

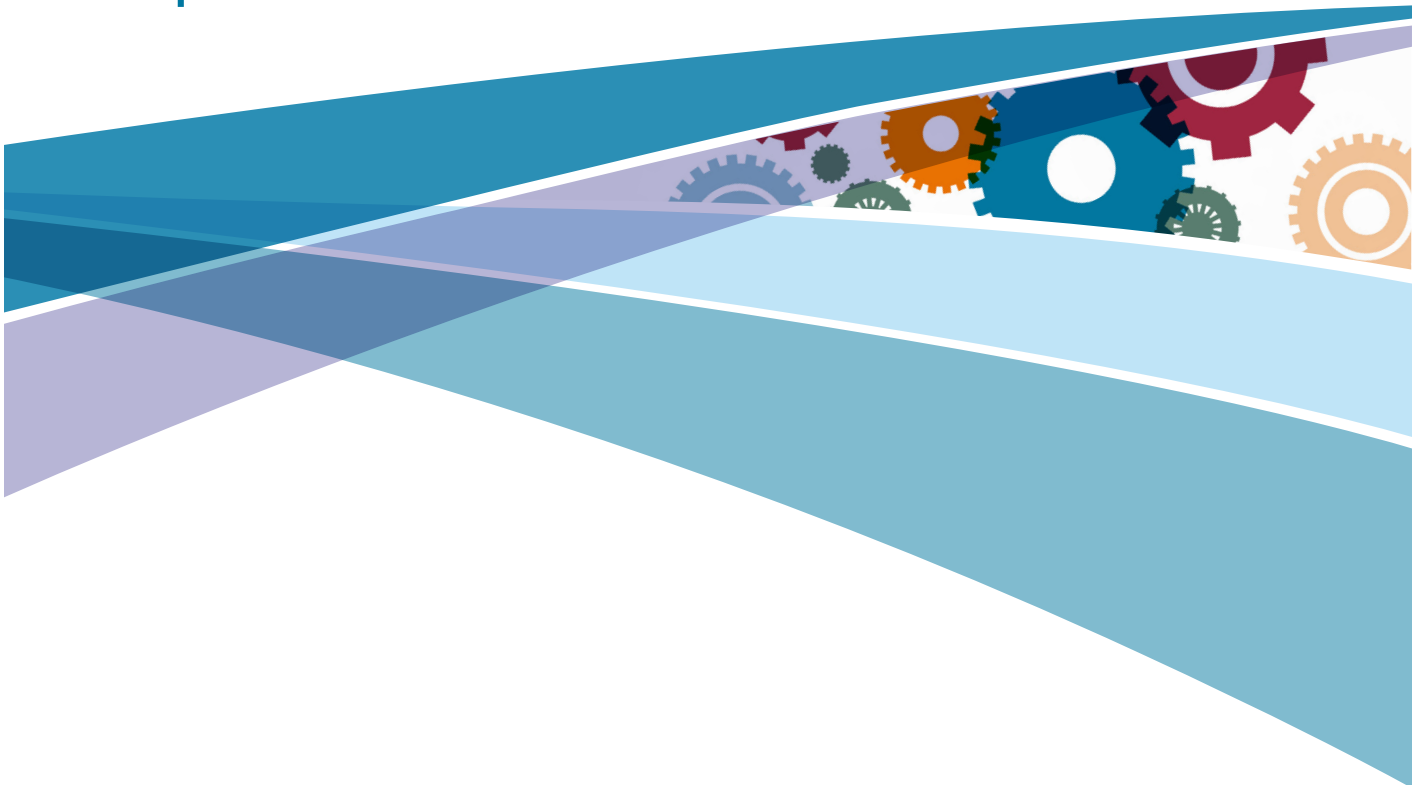


Intellectual
Property
Office

Banking on IP?

The role of intellectual property and intangible assets in
facilitating business finance

Final report



Research commissioned by the Intellectual Property Office, and carried out by:

Martin Brassell, Kelvin King

This is an independent report commissioned by the Intellectual Property Office (IPO). Findings and opinions are those of the researchers, not necessarily the views of the IPO or the Government.

Banking on IP?

Purpose

Small and Medium sized Enterprises, or SMEs, are the lifeblood of the UK economy. Their ability to grow is a key determinant of the nation's future economic health. In recent years, businesses of all sizes have been investing more in intangible assets, in particular Intellectual Property (IP), than in fixed or physical assets. This study sought to examine how effectively SMEs are able to use these assets to secure the finance they need for company growth.

IP: an under-appreciated asset class

Company cash flow, perhaps the chief consideration in debt finance, is often closely connected to company IP assets. Despite this, and good evidence to show that high growth, IP-rich businesses are more resilient and perform better than others over time, the IP and intangibles which equity investors value highly are rarely considered in mainstream lending practice. This is unsurprising: balance sheets do not represent their value, and current regulations actively work against consideration of IP as an asset class but the result is a real and important disconnect between banking regulation and practice and the UK's ambition for growth.

Recent banking initiatives targeting growth businesses are finding that traditional fixed assets simply no longer exist. In the asset based lending market, too, many examples have emerged of transactions where control over intangibles is recognised as being important.

IP and intangibles are, in effect, unbankable. Change seems inevitable: how can it be accelerated?

Key Recommendations

The key recommendations of the report include the design and assembly of a resource toolkit and supporting services. When integrated, these will:

- help old and new economy businesses identify and communicate their IP and its relationship to cash flows
- help companies and lenders understand the business value of IP
- improve efficiency in due diligence on IP assets
- improve practice in obtaining reasonable and effective charges over IP
- make room for development of more effective IP markets, supported by a better information infrastructure
- enable risk to be reduced through insurance and other mechanisms

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Contents

Executive summary	13
Chapter 1 Introduction: brief, scope and methodology	19
Introduction	19
The project's focus on SMEs	20
Project scope: types of finance	22
Project scope: IP and intangibles	24
The value of IP and intangibles to companies	25
Qualitative approach	26
Key questions	28
Interviewee selection	29
Chapter 2 National and international context	30
Introduction	30
• Domestic policy: capital adequacy and bank security	30
• Domestic policy: debt and equity finance	31
• International policy initiatives	32
UK policy initiatives: debt finance	33
• The Funding for Lending Scheme	33
• The Business Bank and the Business Finance Partnership	34
• Export Trade Finance	35
Addressing the absence of collateral: the Enterprise Finance Guarantee Scheme	35
• About the scheme	35
• 2013 EFG review: outcomes	37
• Lender observations on EFG	38
UK policy initiatives: equity finance	40
• Co-Investment Funds in Scotland and England	40
• Enterprise Capital Funds and the UK Innovation Investment Fund	41
• Tax reliefs: the role of the Enterprise Investment Scheme and Seed EIS	42
• Entrepreneurs' Relief	43

Round-up of international policy initiatives	44
• Europe: France, Germany, Denmark	44
• Asia: India, China, Hong Kong	47
• South East Asia: Singapore, Malaysia, South Korea	49
• USA and Canada	52
• South America: Brazil	53
 Chapter 3 Forms of debt finance and their relationship to IP	 54
Introduction	54
Factors affecting the current UK supply of debt finance	54
Types of debt finance studied for this report	58
• ‘Traditional’ bank finance: term lending and informal lending	58
• Asset finance and asset-based lending	58
• Venture debt and mezzanine-style finance	59
• Peer-to-peer lending	59
• Pension-led funding	60
 Formal and informal bank facilities	 60
• How credit decisions get made	60
• How security is obtained and used	62
• What constitutes good security?	64
• Experiences in dealing with IP	66
 Asset finance and asset-based lending	 69
• How credit decisions get made	69
• How security is obtained and used	70
• What constitutes good security?	72
• Experiences in dealing with IP	73
 Venture debt and mezzanine-style finance	 79
• Uses and targets	79
• How security is obtained and used	81
• Experiences in dealing with IP	82
 Peer-to-peer lending	 86
• Interviewee perspective	86
• Assessment, security and IP	86
 Pension-led funding	 88
• Interviewee perspective	88
• Assessment, security and IP	88

Chapter 4	Forms of equity finance and their relationship to IP	90
	Introduction	90
	Types of equity finance studied for this report	90
	<ul style="list-style-type: none"> • Crowdfunding • Angel networks and syndicates • Venture capital and private equity 	90 91 92
	Crowdfunding	94
	<ul style="list-style-type: none"> • Regulated providers • Experiences in dealing with IP 	94 95
	Angel networks and syndicates	96
	<ul style="list-style-type: none"> • Structure, activities and outcomes • Deal flow • Angel network and syndicate views on IP • Serial investors' personal views on IP 	96 98 99 101
	Venture capital and private equity	105
	<ul style="list-style-type: none"> • Industry view • Industry initiatives: the Business Growth Fund • The private sector: Octopus Investments 	105 107 109
Chapter 5	The IP and intangibles owned by SMEs	111
	Introduction	111
	Levels of IP Awareness	111
	<ul style="list-style-type: none"> • Overall IP ownership levels • Rating of importance • Usage of databases for rights checking • Involvement in litigation • Awareness of value 	112 112 113 113 114
	SMEs and their ownership of registered rights	114
	<ul style="list-style-type: none"> • Analysis conducted • Overall UK ownership of patents and trade marks • Ownership of patents and trade marks by business size • Ownership of patents and trade marks by business sector 	114 115 116 117
	Registered vs. unregistered assets: individual IP audits	118
	<ul style="list-style-type: none"> • Registrable rights • Non-registrable rights 	118 119

Registered vs. unregistered assets: audit tools	120
• Presence of registered rights	120
• Presence of potentially registrable rights, not yet registered	121
• Ownership of copyright assets	121
• Ownership of other non-registrable assets	121
• Overall non-registrable intangibles ownership levels	122
High growth firms and intangible asset ownership	123
• Research into intangibles: Big Innovation Centre	123
• Research findings	123
• Research implications	124
Chapter 6 Knowledge-based SME financing needs and experiences	126
Introduction	126
Available funding sources and costs	127
IP and business development challenges	128
• The foundation phase	128
• The expansion and development phases	129
• The mature company	130
The relationship between high growth and high risk	130
• Propensity to become insolvent	130
• Propensity to close	131
• Longer-term behaviour	132
Demand side case studies	133
• Introduction	133
• UK IP-rich companies: investment timelines	133
• Sale of IP ‘vehicles’	135
• Debt investments involving Clydesdale Bank’s Growth Fund	135
• IP in equity investments made by the Business Growth Fund	137
• Angel funding for early stage companies	138
• IP-backed pension-led funding	139
Chapter 7 Realising IP value: in good times and bad	141
Introduction	141
• Are all assets alike?	142

Methods of value realisation	143
• Realising value in distress	143
• Obtaining value from licensing	147
• Adding value through re-structuring	150
• Realising value through securitisation	151
Major acquirers of IP	154
• ‘Offensive’ patent aggregators (OPAs)	154
• ‘Defensive’ patent aggregators (DPAs)	156
• IP trading platforms	157
IP auction and brokerage	158
Using insurance to mitigate risk	160
• Insuring against financial risks in the US	160
• The current status of IP insurance products	161
• What IP insurance covers	162
• Insurance to support bank lending	163
• Insurance to address pension deficits	163
• Other opportunities to mitigate risk via insurance	164
Chapter 8 Gaining effective controls over IP and intangibles	165
Introduction	165
• Better use of IP	165
• The concept of security	166
• The concept of priority	167
• References	167
Types of security interest	169
• Options available to lenders	169
• Mortgages	170
• Fixed charges	171
• Floating charges	172
• Debentures	173
Filing and notice mechanisms	174
• Where to file registered rights	174
• Interests in unregistered rights	175
• The registration process: Companies House	176
• The registration process: statutory registers and the Intellectual Property Office	177
• Recording interests against patents	178
• Recording interests against trade marks	179
• Recording interests against registered designs	179

Regulatory considerations	180
• The role of the Prudential Regulation Authority	180
• Implications of the regulatory position	181
Practical management of security	182
• Initial due diligence	182
• Benefits of actual notice	185
• Ongoing maintenance	186
• Enforcement of security	187
Chapter 9 Valuing, and accounting for, IP and intangibles	189
Accounting rules for IP	189
• History	189
• International Financial Reporting Standard (IFRS) 3 and International Accounting Standard (IAS)	190
R&D reporting: putting IP & intangibles on the balance sheet	191
• IAS 38	191
• Statements of Standard Accounting Practice (SSAP) 13	192
How accounting rules affect business behaviour	193
• Impact on SMEs	193
• Implications for business funding	194
• Implications for IP management	195
The business value of intangibles	196
IP & intangibles valuation standards	197
• Royal Institution of Chartered Surveyors (RICS) and the revised Red Book	197
• Red Book guidance on valuation of intangibles	198
IP and intangibles valuation methodologies and techniques	200
• The market approach	200
• The income approach	200
• The cost approach	201
• The role of appraisal	201
• IP valuation for pension securitisation	202
• Ratios commonly used to assess business performance	204
Methods of business valuation, in the context of intangible asset valuation	205

The UK Patent Box	206
• What Patent Box offers	206
• How Patent Box works	207
• Implications of Patent Box	208
Chapter 10 Conclusions and recommendations	209
Report findings	209
• Introduction	209
• Attitudes and practices in lending	209
• Attitudes and practices in investment	211
• Ownership of IP and intangibles	212
• Driving value from IP	212
• Effective controls	213
• Accounting and valuation	214
• The UK vs. international context	215
Overarching principles	215
The ten recommendations	216
Index of attributed individuals	219
Appendix: IP, education and training	220

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Martin is a former Enterprise Hub Director and high growth coach with a track record of working with IP-rich companies and supporting successful applications for debt, equity and grant funding. For 15 years previously, he was a senior information industry manager working in retail payments, credit scoring and tangible asset registration. He has first-hand experience of working in venture capital and private equity-backed environments with responsibility for IP protection, management, licensing and enforcement, government and industry relations. He is a Fellow of the RSA.

In 2007 Martin founded Inngot (www.inngot.com), a Swansea-based company providing online tools to help companies identify, value and promote their IP and intangible assets. These include 'Sollomon', the online indicative valuation tool for IP and intangibles, using a methodology developed with specialist input from Grant Thornton UK LLP.

Inngot provides IP support and services to a variety of organisations, including SMEs, large corporates, banks, investment networks, universities and government-backed business support initiatives including the GrowthAccelerator programme.

Kelvin King

Kelvin joined the Government in 1970. His early career was spent with the Government's Share Valuation team, which is responsible for all of the private company, business, intellectual property, and intangible asset valuation requirements of Government. He left the Government after 17 years to establish a valuation unit for a large accountancy practice and, before the founding of Valuation Consulting Co (www.valuationconsultingco.com), a dedicated intangible asset IP and business valuation practice, was managing director of a specialist valuation company within two major investment banks.

Valuation Consulting has performed hundreds of valuations of IP and IP-rich businesses worldwide to support debt and equity.

Kelvin is a contributor to many journals, television and radio. He is a contributor to books (RICS Red Book, Business Valuation Digest – Thomson, Intellectual Property Rights and Their Valuation – Gresham, Due Diligence Law and Practice – Sweet & Maxwell, The Trademark Handbook, amongst others). His book Valuation and Exploitation of Intellectual Property and Intangible Assets was published by EMIS Professional Publishing in May 2003.

Kelvin has been one of two separately listed UK Expert Witnesses in the areas of intellectual property and intangible asset valuation and one of the five separately listed unquoted company Experts in The Law Society (now Sweet & Maxwell) Directory of Expert Witnesses (1996-2012). He is the founder of the Society of Share and Business Valuers, Vice Chairman RICS Business

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Executive Summary

Small and medium-sized enterprises, or SMEs, are the lifeblood of the UK economy. Their ability to grow is a key determinant of the nation's future economic health. In recent years, businesses of all sizes have been investing more in intangible assets, in particular intellectual property (IP), than in fixed or physical assets. This study sought to examine how effectively SMEs are able to use these assets to secure the finance they need for company growth.

Knowledge assets aren't appreciated in mainstream UK lending

Cash flow, perhaps the key consideration in debt finance, is often very closely connected to a company's IP and intangibles. Despite this, and good evidence to show that high growth, IP-rich businesses are more resilient and perform better than others over time, IP and intangibles are rarely considered in mainstream lending practice.

This is unsurprising. Balance sheets do not represent the value of these assets, and current regulations actively work against consideration of IP and intangibles as an asset class. The result is a real and important disconnect between banking regulation and practice and the UK's growth ambitions.

Recent banking initiatives targeting growth businesses are finding that traditional fixed assets simply no longer exist. In the asset-based lending market, too many examples have emerged of transactions where control over IP and intangibles is recognised as being important.

IP and intangibles are, in effect, unbankable. Change seems inevitable. How can it be accelerated?

Other countries are already beginning to make change happen...

There are plenty of examples of faster growing economies taking steps to understand this issue and make knowledge assets bankable. Malaysia and Singapore are introducing guarantees to facilitate IP-backed lending; Denmark and India are supporting the development of IP marketplaces; Germany has sought to articulate the 'Wissensbilanz' to assist financial analysis of individual firms; Brazilian banks are experimenting with IP audits prior to lending.

China has publicly set out its policies to make the country a world leader in technology by 2050 which has included the establishment of targets for the creation of "indigenous IPR", while neighbouring Hong Kong set up an Innovation and Technology Fund targeting IP-rich businesses with a \$5bn injection as long ago as 1999.

... and in the UK, some funders are already making the IP link

IP and intangibles represent part of the 'skin in the game' for SME owners and managers, who have often expended significant time and money on their creation, development and protection.

When equity investors (from business angels to venture capital companies) assess the quality and attractiveness of investment opportunities, they invariably include consideration of the underlying IP. They want to understand the extent to which it represents a barrier to entry, creates freedom to operate, and meets a real market need.

Certain types of lending such as venture debt and pension-led funding (which directly harnesses IP assets) already involve close scrutiny of the whole asset portfolio. So why are other routes to finance reluctant to look at IP and intangibles?

Where it remains hidden and unaddressed, IP is a risk...

Taking appropriate controls over a company's registered IP in a lending scenario would involve taking a fixed charge and recording it properly at Companies House and (in the case of registered IP) on the appropriate register. As data compiled for this report demonstrates, this hardly ever happens.

Typically, lenders are reliant on a floating charge over IP which will crystallise on an event of default – by which time, important IP may already have 'leaked' or been disposed of, limiting the lender's recovery potential.

Whilst there are improvements needed to the practicalities (but not the rules) of registration, the basic step that is missing is a clear inventory of the IP and intangibles, without which a lender can never be certain that the assets which should be present are in fact to hand.

...especially when markets for it are imperfect

There is an underlying structural issue relating to value realisation in a distress situation, caused by the absence of mature marketplaces in which IP assets can be sold in the event of default. However, this cannot mean that the IP assets of a company in distress are of no value. Rather, there is not yet the same tradition of disposal, or the same volume of transaction data, as that which has historically existed with tangible fixed assets.

The concern over value is partly intrinsic (because IP is unique rather than a commodity), and arises partly because of an assumption that if a company has failed, its IP was no good. This is a *non-sequitur*, since equity investors have plenty of 'war stories' that illustrate great IP failing due to management failings or chronic under-funding (which they sometimes attribute to a lack of bank support).

Global licensing activity leaves no doubt that IP is in fact an immensely valuable, highly tradable and very portable asset class. In individual cases, insolvency practitioners have no difficulty illustrating cases where IP has been central to recovery in a downside (distressed) situation. Current practice simply reflects the fact that the markets to reach potential buyers of IP are immature.

In truth, lenders can never know precisely how much value will be realised at a future point in time for any given asset, because all prices are ultimately determined by market supply, business sector cycles and sentiment. IP is fundamentally no different – but because of the market's

imperfections, trading is less transparent, and demand never gets properly tested. This can, and must, change.

IP is a missed opportunity

One of the most unhelpful aspects of the IP financing debate is the tendency to conflate the terms ‘technology’ and ‘IP’. There are millions of intangible business assets whose value is either not being leveraged at all, or only being leveraged inadvertently. Whilst it is true that technology and knowledge-based companies will own important IP, there are many thousands of UK businesses with IP (registered and unregistered) who would not think of themselves as being in the technology space, including many of the UK’s globally recognised creative brands and manufacturers.

The new data sources studied for this report demonstrate that while registered rights ownership among micro enterprises is generally low (in itself not a surprise), small and medium-sized businesses have much more IP to offer. Furthermore, IP audit data makes it clear that IP is under-registered (where registration is possible) and confirms the existence of many non-registrable but value-additive assets – some covered by copyright, others not.

It is important to note that IP is not only the currency of the knowledge economy, as has often been observed, but also underpins the value of ‘old’ economy companies too. The more widely business is transacted with it, and the more visible it becomes in public accounts, the easier its value becomes to realise. This will lead to greater opportunities for lenders – and higher risks of inaction.

How will change be encouraged?

This study has interviewed finance professionals across a wide range of different sectors and disciplines. Whilst not all have provided their views ‘on the record’, most recognise and acknowledge that credit decisioning and account management can both benefit from better information on, and understanding of, IP and intangibles, even if regulations do not currently facilitate or encourage their actual business value to be harnessed independently for security purposes. A few have initiatives already under way which seek to address this particular aspect of ‘information asymmetry’.

What is clear, however, is that while specialist funds and some asset-based financiers may be able to generate sufficient margins for detailed due diligence, mainstream lending needs cost-effective, standardised approaches in order to capture and process information on IP and intangibles (which is not currently being presented by SMEs). It also requires assistance to facilitate effective controls to be taken over the assets.

Initial activities may be best focused on cases where traditional security is known to be insufficient or unavailable. In these instances, it is important for a lender to capture as much as possible in its security envelope, since it does not have the comfort of ‘conventional’ assets as a fall-back. Unsecured lending in general, and applications to the Enterprise Finance Guarantee (EFG) scheme in particular, are places for banks to start gathering experience in dealing with IP and intangible assets – in the case of EFG, they can do so with a ‘safety net’.

Recommendations

The issues identified in this report represent a particular challenge for the development of the knowledge economy, but also place potentially serious constraints on the growth of companies in traditional industries. There are two overarching recommendations of this report:

- **A ‘resource toolkit’ must be put in place**, aimed at helping SMEs, lenders and other financiers to make more effective use of the value IP and intangibles represent within businesses. The points for focus are set out below. This toolkit should be accompanied by steps to secure financier commitment to trials, appropriate training/familiarisation, and measures to monitor the economic effectiveness of the support provided. These steps are important to ensure that further measures to assist in value realisation can be identified and a business case built for their implementation.
- **The programme must build on existing initiatives.** Apart from EFG, referenced above, there is already government support designed to boost lending through financial contributions to designated funds (the Business Finance Partnership). There are also helpful tax incentives to encourage investment in early stage companies (principally the Enterprise Investment Scheme) and to stimulate greater appreciation of the value in IP (the ‘Patent Box’). All are useful developments which can, and should, play a greater role in raising awareness and appreciation of IP, and putting it to practical use for business innovation and growth.

It is important to emphasise that this report does not advocate changes to the legislative framework, to policy priorities, or to accounting standards. The steps required to unlock the business value of IP are pragmatic measures that build on principles and practices which exist today. However, the recommendations, set out in more detail within Chapter 10 of the report (Conclusions), will need to be embraced by the market as a whole in order to achieve their transformative potential. They are as follows:

1. **IP and intangibles must be identified during the financing process.** For IP and intangibles to be given any consideration within credit decision-making, tools to identify and describe the actual assets (not merely evidence of expenditure) need to be embedded within the lending process. Businesses must use them, and lenders must understand and take note of them. This step will have the wider benefit of boosting IP awareness amongst the business community as a whole.
 2. **The value of IP needs to be taken into account.** The most important step in harnessing IP value is to realise that this value is not nil, and therefore requires active consideration. Robust approaches to determine the value of intangibles exist in the same way as for tangible property and are now included alongside them within the Royal Institute of Chartered Surveyors’ Red Book, regarded as a banking industry reference point.
-

3. **Due diligence guidelines can help to control costs.** Checks will be needed in order to create confidence that the ownership and quality of the IP and intangibles are understood, that they contribute to serviceability and cash flow (particularly in the case of debt finance), and that their maturity is in line with what it would be reasonable to expect, given the development stage of the business. This will require templates, training and/or access to professional advice, at a cost that lending margins can support, within a turnaround time that meets business requirements.
4. **More effective charges should be part of the lending package.** Once knowledge assets are captured and verified, it becomes possible to create a proper interest over them. Legal templates and the resource toolkit will help lenders to achieve this at modest cost, firstly by providing appropriate wording for the instruments, and secondly by providing guidance on the procedures which must be followed when recording them.
5. **IP markets and IP financing could be facilitated through infrastructure improvements.** The development most likely to transform IP and intangibles as an asset class is the emergence of more transparent and accessible marketplaces where they can be traded. This is a domain where services must stand or fall on their commercial merits; however, the available infrastructure needs to support rather than impede their establishment.

In particular, as IP and intangibles become clearly identified and are more freely licensed, bought and sold (together with or separate to the business), the systems available to register and track financial interests will need to be improved. This will require the co-operation of official registries and the establishment of administrative protocols.

6. **On-going management of IP and intangibles should also be supported.** IP does not stop being important once credit is granted. The asset class is unfamiliar, and lenders will need assistance in understanding it, monitoring it and encouraging businesses to use and protect it so that risk is reduced. There could be a role for the introduction of ‘milestones’ (as used in equity and venture debt) and impairment tests to ensure that businesses are well informed and motivated to adopt appropriate IP management practices.
 7. **Affordable risk mitigation strategies are to be encouraged.** Alongside certain guarantees, access to appropriate insurance policies to guard against unforeseen events could greatly increase banking confidence in adding further weight to IP and intangibles within the lending decision. There is private sector appetite to provide these if lenders are willing to create the demand; more detailed dialogue on the requirements of both parties is urgently required.
 8. **Asset-based financing techniques should be adapted for IP and intangibles.** Recent financial upheavals have triggered something of a return to first principles in lending and a greater emphasis on assets for business finance (reflected, for example, in ‘challenger’ bank activity). This greater emphasis on assets needs to be extended to include IP. Alongside mainstream lending, where EFG is an obvious area of focus, asset-based finance and alternative financing methods should therefore be targeted for IP-backed finance interventions; these are the parts of the finance industry most accustomed to understanding and assessing individual assets and their value.
-

9. **Steps to stimulate private investment need closer study.** IP rights can be well suited to securitisation (patents, trade marks, registered designs and copyright portfolios). Given the successful track record of venture debt, more work is needed to understand onshore and offshore fund appetite to support investment in IP-rich companies, working with fund managers that have the necessary expertise.
 10. **IP demands joined-up thinking.** The Intellectual Property Office (IPO) exists “to promote innovation by providing a clear, accessible and widely understood IP system, which enables the economy and society to benefit from knowledge and ideas”. It therefore has a role to play in scrutinising Government and finance industry initiatives to boost lending, to ensure that the assets produced by knowledge receive consideration. But the IPO is not the only player, and only when all involved appreciate that these assets matter will their true potential be unlocked.
-

Chapter 1

Introduction: brief, scope and methodology

Introduction

This project was commissioned in February 2013 by the Department for Business, Innovation and Skills (BIS) and the UK Intellectual Property Office (IPO) to investigate the barriers to the broader use of intellectual property rights (IP) and related business intangible assets (intangibles) for debt and equity fundraising, and identify possible solutions to address these problems.

Whilst the difficult economic conditions of the past few years have led many companies to rein in their plans for investment and growth, the balance of evidence suggests that there remains an underlying element of market failure¹ in the financing of micro-businesses and Small and Medium Enterprises (SMEs), and that this is limiting the growth and recovery potential of the UK economy, especially given the disproportionate role high growth businesses play in economic growth as a whole². This market failure has been partly attributed by BIS economic research to “*imperfect or asymmetric information*” between finance providers and small businesses³.

The Government has a role in working with banks, industry associations and professional bodies to address problems which may exist in the supply chain of finance to SMEs⁴, a role which includes understanding and addressing both funding needs and market failures.

In 2012, the Breedon Report estimated the scale of the prospective gap over the coming five years at between £84bn and £191bn⁵. The most recent research published by BIS also indicated a shortage of finance for SMEs, “*reflecting banks’ attitudes to risk and their own pressures to delever combined with banks’ market power in the SME sector.*” This concluded that:

If the situation is not resolved, output, investment and employment will be lower than would otherwise be the case, with adverse effects on economic performance in the short and longer term.

1 *SME Access to External Finance*, BIS Economics Paper no. 16, January 2012

2 *The Vital 6 Per Cent*, Nesta, October 2009

3 Ibid. ‘Information asymmetry’ is a term used to describe a situation in which a business seeking funding knows substantially more about its situation and prospects than the funder, making screening and monitoring difficult.

4 Ibid

5 *Boosting Finance Options for Business*: BIS report of industry-led working group on alternative debt markets, March 2012

When looking for funding, 40% of SME employers seek a loan and 35% seek an overdraft, in the vast majority of cases from a high street commercial bank⁶. Only 1-2% of these businesses seek equity funding⁷.

One of the ways in which banks mitigate risk is to take collateral. The relationship between information on collateral and financing success appears clear; according to survey data gathered by the Office of National Statistics (ONS), the largest single reason identified for the lack of success with bank financing is a lack of available collateral or guarantee⁸. Furthermore, sectors with fewer tangible assets (i.e. less collateral) have been particularly badly affected by difficult credit conditions. Service businesses (constituting the majority of the ONS sample) saw bank loan approval rates fall from 84% in 2007 to 61% in 2010: for ICT companies these figures were 85% and 45%⁹. Software companies, along with other creative business categories, also emerge from recent BIS/DCMS research as having poorer access to finance because they lack business assets to offer as collateral¹⁰.

IP and related intangibles are a vitally important asset class in terms of business value and economic growth potential¹¹, and transactions across a range of contexts (many of them documented in this report) demonstrate that they can be leveraged to help overcome the absence of tangible security. However, they are often the most poorly understood – by the businesses which own them, as well as the financiers that could be benefiting from them.

This project is believed to be the first of its kind to investigate the imperfections and asymmetry in the information flow between the parties as it relates to IP and intangibles. By understanding current attitudes to these assets across the debt and equity finance landscape, and exploring the contexts in which such assets are being leveraged successfully, it sets out to establish how IP and intangibles might be able to facilitate the supply of finance to businesses which are rich in this asset class, with a particular emphasis on those with high growth potential.

The project's focus on SMEs

Micro-businesses and SMEs numerically account for 99%¹² of the 4.8 million businesses in the UK, and all have a contribution to make towards economic growth and employment. Of these, the greatest medium to long term potential for growth in the economy and in employment opportunities is generally understood to be amongst the group of businesses which are 'innovators', ranging from start-ups, university spin-out companies, technology transfers and creative businesses through to high growth businesses and SMEs.

6 In 2009 the largest five banking groups held approximately 90% of the SME banking market share. Quoted from *Building the Business Bank: Strategy Update*, BIS, March 2013

7 SME Access to External Finance, BIS Economics Paper no. 16, January 2012

8 *Statistical Bulletin*, Access to Finance 2007 and 2010, Office for National Statistics, October 2011

9 Ibid

10 *Access to Finance for Creative Industry Businesses*, BIS/DCMS, May 2011

11 The Gowers Review of Intellectual Property (HM Treasury, 2006) estimated that "70% of a typical company's value lies in its intangible assets, up from 40% in the early 1980s"

12 *Small businesses and the UK economy*, House of Commons Library, December 2012

In a recent EU survey¹³ SMEs were identified as the main drivers for economic growth between 2004 and 2006. Fast-growing new firms drive employment growth, with 4 per cent of surviving start-ups responsible for 50% of the jobs created by all new firms ten years later¹⁴. Research by Nesta published in 2009 drew a similar conclusion, showing that high-growth companies represented only 6% of all UK firms employing 10 or more people, but had created the majority of jobs - 54%¹⁵.

This group of businesses do not, unless at the upper end, have access to the capital markets and have been amongst the most affected by the financial crisis and consequent reduction in economic growth opportunities. Many are asset rich and cash poor, but crucially their 'assets' are typically in intangibles rather than physical tangible assets, as new research conducted for this report into IP ownership helps to illustrate. Access to finance for this key sector has been further constrained by the financial crisis as the risk appetite amongst investors and lenders has diminished, despite a number of government policy initiatives directed towards promoting growth in these sectors and the Bank of England's policy of quantitative easing of the general money supply.

This project adopts the EU standard definitions for SMEs: medium-sized (employees up to 250, turnover up to €50m or balance sheet total up to €43m), small (less than 50 employees, turnover €10m or balance sheet total up to €10m) and micro (less than 10 employees, turnover up to €2m or balance sheet €2m). However, and crucially (as will be demonstrated), these balance sheet definitions do not take into account the often considerable amount of business value residing in internally generated intangible assets, meaning that IPR and intangible asset-rich SMEs are significantly more 'substantial' than these standard definitions suggest.

13 *Eurostat 71/2009*, Manfred Schmiemann

14 *Understanding the Small Business Sector*, Storey, D.J. (1994) Thomson Learning

15 *The vital 6 per cent*, Nesta, October 2009

Project scope: types of finance

Over the past two years, a growing body of research has been produced on the relationship between business growth, economic recovery and access to finance, particularly for SMEs. Recent reports include:

- BIS *economic paper number 16*, January 2012
- *Boosting Finance Options for Business*, a report initiated by the Business Finance and Tax Team of BIS, by an industry-led working group on alternative debt markets, March 2012 (otherwise known as the Breedon report)
- *Make Business Your Business*, a report by Lord Young into the start-up and development of small businesses, May 2012
- The Big Innovation Centre's *Flexible Project Investments*, February 2013
- *Economic Evaluation of the Enterprise Finance Guarantee Scheme*, BIS, February 2013
- *Evaluating Changes in Bank Lending to UK SMEs over 2001-12 – ongoing tight credit?*, BIS, April 2013
- *What Do We Know About The Relationship Between Entrepreneurial Finance And Growth?* Enterprise Research Centre White Paper no. 4, April 2013

It is therefore not the purpose of this report to set out the case as to whether a funding gap exists, why one exists, where it lies, or how far it is due to reduced demand. The starting point is that there is, simply put, a more than sufficient body of evidence to show that better availability and take-up of finance is needed to boost economic recovery and sustain growth.

The authors also note the ongoing programme of reform to IP law following *Digital Opportunity*, the Hargreaves Review of Intellectual Property and Growth published in May 2011, and the subsequent announcements in respect of SME engagement made in two papers entitled *From Ideas to Growth: Helping SMEs get value from their intellectual property*, published by IPO in April and November 2012.

The Hargreaves review was commissioned in 2010 following concerns expressed by Prime Minister David Cameron about the 'fitness of purpose' of the IP system to deliver economic growth. The previous review of IP law, by Lord Gower¹⁶, had been published less than five years earlier in 2006, reflecting the fast-moving nature of the debate, especially in respect of digitisation.

However, what has been lacking from recent initiatives relating to IP is an examination of its role in relation to business funding, and *vice versa*. There have been few papers and research documents specifically focused on where IP and intangibles sit within the funding mix, for both information and security purposes, or considering ways in which funders might be enabled and

¹⁶ *The Gowers Review of Intellectual Property*, HM Treasury, December 2006

emboldened to be more proactive and less risk adverse in respect of this most significant asset class. Such is the information gap this report sets out to address, as a first stage in the development of resources that will test practical approaches to address this problem.

The focus of the report is on two broad types of finance, namely equity and debt. Each of these is available (or unavailable) to SMEs in a number of different forms depending principally on the business's stage of development, a point considered in more detail in Chapters 5 and 6, which look at the dynamics of the demand side.

There is a third type of finance available, which is grant funding. This is a very important part of the landscape for innovative SMEs, especially those in the early stages of development, and large corporations and universities are also very active in grant funded collaborative working initiatives. The primary outputs of grant funding are generally new IP and intangible assets, so their relevance to the subject area is clear. Furthermore, a strong case can be made that understanding the nature and value (economic and cultural) of the assets that are created from grant funding would provide a far more effective way of measuring impact than some other techniques used in the past. The authors are aware of some important work already going on in this area¹⁷.

Beyond the acknowledgement of its importance as a source of finance, grant funding does not fall within the scope of this report, for the following reasons:

- Whilst the IP and intangibles owned by applicants are an important part of evidencing their capabilities, the decision-making process for grant applications is primarily determined by a proposal's fit with the aims of the specific scheme under which funding is being made available, and grants are generally provided in connection with specific outputs which are essentially project-based
- Owing in large part to State Aid regulations, many grants require an element of match funding to be evidenced before a project can be commenced, which for a business not already generating sufficient cash flows will need to be raised via equity or debt (though the authors acknowledge that having approval for a grant can make equity funding, and in some cases debt finance, more straightforward to obtain because it introduces more leverage)
- Grant funding is often paid in arrears and can therefore create new working capital issues for SMEs rather than alleviating them

17 One such initiative is the Cultural Value Project led by Professor Geoffrey Crossick, funded by the Arts & Humanities Research Council.

Project scope: IP and intangibles

In order to make observations which are capable of being used in support of future implementation, it is important to understand whether and how the different types of IP and intangibles that exist excite interest and appetite amongst financiers of different types. This means it is necessary to clarify which asset types are ‘in scope’.

In some contexts, for example when considering expenditure on intangibles in general, it can be appropriate to consider elements that are related to, or invested in, human capital. However, during the interview stage of this research, it quickly became apparent that it would not be helpful to include this category, for three main reasons:

- Financiers of all kinds have a clear interest in the experience and character of the people they are being asked to back. In the equity marketplace, the management team emerges from most discussions as the ‘number one’ consideration in any investment decision, and in debt finance (while in the current climate serviceability and affordability are king) the very first point in some familiar versions of the ‘canons of lending’¹⁸ concerns character. This is in part because fraudulent activity is one aspect that neither category of funder can do much to mitigate. Accordingly, this factor can be said to be acting as a precondition to funding already
- Human capital is clearly one of the most important assets any business has, but it is not an asset that is legally owned by the business. As such, while it can clearly influence overall enterprise value, it is not an asset that can be leveraged for the purposes of security or collateral
- By the same token, it is clear from early interview feedback that types of intangible which relate to general skills, or to know-how that is restricted to one or more individuals rather than being memorialised or embedded within processes, would be very difficult to present as a credible business asset

Strictly speaking, IP consists primarily of those rights which can be formally registered (patents, trade marks and registered designs), together with copyright (in its various forms), which can also prove to be extremely valuable, and automatic design protection (Design Right). However, in terms of value creation, IP is a significantly ‘broader church’ than these official definitions imply. For example, the International Financial Reporting Standard 3 (IFRS3) regulations provide a set of some 50 asset definitions which have been extensively scrutinised by the accounting industry.

Therefore, in addition to studying new data on business ownership of patents and trade marks supplied by the Intellectual Property Office, this report uses data drawn from sponsored IP audits and third party sources to examine ownership levels of further categories of asset which are capable of being properly validated, and therefore useful in the financing context. These include assets which are embedded within what a company sells, such as trade secrets and contractual agreements.

18 There are many derivatives, but the best known of these is CAMPARI, standing for Character, Ability, Margin, Purpose, Amount, Repayment, Insurance. Most others also place Character first.

The value of IP and intangibles to companies

A number of independent reports¹⁹ have concluded that company value is now largely dependent on intangible assets, with estimates ranging from 70% to 80%. There is an increasing recognition that company expenditure on intangibles ought to be recognised as a determinant of economic growth, rather than simply being expensed as intermediate inputs in national accounts²⁰. Research by Nesta and the Work Foundation highlighted that company investment in intangibles now outstrips that in tangible assets, and made the following connection with finance:

The government should encourage the development of new financial institutions at both the national and local level to meet potential funding gaps for knowledge intensive, intangible rich but physical asset poor SMEs.²¹

Quoted companies have a ready market mechanism by which they can sometimes (though not always) determine and realise this intangible value, but unquoted businesses may not. Calculation of estimates for micro, small and medium enterprises is further complicated by the filing of abbreviated accounts. However, it is reasonable to surmise that the proportion of value in intangible assets will be even greater in many small unquoted companies than in quoted ones, with many high technology and creative businesses owning precious little apart from IP and intangibles.

Considerable progress has been made over a 40-year period in the valuation of IP, and certain methodologies are now accepted by accountants and regulators²². In the US, APB 16 (published in 1970) first required separate intangible assets to be identified for 'fair value' accounting and a purchase price. This was followed by IAS 22 in 1983 and ultimately by Standards 141 and 142 introduced by FASB in 2001. In the UK and internationally, within the last decade, changes in accounting regulations such as IFRS 3, the introduction of tax relief for R&D activity, and the introduction of a 'Patent Box' have created a set of tools and standards which can support value realisation from IP. These developments are set out in more detail in chapter 9 of this report.

The challenge this creates in the context of economic growth has been succinctly summed up in the US context by think-tank the Athena Alliance, as follows:

As the U.S. moves away from a manufacturing-based economy and toward a technology-and-innovation driven one, intangible asset investments are becoming vital to economic growth and sustainability. Just as physical assets were used to finance the creation of more physical assets during the industrial age, intangible assets should be used to finance the creation of more intangible assets in the information age.²³

19 Including the *Gowers Review of Intellectual Property*, HM Treasury, 2006, and *Intangible assets versus tangible assets: the 'great reversal' of 20/80 to 80/20*, Ocean Tomo, 2011

20 *The Impact of Investment in Intangible Assets on Productivity Spillovers*, BIS Research Paper no 74, May 2012

21 *Accounting for intangibles: Financial reporting and value creation in the knowledge economy*, The Work Foundation/Research Republic, August 2009

22 See Chapter 9

23 *Intangible Asset Monetization: The Promise and the Reality*, Jarboe & Furrow, Athena Alliance, April 2008

This investment in IP and intangibles does not appear to be translating into assets which can be leveraged effectively to fund growth. Whilst asset-based (or asset-backed) lending ('ABL') products leverage certain business intangibles, notably invoices, these do not explicitly recognise a business's core value-producing IP. Yet at the same time, those who invest in businesses have a high regard for IP and its importance.

The question prompting this report is: what else could be done to bring this underlying asset value (and its relationship to cash flows) into play, for the purposes of financing growth? The answers may provide insight into ways that broader access to finance issues can be tackled: they may also provide a valuable platform for raising company awareness of the value and utility of IP more generally, with additional benefits for business competitiveness both nationally and internationally.

Qualitative approach

Whilst this study has been provided with access to new data on aspects such as IP ownership, IP-backed finance is not an area in which large data sets exist. SME finance is also an area which is subject to a combination of different processes to inform judgement, ranging from some that are highly automated to others that are very subjective. To understand the dynamics and nuances of the role already played by IP in financing decisions, the potential transferability of any lessons, and the location and nature of gaps, it has been essential to take a qualitative approach.

Accordingly, the principal information gathering methodologies have been:

- Primary supply side research performed using one-to-one expert interviews (conducted face to face wherever possible), using tailored question sets to recognise the variances between different types of funding
- Primary demand side research, using one-to-one interviews and questionnaires
- Secondary research to obtain data on the funding landscape, the characteristics of funding deals recently concluded, successful IP disposals, M&A and re-financings, IP licensing, methods used to securitise assets and relevant policy matters such as the introduction of the 'Patent Box'
- Case studies drawn from the first-hand commercial experience of the authors, including IP-backed financing solutions for pension deficits and IP identification and valuation for investment deals

Alongside the semi-structured interview process, the authors have incorporated concrete examples of funding successes and failures, with commentary drawn from a variety of sources to amplify and expand on the underlying issues. Some of the apparent failure relates to culture, some to communication, and some is rooted in adverse past experiences, but as this research confirms, much of the discrepancy between IP and intangible asset value and usage is attributable to knowledge and process, or the lack of it.

Given the large body of evidence (statistical and anecdotal) which is already in the public domain regarding the difficulties experienced by the demand side in obtaining finance, the report's interviews have been intentionally weighted somewhat more towards understanding supply side opportunities and challenges, which are less well understood and documented.

For the primary research, questionnaires were supplied to participants in advance of each interview, in order to provide them with suitable stimulus material and give them an opportunity to prepare appropriately for the discussions. Wherever practicable, interviews were conducted face-to-face. There were also a few opportunities to participate and gather evidence in meetings being held by particular industry groups, which are acknowledged in the following chapters.

Permission was sought and obtained to record responses on the basis of the Chatham House Rule; as a consequence, this report contains verbatim records of what has been said, but does not attribute them to a specific participant unless that individual and/or organisation has provided their consent for publication with attribution, and confirmed the content of the matters attributed to them. Where there is no attribution for a viewpoint, it is only included if it has been corroborated using more than one source.

The authors acknowledge that any qualitative research process has risk, in that however good the preparation for a set of interviews may be, the use of a pre-planned and structured approach (essential for comparability) may fail to ask the questions that are most pertinent in each context. Reliance on interviews also means that it takes time to arrange access, develop trust and rapport, and find out what interviewees think, particularly when placed outside a box which may have become their everyday sphere of operation.

In the process of interviews, the authors have endeavoured to address this risk through continuous examination of transcripts to identify common themes, references, comparisons and contrasts with other subject candidates, and refine and update question and interview content accordingly.

The authors are particularly indebted to the Government departments, non-Governmental agencies and trade bodies who have assisted this work by contributing information from their existing research and survey activity which has been used to inform this project and benchmark its findings. Amongst the Government departments, we would particularly like to thank BIS and IPO for making available information from their economic and survey activities.

Key questions

In order to identify, understand and explore the barriers to broader use of IP in financing, and the areas in which solutions may be found, this project focuses on six key areas of investigation:

- i) **Supply side experience and attitudes to IP and intangibles:** why do equity and debt financiers seem to have widely differing views on the importance of IP? How much do the different funding sources know about the IP and related intangible assets their present and future customers own?
- ii) **Demand side experience and attitudes to IP and intangibles:** How much potentially valuable IP do SMEs own? What happens when they try to obtain finance with it?
- iii) **Historical precedents:** what are the contexts in which IP-backed financing and IP transactions work?
- iv) **Valuing IP and intangibles:** what are the best ways to think about what IP and IP-rich businesses are worth? How does this value vary depending on the financial performance and development of the IP-owning business?
- v) **Value capture:** what are the various mechanisms financiers can use to exercise control over a company's IP and intangibles (e.g. sale and licence-back mechanisms, specific security, inclusion within a debenture), and are these working efficiently?
- vi) **Value realisation:** how are companies generating capital and cash flow from IP and intangibles, through sale or disposal, assignment, tax relief, exploitation and licensing? What are the methods of realising value at an exit point?

By approaching the subject matter in a structured qualitative way, this research project aims to provide evidence-based conclusions on the following aspects:

- The nature and relative importance of the barriers to the more widespread recognition of IP and its value in financing (e.g. lack of understanding vs. perceived risk vs. valuation vs. regulatory hurdles)
 - Financing and similar structures which can be applied successfully to IP and intangibles
 - Risk management and training strategies needed when financing IP and intangibles
 - The desirability, and achievability, of a standard 'toolkit' and set of measures for companies and lenders to understand and articulate IP, IP lending approaches and IP value (such as the return on investment in IP and intangibles)
 - The link between good IP identification, management and funding success, and the consequences of mismanagement for value realisation
 - The key areas for supply and demand policy focus, education and information
-

Interviewee selection

In order to gain detailed insights into the opportunities and challenges presented by IP in the financing context, the authors have spoken to a wide variety of individuals with first-hand experience of funding and fundraising, in a variety of different capacities.

When looking at equity finance, interview subjects have included business angel networks; high net worth individuals; crowdfunders; providers of venture capital and private equity funding to SMEs; trade bodies representing organisations offering business angel and venture capital finance; knowledge-based SMEs seeking and obtaining finance; intermediaries working with SMEs to raise finance and service providers (such as lawyers) involved in the deal-making process; and government and industry-backed organisations such as the Business Growth Fund and Angel Co-Investment Fund.

For debt finance, our subjects have included past and current heads of policy, relationship management, credit strategy and appetite, credit sanctioning and/or business recovery within high street commercial lenders and 'challenger' banks; senior management within asset and asset-based lenders; alternative business finance providers; debt fund managers; and trade bodies representing lenders.

In seeking to understand methods of value realisation, important contributions have also been made by corporate financiers; legal professionals; individuals involved with licensing; organisations providing IP brokerage and auction services; acquirers of patents and other IP and intangibles; and insolvency practitioners. Policy and thought leaders have included the Prudential Regulation Authority, Intellectual Property Office, Nesta, and other industry and accounting organisations.

Every person interviewed has provided valuable insights into the debate on IP and finance. In order to ensure that their views have been accurately represented, all those who have been attributed have had an opportunity to confirm their views in writing prior to publication.

Chapter 2

The national and international policy context

Key points

Lending policy across Europe is heavily influenced by the need for banks to be safe

Government support already exists to assist businesses with little collateral, but the scheme does not leverage IP as well as it might (for the benefit of lenders or borrowers)

Important tax reliefs are available to UK equity investors, and have a positive effect on their willingness to invest

Co-investment schemes are helping to increase the effective amount of funding available to early stage SMEs with high potential

Other countries have policies which more explicitly recognise the importance of IP to their competitiveness, and the need to encourage its development through financing and 'valorisation'

Introduction

This chapter places the following research findings in the national and international context as it concerns IP and intangibles and their relationship to finance.

Within the UK, current relevant policy initiatives are largely directed towards improving the safety of the banking system and improving access to debt finance. Internationally, however, a growing number of initiatives are dealing directly with the question of IP and finance. This tends to reinforce the view that harnessing IP value is becoming increasingly important for competitiveness generally, as well as for individual firms.

Domestic policy: capital adequacy and bank security

As many commentators have observed, there are challenges inherent in requiring banks to strengthen their balance sheets and to increase lending at the same time.

Capital adequacy and bank liquidity is the domain of Basel III, a voluntary global regulatory standard. Whilst this report is not the place to explain or assess the impact of Basel III, it is important to note that it represents a significant change in the requirements relating to a bank's capital structure and its 'risk-weighted assets', and that the weighting attached to assets of different classes is likely to be an important driver of bank lending behaviour.

Assets such as cash and currency normally have zero risk weight associated with them, whilst certain types of loans have a risk weighting of 100% of their face value, meaning that financial institutions are obliged to provision fully against them. Emmanouil Schizas, Senior Economic Analyst at the Association of Chartered Certified Accountants (ACCA), sees this as a potentially important area:

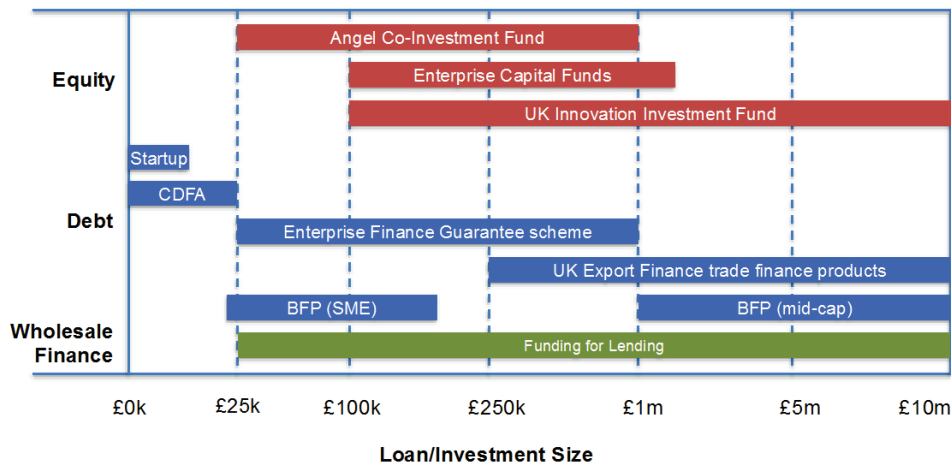
As things currently stand, these liquidity regulations are unhelpful to IP-based lending because such activity would attract a high risk rate due to the absence of ready markets. More transparent and better understood marketplaces for registered IP (though possibly not for other types of intangibles) could assist considerably with the capital relief aspect, and could (over time) establish a basis for a more favourable risk rate that a bank could generate internally.

The authors have been able to explore some of these issues directly with the Prudential Regulatory Authority (PRA), which since 1 April 2013 has been the body responsible for the regulation and supervision of banks, building societies, credit unions, insurers and major investment firms. The findings of these discussions are included in the discussion in Chapter 8 on security interests in IP and intangibles.

In addition, the Banking Reform Bill was introduced to the House of Commons on 4 February 2013. Among other measures, the proposals require UK banks to separate ‘everyday’ banking activities from more volatile investment bank activities by creating a ring-fence around the deposits of individuals and businesses. Whilst this is not a policy intervention directed at SMEs, concerns have been expressed that separating deposits from the business of arranging loans will have adverse knock-on effects. However, as these do not have a specific impact on IP and intangibles, such concerns are not discussed here.

Domestic policy: debt and equity finance

In its recent strategy update on the Business Bank²⁴, BIS set out a number of interventions to assist companies to access capital. These were represented in chart form²⁵ as follows:



24 Building the Business Bank: Strategy Update, BIS, March 2013

25 Ibid

The following UK sections of this chapter look at each of the initiatives providing support of more than £25,000, separating debt and equity for ease of reference.

The Enterprise Finance Guarantee scheme is examined in detail, since it directly addresses issues relating to the absence of 'conventional' collateral. The equity section also includes a brief summary of relevant tax incentives: the Enterprise Investment Scheme and Entrepreneurs' Relief.

As well as central UK Government support interventions, a number of other equity, grant, loan and direct investment forms of assistance are available on a regional basis. Examples include a number of growth-related grant and debt funding initiatives supported by the Welsh Government (some via Finance Wales), and Highlands and Islands Enterprise, who provide services to sectors that are identified in the Scottish Government's Economic Strategy.

International policy initiatives

There are a number of international initiatives, in various stages of development, which are seeking to address the issue of IP value and its use in accessing finance. These range from structured ten year strategies in Singapore through to primary IP exchange markets in Denmark and the provision of government insurance for IP-backed businesses in South Korea.

Each of these initiatives is quite distinct, and seeks to address the issue of financing from differing debt and equity perspectives. The starting points for the UK and the US, for instance, are very different. Whilst in the UK some 80% of investment finance is raised via debt, supplied in the main by the retail banking sector, and the remaining 20% is sourced through various equity-related mechanisms, in the US these proportions are reversed. Consequently, it can be argued that financial resources available to support IP-intensive businesses in the US have greater capacity, particularly in the current environment, and greater diversity. This latter feature is effectively demonstrated by the development of an insurance market in the US in support of commercial bank IP lending, referenced in Chapter 8.

Tax policy is also commonly in use as a means to encourage innovation, with a number of countries having already adopted incentives related to research and development activity along similar lines to the UK's recently introduced 'Patent Box' (examined in Chapter 9). These schemes allow corporate income from the sale of patented products to be taxed at a lower rate than other income, reducing the financial risks of innovation and lowering the effective corporate tax rate for knowledge-based businesses. Ireland was the first nation to develop a patent box in 1973, followed by eight nations – Belgium, China, Denmark, France, Luxembourg, Netherlands, Spain and Switzerland – in the mid to late 2000s.

Within Europe, in 2007, Belgium introduced the Belgian patent income deduction, allowing a Belgian company (or a Belgian permanent establishment of a foreign company) to deduct 80% of qualifying gross patent revenues from taxable income. In Denmark, a patent box tax regime was originally adopted from January 1, 2007, with an effective rate of 10%: this was reduced to 5% in 2010 and the new regime is referred to as the 'innovation box'. Under the Dutch innovation box regime, losses from qualified IP are deductible at the general corporate tax rate of 25%.

In France, revenue or gain deriving from the license, sublicense, sale or transfer of qualified IP is taxed at a reduced 15% corporate tax rate (the standard rate is 33.3%) under specified terms and conditions. In Hungary, companies owning qualified IP may deduct 50% of the royalties that related or unrelated parties pay for use of the IP. In Luxembourg, the patent box regime provides an 80% tax exemption for the net income derived from the use of (or right to use) qualified IP rights acquired or self-developed after December 31, 2007.

Spain's patent box regime exempts 50% of the gross income derived from the cession of the use and the right to use qualified IP, with effect from January 1, 2008. Finally, and notably, Ireland, Luxembourg, Spain and Switzerland go further and also allow income from designs, copyrights, models and trademarks to be taxed at the lower Patent Box rate.

UK policy initiatives: debt finance

The Funding for Lending Scheme

As an addition to the quantitative easing programme (not discussed in this report), the Funding for Lending Scheme was announced in June 2012. It aims to boost the incentive for banks and building societies to lend more to non-financial companies and UK households by reducing funding costs. Its structure is designed to link access to funds available under the Scheme to the amount the financial institution lends to the 'real' economy, and to reward banks who lend more.

The Scheme is a 'collateral swap' designed to run over an 18-month period to the end of January 2014. It involves the Bank of England lending UK Treasury Bills to banks for up to four years, at a fee, with banks providing collateral (in the form of loans to businesses, households and other assets) to the Bank of England. Banks first have to be signed up to the 'Discount Window Facility'.

The intention is that the collateral will be swapped back again when the loans mature (so there is no long-term transfer of risk from the originating bank), but the Bank of England does have the power to realise the value of the collateral if necessary, and can also require more than 100% collateral against the Treasury Bills it lends.

An individual bank can borrow up to 5% of its existing loan stock as determined at end June 2012 (worth about £80bn), plus any expansion of its lending to the end of 2013, with every £1 of extra net lending (i.e. after repayments) increasing the amount a bank can borrow by £1. Whilst acknowledging that some banks have to reduce some parts of their lending activities, the intention of the Scheme is to reduce the impact of these reductions, and also to fend off increases in the cost of money that would otherwise further constrict lending.

The March 2013 report showed that whilst participating banks have drawn down £13.8bn, the collective lending book shrank over the initial period by £1.5bn. This was followed in September 2013 by a further report showing that while net lending grew by £1.6bn in the second quarter of the financial year, the fall in lending since June 2012 had grown to £2.3bn.

The performance of the two banks under partial public ownership received particular press scrutiny. In March 2013, it was announced that RBS had drawn down £750m but reduced its loan stock by £2.3bn, with Lloyds taking £3bn but reducing loan stock by £5.6bn²⁶. There were, however, some brighter spots, with newest bank Aldermore increasing lending to £479m, representing growth of over 30% in less than one year, and Metro Bank increasing lending 119% since the Scheme's introduction.

The Scheme was extended in April 2013, providing additional incentives for participants to increase SME lending. The September announcement showed continued improvements to the mortgage market but negative total net lending to businesses; however, perhaps as a result of modifications to the scheme, SMEs fared better than large companies.

The Business Bank and the Business Finance Partnership

The Business Secretary, Vince Cable, launched the first phase of the new Business Bank in March 2013²⁷. This allocated £300 million to be invested alongside private investors, as well as a further £50m for the Business Angel Co-Investment Fund (see Chapter 4) and £25m of extensions to the venture capital programme. It was the first deployment from the £1 billion of new capital allocated to the Business Bank in the 2012 Autumn Statement (alongside £2.9 billion of existing capital). This is a precursor to the Bank itself becoming a fully operational new institution by Autumn 2014.

The focus of this initiative is on promoting greater diversity of debt finance available to SMEs by encouraging the growth of smaller lenders and new entrants in the market. Investments will be made via new and existing lending channels on a commercial basis. The Business Bank initiatives are intended to complement the activities of the Business Finance Partnership (BFP) in that they aim to leverage at least the same amount in private sector investment.

BFP has an overall value of £1.2bn. The first round of the BFP saw private sector investment into non-bank lending match the government's £55 million investment, taking the total investment to £110 million. The second round of the BFP saw private sector investment exceed the government investment of £30 million, resulting in a total investment of over £70 million.

Successful BFP bidders in round one were peer-to-peer lenders Funding Circle and Zopa, fund management company Boost & Co and specialist asset finance provider Credit Asset Management Ltd. Successful BFP bidders in round two were the online platform Market Invoice, supply chain finance platform URICA and mezzanine fund manager Beechbrook Capital.

The programme will focus on investments that channel financing to viable businesses operating in the UK with an annual turnover below £100 million.²⁸ It has been established to invest in two ways:

- Alongside the private sector into managed lending funds, or other managed lending vehicles, for direct onward lending to SMEs

26 For an example of the coverage, see *The Times*, 10 March 2013, *The Independent on Sunday*, 26 May 2013, and *Sky News*, 29 September 2013

27 *Building the Business Bank, Strategy update*, BIS, March 2013

28 Department for Business Innovation and Skills Press Notice, 10 April 2013

- Direct Capital Investments: funding, either by way of equity or debt injection, alongside private sector investors into lending businesses able to use these commitments to increase their lending activity

BFP appears to be the single most relevant source of additional Government funding which could be brought to bear on IP-rich companies. It is open to bids from specialist funders for additional capital to improve their reach and scale and could be relevant for lenders seeking to leverage company IP more effectively.

Export Trade Finance

IP-rich businesses and high growth companies often have international markets for their products and services, but face a number of barriers to successfully transacting business overseas.

UK Export Finance (UKEF) is run by the Export Credits Guarantee Department (ECGD). It is a UK export credit agency which works with exporters and investors by providing credit insurance policies, political risk insurance on overseas investments, and guarantees on bank loans. Export Insurance policies can also be provided to support exports to most overseas markets outside the EU and certain OECD countries, for organisations unable to obtain cover from the private sector. UKEF also operates a network of export finance advisors.

UKEF operates a number of initiatives through and in conjunction with banks. These include the Letter of Credit Guarantee Scheme (between 50% and 90% guarantee), the Export Working Capital Scheme (normally providing up to 50% cover), and the Bond Support Scheme. The last of these provides a partial guarantee (typically up to 80%) which enables participating banks to issue bonds even if they do not have the risk appetite for the full amount.

Addressing the absence of collateral: the Enterprise Finance Guarantee scheme

About the scheme

The Enterprise Finance Guarantee scheme (EFG) is particularly relevant to considerations about IP, being aimed at businesses lacking tangible collateral or a sufficient track record (but which would otherwise be considered fundable by a bank according to their normal credit policies).

EFG is available in support of loans, overdrafts and invoice finance facilities of between £1,000 and £1m. This is an increase from £250,000 under its predecessor, the Small Firms Loan Guarantee Scheme (SFLG), which also restricted use of the scheme to businesses less than five years old. It is being moved under the auspices of the Business Bank and is currently due to continue to the 2014-15 financial year.

Data last collated in December 2012 indicates the following trends for the four largest UK banks (as now constituted) and all other lenders²⁹:

²⁹ Source: www.gov.uk. Data for 2012/2013 financial year relates to April-November period only.

Lender	Number of EFG loans				Amount (rounded to nearest £m)			
	09/10	10/11	11/12	12/13	09/10	10/11	11/12	12/13
Barclays	1340	481	355	249	119	47	35	30
HSBC	577	433	448	390	79	60	58	51
Lloyds TSB/ HBOS	1983	1499	669	159	134	114	56	17
RBS/ NatWest	2727	1804	1192	809	307	179	110	83
All others	555	468	335	227	98	61	42	20
TOTAL	7182	4685	2999	1834	737	461	301	202

At present, 45 lenders are approved to access EFG. Proposals have been announced³⁰ to expand EFG to support businesses seeking loans of under £25k, and also to help bridge the 'affordability gap' by providing a guarantee of up to 25% of the overall cost of repaying a loan (at present the guarantee only applies under circumstances of default).

Like SFLG before it, the EFG scheme provides a Government-backed guarantee (which attracts a 2% premium paid by the customer) of 75% of the remaining balance in each loan. However, there are two important rule changes:

- Lenders are now allowed to take security for lending, though a direct charge over a principal private residence is not permitted. This provides a greater sharing of risk between the Government, the bank and the business
- The maximum exposure for Government (driven partly by State Aid requirements) is set at 9.75% of the scheme value, meaning that banks are exposed to all the remaining bad debt once this limit has been reached

The overall average size of loan under EFG has been relatively stable since its inception, fluctuating between £103,000 and £98,000 over the 2009-2012 period, before rising to £110k in the first eight months of 2012/13. This latter increase in value is possibly due to the fact that the turnover threshold for eligible businesses was extended in 2011 from £25m to £41m. However, the levels of usage have varied considerably over time.

2013 EFG review: outcomes

A comprehensive independent review has recently been conducted for BIS of the effectiveness of EFG³¹. This considers the cohort of businesses funded in 2009, the first full year of operation for EFG, and the value the scheme has delivered to them and to the economy more generally. The report summarises the rationale and objectives of EFG as follows:

The purpose of such an instrument is to address the long established market failure in the provision of debt finance to SMEs which requires SMEs to provide evidence of track record or collateral to address asymmetric information between the lender and the business.... Economic uncertainty can increase lenders' aversion to risk, making the availability of collateral and evidence of a track record more important factors in the decision to lend.³²

The most relevant conclusions for considering the role of IP and finance include the following:

- The lack of security is confirmed as being a genuine problem for EFG users, with 82% of users indicating that they would not have been able to obtain a loan without the scheme
- Only 49% of EFG businesses had any collateral to offer (compared with 78% of other borrowers), and where it was available they had less to offer (a median of £50-100k compared with £250-500k). It was also much more likely that any collateral would be personal rather than business-related, compared with other borrowers. There appear to be a very small proportion (6% of cases) where the business may have actively chosen to withhold collateral they had
- EFG represents a far greater proportion of a business's total funding requirement than its SFLG predecessor – over 90% compared with under 50%
- Businesses that borrow under EFG grow at a similar rate to those which borrow from other sources, and a significantly higher rate than non-borrowers (33% sales growth for EFG, 35% for other borrowers, 25% for non-borrowers)
- EFG is more likely than other forms of borrowing to be used to expand a business rather than covering falling sales, increased cost or late payment. The businesses that used EFG for investment purposes rather than working capital grew at a significantly higher rate in terms of sales and job creation, and having EFG available meant that they would invest sooner than would otherwise be the case. Conversely, over 70% of EFG respondents said their business would have shrunk had the scheme not been available
- Despite a higher default rate for the EFG portfolio compared with general commercial lending, the net economic benefit of the scheme is estimated to be £1.1bn, and is likely to be significantly higher since most of the businesses which will default do so at an early stage

31 *Economic Evaluation of the Enterprise Finance Guarantee (EFG) Scheme*, Allinson, Robson & Stone, Durham Business School, February 2013

32 Ibid

- Notably, the report states that *“there is no evidence of EFG businesses being of a lower (or higher) quality than the background population of businesses.”*

Whilst EFG provides one way in which younger businesses can obtain debt finance, and does attract a younger business profile than commercial lending in general, it clearly is not just for start-up businesses, as over 70% of businesses using the scheme were over two years old, and over half were more than 5 years old.

Lender observations on EFG

Feedback from lenders indicates that in practice, security is still considered over all available business and personal assets, excluding any principal domestic residence (which the rules of the scheme prohibit). Before proceeding with any EFG request, lenders will frequently attempt to establish their typical facility process using all security available. EFG will only be available for creditworthy businesses that are viable and that can afford the facility.

Richard Holden, Head of Manufacturing, advised that Lloyds Bank is currently offering EFG loans at secured lending rates, which has led to a recent increase in take-up (although 2% premium is still payable to the Government in respect of the guarantee provided).

Stephen Pegge, Director of SME & Corporate Communications, confirmed that Lloyds has been a very active user of EFG with around 25% of the current book, but that activity fell off for a time owing to concerns about high default rates associated with the scheme, and the bank wishing to ensure that the rules on affordability and viability (intended to be the same as for regular bank lending) were being correctly applied. He advises:

More recently, we’ve reviewed and reinforced the benefits and use of EFG, making some changes to promotion, pricing and process and seen some good growth again in the lending done under the scheme.

There is a bit of a tradition that EFG has been used for more marginal lending. However, it is an ideal vehicle to provide finance to people who have good cash flows but don’t have tangible security.

Holden agrees that EFG has traditionally been associated with riskier deals, adding that *“In this context, the bank would desire additional protection by way of a legal charge over the lender’s IP if it was available and had any value.”*

David Gill, now working in Cambridge and managing equity investments, was previously the instigator of the technology team at HSBC and Head of Technology and Innovation for a number of years. He commented in more detail on EFG and its predecessor:

At the margin, we could in the past use SFLGS if we did not have an alternative means of repayment. This was relatively circumscribed, because it only went up to £250k. The increased caps with EFG are good, but it is a lot easier to demand additional guarantees than it was previously.

There is also some quite complex maths behind the government guarantee. At any one time, it is limited to 75% of any one loan, and this is calculated on 13% of the total loan book under EFG, which boils down to a guarantee of about 9%. It would be very bad luck to go anywhere near that level, as it would have to be more than double the average bad debt ratio, but still...

More generally, because the borrower has to pay an extra charge – 2% annually, payable quarterly – there is a bit of an adverse selection issue. If you choose to pay on your credit card not your debit card, what does that say about your credit? By implication, you are a much thinner proposition.

Also, there is always the risk that as you climb the risk gradient, you have to charge more for the increased risk, but that as you also have to charge more per customer individually, you push them closer to the wire.

Stuart Ager now runs the East of England Regional Growth Loan scheme. He is a former head of the Technology Sector Group at NatWest. He had the following observations on EFG from his lending experiences:

The public perception is that the banks only need a 25% guarantee. In practice, there is a quota related to the use of the scheme and the default rate, so the bank doesn't really know where it stands.

EFG does not change the fundamental issues of assessment – i.e. will the business be able to generate sufficient free cash flow to service the debt level and achieve full repayment over an agreed period of time? If the answer to this question is “yes”, but the quantum being requested goes beyond the level of security available, then the EFG is a valid route to progress.

However, lenders do not like owners/directors who seek to hide their personal assets outside of any security required to support their business. The question is raised “why?” – do the directors not have faith in the business?

Ager does believe that IP and EFG are potentially a good fit:

Whilst SFLG precluded taking any personal security, banks can and do take other forms of security under EFG, and they are only supposed to use it where nothing else can be provided. So banks are turning people down because they could have offered them something else, such as invoice discounting, even if it wasn't right for them.

Alignment of IP work with EFG makes sense because it could put back some of the ‘skin in the game’, provided that it is crucial to the business. And a valid first step would be to ensure that any problems associated with the IP are sorted out.

UK policy initiatives: equity finance

Co-Investment Funds in Scotland and England

The Scottish Enterprise Co-investment Fund helps to increase the amount of capital that can be invested in promising start-ups. It started in 2003, just after the 'dotcom bubble' burst, and was critical in reinvigorating the market. Its principles have now been adopted in England, Canada and Australia. This ongoing presence of assistance and incentives has helped to ensure that the Scottish market has not dipped.

Launched in 2011, the Business Angel Co-investment Fund ('Angel CoFund') closely follows the Scottish model. Privately run, it was established with a grant from the Regional Growth Fund, backed by the Government's Business Bank, which was recently increased from its original £50m to £100m. It is able to make initial equity investments of between £100k and £1m (with an upper limit of 49% of any investment round and with the Angel CoFund not allowed to own more than 30%), working alongside groups of business angels to invest in high growth SMEs across the UK, directly providing funding as well as encouraging the expansion of the business angel market.

George Whitehead, a founder of the Angel CoFund, explains some of the thinking behind the scheme:

Business angels are often sensible investors and can add a lot of value and experience; they just don't generally have deep enough pockets to take companies to the point that they achieve profitability or have the scale to attract venture capital involvement. The principle of the Angel CoFund is to amplify what the angels are doing - so it simply extends the round, on the same terms.

One of the most compelling things about the Angel CoFund is that it can follow its money: many seed investors are not prepared for the long road ahead! By aligning ourselves with the angels' interests, we provide the backing of a fund with considerable resources which will base its follow-on funding entirely on their decision. That is very powerful when dealing with 'Series A' funders like venture capital companies.

The Angel CoFund operates an independent investment committee which evaluates the proposals syndicates put forward, providing a 2.5% fee to the syndicate (which does not need to be formally constituted) to recognise the costs of the due diligence required. Whitehead adds:

I wanted to raise the quality of angel investing in the UK, because networks don't always provide a good level of due diligence – there's not enough rigour. Research confirms how important proper investigation is to success, and the Angel CoFund can't do it because it is as lean as it can be! And if the angel doesn't do the due diligence, who will?

The scheme requires there to be a lead angel, to ensure somebody always knows the business inside out – I want the buck to stop with someone! The simplest way to ensure this happens is for three of our advising angels to have a conversation with the lead investor and have a sensible discussion about what the business is doing and the investment terms.

Applications to the Angel CoFund must represent the angels' first investment in a business. To date the Fund has supported 32 companies (for example Yplan, PlayJam and Micrima) providing over £10m in direct investment alongside £40 million from business angels.

There is also a Scottish Seed Fund (which does not have an English equivalent). Operating on a co-investment basis with either syndicates approved by the Scottish Investment Bank or individual private investors, it primarily uses equity to bring between £25k and £250k to companies who are completing product development or commercialisation and which have growth or export potential. Companies must have secured 50% of the funding being sought prior to application, and the fund is subject to restrictions in terms of sector activities (exclusions include retail, property, banking and insurance and professional services).

Enterprise Capital Funds (ECFs) and the Innovation Investment Fund (IIF)

ECFs are commercial funds designed to bring together private and public money to support businesses with high growth potential. The programme, run by Capital for Enterprise, aims to invest in 2-3 new funds per year by providing gearing on private investments. In effect, these offer enhanced profits to private investors when the funds are successful, to make them more comparable to the returns achievable in later stage funds.

There is now a portfolio of 12 active funds with commitments totaling approximately £400m, of which £240m has been committed by the Government. Latest reported figures show that £166m has been invested in 144 fast-growing businesses with some significant follow-on financings now being achieved. The Government's commitments are made on a competitive basis to teams who can raise the appropriate level of supporting capital.

IIF operates as two funds of funds – the Hermes Environmental Innovation Fund and the European Investment Fund's UK Future Technologies Fund. IIF was established in 2009, again with the aim of supporting innovative businesses. It has a focus on strategically important sectors including digital technologies, life sciences, cleantech and advanced manufacturing, all of which are IP-rich.

An assessment of the IIF, conducted in May 2012³³, confirmed that the £150m invested by Government had been more than matched by private investors, providing £330m at closing. It assesses the experiences of 16 businesses which have received funding from the scheme and concludes that IIF has had a positive influence, though it is too early to assess its full leverage impact.

33 *An early assessment of the UK Innovation Investment Fund*, CEEDR and Middlesex University Business School, May 2012

Tax reliefs: the Enterprise Investment Scheme and Seed EIS

Nesta's report on angel activity³⁴ found that the typical private investor put 10% of their total net worth into business angel investments (though 44% had only invested 5%). This is consistent with experience quoted by Bill Morrow, founder of Angels Den:

91-92% of an angel's capital is tied up in things that make money and they put 8-9% into new things. In a recession, the normal portfolio is much more volatile, with a decreasing amount tied up in VCTs and third party brokers.

As well as the capital returns from subsequent successful exits, tax incentives are a further important motivation for angel investing. Subject to some exclusions (including a requirement that there is no previous 'connection' with the investee business), angels can use the Enterprise Investment Scheme (EIS) to obtain income tax relief on their investment in the year it is made, or the prior year³⁵. The maximum subscription that can qualify for EIS income tax relief has recently been doubled from £500k to £1m (with effect from the 2012-13 tax year).

The rules concerning these investments have been made more generous in recent years, with tax reliefs provided on EIS being increased from 20% to 30%. In addition, the Seed Enterprise Investment Scheme (SEIS) has been introduced, providing a higher rate of income tax relief (elevated to 50%) to angels who invest up to £100k annually in qualifying seed companies. This was kick-started with a Capital Gains Tax exemption on any gains realised in 2012-13 which were invested via SEIS in the same tax year.

EIS also provides two capital gains tax reliefs: disposal relief and deferral relief. These mean³⁶ that:

- Provided an angel has held EIS qualifying shares for at least three years, that income tax relief was received on them, and that none of this relief has been withdrawn, no capital gains tax is payable on a gain on disposal of the shares. Also, if there is a net loss on disposal at any time (i.e. after taking income tax relief received into account), this can be offset against chargeable gains or (potentially) other income
- Whilst capital gains tax is normally payable for the same tax year in which an asset is disposed of, deferral relief allows an investor to treat the gain as not arising until a future date (up to five years following EIS certificate issue) if EIS shares are acquired. This will usually be the year in which the shares are disposed of. It is not essential to have obtained income tax relief to qualify for this benefit

Over 80% of investors covered in the Nesta report had made use of EIS, and the report also estimated that 24% of deals would not have happened without it³⁷.

34 *Siding with the angels*: Wiltbank, Nesta, May 2009

35 Enterprise Investment Scheme – Income Tax relief, Helpsheet 341, HM Revenue & Customs

36 Enterprise Investment Scheme and Capital Gains Tax, Helpsheet 297, HM Revenue & Customs

37 *Siding with the angels*, Wiltbank, Nesta, May 2009

Several participants in the equity financing landscape were asked for their views on the contribution made by EIS (the views of high net worth individuals themselves are shown in Chapter 4). Jenny Tooth, Chief Executive of the UK Business Angels Association, thinks the Seed EIS scheme, with its higher tax relief, *“helps angels to get comfortable with the risk that is presented by organisations that are IP-rich but at a very early stage of development.”* She also believes that the more generous reliefs now available may be contributing to recent growth in angel activity anecdotal evidence indicates. This has been demonstrated through UKBAA’s recent research with Deloitte which showed that 58% of those interviewed had invested more in 2012-13 compared with the previous year³⁸.

Sandy Finlayson of MBM Commercial is an experienced lawyer working closely with many Scottish syndicates. He contrasts the success of EIS used by individuals with past experience of EIS funds:

Some of these funds were only interested in the management charges, not in growing businesses, and selling tax shelters is still something of an issue. However, if we could find the right collective investment scheme that would attract EIS reliefs but didn’t need to be regulated, it would be very beneficial.

At the same time, he points out:

None of these serial angels actually need the money; tax breaks are important for the returns (and the portfolio attracts business property relief, which is helpful for older investors in terms of inheritance tax liabilities), but these aren’t the reason for investing. There’s a lot of desire to put something back.

Bill Morrow voices his opinion on angel motivation:

It’s a kind of altruism I’m still trying to understand, but it’s about passion, wanting to make a difference, and be part of something. In the UK, angels will only invest if they add value (which they nearly always can) and sometimes don’t invest if they can’t, even if a company has good traction. This is a little different from the US where they are often content just to put their money in. If an angel is only interested in tax mitigation – which is perfectly legitimate – they’re probably not going to be best for the company.

Tax reliefs: Entrepreneurs’ Relief

As well as considering the tax incentives for investors to purchase equity in growth companies, the motivations for entrepreneurs to accept funding to grow their businesses and benefit from a subsequent exit need to be considered. If the interests of founders, management teams and investors are not well aligned, this is likely to have an adverse impact on performance and opportunities to realise value from the business.

38 *Taking the Pulse of the Angel Market*, Deloitte, July 2013

Prior to the introduction of entrepreneurs' relief, individuals starting, growing and disposing of companies could reduce their capital gains tax liability to an effective rate of 10%, provided qualifying shares had been held for over two years. This was done using a scheme called Business Asset Taper Relief. However, it raised concerns that it was being used for purposes other than those originally intended, and was replaced for the 2008-9 tax year.

Entrepreneurs' relief originally worked by reducing gains by four-ninths, reducing the rate of 18% on qualifying gains (on a material disposal) to an effective rate of 10%. This has now been simplified and gains from disposals made on or after 23 June 2010 are now charged to capital gains tax at the rate of 10%³⁹.

The qualifying conditions are now one year but are subject to a lifetime limit. This was originally set at £1m when the scheme was first introduced but has been increased progressively to £2m, £5m, and now stands at £10m for disposals on or after 6 April 2011.

Selected international initiatives impacting on IP-rich SMEs

Europe: France

In 2005, OSEO⁴⁰ was established by bringing together the French innovation agency and SME development bank, with the aim of providing assistance and financial support to French SMEs in the most decisive phases of their life cycle. OSEO covers three areas of activity: innovation support and funding for technology transfer and innovative technology-based projects with real marketing prospects; guaranteeing funding granted by banks and equity capital investors; and funding investments and operating cycles alongside banks. It reports to both the Ministry for Economy, Finance and Industry and Ministry for Higher Education and Research.

Every year, the Ministry for Economy, Industry and Employment, through the General Directorate for Competitiveness, Industries and Services (DGCIS) earmarks funds for EUREKA France, mainly providing refundable loans without interest. Grants are also possible for industrial research phases, with SMEs above 50 employees being the main target for this intervention.

Separately, following the work of the European Commission on the Economics of Intangibles, a working group was established in 2011 to focus on 'Principles of Measurement of Intangibles – proposals for the provision of competitiveness and the sustainable development of businesses'. Its report later that year concluded that intangible capital is now at the heart of sustainable growth and the qualitative competitiveness of businesses, providing a route to business longevity and a major pillar of lasting value.

In introducing the Report, the current state of Accounting Standards was identified as not giving full visibility of intangible capital. This led the Supreme Council of the Institute of Chartered Accountants to participate. After a year of work, the study made 12 proposals around three major directions to encourage companies to monitor the performance of their intangible assets and to then correctly measure and report to market.

39 Entrepreneurs' Relief, Helpsheet 275, HM revenue & Customs

40 see www.bpifrance.fr/autre/oseo_in_english2

Under the first direction: 'A Process for the Measure of Intangibles', the five proposals were:

- Establish mapping of intangible assets that are relevant in furthering competitiveness and business strategy
- Identify and structure the qualitative and quantitative indicators to identify and measure intangible assets that have been "mapped"
- Ensure the relevance and robustness of measurement indicators of intangible assets
- Analyse the link between the performance of the intangible assets and financial performance and select indicators
- Manage the utility value of the intangible portfolio to provide a better long-term valuation of the business

Proposals within the 'Governance and Management in order to control and lead the performance of intangible assets' direction were:

- Integrate intangibles in institutional and operational governance
- Use existing processes to achieve the reliable measurement and performance management of intangible assets
- Integrate the measurement of intangible assets in internal and external control processes
- Make intangibles secure by integrating them into intellectual property protection and insurance

The final heading, 'Efficient Communication to promote the value of Intangibles', included three proposals:

- Integrate intangibles' in the training of analysts and their diagnostic and assessment methodologies
 - Integrate intangible investor's governance and management arrangements
 - Enhance businesses' communication strategies for reporting intangibles
-

Europe: Germany

According to German GAAP, following the Accounting Law Modernisation Act, a company is allowed to capitalise internally generated intangible assets in its balance sheet if the features of an asset are met⁴¹. The main criteria for capitalisation are independent marketability and measurability.

A report in 2010 by the Institute of Management and Economics and the Department of Financial and Management Accounting concerned the intellectual capital statement as a component of the management commentary. The aim of the project was to integrate essential intangible factors relevant for the sustainable success of companies into the management commentary; it identified that current information about intangibles is not sufficient to assess the future financial and earning power of a company, especially a SME⁴².

One of the main project achievements was a checklist with intangible factors and assigned indicators. Based on a national and international survey, complemented with experiences of the trial companies, key factors and indicators were identified. Besides factors of human, structural and relational capital, financial influences on a company's success were included. The checklist provides guidance for SMEs as well as documenting the advanced implementation process for the audit.

In addition to a standard list an electronic template was developed, the "Wissensbilanz-Toolbox", to promote usability and to perform different analysis with the data to identify relevant contents. Guidance and reporting structures were also developed to help companies integrate the results into their management commentary.

Europe: Denmark

In 2007, the Danish Patent and Trade Mark Office established an IP exchange to be "*a venue for buyers and sellers of IP rights*" and to assist businesses to "*better exploit IP knowledge fully by trading IP rights*". The IP Trade portal provides "*information and guidelines for trading IPRs, standard contracts and accompanying guidelines for trading patents and utility models, IP evaluation tools and accompanying guidance material in valuation and statistics on trading IPR*"⁴³.

The trading platform, which is free for sellers and searchers, has the capacity to meet one of the key requirements of IP finance, namely a marketplace for the sale of distressed IP assets, although to date, given the infancy of such structured financial frameworks, it has not been used to this end. Also, its aspirations are limited to being a 'display window' for patents, designs and trade marks, and the marketplace does not include any transactional facility.

41 ss248.2.1 German GAAP

42 The Project's results and experiences were published in the edited volume *Wissensbilanzen im Mittelstand-Kapitalmarktkommunikation, Immaterielle Werte, Lageberichterstattung, Integrated Reporting EBRL* (Schaeffer-Poeschel, May 2013).

43 See www.ip-marketplace.org

Asia: India

To date there has been evidence of some limited appetite amongst banking institutions towards IP. The most (in) famous example is Kingfisher Airlines, which successfully securitised its brand assets to borrow \$420m from State Bank of India in 2009, but which has been grounded for around 10 months at the time of writing and currently owes more than \$1bn to the banking consortium led by that bank. It has been reported that this brand valuation has been added to the company's balance sheet.

There have, however, been other securitisation deals in India, such as LT Foods, reported to have used its 'Daawat' brand of packaged rice as collateral to raise debt for a £50m acquisition of a US competitor. There have also been successful securitisations of spirits brands within the same Kingfisher group, and other Indian retail and fashion companies have leveraged their brands to obtain bank funding.

Apart from professional advisers, the primary organisations driving commercial activity in IP rights have been the Federation of Indian Chambers of Commerce and Industry (FICCI) and the Federation of Micro, Small and Medium Enterprises (FISME). Recognising the growing contribution of intellectual property to member organisations, FISME has initiated a number of programmes with assistance from the National Manufacturing Competitiveness Programme under the Office of the Development Commissioner within the Ministry of MSME.

Following the creation of a number of IP facilitation centres in New Delhi, Bangalore and Hyderabad, FISME has gone on to explore two key themes; IP valuation and the creation of a mechanism to sell the IP and realise the value. It obtained additional support from the Prosperity Fund, provided by the British High Commission in order to set up a prototype IP marketplace at www.IPRexchange.in.

This is an experimental site established to facilitate outright sale, licensing or franchising to rights that have been identified and protected, both to assist participating businesses and to provide a demonstration of the financial value associated with IP. It is not yet populated, but the Controller General of the Indian Patent Office has called it a "very good initiative; we would be willing to help as far as possible".

Asia: China

China launched a major IP strategy in 2008 to support the creation, utilisation, management and protection of IP, with the aim of fostering 'indigenous innovation'. This concept, defined as advancing domestic Chinese innovation via 'original' innovation, integrated innovation (combining existing technologies in a new way), and assimilated innovation (making improvements to imported technologies) was set out in the National Medium and Long-Term Plan for the Development of Science and Technology (2006-2020), setting the objective of making China a world leader in technology by 2050. A variety of initiatives have followed, most recently the 12th Five Year Plan for Establishing National Indigenous Innovation Capacity (Plan) promulgated on May 20th 2013 by China's State Council.

Seven industry sectors have been specifically targeted for stimulus measures: energy conservation and environmental protection, new generation IT, biotechnology, advanced manufacturing, renewable energy, materials, and environmentally-friendly automobiles. However, these are not proscriptive, and many other industries (including some in the 'social sphere') also have government-led plans associated with indigenous innovation. The Plan also specifically references the importance of building innovation in cultural industries and developing these into a pillar industry in China.

More generally, the Chinese government is trying to boost domestic ownership of intellectual property rights in more industries. One such approach is to set targets for rewarding and otherwise assisting in the development of Chinese indigenous IP. As noted above, tax incentives are also in place, and the increased appreciation of the importance of IP to economic output has spurred progress in the enforceability of IP rights in China (to the benefit of domestic and foreign companies).

Asia: Hong Kong

The Innovation and Technology Commission (ITC) was set up on July 1, 2000 with the mission to spearhead Hong Kong's drive to become a world-class, knowledge-based economy. In January 2004, the Hong Kong government established a Steering Committee on Innovation and Technology to co-ordinate the formulation and implementation of innovation and technology policy and ensure greater synergy among different elements of the innovation and technology programme.

ITC works with other government departments, the industrial and business sectors, institutions and industrial support organisations to promote applied research and development (R&D) in different technology areas. Following a comprehensive review and a public consultation exercise, the ITC set up five R&D centres in 2006 to drive and co-ordinate applied R&D in five focus areas: automotive parts and accessory systems; information and communication technologies; logistics and supply chain management-enabling technologies; nanotechnology and advanced materials; and textiles and clothing. At the end of February 2013, 527 projects from the R&D Centres were approved at a total project cost of \$3 billion.

The ITC manages funding schemes to encourage companies in Hong Kong to develop innovative ideas and technology businesses. The Innovation and Technology Fund (ITF) was set up in 1999 with an injection of \$5 billion. There are four programmes under the ITF to cater for different needs: an Innovation and Technology Support Programme; a University-Industry Collaboration Programme; a General Support Programme; and a Small Entrepreneur Research Assistance Programme.

As at the end of February 2013, 3,215 projects with total ITF funds of \$7.3 billion were approved. Most of the funded projects were related to information technology (19 per cent); electrical and electronics (17 per cent); manufacturing technology (11 per cent); and biotechnology (10 per cent). ITC also manages the development of the Hong Kong Science Park, due to open in 2014.

In April 2010, the Government introduced an R&D Cash Rebate Scheme to reinforce the research culture among enterprises and encourage them to establish stronger partnerships with

local research institutions. Under the Scheme, a cash rebate is provided on the applied R&D investments by enterprises. The Scheme covers projects funded by ITF and applied R&D projects conducted by enterprises in partnership with local designated research institutions. Since February 2012, the level of cash rebate has been increased from 10 per cent to 30 per cent. As at end of March 2013, 577 applications with a total cash rebate of \$41.4 million were approved.

South-East Asia: Singapore

In April 2013, the government of Singapore accepted the recommendations of its IP Steering Committee, which has drawn up a ten year strategy to establish the island as a central 'hub' for Intellectual Property in South East Asia. The committee was originally convened in May 2012.

Among the various initiatives, the government plans to introduce an IP financing scheme which includes the concept of partially underwriting the value of patents used as collateral for bank loans in event of default. This measure is intended to encourage banks to recognise IP as an asset class, to build IP financing capabilities among financial institutions, and allow IP-rich companies to raise capital more easily using their patent assets, and was referenced by Singapore Deputy Prime Minister Mr Teo at the 4th Global Forum on Intellectual Property (GFIP) in August 2013. The scheme is due to become available from Q1 2014.

As part of the 'Global Hub for IP' vision, the Intellectual Property Office of Singapore (IPOS) will also set up a new Centre of Excellence for IP valuation, and the latter will work with industry stakeholders on areas such as research on IP valuation methodologies and training and certification for IP valuation professionals. It will invest \$40m to build up patent search and examination capabilities in technology areas considered to be strategically important to Singapore. Another \$12m will be spent strengthening the IP Academy to be the central agency to orchestrate the delivery of education and training.

IP creation is seen as increasingly important as Singapore's economy restructures towards innovation-driven growth. Earlier this year, during the Budget statement, the Productivity and Innovation Credit Scheme (PIC Scheme) has been enhanced to allow IP in-licensing costs incurred to qualify for PIC benefits.

PIC benefits are a grant or subsidy where businesses can make a claim for deduction in their tax returns by converting up to \$100,000 of their total expenditure in six qualifying activities; acquisition and leasing of IT, training, acquisition and in licensing of IP, registration of patents, trademarks, design and plant varieties, R&D and finally designs approved by Designs Singapore Council. The 2013 revision allows companies to claim 60% in cash payout or 400% tax deduction on their expenditure on any PIC qualifying activity.

The significance of this scheme is underlined by the findings of a recently-released report by DP Group titled The Fastest Growing 50 (FG50). In its report, DP Group announced that large corporate firms now dominate its list, with only four SMEs included, making it the lowest representation and the weakest showing since the report's conception in 2002. It also marked a significant drop from 11 in 2012 and 17 in 2011. The report, which identifies companies with at least a 10% turnover growth annually for the last three years, also revealed that SMEs have

struggled to stay in the list due to rising business costs and greater market uncertainties. Commenting, Mr Satish Bakhda at Rikvin is quoted as saying:

The year has been full of challenges for SMEs. As the country restructures towards innovation-driven growth, IP creation will become increasingly vital to the success of a company. Hence the move to assist SMEs with having better access to funding is a welcome one. IP assets are accorded a new worth and SMEs can now exploit that. We anticipate that this new scheme will sway in Singapore's favour and attract innovation-based companies to set their sights here or even set up Singapore companies.

To boost the overall ecosystem, financial institutions that undertake IP financing-related courses can also apply for support under the Financial Training Scheme administered by the Monetary Authority of Singapore (MAS).

South-east Asia: Malaysia

Malaysia has been contemplating the introduction of specialist IP financing measures for several years. In November 2011, Malaysian Development Corporation (MDeC) chief operating officer Ng Wan Peng highlighted the lack of a collectively acceptable IP valuation framework which financial institutions can adhere to when processing applications for financial assistance. Ng indicated that hundreds of MSC Malaysia-status SMEs that possess IP rights such as patents, copyrights and trademarks were facing difficulties in getting financial assistance to commercialise their products:

More than 1,000 SMEs with MSC Malaysia status have IP rights which range from patents to trademarks, copyrights and industrial designs. Not all need financial assistance to commercialise their products but most of them will be happy to have some kind of recognition that the IP created by them actually has value. MyIPO has been working hard in driving this initiative including looking at the amendments of the IP laws to allow the adoption of IP rights as security.

She highlighted the difficulties for financial institutions in accepting IP rights as a 'collateralised' asset:

I think they are more comfortable in giving out the loan based on business plans on tangible assets or proven business rather than looking at IP as collateral. It's not that they don't want to value the IP, the problem is that they don't know how to value IP rights. We do not see financial institutions keen in readily accepting IP as collateral at this moment. We were told by some companies, most of them SMEs, that they have difficulties in getting banks to recognise their IP rights.

Financial institutions have to start developing capability in these areas as more and more companies will have less and less tangible assets. In becoming more competitive, financial institutions would need to know how to value intangible assets and put a defensible value that can mitigate the perceived risk attached to assets such as IP... Eventually, we hope that local companies will continue to create IP which will be

accepted as an asset that can be transacted and thus help increase our competitiveness as a nation.

Subsequently, in its 2013 budget, the Malaysian Government announced an allocation of RM 200m to Malaysian Debt Ventures Bhd (MDV) to develop an IP fund scheme.

MDV is set up to fund SME's innovative companies, with a special emphasis on ICT, biotechnology and green technology, to expand their businesses by using intellectual property rights as collateral to obtain financing. The new IP fund scheme would provide a 2% interest rate subsidy and guarantee of 50% through Credit Guarantee Corp Malaysia Bhd.

RM19 million (around £4m) was also allocated within the 2013 Budget to the Intellectual Property Corporation of Malaysia (MyIPO) to create training programmes to local intellectual property evaluators as well as the creation of an intellectual property rights market platform.

The valuation training programme was launched on 7 March 2013, and a number of international valuation specialists (including Valuation Consulting Co Ltd) have been involved in its delivery to a number of locally based IP practitioners, bankers, accountants and VC companies over a series of cohorts.

The stated intention of this programme is to create an IP Valuation Model to allow IP to be valued and recognised by financial institutions as an asset that can be put up as collateral in obtaining financing. The IP Valuation Model is intended to serve as a guide for financial institutions as well as stakeholders in conducting valuations, or to be used as a basis to get a third party to undertake the valuation process. Latest reports suggest this is intended to be functional by January 2014.

South-east Asia: Korea

The Korean Government has experimented with numerous types of support to aid SMEs in both contentious and non-contentious situations. The former has included direct cost sharing initiatives between SMEs and Government regarding IP disputes and furthering the creation and sale of commercial IP insurance to cover the cost of potential infringement law suits. Under this scheme, the Government pays 70% or more of the premium for IP insurance.

In the non-contentious area, Korea Development Bank (KDB) and the Korean Intellectual Property Office (KIPO) are working together on initiatives to help SMEs and others. KIPO provides a valuation service for IP, and KDB either buys it or puts up guarantees for others to lend. Conversations indicate that over last few months, the emphasis seems to have turned from a fund to purchase IP (which is an expensive initiative) towards a policy of supporting guarantees. The real learning for KIPO and KDB in work so far has been in understanding the valuation process, which their experience suggests is more effectively leveraged by guarantees than by purchase.

The guarantee organisation, known as KODIT, provides 95% underwriting of IP valuation for lending and/or securitisation. It focuses on the value and the quality of patents, examining the

entire international portfolio/coverage of a company's patents, rather than focusing on domestic aspects (as its intention is primarily to support international expansion). It is believed currently to be looking to bring in commercial banks to expand the process and to access more private finance

In total, as reported by the Korean Herald in February 2013, the Government currently offers no less than 160 SME incentives, including tax benefits. Achieving shared growth between large and small companies has been a key policy goal of the Government for years, and this is expected to gain momentum under President Park Guen-hye, with large companies being encouraged to support SME growth via intervention and state funded panels.

The new administration plans to increase R&D support for SMEs and reduce their income gap with big companies in a bid to foster global SMEs; it is believed that many SMEs in Korea deliberately delay growing over the legal measure of size for SMEs to receive benefits and the Park administration plans to give a 10 year grace period for SMEs that have grown into medium-sized companies with high potential. The new President also vowed to take steps to keep banks from cutting back on loans for SMEs.

USA

In 2012 the Financial Times carried a report by Brooke Masters, Chief Regulation Correspondent, suggesting that several US banks want to tap the value of the IP holdings of their borrowers as a way of addressing their capital requirements under Basel III rules. Under the terms of many loans, banks have the rights to seize a borrower's patents and trademarks as part of a foreclosure proceeding. However, even in the US (where domestic lending is not regulated by Basel III) these intangible assets cannot generally be counted towards a loan's security for regulatory capital assets because they are considered too difficult to value.

Some banks faced with tougher safety rules (that began to take effect in January 2013) are exploring whether they can use these IP assets to reduce their estimates of expected losses in case of default, in turn reducing the risk weight of a loan and overall capital requirements. The banks are reported to be interested in deals in which an insurer agrees to buy a borrower's intellectual property – anything from a mobile phone patent to a logo or recipe – for a fixed price in case of default. That price can then be counted against the expected losses, in the same way the expected proceeds from a credit default swap can be used today. One particular firm, MCAM, is already active in this space: their activities are summarised in chapter 7.

A Bill was recently introduced in Congress to provide a significant tax break to companies that manufacture patented goods in the US, along similar lines to those introduced elsewhere. The Manufacturing Innovation in America Act, HR 2605 was introduced on June 28th, 2013, lowering the Corporate Tax Rate from 35% to 10% on company's profits that are derived from the sale of patented products (and foreign patents in certain circumstances).

In order for a company to qualify for the reduced tax rate, a company must have a US patent and a substantial portion of the patents covering the product must be the result of research and development performed in the US. The legislation specifies that a foreign patent may also be treated as a "qualified patent" under the Bill if the foreign patent is "for the same or substantially

similar invention or application” as a US patent that the taxpayer holds or exclusively licenses and provided that the taxpayer holds or exclusively licenses the foreign patent.

Other important non-policy initiatives in the US market include the IPXI rights exchange, described in more detail in chapter 7.

Canada

In 1995, the Canadian parliament passed the Business Development Bank of Canada (BDC) Act leading to a new name and mission for the bank. The Act mandates BDC to promote entrepreneurship with a special focus on the needs of SMEs and to fill the market gaps and maximise financing alternatives for businesses by offering services that were complementary to those available from other financial institutions.

BDC is a federal crown corporation wholly owned by the Government of Canada. Its current mandate is to help create and develop Canadian businesses through financing, subordinate financing, venture capital and consulting services, with a focus on SMEs. As reported at www.bdc.ca, with more than \$1bn in current and planned investments, BDC focuses on innovative IT, health and energy/clean technology companies with high growth potential.

More recently, Canada’s Budget 2010 (*Leading the Way on Jobs and Growth*) announced a comprehensive review of support for research and development in order to optimise the contributions of the Government to innovation and related economic opportunities for business. The Review’s report (*Innovation Canada: A Call to Action*) was released on October 17, 2011.

The report made a series of recommendations aimed at promoting business innovation. These included creating an industrial research and innovation council with a clear business innovation mandate, and simplifying the scientific research and experimental development programme by basing the tax credit for SMEs on labour-related costs. This was intended to enable funds to be redeployed from the tax credit to a more complete set of direct support initiatives to help SMEs grow into larger competitive firms. There are also measures to help high-growth innovative firms access the risk capital they need through the establishment of new funds where gaps exist.

South America: Brazil

In contrast to Singapore, Brazil has opted to use its long established Development Bank (BNEDS) to consider IP lending possibilities. In the past the same bank had been used to support capital and infrastructure projects. The remit of the bank has now been updated to reflect industrial development and diversification.

Similar to the government guarantee to be offered in Singapore, the Development Bank essentially underwrites IP business on behalf of the government, reflecting a portfolio of both historical and new IP business. The bank has a scoring system for management and IP capability, which is set in the context of market assessment, for lending on higher risks than would be normally accepted by commercial banks. This business is in its early stages and metrics on the performance of this new portfolio of lending are awaited.

Chapter 3

Forms of debt finance and their relationship to IP

Key points

IP seldom features formally in mainstream lending applications at present

Successful IP-backed lending models do exist

IP is featuring in areas of credit decision making, but not generally in a systematic way

Low margins of lending demand affordable standard procedures for understanding and securing assets

Cash is king: demonstrating the relationship between IP and cash flow is therefore vital

IP matters to management: a means for banks to obtain further 'skin in the game'

Introduction

As explained in Chapter 1 above, it is not the function of this report to investigate the overall supply of finance to SMEs, as this has been more than adequately documented elsewhere. However, to understand the potential role of IP and intangibles in facilitating better and wider access to finance, it is necessary to identify and investigate the underlying factors affecting supply, as well as the policy initiatives already aimed at addressing them, outlined in Chapter 2.

This chapter starts with a short review of the factors affecting the supply of debt finance to UK SMEs. The report then provides a brief description of the different forms which debt finance takes, before examining the role of IP in decision-making, risk management and exit, and how IP and intangibles do or do not feature now, within each of them.

Factors affecting the current UK supply of debt finance

Leaving aside macro-economic factors (which have been exhaustively examined in other studies), the key aspects for immediate consideration are the reasons that have been given for businesses who wish to finance growth not being able to do so using debt instruments.

Trends in rejection rates are out in considerable detail in a BIS publication dating from April 2013⁴⁴. This uses data from a succession of SME surveys. The report set out to consider characteristics of SMEs likely to face constraints in the supply of credit, which it summarised in the following way:

44 *Evaluating changes in bank lending to UK SMEs over 2001-12 – ongoing tight credit?* BIS, April 2013

The supply of bank credit to SMEs has distinct characteristics compared to larger businesses. First, lending to SMEs is generally riskier as they are often young businesses, they often have less collateral available for security and they are less likely to have pricing power in their product markets. At a time when capital preservation is key, banks may be more reluctant to accept credit risk.

Second, SMEs are often more opaque than larger firms because they have lower reporting requirements, have less need for formal reporting structures and are subject to less outside monitoring by equity investors. This creates some important information issues.

Third, the collateral or assets used to secure loans are likely to be less liquid as they are more firm-specific and even location-specific and involve incomplete contracts.

These difficulties mean that the cost of bankruptcy (such as specific and not easily marketable assets) and loss on asset disposal may be greater for smaller than larger firms⁴⁵.

Collateral is one of the key areas of investigation in the context of IP and finance. In this regard, it is noteworthy that, in the words of the report:

Collateral requirements for term loans in 2011 and 2012 are higher than at any time since 2005...Higher sales and legal status as a limited company lead to collateral being required more frequently as does higher risk.

The study also found that:

While credit may be consistently tight for new loans, it appears to be increasingly tight for renewals... the rejection rate has increased particularly for low and average risk firms and not significantly for high risk firms⁴⁶.

The most recent data used by the report comes from the SME Finance Monitor⁴⁷, produced by BRDC Continental, which uses SME interviews to understand their experiences and perceptions. Its 2012 report, based on a total of 20,000 surveys, found that 44% of respondents overall were using some external finance. Of those not borrowing, the study identified 34% of them as being 'permanent non-borrowers' who habitually do not use or seek such finance.

Of the total respondents, 23% had made some sort of application, renewed or renegotiated a facility during the previous 12 months, with another 10% stating that they would have liked to have done so but that something prevented them (interestingly, when separately asked whether any personal funds had been injected into the business over the same period, 17% of respondents said they had chosen to do so whilst 25% had felt compelled to do so).

45 Ibid

46 Ibid

47 *SME Finance Monitor 2012 Annual Report*, BRDC Continental, April 2013

In terms of overdrafts, 61% had been offered and had accepted what they wanted, with a further 12% accepting an overdraft after issues. Of the remainder, only 2% had obtained funding elsewhere, with the remainder (25%) having no facility. Comparative figures for loans indicated a significantly lower success rate, with 45% getting what they wanted, 12% accepting a loan after issues, and 43% having no success (though 9% subsequently used some other form of funding).

Where businesses want to apply for funding but do not, the SME Finance Monitor seeks to measure those dissuaded by the principle of lending; by the practicalities of the process; by the feeling that it was the wrong time due to overall economic conditions; and by being 'discouraged' - either by the bank after informal enquiries, or by a preconception that they would be turned down. The breakdown of responses for the most recent period examined was as follows⁴⁸:

All "would-be seekers" Main reason for <u>not</u> applying when wished to overtime, by date of interview	Wanted to apply for overdraft Q4 2012	Wanted to apply for loan
Unweighted base:	189	119
Discouraged (any)	39%	34%
- Direct (put off by bank)	10%	12%
- Indirect (thought I would be turned down)	29%	22%
Issues with <u>process</u> of borrowing	36%	45%
Issues with <u>principle</u> of borrowing	8%	13%
Economic climate	9%	7%

Q116/Q210 All SMEs that wished they had applied for an overdraft or a loan (new definition)

This data seems to indicate that a lack of business confidence in the likelihood of being granted credit, and the process required to obtain it, are jointly responsible for the vast majority of non-applications.

In addition to survey data, lending figures and declination reasons are available from bank records. One of a number of measures put in place by BBA member banks within a 17-point plan put forward to Government in October 2010⁴⁹ was the introduction of an appeals process for SME lending decisions. This is overseen by an independent external reviewer, Professor Russel Griggs.

The first annual report on the appeals process activities⁵⁰, covering the 2011-12 financial year, showed that of the taskforce banks, 827,000 applications had been received for all credit products that fell within the scope of the appeals process, of which 114,000 had been declined (14%). Of those which were declined, 2% were taken to appeal (2,177 in total, equivalent to 0.3% of all applications) and 39.5% of these have been overturned – which in this context *“does not mean that the business has received exactly what they asked for initially, but that they have reached a lending agreement with which both parties are satisfied”*⁵¹.

48 Ibid

49 *Supporting UK Business – The Report of the Business Finance Taskforce*, October 2010

50 *Banking Taskforce Appeals Process: Independent External Reviewer Annual Report*, 2011/2012

51 Ibid

The review contains an analysis of the changes to lending appetite and practices since 2008, which include requesting larger cash stakes from business owners to spread risk, taking longer to make decisions, focusing on affordability as the main driver (followed by “*the ability of the management of the business to deliver what they say they are going to*”), and the need to make proper provisions for default based on the credit risk and customer.

The key aspects where IP may have some influence therefore appear to be:

- Addressing information asymmetry by helping a lender to understand a business’s underlying substance
- Providing additional information to assess risk
- Mitigating risk by providing an additional form of business collateral (whether or not regarded as ‘security’ in the full conventional meaning of the world – as explored further in Chapter 8)
- Helping businesses to grow using assets they possess

Within this framework, from interviews conducted to date, the taking of security or collateral emerges as having three distinct purposes, the emphasis of which varies according to the type of instrument being used:

- Examining the quality of the assets (particularly the debtor book, or receivables) helps the lender make their initial decision on whether to lend
- Taking control over valuable assets provides the lender with the influence it needs over the business’s behaviour
- Having a charge over the assets means that the lender can take ownership in the event of default and sell them to settle a debt – which might happen independently of the business (more commonly found in conventional asset finance), or could be related to sale of the business as a going concern

Currently, as the qualitative interviews for this report have confirmed, IP and intangibles (other than invoices) seldom feature in term lending and overdrafts or in asset finance. There are some cases where they have been taken into consideration in asset-backed finance. By contrast, they are viewed as fundamentally important in venture debt, because of their value to the business.

Manos Schizas of ACCA, quoted in Chapter 2, comments on the landscape as follows:

The starting point is that we are increasingly moving towards an economy that generally runs on intangibles. SMEs are more reliant on these assets than most, and lack the mechanisms larger companies can use to recognise intangible values. In a larger business you will see assets present in the balance sheet that have some relationship to reputation. If you were to create a comprehensive balance sheet for an SME you would find lots of the value would be down to intangibles.

Types of debt finance studied for this report

'Traditional' bank finance: term lending and informal lending

As already highlighted, where SMEs are seeking finance, the vast majority turn to their primary banking relationship in order to obtain it. Traditionally, funding comes in one of two forms: bank loans (i.e. term lending agreements that are structured facilities repaid over time on an agreed basis) or overdraft facilities (informal arrangements which are applied to accounts for variable time periods).

Traditionally, the main distinction between informal arrangements and term lending is that the former is normally used to facilitate working capital needs, whereas the latter is normally for development capital. It represents a longer term commitment for both parties.

Asset finance and asset-based lending

This category of finance has two distinct elements: providing finance to companies who want to purchase new (or sometimes 'pre-owned') assets for their business, generally referred to as asset finance, and providing finance to business that is secured against assets that they already own, commonly known as asset-backed lending.

The asset finance space includes mainstream hire purchase and leasing activities, while the asset-backed lending aspect works using a combination of a business's receivables (which are intangible assets, but of an unusual nature, being on the balance sheet) and other assets the business owns. Some organisations specialise in one area while others do both; some are independent (and therefore raise funds from a number of sources) while others are 'captive' (i.e. subsidiaries of larger funding organisations, generally banks). Of the two types, it is asset-based lending which has greater relevance for IP.

Invoice discounting and factoring are often the core products in asset-based lending, because invoices are closest of all to cash. Under these two arrangements, the bank will provide an advance that represents a percentage of the amount invoiced, which depending on the business, the sector and the payment profile will generally range from 70-90% (hence the term 'discounting'). The balance is then paid to the client when their customer pays, and the cost of the service is the cost of the charges for the advances made.

The main difference between the two products is that invoice discounting is generally invisible to a client's customers, whereas a factoring arrangement involves a bank stepping visibly into the supply chain and collecting debts on behalf of the client. This provides an even greater degree of control; accordingly, sometimes the product used will change based on payment experience (with factoring preferable to funders if this experience is adverse).

Venture debt and mezzanine-style finance

Venture debt started in the US as venture leasing, an interesting but comparatively short-lived phenomenon. The principle behind it was that fast growth companies needed to be able to acquire assets, typically involving information technology (IT), but that owing to their lack of track record, the risk associated with their businesses was impossible to price using conventional debt. The answer was to take warrants for an additional equity stake in the business in order to achieve an acceptable rate of return.

This was a difficult thing for a lending institution to do well, and the number of examples from the UK is limited. Sam Geneen, Managing Director of Five Arrows Leasing Group, is a very experienced asset finance professional. He explains:

We did one deal which was fantastic. Two very impressive guys came in with a concept for establishing a disaster recovery business. To run it, they wanted to finance two large IBM computers. At the time our main business was computer leasing, which is why they came to us, and we were doing a lot of business with IBM at the time. We decided to take a punt, and took a stake equivalent to about 25%. The company did amazingly well and achieved a fantastic exit. Had it gone wrong, we would have been able to do something with the computers. However, there were very few of those sort of opportunities around – you would have to kiss a lot of frogs!

The providers of venture leasing were forced to rethink by the falling costs of IT and the increased amount of outsourcing in the market, both of which led to a fall in the value of fixed assets. None of the finance companies seeking to specialise in this area were ultimately successful.

Venture debt retains the idea of combining lending with a modest equity upside (usually by taking warrants), but looks at all the existing assets of the business rather than focusing on financing specific new ones. It works by being applied alongside venture capital investment to address risk.

Peer-to-peer lending

Peer-to-peer lending is a fairly recent phenomenon in the UK. Rather than debt finance coming from banks, it takes the form of loans from individuals, who compete to provide a good interest rate depending on how much they like the opportunity.

Whilst the best-known, Zopa, operates in the personal lending space, there are a number of business-to-business peer-to-peer lenders now in operation, including Funding Circle and Thin Cats in business lending, and MarketInvoice and Platform Black in invoice discounting.

Whilst they have slightly different operating models, they all create a marketplace in which individuals can participate to lend money to 'screened' companies.

Pension-led funding

The increasing use of IP and intangibles in the pensions area is a particularly interesting development, especially given the high degree of scrutiny given by trustees, the Pension Regulator and HM Revenue & Customs to the value of assets on which a pension fund will rely in large corporate situations. The IP securitisation techniques used to address deficits in corporate pension funds are examined in Chapter 9, as they are particularly pertinent to the question of valuation scrutiny. However, IP is also being successfully used to help SMEs secure more modest amounts of funding, as explained in this chapter.

For general business funding, the specific scheme types which are used are either a Small Self-Administered Scheme (SSAS) or a Self Invested Personal Pension (SIPP), the main difference between the two being that a SSAS has to attach to a limited company but has greater flexibility in terms of what it can do, including lending to a business. The opportunity to use intangible assets in the context of both SSAS and SIPP schemes arose from the Finance Act 2004; broadly, this permitted any asset to be used for pensions, but introduced tax charges for certain classes of property, such as tangible moveable property.

The financial instruments most frequently used for pensions are a sale and leaseback mechanism, where one or more assets are acquired by the pension fund and then leased back to the business in exchange for a stream of payments over an agreed fixed term, or (in the case of a SSAS) the pension fund will provide a loan to the business which uses the IP as security.

Formal and informal bank facilities

How credit decisions get made

When dealing with SMEs, owing to the volume of applications, all mainstream lenders make use of a variety of information sources to make a decision. Some of these will be internal records relating to historical account conduct, and some will be external sources, such as Companies House records and credit histories.

To a lesser or greater extent, all decision-making processes will be assisted by automated tools and scoring mechanisms or methodologies, though the ‘computer says no’ view of credit procedures is unduly harsh – this report did not encounter any circumstances where business lending was *solely* determined by a computer.

The sensitivities associated with the public perceptions of bank decision-making made it difficult to attract many comments on the record but the following quotes are representative of a number of conversations and exchanges held in terms of sequencing:

In the SME space, we’re predominantly secured lenders. We are looking to establish the robustness of underlying earnings and cash flow. To do this, we look backwards at how sustainable it has been and where it has gone, then after that, we look at the forward position.

The balance sheet becomes important thereafter, though it is useful to help us get an initial view of where the business is at - if there are no net assets, the bank will have a problem with the application anyway!

Affordability is all about earnings and cash flow, and there will be particular percentages and ratios that need to be achieved. Affordability is not linked to security, but the level of belief or confidence in the forecast will affect the level of security required.

Peter Starmer, Director of the Mid-Market credit team at Barclays Bank, provides a more detailed commentary:

Serviceability is key, measured on both a profit and cash basis – cash generation is our primary source of repayment. We ensure that this is achievable with a reasonable margin of safety. Appropriate downside sensitivities are especially important for larger exposures, to ensure sustainability of the business and its capacity to service debt in a changing trading environment.

Trended Debt Service ratios are automatically calculated on our systems and available to assess smaller transactions: we apply a more sophisticated/tailored approach for larger transactions and more complex client structures.

Our analytical approach is framed around the mnemonic “COLD” – Capital structure, Operating performance, Liquidity and Debt service. In broad terms, the credit officer assessment would cover the business’s track record, industry risk, business risks, trended financial analysis, debt structure/security, monitoring and return.

Our key ratios analysis looks at a number of areas: gearing, current ratio (plus acid test), leverage, debt service ratios (i.e. interest cover/ debt service cover by both EBITDA/cash) and LTV.

Balance sheet robustness is key – our focus being on a sustainable working capital position (including cash reserves/headroom in credit lines) and clear evidence there is no inappropriate creditor stretch or other arrears.

In terms of the information that gets fed into the process, Richard Holden, Head of Manufacturing at Lloyds Banking Group, sets out the position as it currently stands within the SME market generally. When a business owner presents their financial request to the bank, they are always asked for a breakdown of assets and liabilities. At present, these seldom if ever include intangibles and IP; they don’t get offered or asked for – they are just not on the agenda. As a result, it is unlikely, in most cases, that for the credit decisioning process considers IP to any significant degree:

Paying much attention to IP at the moment would be a big leap in any event, but at least when it comes to understanding a company’s overall position, it may provide comfort between doing something or not. It doesn’t necessarily follow even at that point that lending will increase or be directly assigned to the IP, but it might make the difference between lending and not lending.

Logistically, Holden thinks this would probably involve a non-standard form or process with bespoke documentation, at least initially. This would have a cost attached to it which the bank would have to pass on in some way, unless standardised approaches were available.

The benefits would include a better understanding of the customer, to inform lending decisions. If the credit team has confidence that relationship managers have ‘dug beneath the surface’ of a business, they will have a lot more comfort in offering terms.

Holden thinks that understanding the value of the IP and intangibles will also be a factor, and that there will be some scepticism to overcome over how IP is valued. However, he also sees benefits in having more understanding and control over the IP in a recovery situation and believes that clients would potentially view more use of IP in a positive light:

A lot of directors don’t want to put up personal security - family run businesses in particular, who will have already had to do this in the past. So if an alternative within the business’s assets could be found, it would be attractive to customers.

Making the IP as easy as possible to understand would be critical, as these further (unattributed) conversations indicate:

If you can’t see the assets in the SME space, you’re not going to lend anything against them.. Banks will not assess a secondary source of payment against a difficult to reach and hard to see asset – they like personal assets.

With a technology asset, the first challenge is to understand why it’s relevant and why it might still be relevant tomorrow. It’s a real leap of faith.

The lending process relies on credit scored models – there just aren’t the margins to give deals the same level of individual scrutiny as they would receive in the corporate space.

How security is obtained and used

Stephen Pegge of Lloyds Banking Group reports that, across the bank’s lending book in total, around 70% by value is secured, although when viewed by quantity, the majority overall are unsecured. Unsecured lending requires a high degree of confidence that the necessary capital resources are available within the business.

Lloyds has a policy not to take security at all when lending less than £10k, but if looking at a typical £250k term loan to a company turning over between £500k and £1m, it will look for security, and at the balance sheet to find it. He sets the general context:

If you have collateral, you can go a bit closer to the line and you can push a little bit more. Ideally you want collateral that has value independently of the revenue flows of the business. If the two are intrinsically linked, this is more problematic - especially goodwill. Collateral needs to be able to be transferred - if it’s essentially in a person, it can’t be used.

Banks also take personal guarantees, which are particularly relevant when dealing with smaller companies. Pegge explains:

This provides comfort of a charge, usually over residential property. It is rare for this ever to be realised, as it is usually avoided by arranging refinancing or putting up alternative collateral, but it does concentrate the mind!

He identifies five areas of concern when considering the suitability of IP as collateral:

- Difficulty in independently realising the value
- Being comfortable you can get title to it and market it successfully
- There is scope for dispute over it
- There might be a limited market for it
- Even if you can separate the IP, the business's decline might be due to overall market problems which will affect its realisable value

However, he added that Lloyds does feel more comfortable with unsecured lending where there is recognised goodwill in some sectors like professional practices.

Starmer put the need for security into context as follows:

Smaller SMEs at an earlier life stage have less financial sophistication. In addition, narrow balance sheets generally mean borrowing requests need to be tangibly secured. The vast majority of SME Lending will have tangible security backing to mitigate the lack of business size and generally their modest financial profile. The security taken is viewed very much as a “back stop” – a secondary source of repayment.

Certain industry sectors lack available tangible security, for example retail clients, media and technology where our approach will be focused on liquidity and cash generation. Where businesses have good opportunity, but lack the required asset backing, we can use the Government supported EFG loan product.

For SME customers, without available corporate assets, we can look to support proposals through wider recourse to the principals. This takes the form of personal guarantees – supported and unsupported.

When there is a need for security to be realised because the primary exit route (cash) has failed to materialise, the majority of lenders will refer the business to a specialist recovery unit (which have a variety of different titles). Lenders were keen to stress that they are not in a hurry to break up companies in order to realise security values, as the following (unattributed) comment explains:

It is absolutely not in the interests of a bank for a business to fail, and we do turn around the majority of cases. There will need to be a reassessment of the security position, as the company will probably have tried to clear stock. Value realisation is not the first objective – the question will be: how do we turn it around?

Jason Oakley is Managing Director of Commercial Banking at Metro Bank, and sits on the bank's credit committee. He confirms that Metro Bank uses debentures when obtaining security, and is one of a number of interviewees to reference the need for care in structuring overdrafts following the Brumark case, explained in Chapter 8:

The overdraft will involve a debenture on the cash flow and a floating charge over the debts which will crystallise in the event of default. This enables us to access the book debts. These have to be carefully structured – if it is a rolling advance and if it gets paid back, you can ultimately end up unsecured!

Further detail on the recovery processes followed was provided by Starmer:

Our initial focus will be on business viability, the capability/energy of the management, the cash position of the business and whether further funding support is needed. Sometimes a sector turnaround specialist will be recommended to help the management team. Then a plan of action will be developed – the agreed changes from which need to be executed at pace.

The most important “asset” is an open minded and fully transparent management team with a clear plan: beyond that, the main assets are tangible assets (i.e. property/working capital assets) that provide a source of repayment or the ability to de-leverage.

What constitutes good security?

Holden describes the types of security currently preferred by the credit team in his particular key sector, in order of attractiveness to the bank:

- i) A director's personal guarantee
- ii) A legal charge over a residential property with sufficient equity in it⁵².
- iii) A commercial freehold property
- iv) A commercial leasehold property with time left on the lease (typically at least 22 years)
- v) Life policies with a surrender value
- vi) Debenture (fixed and floating charge over a company's assets)

If no assets are available, EFG may be considered. He explains:

Ideally, a bank wants to get enough security to cover its whole exposure. Also, secured lending costs are lower, which may represent the best deal for the customer. The rates

52 The lending value is typically calculated by determining the value of the property, deducting an element of contingency and then subtracting any outstanding mortgage, meaning that the ultimate value might be (for illustrative purposes only) 75% of the property value less any outstanding finance.

also vary by the amount of the loan, with larger amounts attracting lower rates, and the term length may also affect the price. We will consider an element of the lending on an unsecured basis if a business is strong enough, but the price may reflect any potential increased risk.

One of the main lines of enquiry for this report has been to determine the extent to which IP and intangibles can help to satisfy lender requirements for security – whether formally recognised as such for capital adequacy purposes, or simply providing ‘comfort’. The following unattributed comment helps to explain the position from a bank perspective and reinforces the ACCA view expressed in Chapter 2:

The Prudential Regulation Authority (PRA) rules drive the cost of unsecured lending because they allow a bank to use collateral to mitigate risk. In fact, they require us to use it to set price, though that aspect is not a credit risk team responsibility.

To use IP as collateral in this way would require a ratio to be derived which would take into account the net losses encountered following a default. If a bank did this independently as an internal rating, it would take quite a number of years to determine (though if it was a PRA decision, it could be applied by everyone). The PRA rules also say that we have to use our internal ratings when considering the extension of credit, including account conduct.

Discussions held with the PRA are summarised in Chapter 8 of this report.

Peter Starmer of Barclays confirms the standard procedures and highlights that IP’s relevance in terms of collateral, at least from a mid-market perspective, is more about sustainability of cashflow than about an expectation that value will be independently realised in recovery:

We look at the quality of assets forming the net worth, availability of security (property/debtors) and understanding of intangibles (including Intellectual Property - what it is, where it is located, value to the business and is it included in our security net).

The common corporate security taken for committed lines would be debenture, cross-guarantee and debenture, 1st legal charge over property and personal guarantee. These are registered at Companies House where appropriate, and recorded on our own security system.

IP is discussed as part of our due diligence - understanding its significance to the business in driving cash flows. We are keen to ensure we understand how it is protected, where it is held and that it is captured effectively in our security. However, we don’t consider IP as a tangible security with an attributed security value. Identifying and ensuring IP is captured in our security is more about achieving rights over the technology that drives the cash flow and making sure that it is available in the event of business distress.

IP can be critical to business sustainability/sale, so we endeavour to achieve inclusion in our security net where it is clearly identifiable/chargeable. However, one of the reasons why we don’t attach a tangible security value is that often IP can be vague or

highly portable (i.e. on a memory stick!).

Experiences in dealing with IP

As observed elsewhere in this report, conflating technology with IP is not always helpful, as it understates the importance of IP within many businesses that are not technology-based. However, in the case of banking, there have been various initiatives over the years where different lenders have adopted a particular focus on technology businesses for other reasons. Those who have been involved in these business units emerged as having a clear understanding of the challenges of banking on IP.

Looking back on his time as Head of Technology and Innovation for HSBC, David Gill observes:

Generally, we couldn't lend to very young companies due to lack of cash flow, but we could get a bank account going which enabled us to do other things. The idea was to get in at the ground floor of the banking relationship. To assist us, we developed a relationship with York and Brunel universities to develop a scoring protocol that we used to think about the likelihood of success – it created a 'floor' which at least screened out the most likely losers.

He is unsurprised that banks generally find lending to IP-rich SMEs problematic:

There is probably a misalignment of expectation between the lender and the borrower – and on this occasion, I'm on the side of the lender. A patent is a right to keep your tanks off my lawn, but it is not a licence to print money. It gives you a ticket to play, but not much more. Later stage IP that you can make sales on is more viable, but gets swept up in the general business decision. I would be surprised even today if the major banks have a way of being able to put a value on a patent portfolio in the SME market... in the corporate space, yes.

In terms of security, you would probably go for every charge you could lay your hands on, but you wouldn't expect to get value for it. Generally our lending in the SME space had to be secured, and if anything it has got worse with tightening up of capital adequacy ratios.

And he had the following thoughts on valuation:

If you are valuing the company on a standard earnings basis, then IP is part of the mix. It would provide more comfort about the fact that the cashflows are likely to be of quality and sustainable.

It is rare that the IP on its own has a value, unless you have the management team to build on it. But in distress it would be more important – the IP often ends up going back to a phoenix company, who are the ones who know how to use it.

Stuart Ager explains the thinking of the Technology Sector Group team from his time within it:

We were looking at what you could do with tech companies from pre-start up to substantial businesses. Tech was defined broadly – there was lots of ICT, quite a lot of biotech and advanced manufacturing. The principles were pretty familiar: they're all businesses, they just don't have assets in the same way.

Lack of familiarity with the business models of IP-rich companies is a major obstacle:

Our credit team was inclined to turn down anything they didn't understand and which didn't have the sort of assets that were familiar. However, we did manage to turn round a lot of decisions that were initially declined.

One of the problems is that tech companies don't have the traditional model of adding value to raw materials and producing a product. Instead, for instance, they have a software program being developed by highly skilled (and slightly strange!) individuals, selling under licence – which means deferred revenues, and so on. There's a lot of money been spent on developing a software suite but it is not evident from the balance sheet. If it is shown at all, it is there as an intangible asset which the bank is used to valuing at nil!

The key is understanding how the technology relates to revenue. The model is often that there is a comparatively high level of fixed cost, which is generally in people - and once the revenues hit a certain level, then it all drops to the bottom line and they can quickly become very profitable.

Also, traditional lenders don't understand that tech companies have to continually innovate. They can't just have version 1 and expect it to sell like hot cakes in two years' time. They need to get feedback from clients and keep incorporating changes – I used to ask for their product development roadmap.

In Ager's view, there is also a lot more that could be done in terms of preparation by companies seeking funding, particularly when it comes to their business plans:

The standard is generally poor. Technologists tend to present very large technical business plans that don't clearly answer the basic questions, like what does it do, what market does it address, how is it accessed, do the numbers add up... Forecasts are often optimistic and seem to rely on Excel spreadsheet formulae rather than reality. I have seen substantial accounting firms put together business plan forecasts that have been daft - generally because the company hasn't wanted to spend the money to do it properly!

The better managed the business, the better the proposal and more realistic the plans and forecasts. Still, information about IP is often scant or, sometimes, too much – especially if the management team are highly technically based and lacking in commercial acumen.

Well documented and thought through proposals generally get funded. But businesses need to talk to banks much earlier - to ensure that they can get the money, plan and prepare properly and put together good propositions.

More important than the question of value is generating understanding of the importance of the asset:

There will always be an issue about attaching a value to IP, but if the business puts forward a case that the IP is critical, the lender can start to recognise its importance and take it into account when looking at cash flow. It is less about assigning a value, and more about understanding how it fits.

If there's something to be done, it's in educating senior bank lenders about the genre of businesses where IP is a key asset and a fundamental platform for the revenues... 99% of relationship managers don't think that way. I used to have a list of 20 questions, and a lot of them were around IP and how the revenues related to them. If it's know how - get key man cover. If it's in software - is it in escrow? Do you have a policy around it?

Aside from technology, there are other sectors where IP is a visible element in the credit decision. One of these is franchising, where businesses can be tangible asset-light. Jason Oakley of Metro Bank draws on his previous experience as director of business banking for RBS and NatWest when commenting on both technology companies and franchises:

IP features in conversations to a limited extent. Technology businesses are more likely to volunteer it. Typically we are lending to smaller clients, and the issue is, to what extent can the assets be independently monetised? It is difficult to establish a meaningful value. It's a bit easier with larger companies, because you can often see the brand name values on the balance sheet.

Franchising is a cash flow lend, a bit like an IP lend - you are buying into the brand - and the know-how if it's a turnkey. If the bank is approached with a deal for a franchise with a brand name, we would offer a term loan and underpin it with a personal guarantee, because the only assets we have are intangibles like the brand and the licence.

With a PG, it is less about calling it in: it is more about ensuring that you have the entrepreneur's engagement and commitment when you need to go into a workout situation. So bad debt levels are lower.

We wouldn't at this stage attach a huge amount of value to IP, and very few companies are pitching it as having additional value. Having more information being passed across would help, but we wouldn't attribute value to it independently of the cash flows. To me it's a goodwill valuation on top of the balance sheet part.

However, we will be doing more with the EFG scheme in future: it's important in the franchise space, where there is a lot of goodwill, and in other cases where a company is relatively light on assets or is young.

Asset finance and asset-based lending

How credit decisions get made

As would be expected, the nature of the asset requirement is central to the decision on whether to lend against it. One of Lloyds' divisions covers both asset finance and asset-backed finance. Finance Director of Lloyds Bank's Commercial Finance division, Martin Cooper, explains how the latter is approached:

The bank looks at current and past performance and considers whether there is a sustainable future for the business. This is also reputationally very important for us in terms of responsible lending.

With a smaller business, the main emphasis will be on the quality of the receivables, followed by the quality of other assets which are available, depending on how much money is required. We need to understand whether being better funded will help them and whether they are currently paying all the things they should be, in terms of PAYE, VAT and so on.

Christopher Hawes is now Director of Corporate at RBS Invoice Finance but has previous experience from a number of organisations involved with asset-based lending, including US and European-based banks. He advises:

We look at the debt, the debtors and the financials. In terms of the nature of the debt, everyone's favourite is temporary manpower agencies, because the potential for dispute or dilutions is minimal, so you can advance more. This is particularly the case compared with, say, contractual and quasi-contractual operations, such as companies supplying food to multiples, where there is a performance risk issue. We ask: what is the order to invoice cycle? Where's the proof?

Debtors are vital because they are the ultimate source of repayment. Assuming that they wish to pay, can they? We like to see multiple high quality debtors.

On financials - have you got a business that is at least cash-positive, and what is the nature of the funding gap you are seeking to address?

If the nature of the supply is contractually complex, the more disputatious it may be, and the less attractive. But if we don't overly like the debt, but have a strong financial story, we can do more - we don't necessarily have to rely solely on the assets. For example, if we are dealing with a specific development project, we can start to bring other assets into play. This might involve bringing in colleagues from other parts of the bank - our skills are not about getting down to an EBITDA number and working through forecasts.

Neeraj Kapur is Finance Director at Secure Trust, who are currently creating a new finance offering for SMEs, having done a small amount of business lending already, with a view to a launch in January 2014. Both Kapur and Secure Trust's Chief Executive have a background at RBS and Lombard Technology Finance:

We have a particular interest in the quality of the customer, and what they are going to do with their money. There are only certain things they can invest in: if they are growing their debtor book, then invoice finance works, if it's plant and machinery then asset finance is applicable. If it is R&D, it is more difficult to take an asset-based or asset-backed approach.

It really becomes important to understand how central the asset is to making money. If a small business that is a coffee shop wants to spend £5,000 on a coffee machine, you would lend them that because they should make £5,000 per week, and if you take it away, you close them down. You wouldn't lend for that to a car dealership, because you don't have the same leverage – we like to see a clear relationship to revenue.

Kapur characterises the position of new entrants into the finance market as follows:

Any fool can lend money; it's getting it back that's the trick. In the 'new age' of banking, you have to bring things back to a more traditional model. There is more demand than there is supply, so you can be quite choosy about what you do, and if you have a choice of lending money against something tangible rather than intangible, you're going to take it.

How security is obtained and used

Martin Cooper explains how Lloyds approaches security:

Our normal practice is to take a debenture over the company which will provide a first charge over all the assets. This will include a first charge over the intellectual property, but it will often be floating, as the assets aren't individually specified.

Cooper is already aware that IP can potentially be very important in a recovery context. He provided the example of Woolworths, which was partly funded using asset backed finance. Lenders (which didn't include Lloyds) did ultimately get all their money back, and while part of the exit route involved receivables and inventory, it also involved making an assessment of the IP and intangible assets held by the business (such as the Ladybird brand) and finding buyers for them.

The vast majority of PNC Bank's business is about leveraging existing assets rather than financing new ones. This generally involves a three to five year facility consisting of a term loan, which involves an assessment of the asset base and the affordability of a facility, and a revolving facility against receivables and stock. This is a little different from US practice, where credit is mainly revolving; in the UK PNC prefers to be in control of all the assets, with a first charge over everything (sometimes with an additional strip of mezzanine funding).

PNC will use separate operational and financial covenants. The operational aspect governs the collateral itself, i.e. the revolving facility element, and the financial aspect deals with the overall business performance, i.e. the interest and/or debt service aspects. If an operational covenant is breached, the advance rates and lending formula may be adjusted: if a business gets into difficulties with its financial covenant, the consequences can be much more serious.

Danny Harrison, Director of Operations and Internal Control, highlights that PNC has experience of lending in contexts where brands in particular are important:

Brands can be itemised and listed in a debenture. We regard them as boot collateral; we don't lend against them directly, but they do assist with control, so while they might not be a reason for doing the deal, they are a risk mitigant.

Where we are senior secured lender or sole senior lender, they give better control in the event of an administration situation and can be a key part of the recovery process. Potentially, in one case, we wouldn't have done the unsecured part of the deal without a fixed charge over the brand.

For PNC, an accounts receivable (A/R) or invoice discounting facility is a standard feature, and it involves the company's income being paid into a designated account over which the bank has direct control. As Harrison explains:

We'll take an assignment of (A/R purchase) and a fixed charge over the A/R and a floating charge over assets being used in the ordinary course of business, because effectively they are like stock... We always have A/R customer receipts paid into a 'blocked bank account', because we need that control to perfect our fixed charge on the A/R and in a downside scenario.

Christopher Hawes from RBS Invoice Finance states that:

With asset-based lending (ABL), we are generally a bit less worried about over-trading risk and the thinness of the tangible net worth on a balance sheet (compared to a conventional banker). We will generally have an assignment of the debt and a fixed charge over it. In the ABL context, we will always have a debenture - fixed and floating. We purchase the receivables in the case of SMEs, because it takes the asset outside the business (and outside any insolvency process).

Two of the 'challenger' banks are Aldermore and Shawbrook (referenced below). They have different strategies, but as far lending against assets is concerned, both are firmly in the asset finance rather than the asset-backed lending category.

Aldermore has five product lines for business – savings, property development finance, commercial mortgages, invoice finance and asset finance. Asset finance is offered both through Original Equipment Manufacturers (OEMs) and via brokers to Aldermore's customers: these are typically small businesses with between 10 and 100 employees, with turnover generally ranging from £1m to £25m (though some are larger). Chief Executive Phillip Monks explains:

We won't generally be involved in taking a debenture, because we're not involved in balance sheet-based term lending. Our business is fundamentally secured against an asset. First we'll look to the asset, and we'll know the amortisation profile for an asset based on its intended usage. Then we'll look at the company in terms of its stability, cash flow and ability to repay.

If the assets are soft, like IT assets, software, copiers and so forth, we would look to the strength of the business. The service businesses we specialise in are professional practices, which have a good incentive to repay because their livelihood is at stake. Usually there are few hard assets unless they want to buy premises, so it is typically unsecured, and the only collateral we might take would be partners' guarantees.

The issue with intellectual property is having the expertise in-house or in the market to value it. Can you capture it when you need to? Can you sell it? If it belongs to people – you can't own people.

Lending against IP isn't on our agenda; we have plenty to shoot at in the markets in which we do operate!

What constitutes good security?

The concept of security, or rather the use of assets as collateral, is absolutely central to the principle of asset-based lending. Whilst there is not the same working assumption that the lender will ultimately end up with the asset and need to dispose of it (as is frequently the case with asset finance), it is recognised that the value of the asset is central to the viability of any deal. In many contexts, this comes down to its closeness to cash – hence the popularity of invoice finance, as stated above.

Where there is a need to stretch the asset base further to bring in the capital a company is seeking, Martin Cooper sees the order of preference as being:

- *Property – because despite its current problems it is well known and generally understood*
- *Plant & machinery – because it will have some value to someone*
- *Stock – similar to plant, but more problematic; it has a tendency to disappear if a business gets into difficulties – and when this happens it is usually because they haven't been able to sell the stock*
- *Other considerations*

As a specialist business credit provider, Danny Harrison says that when assessing asset quality, PNC Bank has its own 'pecking order' when it comes to collateral:

Accounts receivable we know and like, and know how to exit.

Plant and machinery can be good, as there are lots of disposal routes. We will always get a professional valuation on all of it.

We are not as keen on property and will not do more than 75% loan to value; other banks have a lot they are earning interest on but can't sell, and a lot of people are 'underwater'.

We do fund inventory, but this can get somewhat more 'racy'. The floating nature of the charge and the complexities in managing this aspect means that care is needed. One of your biggest risks is the stock you can't sell.

Experiences in dealing with IP

Because they are accustomed to giving asset values careful consideration, many asset financiers interviewed for this study have had some dealings with IP, not least because it has been embedded in the assets they have financed.

Shawbrook is owned by a private equity fund which saw an opportunity to create a specialist savings and lending institution in 2009, and used its connections in capital markets to address the perceived issue of liquidity by focusing on savings. Shawbrook has grown partly through acquisition to build up specialisms in commercial real estate, asset finance, secured and unsecured lending; as such its involvement with IP is somewhat tangential, as Its Chief Executive Ian Henderson (formerly of RBS/NatWest and Barclays Private Banking) explains:

We're a secured lender, in the conventional sense of the word. There is an intangible angle to what we do, but it's not overt, it's more in the DNA of how we work. Our IP is about asset knowledge.

In secured lending, we have adopted niches. For example, we won't take on large lenders for white van fleets, but we will fund new vehicles in specialist areas, and we are good at funding secondhand equipment. We are strong in precision engineering, medical equipment, ambulances, gamma knives and so forth – supporting businesses that have a lot of IP in them.

Often the assets are leased, so we do end up with the equipment to dispose of, and we're good at finding other homes for it.

However, we do offer block discounting where we sell finance to other lenders who have specialist expertise in different types of asset. There is intellectual property in the financing sense for which Shawbrook's funds are used.

We have big enough other markets to concentrate on without looking at funding intangibles more directly. There's nothing wrong with them, but it doesn't fit our model. There are huge opportunities elsewhere!

Interviews for this report also revealed many instances where IP has come directly under consideration, at least occasionally. Christopher Hawes' comments are representative:

At times, when looking to do a transaction, I have specifically thought that you would need the IP in order to have a secondary exit. In these instances, I have instructed our lawyers to make sure we get it, particularly if there is an equity participant or someone else who might have secured it.

Hawes also sees increased potential relevance for obtaining proper controls over all a business's relevant assets, including its IP:

In one recent example, we financed a 'smart' courier business whose true USP was based on software. It needed a large invoice finance revolver, and when it subsequently got sold to private equity, we put in structured facility and a cash flow element amortised over the top.

In the past, when assets may not have been leveraged as much as they are now, IP would have been seen as a 'nice to have'. If we were putting hard cash against the IP, then security would be a concern, but at the moment IP is only used in an unsecured way.

There is potential for IP to be taken into account – it's not unusual to see opportunities to grow that business, grow our own business, or beat off competition. However it would be very important for it to be 'nailed down', and business management would need to be able to report back very well because it would need more scrutiny.

Syscap is one of the funders with the most experience in lending against IP assets. Chief Executive Philip White believes that in the current environment, security is becoming increasingly important:

Today it's less a case of insufficient capital or liquidity, but more so competing calls. With new regulation coming through, it's going to get increasingly difficult to lend in what most see as an unsecured marketplace. Access to capital to do less traditional, to some even 'experimental' IP-backed deals has been significantly impaired by liquidity issues: the discussions on the Business Bank, the new entrants, and the Funding for Lending emphasis on mortgages reflects an appetite for well-understood products that are solid, tangible and asset backed that you can see, feel and if needs be repossess.

In the main our approach is definitively asset-backed, so what we are doing could technically be described as secured lending. However, the assets are 'soft', so in our view, it is all unsecured lending: we are not relying on a sale of the asset to mitigate our risk.

On the development capital side, we are seeing a modest uplift in sentiment to invest in software assets, which is probably driven by a little more confidence and the pent-up need to do something, such as to move away from legacy business models and

continuous system patch-ups. If you amortise the investment over a sensible period, it can be less expensive than the on-going costs of support.

As one of comparatively few asset-based lenders to fund consciously and deliberately against IP assets, Syscap's experiences in terms of risk are instructive:

Our experience has generally been positive. Whilst it has been constrained by the need to understand the customers and limited capital availability, our portfolio of all unsecured lending has outperformed the market even when our own capital is not being deployed, and that extends into the IP space.

We go quite deep into the product and the customer. We can deposit code into escrow, but we know that's not much use if in the event of default we can't realise it - so we need, and obtain, a reasonable idea of where we might go if we have to mitigate risk or offset potential losses.

We are taking a mixture of end user credit risk and supplier performance risk. Accordingly, we will not look to engage a new start ISV (Independent Software Vendor) with unproven technology in a new marketplace.

If we are funding an ISV there could be different mechanisms depending on their size. If it is a modest ISV, with a modest requirement, who is looking to do more development or sell more, we would put in a simple loan facility. We would have no security, but we would have understood the reason for this and got comfortable with the levels of recurring or annuity income, because we would get an understanding of what they do.

If it is a larger ISV or a larger requirement, we will then put the code into escrow, do more 'backstop research' and take a fixed charge over the code itself. We seek to get a valuation on it because it won't be on the balance sheet, and if it is it'll show the cost not the value.

We need to think about the market value because we want to ensure that our lending is prudent and get appropriate coverage in a refinance situation, so we are trying to benchmark it against market values.

Cooper confirms that in the context of asset-backed finance, some clients do talk about their IP and intangibles and put them on the table, generally when they are seeking development rather than working capital. Sometimes, there are also IP assets on the balance sheet if they have been bought in or acquired as part of a larger transaction. He summarises the challenge of IP as being that of understanding what the real value is, in two contexts. The first of these is the value to the business where it is currently:

Is it giving rise to superior cash flows? Does having the brand, for example, enable you to get a premium price? If so, in terms of the size of the facility we can offer, its effects on cash flow mean that it is already being taken into account in receivables financing.

By the same token, if there are problems with the product on a regular basis, he would expect them to undermine the cash flow. But in any event, he says, *“You wouldn’t want control over the assets to go beyond your reach.”*

The second consideration is the value that the IP might have on any subsequent sale or disposal:

Is there a value beyond the business, in terms of something you can sell? This is only really relevant if the business has to be sold or broken up – in which case, it is also a concern how quickly an asset’s value can be damaged.

Cooper feels that if this second point concerning resale value could be more successfully covered off, it would be of assistance:

The bank probably wouldn’t lend any more, but the IP could be taken into consideration if there were a requirement for an additional unsecured facility on top of the asset-backed package. Our priority would be to understand the relationship between the intellectual property and the core assets being lent against.

In this situation, one of the key considerations would be the ability to put some sort of agreement in place if the business has some core technology, but fails, and the bank is still trying to collect receivables, so that those who have already bought can continue to receive a service, and cash flows maintained. This has much in common with the approach adopted by Syscap, explained above.

Notwithstanding its historical experiment with venture leasing briefly described above, Sam Geneen confirmed that as an asset finance company, Five Arrows does not fund intangible assets other than indirectly when they are associated with fixed ones - although this is increasingly the case in sectors such as print and broadcast (where control software is often involved). Also, the Five Arrows business does end up financing software purchases by companies and institutions. Accordingly, Geneen acknowledges that there is contingent risk in everything that the company finances, but says:

We are not a speculative lender. We wouldn’t consider intangibles outside a large company with predictable cash flows, and if we did get involved, we would be looking for equity kickers. It’s a specialised business.

For example, if financing a software company, we would have to find some security to latch onto, which would need to come from the receivables.

Five Arrows does have some experience in having software tested and placed into escrow prior to a financing deal being finalised, as a safeguard against future difficulties, but normally works with far larger providers where this is not viewed as necessary.

Christopher Hawes provides a further view of his own experience of encountering IP, both at RBS and at previous banks including US-owned ones providing asset based lending (which he abbreviates here to ABL):

There is often a tangible value to IP which can survive the death of the corporate which owns it. And when you get down to it, ABL is about lending against assets which have a value independently of the business that owns them. ABL, by its nature, lends itself to this sort of assessment.

We have to move towards a knowledge economy where business value will be based around IP; finding ways to lend against it would help to grow our business and help our customers, which we like doing. The issue is having a consistent way of assessing the asset value.

In terms of specific experiences, he recalls that:

I've done deals where the security position might be a bit weak, but we know that there is other asset value that we end up benefiting from, such as brand value. I remember a pottery business which had a great history, and a museum attached to it: if push had come to shove, the bank would probably have been paid back out of the IP.

Pattern books can also be valuable: in one instance we got money back out of a printing business because its customers wanted their artwork back.

There could be automotive sector opportunities around tooling, too. Tier 1 suppliers have an interest in establishing a more reliable supply chain, and tooling is one of the most important assets. It embodies IP in quite a hard, tangible way which is stable - though of course there could be an ownership issue!

White explains how Syscap's move into IP came about:

Historically, our approach to partnering has been to identify mission-critical applications that make or save money. It all comes down to the utility of the asset and therefore the client's propensity to pay, which is what we need to align our investment with that of the business - if a company needs help to fulfil a contract it needs to meet, that's a good incentive to repay.

IP is almost a natural extension of what we have done in the past. If we are prepared to fund software, understand it, and recognise that it is going to make or save someone money, then funding IP is not a long walk from there.

The challenges have been around valuation. If we fund 50 licences of a Tier 1 ISV product, we can see what the RRP is. For one-offs, the valuation has been challenging. Typically, financing IP means you are financing an asset someone already owns, so it's cash-raising. The question is: are they mortgaging the Crown Jewels to pay the bills?

Understanding of markets is very important. In the technology space, you always first have to think about the market (historical as well as current) and consider people's cultural approach to lending.

We don't fund against hard assets. Hard assets have a number of mitigants in terms of value benchmarks and risk mitigants – for example, you can do an HPI Check, you can look at depreciation over a long period of time – in short, you can know that you're always going to get out.

There is less appetite for unsecured lending because when it is risk adjusted, it becomes out of kilter with mainstream funding. To do more, what we need is ready availability of appropriately priced capital that has the right risk appetite.

Kapur has personal experience of financing software during his time at Lombard Technology Finance, which was initially concerned more with hardware funding but has progressively moved further into software:

Increasingly, businesses are relying on IP, so you can't ignore it. I have certainly lent against software before – either software that is being sold, or software a business relies on. You either do it on the principle that the company has the money to pay you back, or you identify that you will have control if you take away the asset in the event of default. Then, if a buyer comes along, they have to deal with me instead.

If someone creates IP, some software for instance, and they have licensed it to companies like BP and Shell who are now tied in to pay £50k a year, we can rely on the cash flow to lend them the money.

You have to be very clear on how you will secure and deal with the asset in the event of default. Software is complex partly because a lot of it is a sort of 'mish-mash' of other people's software. With other types of asset, you have the problem that however you charge them, someone can still walk off with them.

There are other complications with software, in terms of how you pass it on. If you want, for example, to agree a sale and leaseback, you have to demonstrate that the risk and reward has been transferred in order to comply with financial regulations. That means if you haven't passed on the obligation to maintain the software, you haven't really sold it: and if a problem arises, how can we work out what the repair cost will be? This is not a problem you would experience with a tangible asset like a car.

With software, there are ways in which you can address these issues, but with other types of intangible asset it can get very complicated. The problem with brands, for example, is how you secure them. For example, you might take a fizzy drinks brand as security. You can see it has cash-generative value: the difficulty you're going to get is if some unforeseen event like a new law comes in banning fizzy drinks and the market disappears. Or, the company goes 'pop' and you own the brand. Do you really own it? Can somebody come along and steal it or impinge on it? If it all goes wrong, have I got the ability to trade my way out of my debt?

Venture debt and mezzanine-style finance

Uses and targets

One of the names most closely involved with venture debt in the US, and increasingly in the UK, is Silicon Valley Bank. It specialises almost exclusively in the technology sector. While Silicon Valley Bank is a full service commercial bank serving all stages of the market, it is active in providing capital in the form of venture debt to businesses from pre-revenue up to turnover of around £50m and beyond. Director of Commercial Banking, Erin Lockwood, explains:

In earlier stage businesses, the main purpose when using venture debt is ‘runway extension’ – providing additional capital for a couple of quarters to hit a key milestone and drive valuation for the next round of equity. Alternatively, it is to speed up growth. The advantages are flexibility and the non-dilutive nature of what we offer. We do take warrants ranging from 25 basis points to 2% on a fully diluted basis, depending on the deal; however, this form of finance is substantially cheaper than equity.

While we can also consider venture debt for later stage businesses, we have a full breadth of debt products which can be more appropriate for smoothing out a working capital cycle, for acquisition purposes or building inventory, for example.

Whilst in the corporate world Silicon Valley Bank does get reports from third parties from time to time, and note is taken of investor enquiries and opinions, all the due diligence work is done in-house, with external lawyers being involved sometimes before and always after term sheet stage:

Amongst other things, they check that the IP is unencumbered, and that the technology service or offering is not reliant on another third party’s technology. If it is, we need to have confidence that the supply is rock solid, or that there is an established alternative.

In terms of technology due diligence, Silicon Valley Bank does not “crawl over the code”; the risk it seeks to assess is whether someone is going to buy the service and which companies have the best chance of commercialisation at scale, rather than whether it is technically brilliant:

There are many examples where there is market pull without impressive technology. While we like to understand where the investment and development effort will be focused, we also rely on management team experience, competition, and the disruptive nature of the business model. Software as a service, for example, is a fantastic model for a lender.

Stuart Ager now lends to a range of businesses that have realistic, deliverable growth plans (some of which are ‘hi-tech’, but many of which are not). His current activities are in the context of a specialist financier that can lend at interest rates of 10% or more, and can therefore tolerate a higher rate of default (“*The problem for a bank is that if one loan goes wrong out of a book it can turn the whole thing bad. Traditionally they work off a 1-2% net write-off rate*”). He adds:

Initially, I ignore the question of security. For me, it's more of a pricing issue, though that may not be a view that is widely shared! I want to understand whether the business is commercially viable and whether I have sufficient information to be confident that this business will generate sufficient free cash flow to be able to repay my debt. After that, I consider the risk factors, and what happens if business underachieves on revenue by 50%. If debt still works, you have some headroom.

All banks will apply a sensitivity analysis, which is why we always like to see a base case and an upside – it shows that the business has thought about the issues. I focus on the year one forecast to understand how credible it is. The issue then becomes one of skin in the game. What have the management put in - £5k or £500k? If they will put more in, then the price can come down.

One example where banking and venture debt/mezzanine funding are overlapping is the Breakthrough programme from Santander's Corporate Banking division, a recently launched initiative, backed by a £200m allocation for lending to high growth potential SMEs. Over 400 companies have already expressed interest in it, many of whom display the typical profile of being IP and intangibles-rich and light on tangible fixed assets. At the time of compiling this report, 14 deals have been done averaging £1m each.

Breakthrough sits above traditional bank finance in terms of price, but at the lower end of existing mezzanine finance solutions. Its launch represents explicit acknowledgement that there is a funding gap for fast-growth businesses.

As with any other debt vehicle its preconditions stress the need for a track record of strong growth and cash generation, but unlike venture debt facilities it does not require businesses to be VC backed (or to bank with Santander beforehand – although bringing banking to Santander is a precondition for a Breakthrough advance). Midlands Director James Cooksey explained:

It is the aim of Santander's Breakthrough programme to help strong, viable small companies caught in the funding gap to realise their ambitions. We know that with the right finance and the right support with marketing, recruitment, and internationalisation, these companies can be the big job creators and economic drivers of their local communities and market places.

It is typical for us to meet businesses that have developed a niche product or service, where the inherent value of the business is enshrined in intellectual property or know-how, rather than a physical balance sheet asset. Establishing the value of this intangible asset is critical.

The initiative is 'sector-agnostic'. Beneficiaries to date have included software and communications businesses, engineering and service companies, with amounts ranging from £400k to £2.4m over terms of 3-5 years. Tellingly, at least one of these businesses has already managed to repay its debt facility courtesy of a substantial US IP licensing deal.

How security is obtained and used

Silicon Valley Bank always participates alongside venture capital when lending to earlier stage businesses: *'it is important that venture debt be used as a supplement to equity, not a replacement of equity.'* It acts as a senior lender, and in the UK it takes a charge over all a company's assets, including all IP. This is due to both legal and commercial protections.

The bank's deal documentation will typically involve both negative and affirmative covenants, with a key area focused on licensing (*'if for example a biotech company exclusively licenses its IP out – that can be an issue for any lender'*) and protecting the business's IP position. It will also require IP to be updated periodically, and Silicon Valley Bank takes a view on whether something new is core or not to see whether it needs to refine certain documents.

Erin Lockwood feels a bank operating in this space needs to understand the ups and downs of an SME and stresses that Silicon Valley Bank sees itself as a 'patient lender', and one that regularly works alongside management teams and the Board to weather challenging situations as a partner.

The importance of this attitude is echoed by Neil Pitcher, founder and director of LGF Partners and former CEO of ETV Capital, who has a wealth of experience in managing venture debt operations across Europe. He provided facilities alongside venture capital companies for two separate providers until his most recent fund's activities were curtailed by the financial crisis. Over two cycles from 1999 to 2012, he has seen £300m invested and only £15m provisioned, i.e. 5%. *"I suspect the lending book for property over the same period would look an awful lot worse."* He adds:

We can't behave like some other lenders and go for a fire sale at the first sign of trouble. I have never seen one company that has hit its business plan – it will always under or over-achieve at certain points. This is expected! So the account management needs to be different, as well as the risk assessment.

Patents are regarded as very important, though Pitcher has also been involved in taking security over brands, drug formulae and software code, which need to have escrow processes in place. It is particularly important that the company keeps all these assets up to date and notifies the lender of new releases or new patents. These are also important at exit, as it determines the value that will be realised (an observation also made by equity investors in Chapter 4).

By the exit point the debt element may have been paid off, but for the venture debt provider, the warrant portfolio still exists, and because competitive considerations are less intense, a lender can make money even if a VC does not. On occasions, the venture debt facility has even covered the costs of additional protection for the core IP.

In terms of security, the Growth Loan fund under management by Ager will seek the following:

We will take an 'all assets' debenture registered at Companies House – possibly including a fixed charge over any identifiable, key asset. The debenture will give you a fixed and floating charge which will catch IP, but it won't value the IP because you only

value your debenture on a break-up. In liquidation, I would assume that there is nil value (which means it provides a bit of 'bunce' if we do get it). That's unlike a debtor book, where we might traditionally allocate 60% recovery, or 20% in the case of stock, and so on.

There is a case for identifying IP within a fixed charge. We have sometimes listed patents within a fixed charge, although that covers it at a particular point in time. There can be an issue with monitoring how it is updated and augmented.

We will also take personal guarantees on a case-by-case basis depending on the risk assessment, though when we do take them, they are always limited to around 30% of the loan facility and are always unsupported (we do not take supporting personal security).

Security is always the lender's 'back stop - if the debt cannot be serviced by the business, then a lender should not lend even if he has full security.

Experiences in dealing with IP

In Neil Pitcher's view, the venture debt thought process can be translated to banks, if they use the right products (for example, venture debt always has capital repaid from the outset, so there is never a 100% write-off, especially after taking the various fees into consideration). However, while he sees this as a question of education, he believes changing bank lending culture will only come with case studies and experience. He provides an example:

An embedded mobile software company went into liquidation. It attracted two competing bids – one to incorporate the technology, and the other to bury it. Some companies will pay a premium to acquire a business's IP without even using it.

This outcome provided a good exit. It would not have been predicted, but it was possible to understand that the business's market potential was neither niche nor narrow. A traditional scoring model will kick these out because no value is attributed to intangibles.

What about the value of the IP itself? Pitcher tended to focus on the valuation of the whole business, because the warrants were an important part of the upside:

In a workout scenario, I assume the IP is worth 1-5% of the amount the VC invested. However, it can ultimately be sold for more than the loan – or be worth nothing if it didn't work!

I would question the basis for a high business valuation and look for evidence of it within the IP, as the key asset. However, if the IP appears undervalued, that is an additional attraction.

Pitcher attributes general bank reluctance to get involved with IP as being chiefly down to a fear of the unknown:

The perception that there is no value in IP is wrong... We only lent to companies that had IP, and it was viewed as the core asset of the company, especially as it's the asset that will have driven investor behaviour. We took a senior debt position which was always secured on the IP asset, so if the company defaulted, we had a right to go and sell it. If the VC believes that the IP is worth more than the outstanding loan balance, then they will not let this happen.

Where there are difficulties concerning IP, they have generally related to confirming ownership, for example where a core patent used by the business has turned out to be on license from a university.

A clear path of ownership is essential. Sometimes the company itself doesn't appreciate the importance of having ownership, or obfuscates. These situations can be renegotiated, for example to a revenue share, but they can prove a killer.

Erin Lockwood's position is simple: *"It has to be an innovative business, or we're not interested."* The further a business is from having core defensible IP, the less aggressive Silicon Valley Bank is likely to be, both on lending terms and facility quantum. Even where the bank gets involved with e-commerce or social media businesses, it is still looking for a defensible USP versus others in the market.

Silicon Valley Bank will still look at innovation that is non-patentable, and the portfolio features some companies in this category. Here, past experience with the VC and/or the management team involved will come into play, especially if the business is pre-revenue.

Whilst the bank does not separately value IP, and does not necessarily quantify the value of the company as a whole either, Lockwood thinks about enterprise value as a risk mitigant:

If the company continues to grow and is enhancing enterprise value, our assumption is that someone will want to buy it or invest in it further.

Silicon Valley Bank has had an excellent track record in lending to both early and late stage innovation businesses globally. Credit quality has been extremely strong with any losses well below industry averages.

In considering how these approaches might be more widely adopted, the experiences to date of Clydesdale Bank are particularly instructive. Its Growth Finance initiative adopts some of the principles and practices associated with venture debt within mainstream lending.

Head of Growth Finance, Graeme Sands, explains the motivation for looking at this area:

Businesses are changing, from those that use physical assets to service businesses and IP-based businesses. If banks continue to look for physical assets, it follows that the lending opportunity may reduce.

In reality, there is a well-established stream of lending based on cash flow, and the value of IP has a relationship to its potential for generating cash flow, even though it may not be the current owner that is best placed to crystallise that cash. This is about identifying those cash flows, and understanding who can crystallise them.

Whilst there are fixed and variable exit fees, the bank does not use warrants or equity 'kickers', so the success of the model is not dependent on exits being achieved. The bank relies on its senior lending charge and covenants, term lending (generally over 3-5 years, with some later amortisation possible) and specialist invoice finance.

Sands echoes other comments made above when he observes that:

IP still has some value even in a distress situation. A close look at how asset-backed loans have performed of late would not suggest they were problem-free either.

IP is not conventionally recognised by accountants and it doesn't come with a valuation certificate, but that doesn't mean its value is nil. There is value in the enterprise. The reason we believe this is due to the underlying value of the IP. In a growth context, for example, its value is in the economic rights to exploit.

In the assessment process, Clydesdale Bank seeks mainly to establish a clear relationship between the IP and the cash flows, rather than lend against a specific IP value. A specialist 'stretched' form of invoice finance for growth finance companies is then deployed in order to ensure the bank stays as close as possible to the company's cash. As Sands explains, "Invoice discounting slows down the burn rate for working capital, and term lending covers the losses."

In building its portfolio, the Clydesdale team has been able to draw on wider experience in managing venture debt across Europe. Sands is confident that technology businesses with underlying IP make good lending propositions if the company and the package are right:

IP is stronger in more technology-intensive sectors, less so in software. However, Clydesdale is not looking for a long list of patents. We are looking for something tied into the business that can grow further; something unique that relates to the revenue already being generated.

With comparatively early stage businesses it is more realistic, in the bank's view, to think in terms of selling as a going concern (an exit strategy likely to be preferable to management and investors too) but if a separate exit route for the IP were available they would certainly consider it.

The risk is priced based on the credit score (which is affected by the lack of fixed assets on the balance sheet) and personal guarantees are not sought. The package being offered so far is proving promising, according to Sands:

The combination provides a good rate of return for the bank, but does not cost the borrower as much in IRR terms as conventional venture debt. The facility is fully secured against all the assets of the business, but there is seldom any property; nearly everything is in intangibles apart from stock, debtors and cash. It is more expensive than traditional bank debt (if you could get it!) but it is all expressed over LIBOR, which is at an all-time low.

Sands confirms that whilst the bank takes a charge over the company's intellectual property, it does not often focus on its value, and does not attribute a value to it within the final terms, so it is technically 'unsecured'.

We think this is the most prudent position. We are building our own data set, but we are not sure there is a good enough external data set to support the attribution of value. Also, we work in a highly regulated environment, which is precisely why we have a secured senior charge, have covenants and look at a slightly later stage. The discussion around asset categories that attract reduced capital loading is one for the regulators.

Even if a bank does not wish to set up its own operations to specialise in IP in this way, there is no impediment to making investments in other organisations which can offer this focus. One senior banker who preferred to remain anonymous made the following observations:

I think one of the most sensible strategies is for banks to invest in funds. We can't otherwise make the returns to satisfy the risk, but we could collectively back a fund that would go out and make the investments. However, I still think the Government would need to stand behind it in some way.

There has been some movement in the past on this front – if you look at the funds like Kreos, Noble, ETV and so on – they've got experts, properly trained people and a good track record. They still have a job convincing people, but it's a much better way of doing it. You've got to be able to take security, know what you're taking, how to take control of it, understand where you can sell it, and do proper due diligence.

FSE CIC and its group subsidiaries, together known as The FSE Group (www.thefsegroup.com), manages grant, debt and equity funds in the East of England as well as the South East region. It has been operating for over 10 years and has built up a significant body of experience in working with SMEs from very early stage to later growth.

The FSE Group has also been responsible for management of innovative funding structures, including the Accelerator mezzanine debt fund (now winding down as it approaches the end of its 10 year life), which provided access to up to £200k of debt funding to growth businesses in two instalments, and the Proof of Commercialisation ('PoCket') fund, providing up to £50k of contingently repayable grant funding. The Accelerator Fund was funded by Small Business Service and Bank of Scotland (later Clydesdale Bank) and the PoCket Fund by the South East England Development Agency.

The Accelerator Fund was aimed at a market seeking additional non-dilutive funding to support growth and the achievement of business milestones. Typically priced at 7-11% above base rates to take account of the absence of security, it was used by 141 businesses over its lifetime.

Kevan Jones is Chief Executive of The FSE Group, with 30 years' experience in SME funding via traditional banking, acquisition finance, asset and invoice finance. He comments:

Fundamentally, the Accelerator Fund involved lending against forecast future cash flows. Many of the organisations applying for the fund had little or no tangible security to offer, and any that was available would be subject to a first charge from their bank. They frequently also had limited trading track records.

The importance of IP was that it is the driver behind the cash flows on which the Fund was reliant. FSE therefore had to look to assess the nature and strength of these intangible assets. The approach has worked well, and it underpins much of the due diligence work done when assessing applications for the funds currently under management.

Peer-to-peer lending

Interviewee perspective

Andrew Mullinger is co-founder of the largest peer-to-peer lending network to small businesses, Funding Circle, which at the time of interview had lent over £128m to more than 2,000 businesses since its inception. It operates an innovative, highly data-driven service, which is used to inform a manual assessment of each opportunity before it is promoted on the platform.

Funding Circle is one of the organisations which has already benefited from the Business Finance Partnership, and currently 20% of the total amount that approved businesses seek to raise will ultimately be government funded.

Assessment, security and IP

Funding Circle's model is to combine a human decision maker with a high degree of data-driven scoring:

We gather as much data as possible and are building up our databases on non-limited as well as limited companies. We look for parallels between new deals we are offered and deals that have worked. Obviously, though, we can't guarantee that any one deal or proposition won't go wrong.

We don't just monitor our own book, which is all open for lenders to see on the website. We also monitor the ones that apply for our platform but don't get funded, many of whom continue to succeed. This helps to temper the negative sentiment you otherwise get internally by being overly focused on the ones you do back that go wrong. We need this feedback on our risk management.

Funding Circle takes charges now over business assets and adopts a policy of taking personal guarantees for loans of less than £100,000, though Mullinger would like to change this:

We take a charge over all assets as the first or second chargeholder: we can also buy assets and lease them back, or use hire purchase. Where we have any tensions with other lenders, they arise around priority of assets: we are pushing for greater speed and efficiency in the process.

One of my aspirations has been to lend without personal guarantees. We haven't managed that yet – though in some cases we don't take them on deals over £100k, because at that level, we have to find security in the business. I think IP could provide some of that 'skin in the game' element.

However, the current scoring models do not work well with intangibles-rich businesses:

We don't have a policy that we won't lend to you unless you have hard assets. However, companies get allocated a risk band. The issue with these [IP & intangibles-rich] businesses is that their balance sheet would be poorer. Like any other lender, we look at the balance sheet and we always strip out the intangible assets. The people with more intangibles than hard assets will always come out worst!

So anything we do around IP at the moment is pretty unstructured; it is just about having confidence that there are some assets which contribute to the cash flows.

Mullinger offers the following view on finding ways to finance IP in a more structured way:

My view on the future of this is that it will be massive. The capital resources needed to set up a business are reducing all the time, partly due to technology, and even if you use machinery, you generally make the money from the thinking behind it. So there is a lot of untapped IP on the market.

There is a huge opportunity for lenders who can lend against it in a smart way. I think it might be done by applying ratios to particular segments or 'slithers' across a whole portfolio, based on research into precedents where IP value has been tested, to determine what the implied IP value for that sector should be.

It needs some critical mass to work, and my view is that you would put in a structure at an industry sector level. But if you invest in this space, you will build up knowledge that could create a competitive advantage. Of course, you can do it now on bigger deals, on a one-off basis, but that doesn't scale.

Pension-led funding

Interviewee perspective

One company which has made considerable use of pension-led funding to finance businesses is Clifton Asset Management, whose overall average loan size is around £125,000. The business has funded around 1,500 businesses to date.

The two limiting factors for how much can be raised by a business are the value that can be found in their IP and intangibles, and the value of the pension. The pension funds can belong to an individual or a group of participants. As a general guide, Clifton Asset Management discourages the use of these mechanisms where the total existing pension is worth under £50,000, as the process typically involves costs of around £7,000. Chairman Adam Tavener explains that the process is “*driven by pragmatism*”:

What is the desired outcome? What do we have to do to get there, within the rules? Our first question is always: is an investment in your own business right now a good idea? Is it going to return you more than an investment in someone else’s business, which is what stocks and shares are?

Worryingly, the average UK pension pot is worth about £30,000. For many business owners, their real retirement plan is to have a company that’s worth some money.

Assessment, security and IP

Tavener explains the process of using IP to support a loan or sale and leaseback arrangement with a pension fund:

We have to be able to identify, separately value and then confirm ownership of the asset or assets. It is important to use an asset that can be valued separately from the business, as distinct from goodwill, which is about the whole business. Normally, a trade mark is used, but other assets such as databases may also have a value; quite often it might be a portfolio of different intangible assets, which attach to most businesses.

A significant proportion of deals have some bank involvement, so there is usually a debenture. We will work with the bank security department to get a deed of release. This is seldom a problem because the bank often sees little value in IP, yet they value cash pound for pound. Occasionally there will be a conversation around software, where the bank has already attributed some value to it, or realises that it has paid for it all. However, this is generally just a point for negotiation, especially since businesses who come to us will still have a relationship with a bank.

Equity funded businesses are the one area that doesn’t work so well, because we are both after the same thing – the good ideas the company has. Although, since all deals involve an exclusive arrangement such as a sale and leaseback, they probably should be more comfortable than they are.

Should a business be sold while the pension fund owns or controls the IP assets, there are a number of options:

The deal can always be undone, and is always under the control of the business in any event. It can be rounded out by paying off the outstanding balance, and the IP transferred; or the pension fund can sell the IP, leaving the capital gain within the pension fund, which is a good way to defer tax liability; or, the agreement can be novated, though this isn't usually the chosen route.

The tax treatment of the asset once transferred to a SIPP or SSAS is generally favourable, since pension investments do not attract capital gains tax. However, if the asset is being acquired from a business, a liability may arise. Tavener explains:

The process is controlled by the FCA as well as HMRC. There are around 12 steps to go through behind the scenes. The asset then needs to be independently valued, and the accepted valuation practice needs to be followed. Robust valuation is critical.

The ongoing tax treatment depends on the structure of the deal. Currently, leaseback payments attract corporation tax relief at 100%, whereas a loan will only attract relief on the element that is interest.

Chapter 4

Forms of equity finance and their relationship to IP

Key points

In the eyes of equity investors, IP and intangibles that provide competitive advantage act as a necessary (though not in themselves a sufficient) precondition for their involvement

Equity investors will expend considerable time and energy verifying the information presented to them – but many note that when it comes to IP, this is often unsatisfactory

Introduction

Equity funding is acknowledged as being better suited to certain types of companies, and certain stages of development, because of the greater flexibility it provides. The recently released Big Innovation Centre report⁵³ highlighted the importance of equity investment to fund research and development activities (inferred from balance sheet activity in respect of intangible assets), concluding that:

Firms are much more likely to finance their intangible assets through equity rather than debt – for high growth firms this effect is much stronger. This is due to the fact that equity is much better at valuing intangible assets and innovative business models compared to debt.

This chapter starts with a brief description of the different forms of equity investment with greatest relevance to SMEs, and focuses on the aspects of decision-making, risk management and exit, considering the extent to which IP and intangibles do or do not feature within the process now.

Types of equity finance studied for this report

Crowdfunding

Crowdfunding is a generic term used to describe various different ways of raising finance by encouraging small contributions from a large number of people. This is, in a sense, the inverse of the traditional venture capital model, which involves approaching a small number of people for a large amount of money (which will generally only come from one or two participants – or maybe half a dozen in the case of angel investors).

53 *Disrupted Innovation: Financing small innovative firms in the UK*, Hiba Sameen and Gareth Quedest, Big Innovation Centre, August 2013

Crowdfunding is highly technology-driven, using the internet to communicate propositions seeking funding to a broad audience, usually by setting up a mini-prospectus of their project, initiative or company on a website. This lends itself well to further online promotion through social media, as well as providing a mechanism and a focal point to generate support amongst friends and family or other supporters.

There is now a UK Crowdfunding Association (UKCFA) aimed at raising awareness of the various platforms which exist. Its website⁵⁴ characterises crowdfunding as falling into three main categories:

- Donation-based crowdfunding, which attracts participants who believe in a particular cause. Donors may receive rewards such as credits, tickets, samples or other free gifts, mostly items which are intangible. This is generally not the route used to fund SMEs, though it can work well in the creative industries, and is used by artists among others
- Debt crowdfunding, more commonly called peer-to-peer lending, and covered in Chapter 3 of this report
- Equity crowdfunding, where small stakes are purchased in a business, project or venture, dealt with in more detail in this chapter

Bill Morrow of Angels Den comments:

Crowdfunding is interesting because it allows people to fund deals that don't meet an angel's criteria, so it provides a means of monetising things like your Facebook likes and website traffic. It's never been easier to raise capital – Crowdcube can help you raise over £1m in four hours – but you need help to spend it. If you look at Kickstarter for example, you'll conclude that a lot of crowdfunding is donation, not investment.

Angel networks and syndicates

In terms of transaction volume and value, the largest single form of equity investment in SMEs is thought to be business angel investment. A business angel is a high net worth individual acting as a private investor in unquoted companies, either singly or in groups typically referred to as 'syndicates'. An angel purchases shares, often providing a company with contacts, sector knowledge and specific skills and expertise as well as capital.

The 'formal' venture capital market is reasonably well understood because it is organised around partnerships which have reporting obligations. However, because 'informal' angel investments are often made by individuals putting their own money into businesses, many of the transactions that occur may be invisible. The relevant official sources of data on private investment activities are Enterprise Investment Scheme⁵⁵ returns. These have a potentially lengthy time delay associated with them⁵⁶, and are in any event not comprehensive as some private investments are not EIS qualifying. Based on the available data it has previously been estimated⁵⁷ that in

54 See www.ukcfa.org.uk

55 See following section.

56 EIS forms can be returned up to 36 months after qualifying shares are issued. See further detail following.

57 *The Race to the Top: A Review of Government's Science and Innovation Policies*, Lord Sainsbury of Turville, TSO, 2007.

2000, the market accounted for up to £1bn of investment, distributed between 4,000 – 6,000 angels.

The industry association representing the interests of the private investor community, the recently renamed UK Business Angels Association (UKBAA), believes the market for angel investment is currently around £850m per annum (about 2.5x the amount being invested by venture capital companies). This figure is derived from the £600m regularly shown in returns relating to EIS, and the knowledge that about 30% of the deals in which investors participate are not done under EIS.

Whilst there have been some distortions in EIS activity in the past (relating to schemes qualifying for EIS relief but not primarily aimed at assisting business investment), most of those interviewed for this report suggested that the majority of these have disappeared. Interest in EIS has recently been boosted by enhanced reliefs and the even more generous tax treatment provided by Seed EIS, explained in Chapter 2.

The fact that angel investment activity appears generally to have held up reasonably well in recent years may be attributable to a combination of factors:

- Tax reliefs are generous, have been increased recently, and address the issue of total loss (which is the angel's primary concern)
- Returns across many other areas of investment for high net worth individuals have reduced during the recession, which may increase their appetite for higher risk, but higher reward, as part of a portfolio approach
- However these positive factors are tempered by the need to support existing portfolio companies during the recession, many of which have experienced slower growth as a result of macro-economic factors than would originally have been anticipated

Venture capital and private equity

Venture capital is a particular subset of private equity. As understood across Europe, the term is used to describe equity investments made by organisations in unquoted companies (though it may also include loans and other capital that has an equity-type risk).

In practice, however, private equity and venture capital are taken to mean different things. Private equity is the term generally associated with a range of refinancing activities undertaken by more mature companies (such as buyouts and rescue packages), whilst venture capital is associated with providing start-up to expansion investment. Both activities are undertaken with an expectation of a profitable exit in due course.

The trade body representing UK venture capital and private equity firms is the British Venture Capital Association (BVCA), which also has a European equivalent (EVCA). Amongst its activities, it compiles industry statistics to track investment and fundraising activity⁵⁸.

58 Figures shown are from the BVCA Private Equity and Venture Capital Report on Investment Activity 2012.

For statistical purposes, BVCA divides up member investment activities into five principal headings: venture capital (comprising seed, start-up, early stage and later stage VC funding), expansion capital (including bridge financing), replacement capital (including secondary buyouts), Management Buy-Out (MBO) and Buy-In (MBI) and other late stage financing. The trend over the past three years for each of these areas in terms of UK investments is shown in volume (number of companies) and value (amount invested)⁵⁹.

	2012 (companies)	2012 (£m)	2011 (companies)	2011 (£m)	2010 (companies)	2010 (£m)
Venture Capital	431	343	405	347	397	313
Expansion Capital	296	1,471	317	1,657	334	1,653
Replacement Capital	44	1,133	35	1,285	40	987
MBO/MBI	100	2,677	90	2,950	103	4,752
Other Late Stage	25	143	30	304	26	533
Total	820	5,767	803	6,544	823	8,237

On the fundraising side, there was a significant upturn in 2012 to £5.9bn compared with £4.2bn in 2011. Whilst banks and academic institutions reduced their investments, the amounts of capital provided by sovereign wealth funds, pensions, fund of funds, insurance companies, corporate investors and capital markets all increased.

This report is not the place to explore the workings of venture capital in detail. However, a few observations are pertinent when considering SME access to finance:

- Venture capital companies are responsible to their investors for making a return, and because their investments involve a high level of risk (and unlike many lending mechanisms, a high risk of losing *all* the money invested), a high level of return is also required. VC funds can mitigate this risk to some degree by investing in a portfolio of businesses, but still need to exercise great care when investing, involving detailed and lengthy due diligence enquiries
- The high costs of due diligence, combined with the importance of making a return on capital employed that is material in absolute as well as percentage terms, have combined with reducing risk appetite to push many private equity firms towards the pursuit of increasingly large deals. This perfectly understandable and rational behaviour has exacerbated the funding gap facing SMEs wishing to grow and prepared to sacrifice equity to achieve it, because less new funding has reached the market in its place. The location of this gap is examined in Chapter 6
- Two other factors are tending to limit venture capital appetite: the absence of profitable exits during the recession (because many companies are choosing to conserve cash and repay debt, as numerous banking industry statistics have shown) and the difficulty in raising new funds because of concerns over macro-economic prospects

59 It should be noted that these represent UK investments by UK members: the EVCA, covering Europe, has information on fund investments in UK companies from Europe-wide funds.

Crowdfunding

Regulated providers

There is a considerable amount of regulatory activity around crowdfunding. At the time of writing, there are three FCA-regulated crowdfunding platforms companies can use to raise money on the internet; Crowdcube, Seedrs and Abundance. The largest and longest established of these is Crowdcube, which has now helped companies raise over £12m: it has over 45,000 investors now registered.

The models and emphasis of all three are slightly different. Abundance⁶⁰ specialises in enabling individuals to invest in UK renewable energy projects and is essentially debt-based in outlook. Seedrs⁶¹ (as its name suggests) is particularly directed at helping start-up companies to find seed capital. It also holds the shares that are issued as a nominee for investors, meeting that the company only deals with one organisation rather than a plethora of individuals with small shareholdings.

Crowdcube⁶², founded by Darren Westlake, offered its first investments in February 2011:

It seemed to me that angel investment still had a very 'elitist' image to it, and hadn't really come into the 21st century and embraced the internet and social media. I felt it should be 'democratised' – not necessarily opened up to the mass market, but to the wider affluent market.

When we started, we weren't 100% sure how well it would work, because no-one had tried to create an equity crowdfunding platform before. Doing a £1m fundraise for Rushmore in the first year was beyond our expectations. We've now done 65 deals, including five in September 2013, and over £2m was raised on the platform in August.

It adopts a different approach to the equity dissemination problem, which is to restrict voting 'A' shares to individuals who invest more than a set amount or percentage of the funding round requirement. Most investors receive 'B' shares, which provide a share of the business but do not have voting or pre-emption rights attached to them.

Interestingly, Crowdcube has also subjected its own model to the wisdom of the crowd, raising £320,000 in 2011, followed by a further £1.5m.

60 See www.abundancegeneration.com

61 See www.seedrs.com

62 See www.crowdcube.com

Experiences in dealing with IP

Westlake characterises the types of business which benefit from the platform as follows:

People like to invest in things that have a bit of traction. Only 20% of our companies are pre-revenue – the remainder are either generating turnover or have obtained some sort of foothold in the market. Our average fundraise now is about £175,000.

Overall, the split is around 75/25 between business-to-consumer and business-to-business propositions. Businesses that people can understand relatively quickly tend to do best on our platform. We have had a lot of success with food and drink companies and consumer-related technology.

In the past businesses that have been very scientific or high-tech-orientated haven't done as well, but this is starting to change – for example, we successfully funded a biotech company last month. As the crowd grows, it becomes possible to fund an increasingly diverse range of businesses.

Whilst relatively few companies that have come through the platform have been “*IP-type businesses*”, there have still been some notable instances where IP issues have come to light. Westlake cites two examples:

Quite early on, we funded an alcoholic drinks manufacturer. One of the prospective investors pointed out that there could be an issue with a German branded drink with a similar name. That's one instance where the wisdom of the crowd helped the company address the situation before they spent lots of money building the brand.

Another instance has been a marine security device where there was a great deal of discussion over who owned the IP for the device, without which the business was not as investable.

We've currently got a medical device called Zovolt being funded through the platform, and another business called AlgaeCytes which sustainably farms algae. IP is likely to be quite an important element for both of them.

Both Seedrs and Crowdcube have a simple rule that if the target sum is not achieved, then no investment is made. Usually it is the first 20-30% of the funding being sought that is the most difficult to obtain; Westlake explains that this is a key point in client discussions, with companies encouraged to plan how they can mobilise friends and family and others who have expressed interest in supporting their business at an early stage. If a round goes particularly well, a company can opt to set an overfunding target; this conversation typically happens when 70-80% of the total has been achieved.

It is often observed that the benefits of angel investment include attracting talented and experienced individuals who can help the business to grow. There are similar benefits for businesses that choose crowdfunding, according to Westlake:

I think the benefits are particularly apparent for business-to-consumer companies. If you can get an investor base of, say, 100 people, they become repeat customers and ‘evangelists’ who will spread the word, especially because their investment motivates them to help you be successful. You can use them for market research, to find out what changes they would like. You may also find advisers or non-executive directors. Certainly, that’s been our experience at Crowdcube – we have attracted some senior investors who have certainly helped us to open doors.

Crowdcube does not make or offer any judgement on whether it thinks a business is likely to be successful or not. There is an obligation on the company to make sure that information is fair, clear and not misleading, and Crowdcube ensures that the documentation made available for investor presentation addresses the key questions they will ask. Background checks are conducted into directors and the company, including for money laundering, as required by regulators.

Whilst the process of becoming regulated was lengthy and at times complex, it generally has proved to be a good thing, in Westlake’s view:

I think it has provided reassurance and credibility. Prior to regulation, we have had instances where people have been put off participating or investing; now, we have to have all sorts of procedures and safeguards in place.

Angel networks and syndicates

Structure, activities and outcomes

The workings of the UK angel investment market were first researched in detail in a Nesta report published in May 2009⁶³, which surveyed 158 angel investors from 31 groups and networks who had invested £134m in 1,080 businesses and exited 406 of them. This was able to reference and compare its findings with a larger body of research done by the Kauffman Foundation in the US in 2007⁶⁴.

Since 2009 there has been considerable network consolidation within England as well as a wide range of new groupings emerging. This is partly due to the disappearance of regional development agencies, many of which used to fund regional angel network operations. This change has compelled these networks to take a more commercial approach in line with other privately managed networks and groups, which can only come from successful deals (to quote Jenny Tooth, CEO of UKBAA: *“because entrepreneurs can’t afford to pay much at the front end”*).

Angel investors play a particularly important role for new and early stage businesses whose financing requirements exceed their founder’s resources, but which are too small and too high risk to be accommodated by venture capital investors, particularly given their requirements for due diligence and oversight. This in turn is important because of the important role high growth start up businesses play in the wider economy (referenced in other chapters of this report).

63 Siding with the angels: Wiltbank, Nesta, May 2009

64 See also Deloitte’s recent report for UKBAA.

This profile is borne out by Nesta's 2009 research, which found that the average company valuation was £875,000 (median) or £1.7m (mean) and 51% were at seed or start-up capital stage with a further 36% as early growth.

In terms of individual deals: when acting in syndicates, angels can bring anything from £100k to £1.5m depending on the quality of the IP and the opportunity, demonstrating (in Jenny Tooth's view) that:

Angels now have the capacity to bring quite significant firepower to the table... there is a blurring of lines between angels and VCs.

Sandy Finlayson, referenced in Chapter 2, says the Scottish angel groups have proved remarkably resilient throughout the recession. He cites the example of Edinburgh-based Archangels⁶⁵, the largest of all the syndicates, now established for over 20 years, and which has consistently invested £10m each year throughout the last four-year period. In total, the Archangels website references £55m invested in 60 businesses, with follow-on funding provided in a number of cases. *"They are now big enough to operate without support and have five full-time people on the payroll"*.

Whilst the most likely outcome to any investment is failure, Nesta's research found that overall, angel investing delivered a 22% internal rate of return, despite the fact that 56% of exits did not return the capital invested.

The 44% overall which were positive delivered a larger multiple than the unsuccessful exits, leading to a 2.2 times return on capital invested. Interestingly, the top 9% of deals provided more than a 10 times return, and accounted for nearly 80% of the positive cash flows. The Nesta survey's findings were in line with previous US studies which found an average IRR of 27% and that 10% of exits produced 90% of cash.

Looking at returns, Finlayson says it is *"absolutely not scientific. The best I have seen is a 125 times return. I have also seen a 90 times return, but then again, I have seen £800,000 pissed up against the wall in three months. Some individual angels manage to generate returns in the 40-50% range."*

Because of the high failure rate, angels generally look to assemble portfolios to spread risk and these can be built more quickly by working together. Nesta's research found an average of six people co-invest in each company, though 17% of ventures get their funding from a single individual. Jenny Tooth provides a perspective on this:

An individual's £10-£25k won't do much but working with others makes a real difference. Angels have the capacity to do more through syndication and work with a business through several phases... investors generally like to invest together with people they know.

65 See www.archangelsonline.com

Due to its business model, Angels Den tends to attract a different investor profile from other networks, but even though many of its angels act independently, co-investment behaviour (when it happens) appears similar. Founder Bill Morrow explains:

We find angels can be quite binary. They either like something or not, and if they like it, they want as much of it as possible. So the majority of our deals are actually done by one person, with our current average investment being £203k. However we also have many people who tend to reinvest with the same group repeatedly; they meet each other at our clubs, and sometimes share an interest in an area of technology.

Scottish angel investment syndicates tend to be more formally organised than their English equivalents, but since each investor must make their own decisions for regulatory reasons, syndicates are not run as funds. However, syndicates such as Par Fund Management⁶⁶, an FSA-regulated company, operates an EIS fund as well as an angel syndicate (and is also launching a ‘Par Innovation Fund’ to invest between £500k and £2.5m). This EIS fund operates as a ‘sidecar’ fund that invests alongside syndicated deals, helping to make additional use of the due diligence already conducted and bring more money into businesses with growth potential.

Another example is Kelvin Capital⁶⁷, with a core group of investors meeting regularly to review opportunities. Kelvin Capital summarises its target market as being “*start up and young businesses which have a novel technology that can deliver something useful in the market place and for which there is a genuine long-term market and demand from users.*” Its portfolio includes a number of medical device companies as well as new products aimed at consumer markets.

Deal flow

Apart from the risk of loss, the main challenge for investors looking to build portfolios (whether as individuals or in syndicate groups) is finding the right opportunities. For example, the Nesta report⁶⁸ identified that 25% of investors had looked at more than 50 possible investments over two years.

Jenny Tooth confirms that UKBAA members see this as an issue:

The biggest challenge for angels is to sift their way through the unsuitable opportunities. The capacity to bring a highly filtered quality deal flow, that has had some validation/scrutiny by a player in the marketplace, is important. We also need greater capacity to bring deals together which can achieve larger overall sums. At the moment angels rely on market connections, but better ways could be found to accumulate the collective power of the angel community. We are currently testing out a deal sharing platform which might help.

66 See www.parequity.com

67 See www.kelvincapital.com.

68 *Siding with the angels*: Wiltbank, Nesta, May 2009

Bill Morrow of Angels Den adds:

When we started out, we thought we were offering a service for entrepreneurs, but we now know that the primary audience is the angels, because we find what they want and we save them time. We have 400 of them on our website a day.

The demand for angel investment is indicated in the fact that Angels Den now receives 150 approaches a day from entrepreneurs. The dilemma of the investor is illustrated by what happens next:

Most companies will simply never have what it takes to attract angel investment. Of that 150 per day, we'll need to put 100 out of their misery, and 20 will decide for themselves that they don't want to continue. However, there will be 30 that are potentially trainable and worth working with, for example, on why it is important for them to protect their IP. Just one of the plans we see each day will be exciting, and we'll want to take it on and make it 'shiny'.

Angel network and syndicate views on IP

Due diligence procedures were shown in Nesta's report to reduce angel investment risk of a bad exit. The evidence shows that due diligence is important in making better returns, with a positive correlation between investors spending 20 or more hours on due diligence compared with those who spent less time checking the business. Jenny Tooth observes that *"syndicates allow you to be more efficient with due diligence, and to get different views; groups will naturally tend to be more enquiring"*.

If a syndicate is seeking to take advantage of the Angel Co-Fund, referenced in Chapter 2, it is also notable that this fund (recently 'topped up' to a total of £100m) does no due diligence of its own; to qualify for this support, a syndicate has to have done it and pass it on to them. Tooth believes that *"this is driving more due diligence in general, and has acted as a catalyst towards best practice"*. She continues:

When you're looking for better overall financial performance, diligence lies at the heart of it - commercial, financial, technical, market and IP.

Concerns are around infringement, how well protected a technology is, and whether there is anyone else out there doing something similar. Syndicates have a lot of strength; you will usually be able to find someone who knows something about the opportunity that is helpful...

Having some initial validation of the IP is important. Patents or patents applied for are one particular area of enquiry. The more a company has prepared itself around IP and its potential, the more likely they are to immediately attract investment.

Scottish syndicates are principally interested in IP-rich businesses. Finlayson's analysis is as follows:

If the investment is a technology play, angels are looking for something that is a significant innovation. It might not necessarily be disruptive, but it needs to have clear visibility of expanding international markets. Put capital with innovation, and you get wealth creation, but you cannot finance an equity proposition with debt. If there is no clear route to revenue, there's no chance of investment.

Also, whilst the Scottish syndicates' focus is generally on novel technologies:

They will all tell you that a first rate technology and a second rate management team will go nowhere, but there are many examples of first rate management being successful with technologies that are not necessarily cutting edge.

In particular the angels seek individuals who are experts in their domain, as they can fill in some of the other gaps using their own contacts and resources.

Bill Morrow of Angels Den gives his view of the decisioning process:

The thing that precludes most businesses from moving forward is an inability to answer the question, 'what do you do?' in a clear way that investors will understand. Once you can do that, you have to show what pain you solve – in other words, what's the point of what you do?

The next two considerations relate directly to IP:

Angels then need to understand how you go about solving this problem; if I'm going to invest, I need to know what mechanism you use and whether there is something clever about it. Then, I want to find out what your unfair advantage is in the marketplace. Have you got IP?

The last two considerations are about the team ("*who are they, do they gel together, are there any gaps, and have they shown that they've got the determination to see it through?*") and the amount of money needed, at what valuation. Morrow:

Every single one of the 150 a day has got the valuation wrong – it is obviously too high. The entrepreneur's job is to justify it reasonably without insulting the angel. It tells us quite a lot; if they are convinced their business is worth £1bn, there is no point in progressing.

In Morrow's experience, angels are good at sharing the due diligence workload between them, and will tend to have a salesperson, lawyer and accountant as part of the investor group who are sufficiently trusted to get comfortable with the main points. However:

Even if a company has been trading for several years, there is a limited amount that you can derive from their accounts. Angels are not going to spend weeks pouring over spreadsheets, and balance sheets are a bit pointless at this early stage; most of the assets will be intangible, especially IP, and the company's accountant will have no idea what to do with it.

Serial investors' personal views on IP

For the purposes of this report, five "serial investors" (business angels who regularly invest in early stage growth companies) were provided with IP questionnaires. All were active in networks based in the South and South-East of England, East of England, West Midlands and Wales, though the amount of investments identified through their networks as a proportion of their portfolio varied quite considerably, ranging from 30% to 90%.

Their views are set out in order below marked A-E (not all answered every question). They are intentionally unattributed, so as not to be interpreted as a reflection on particular current investments. These provide an informative picture of how a selection of high net worth individuals and sophisticated investors feel about IP.

When assessing a prospective investment, investors were asked to identify the main things they looked for and where IP featured amongst them:

A: IP is key. There are 6 things I look for:

- What is the problem you are solving?
- What is your product or solution?
- Who are your customers?
- What is your USP?
- How does it scale?
- How much money do you need and what do you need it for?

It's the first three that determine whether you have a business and the last three that are relevant in determining the value of the business. If you answer those questions, simply and clearly, you have the best chance of starting the conversation that is the investment process.

B: Quality of management team, unique and defensible selling proposition, market size, scalability, competitive situation. IP plays a key role in establishing a defensible USP by providing innovation and entry barriers.

C: IP is one very important aspect of barriers to entry, and the latter are critical to an understanding of whether a company has a defensible market position and can therefore exploit its know-how in a big (preferably global) market.

D: Track record of entrepreneur/team, attractive financial business model, sales momentum, good customer referencing.

E:

- Quality and Experience of MD, and management team
- Competitive advantage, of which IP is a key component
- Ability to disrupt existing established markets, again of which IP is a key component
- Quality of IP protection, i.e. patents etc, are important, but equally important is the IP protection strategy that sits behind this as sometimes it is preferable not to register a patent

Investors were asked whether they thought it was necessary for a business to have registered IP as a precondition to investment. Here their views varied:

A: It is not essential for IP to be registered in a traditional way. I deal mostly in software-based businesses. It is essential that they have IP awareness. They should be able to describe what they have and when they created it. Patent law does not satisfy this. Current IPR does not protect, merely helps defend. What is needed is standardised language to describe this type of IP and register its creation.

B: Not necessarily registered, but measurable and defensible.

C: It is difficult to take a company seriously if it doesn't have any registered IP. Having said that, it may be that trade marks and copyright are all that is realistically available because the software is not patentable.

D: No, but good management of IP would be evidence of a well-run business.

E: Almost always if the idea/concept offering a competitive advantage is protectable.

None of those interviewed were impressed with the quality of information that they received from prospective investee businesses. Three were particularly critical: A stated that IP awareness was *"shockingly bad amongst almost all levels of business"*; C pointed out that there was *"no generally accepted framework"* for presenting IP: and E stated that *"no more than half the investments I see have a quality approach to this area and even then it is often riddled with amateurish thinking and execution."*

The investors were then asked how they think about valuation in an early stage context, and how much of the value they perceive to be present is likely to lie in the IP and intangibles associated with a business:

A: At least 70%, but when really early it's everything.

B: Apart from the management team the key consideration is a unique, scalable and defensible selling proposition in an attractive space that offers global market potential.

C: Valuation of all companies is an inexact science. When it comes to early stage companies the problem is particularly acute. There are usually no profits to multiply so a multiple of turnover is often used as a poor proxy. Amount of time, energy and money invested to date, quality of the management team, size of the market, barriers to entry are all important considerations. At an early stage, IP can represent as much as 75% of a company's value.

E: Generally speaking, and especially with pre-revenue or very early stage businesses, the IP is the only thing you have to value with anything approaching an objective framework. Too often valuation is gut-feel based and approached from the owners as 'how little can I get away with giving away to investors whilst still raising the money I need?' They always overlook the fact that experienced investors will evaluate an investment as requiring at least 200% of what they invest on day 1.

The investors responded as follows when asked about the key risks and dangers they associate with companies that are 'IP rich' (and whether these are any different from other businesses):

A: Valuation and delusion.

B: IP is very people-dependent and often concentrated, sometimes in just one individual. IP-rich companies tend to operate in a fast-changing environment where new competitors or technologies/products can destroy your business almost overnight. Life cycles are short and IP-rich companies need to be able to continuously reinvent themselves in order to prosper over longer periods.

C: The IP isn't held by the vehicle one is investing in, there are others who claim the same IP but are much bigger and therefore have deeper pockets to pay for lawyers, the IP is technically sound but has little or no commercial application.

E: Even when IP is of good quality and has been well protected through a considered IP protection strategy, it is of little value if the company cannot answer the question, 'How will you respond when you come under attack from 'Megacorp's' IP lawyers? - which will happen if the techno is disruptive and generating real revenue in established markets, because the losers in these situations always seek to fight back in some way.

There a host of good answers to this question, but the way in which a management team answers them is a key bellwether of their quality and intellectual horsepower; it also reveals clearly what experience they actually have of fighting in an IP-driven world, because too often such opportunities are advanced by well-intentioned boffins who do not have enough commercial DNA, which is another area in which angel investors can always help.

So, yes they are different from other businesses, because the perception of value is a 'second order' debate, i.e. bigger and more sophisticated than a simple multiple-based analysis for a run-of-the-mill business with little IP.

Their views on tax incentives also varied, in terms of how much of a difference these make to a) their level of activity and b) the amount they decide to invest:

A: Tax incentives are good at bringing more angel money to early-stage businesses, but professional investors would invest despite these. They are literally the icing on the cake.

B: Very strong impact on amount invested through impact on risk/return profile and on activity level through use of tax credits. However, the quality of the team and the overall business proposition will always be key. An "A" tax benefit cannot compensate for a "B" business proposal.

C: EIS and SEIS are significant tax advantages and they are therefore an important factor in a) and b). Care is required to make sure any investment decision is made on its merits not on the tax benefits. Do not let the tax tail wag the dog!

D: The real issue is valuation/EIS/Non-EIS.

E: For risky start-ups, the tax breaks are an essential component to reduce investors' downside and encourage an investment.

Finally, the five investors were asked what role they felt that IP played in the context of achieving an exit:

A: Understanding, identification and codifying IP is essential at exit. The requirement may be more rigorous with an Initial Public Offering as verification will mean any claims are substantiated, but any exit should require knowledge of the IP being sold and its true value.

B: IP is absolutely essential and plays a key role in providing a defensible market position. Key challenge is to measure, value and transfer IP.

C: The same as on investment. It gives the buyer some comfort re the valuation being proposed.

D: The larger the business and more integral the IP, the more important it will be for the business to demonstrate to a purchaser doing due diligence that the IP is owned by the company and being well managed.

E: It will juice up valuations and is at the heart of attracting a strategic value for the business, rather than a commonplace one. In some cases, big companies will often overpay to get the IP, as they can appreciate both the danger of a competitor getting it, and the potential to sustain and grow their own businesses.

Venture capital and private equity

Industry view

Mark Florman is the Strategic Adviser and Industry Ambassador for the BVCA. He also happens to have a specific interest in IP, both as an investor and as an advisor to the African IP Trust. He provided the following commentary on the latest investment figures:

There are indications that investment activity is beginning to pick up: sentiment started to improve from mid-2012, due in part to AIFMD being substantially settled. It is not advisable to read too much into quarterly and half-yearly trends, which can be distorted by large individual deals. In addition, the fundraising cycle can easily take 18 months or more to complete, and has been difficult of late, especially for Euro-denominated funds.

Arranging an exit, whether through the stock market, a trade sale or to a new PE owner has been difficult for the past three years due to general uncertainty. Investors are now prepared to accept a little more risk, however.

Florman also provided some specific comments in relation to intellectual property in the private equity context, firstly on the subject of IP management:

One of the key value enhancement opportunities for private equity is to invest in R&D. If you are buying quite a well-established business, and you want to add value, then new IP is one way to do it. Many company boards are not as strong as they might be on that aspect, because they have never really thought about R&D in such a way.

Investor IP strategies can be about the management of downside risk, or making sure you can reap the rewards. In one previous investment of mine, LM Wind Power (a Danish company), we found a number of patentable inventions which had not been registered – the company went from about 5 to 20 patent applications within a couple of years. One of these was a lightning conductor device which provided a significant competitive advantage but which had never been protected.

As a result of attending to IP, you may find there is more value on your balance sheet than you realised, because you may not recognise assets that have been there for a while. In a recession, awareness of IP is more important because you are looking for everything that could represent additional value. In boom times, everything can be going well and you are not looking hard enough!

He also offered some thoughts on the part played by IP in due diligence exercises:

IP is not always very high up on the checklist. It should be on there, but its importance will depend on the type of company in which the investment is being made. Fixed assets are more likely to be obvious, but equally, it might also be obvious that certain brands have significant value, and that strategies need to be in place to protect it.

Where a company is more inventive or innovative, the IP is probably everything, but it may not be described as such: it may be characterised as 'technology'. Sometimes the value may be in people's heads, and there may be a big gap between what people consider to be their invention and what they are able to register: it is harder to prove something is uniquely yours in a world of 7 billion people.

Bill Morrow of Angels Den comments:

Most VCs are finding the climate very difficult because there are very few exits available and not much capital. People have lost faith in VCTs because they have debatable benefits compared with what you can get from EIS and SEIS.

Nick Goddard's breadth of experience is unusual, having worked as both a scientist (a physicist and chartered engineer) and a corporate financier with BNP Paribas and ABN Amro. His experiences working on both sides of the funding 'fence' have led him to some particular views on where IP ranks in the list of priorities from an equity funding perspective:

You need some distinctive knowledge in the knowledge economy. So most of our industry needs to know something that is distinctive, proprietary and smart. This is know-how, but may not involve formalised IP (i.e. patents). Patents are sometimes necessary, but rarely sufficient.

They will tend to be necessary if the technology is clever and original but can easily be copied by someone without reference to you. Patents may also be necessary if you can't get the confidence of route to market partners or funders without IP. But patents obtained for this reason are neither necessary nor sufficient to ensure business success. I use the 'Crepe Paper seat belt' analogy – it won't save you in a crash, but it offers a feeling of security - which of course has a survivor bias to it!

Across the economy some businesses can be very successful without any formal IP because what they have is hidden, personal and cultural. Some need to patent and do, because they have to; some don't have a functional need to patent but still do, because it gives them the confidence to do business. Or it can be an ego/badge thing. This is easy to detect – for example, if a patent is only taken out in the UK where there is no market for the product concerned.

Goddard also has some fairly trenchant observations on Venture Capital Trusts (VCTs):

VCTs focus on providing tax benefits. I have never found a single instance of an early stage British technology being helped by a VCT, out of the 200 small businesses which I've seen.

Industry initiatives: the Business Growth Fund

In July 2010, the Chief Executives of some of the largest UK banks along with the British Bankers Association set up a Business Finance Taskforce to consider what more could be done to help the UK return to sustainable growth. In October 2010 the Business Finance Taskforce committed to a new source of growth equity for SMEs. BGF (Business Growth Fund) was launched in May 2011 funded by five of the largest UK banks (HSBC, RBS, Standard Chartered, Barclays and Lloyds TSB) with £2.5bn of committed capital.

BGF's first investment was made that October and by the end of 2012 nearly £100m of new capital had been introduced into growing British businesses.

The capital provided by BGF (usually ordinary shares, warrants/options and unsecured loan notes) combines with alternative non-bank providers of mezzanine and junior debt and traditional bank lending of asset-backed debt, senior debt and working capital facilities.

Whilst funded by banks, BGF confirms that equity and debt positions require different investment skill sets, and that the skills necessary to identify and perform due diligence on good investment prospects are often too expensive to be compatible with the typical low margin debt present in conventional banking. BGF's processes involve identifying businesses requiring growth capital that have passed through the early funding stage and demonstrate that they have a sustainable competitive advantage and an appropriately experienced management team.

A meeting with Alistair Brew, Investment Director, Mark Nunny, Senior Investment Manager and John Rhodes, Director of Marketing and Communications provided insight and a summary as to how BGF operates and its investment attitude.

However sophisticated a business plan may be, the deal team at BGF always prepares its own summary case for investment which is then taken to an investment committee for consideration. BGF typically invests £2 - £10m of growth capital for a minority stake (10 - 40%) and a board seat and backs privately owned, profitable companies typically within a turnover of £5m to £100m. BGF also has the ability to make co-investments alongside other growth capital providers.

As minority shareholders, BGF is set up to work in partnership with incumbent management teams, rather than inserting their own team. However, they will assist in introducing non-executives and other senior management to complete the team, for example a finance director. BGF only has one vote at the Board meetings and no day-to-day management control, unlike more mainstream private equity.

BGF offers long term funding of up to 10 years and seeks to develop a partnership with shared goals and objectives from the outset. Most business sectors with the exception of regulated financial services and property development are considered for investment. With seven offices across the UK, they like to be geographically close to the business invested. BGF can invest using unsecured loan notes as part of its equity investment but this is not regarded as being comparable with a conventional debt position because the capital is unsecured and the repayments may not start until year five and beyond.

As with other investors in the VC space, determining the strength, resilience and adaptability of the management team has been regarded as an overriding priority. BGF looks for management teams with a good track record, a proven business model and a desire to grow. BGF will also look at the market in which the business operates and the product or service offered. It is important to understand the business' competitive advantage and how sustainable that is.

Accordingly, BGF regards IP as an important element in its decision-making process, but far from a 'be all and end all':

As investors, we expect the management team to be capable of recognising the IP in the business and exploiting it. Where registered rights are an important part of the company's strategy, particularly in terms of creating barriers to entry or reinforcing a first mover advantage, then we will examine them more closely. However there are other types of intangible asset that may be more important. We are particularly interested in customer relationships and trade secrets which provide a competitive edge.

IP is a complex area for an investor to assess - it carries risk in terms of regulatory and technological change and potential for litigation. Technology is also difficult as it can only be viewed at a particular point in time. We want to see companies continuing to develop their products, but prospective investees do raise concerns over registration procedures and the associated costs. As such, easier registration procedures for smaller companies would be welcome.

The quality of information we receive on IP is very variable - sometimes it is limited to a list of registrations. Many of the business plans we receive do not properly consider whether IP is a strategic asset. The question for us is: what is the relationship between IP and value creation? And we do not necessarily carry out a systematic appraisal if this relationship is not apparent. However, if there is a particular patent or piece of software code that is clearly represented as being a driver for the business, we will perform legal due diligence on it, which will normally be carried out by our group legal function.

Where the IP does clearly drive the cash flows and projections, it can affect the investment decision.

Both the IP and the strength of the management are more important in a recession. When times are easier, management may be able to get away with less rigorous attention to matters like IP identification and protection.

The private sector: Octopus Investments

Whilst the costs of doing due diligence, desire to reduce risk and secure larger overall returns has driven many venture capital companies towards increasingly large deals, one that continues to address the SME funding gap is Octopus Investments. The Ventures team at Octopus currently has a portfolio of some 40 companies, which include a number of well-known high-growth businesses such as Zoopla, Calastone and Swiftkey. Octopus currently has £3bn assets under management and is the largest manager of Venture Capital Trusts (VCTs) in the UK.

George Whitehead (also Angel CoFund founder) is a member of the Ventures team at Octopus. Demand for investment is clearly high:

In the course of a year, the team at Octopus will probably review more than 2,000 business plans. However, we only end up making eight to ten new investments a year, and these are generally in companies that have been referred to us through our network of contacts, in particular the group of seasoned business professionals and entrepreneurs (Octopus Venture Partners) who invest alongside us.

We are dealing with companies worth £3m to £10m, but trying to build them up to be worth more than £100m. That's not easy! So we will underwrite the deal initially, but always look to syndicate with our Venture Partners – it's a really good way of testing whether we are backing good quality companies, and for businesses who pitch, their final hurdle is always to present to these really senior guys, who can help to provide the know-how and contacts these companies will need to support their growth.

How does Octopus justify investing relatively modest amounts of money into businesses where other VC firms do not? Whitehead explains:

Octopus has done quite a few deals where it sees a really impressive management team, which is attracting great people around it, but the company is still very early stage. Under these circumstances we may make a seed investment and syndicate with a few other investors. The advantage of investing at this very early stage is that if the company requires series A funding within a year or so, we are ideally placed to participate in it through our funds.

In terms of the role of IP within these investment decisions, Whitehead comments:

It really depends on the company: the sector it is coming from, and how critical it is to the business plan. How far is the business reliant on IP as a means of preventing other businesses coming into its space?

There will be some software companies where the IP is less important than the business concept, the quality of the team and the route to market; our in-house team will probably look at these. Whereas for other companies, IP is absolutely critical. In these cases, we will outsource a full strategy review including looking at the IP itself and the IP landscape to see what else is being developed and whether the company is treading on anyone's toes.

Often the companies we back go into IP areas which are very busy, which is both good and bad from our point of view. Almost all will need to have global potential, and if they are heading into places like the US – where a third of our companies now have some sort of office or presence – the environment is more litigious, and of course people are litigating for different reasons.

When a VC invests, it has to back a credible product, concept or business. If the company needs strong IP, it has to be in order and it will be a deal breaker if this is not the case. What happens in practice is that companies generally understand what a VC will want to see and ensure these aspects of the business are in place before approaching us for investment.

Being well-backed is vital if you have an IP position so that you aren't bullied by other potential competitors out there. Many of those who approach companies are just fishing for information. As well as money, we can put the processes in place so enquiries are treated appropriately and promptly, to prevent it being a massive distraction or risk for the business.

In terms of the value of the investee businesses, the overall package rather than the IP in isolation is the determining factor, with the capacity of the management team to run a business worth £100m+ being a key consideration. When setting a value, Octopus tends to refer back to its earlier experiences with deals rather than follow a specific formula, since the team in total have done hundreds of them “*and have a good idea of what it is reasonable to invest.*”

Chapter 5

The IP & intangibles owned by SMEs

Key points

IP is a broadly held asset class which supports the business models of a substantial part of the UK SME population

As well as IP, which is manifestly under-registered, SMEs use a wide range of other intangible assets to generate cash

There is a clear connection between expenditure on IP and intangibles and high growth, and therefore with the continued development of a knowledge-based economy

However, much more needs to be done to help businesses identify that they own these assets which often have significant 'presentable' value

Introduction

This chapter sets out to consider how widely are registered and unregistered IP and intangibles are owned by UK businesses now, in order to establish whether closer attention to these assets could make a meaningful difference to economic growth.

This report looks at a number of existing and new data sources which provide insights into the breadth and depth of IP ownership. It starts from the most recent IP awareness survey, followed by the analysis of rights that are registered, using newly collated information from the IPO. This provides the hardest factual evidence, but which cannot by definition consider other important rights such as copyright and unregistered design right.

Consideration has therefore also been given to extracts from the data available as a result of the increased availability of sponsored IP audits during 2012-2013, and information available from two other sources, namely the Inngot directory of IP and intangible asset profiles (with particular emphasis on universities, environmental technology companies and software businesses) and recent research conducted by the Big Innovation Centre with the benefit of a dataset on company intangible asset ownership provided by Experian.

Levels of IP awareness

In 2006 and 2010, the Intellectual Property Office published the findings of UK Intellectual Property Awareness Surveys, conducted by Dr Robert Pitkethly of the Oxford Intellectual Property Research Centre, in conjunction with the IPO's Business Outreach Team. In 2010, this

provided insights into attitudes amongst 1,901 businesses, split by size and by sector, which were subsequently weighted in order to be representative of the distribution of businesses in the UK more generally (which explains the rounding differences found in a few of the following tables).

Whilst the general level of IP awareness amongst businesses is clearly a potential constraint on IP-backed funding, it is beyond the direct scope of this report. However, the survey contains a number of findings that are useful in understanding the potential level, usage and vulnerability of IP assets which might be financed.

Overall IP ownership levels

52% of respondents answered this question. The 2010 figures were as follows (totals incorporate the adjustments outlined above):

No. Employees	0-9	10-49	50-249	250+	Total
Patents	9%	16%	28%	31%	10%
Trade marks	24%	48%	65%	81%	28%
Copyright	60%	48%	47%	63%	59%
Database rights	14%	21%	25%	29%	15%
Other	25%	23%	9%	12%	25%

When compared with the extracts from the IPO databases referenced later in this chapter, these figures could be taken to suggest that the audience for the survey is somewhat more IP aware, and IP active, than average.

Rating of Importance

Respondents were asked to rate different methods of protecting innovations in terms of whether they regard them as 'essential'.

No. Employees	0-9	10-49	50-249	250+	Total
Patents	8%	7%	10%	9%	8%
Registered trade marks	8%	8%	15%	20%	8%
Copyright	14%	11%	13%	15%	14%
Registered designs	5%	6%	8%	10%	5%
Confidentiality agreements	19%	17%	25%	31%	19%
Secrecy	13%	11%	15%	17%	13%
Complexity of design	5%	9%	12%	10%	5%
Lead time over competitors	10%	9%	9%	10%	10%

Dr Pitkelthy notes:

Confidentiality agreements and lead-time over competitors are seen as at least as if not more effective means of protection than patents and some other IPRs. This reflects findings of the UK Innovation Survey and is broadly similar to findings regarding the relative effectiveness of IPRs, lead-time and secrecy by Levin and Klevorick⁶⁹.

Use of databases for rights checking

The survey asked which sources firms chose to consult when they wanted to make sure they were free to use a company or a product name. This suggests a better degree of awareness of the need to ensure that trade marks are taken into consideration than might be anticipated:

No. Employees	0-9	10-49	50-249	250+	Total
UK trade marks	47%	50%	63%	77%	48%
UK company names	78%	75%	82%	84%	77%
Domain names	57%	55%	64%	70%	57%
Web search	60%	61%	65%	67%	60%
None of these	8%	6%	4%	2%	7%
Other	5%	5%	5%	16%	5%

However, when the survey asked whether a company had ever used or searched patent, trade mark or other IP databases, the picture which emerges is somewhat different:

No. Employees	0-9	10-49	50-249	250+	Total
Yes	16%	22%	37%	55%	17%
No	80%	70%	51%	30%	78%
Don't know	5%	8%	13%	15%	5%

Involvement in litigation

One of the questions asked of businesses is whether they or their companies have ever been involved in a legal dispute relating to IP rights. This is interesting in terms of the risks faced when using IP as security. There was no breakdown between different types of IP rights.

No. Employees	0-9	10-49	50-249	250+	Total
Yes	4%	9%	21%	39%	5%
No	94%	87%	71%	53%	93%
Don't know	2%	4%	8%	9%	2%

The difference in responses by size may perhaps reflect the fact that litigation is more likely to be brought by, and against, larger businesses where sufficient sums are at stake that the potential rewards are perceived to offset the likely costs.

69 Reference is to Levin, R. C., Klevorick, A. K., Nelson, R. R. & Winter, S. G. 1987. Appropriating the Returns from Industrial Research and Development. *Brookings Papers on Economic Activity*, 783-831.

Awareness of value

IPO survey respondents were asked whether they had ever tried to assess what their IP was worth. The figures suggest that the chances of companies approaching lenders with a predetermined view of IP value are low:

No. Employees	0-9	10-49	50-249	250+	Total
Yes	3%	4%	4%	10%	3%
No	94%	91%	89%	78%	93%
Don't know	3%	5%	7%	12%	3%

This data is supported by research conducted by BRDC published by Clifton Asset Management⁷⁰, which as explained in Chapter 3 has an interest in IP values for pension-led funding. Its survey of SME owners, managing directors and financial controllers, conducted in May 2012, found that:

- 84% of business owners valued their intellectual property at zero
- Only 6% valued their IP at more than 10% of their overall business's worth

The same research found that 55% of businesses would still turn to their bank for advice on alternative forms of business funding: 49% would talk to their accountant; 23% would turn to an IFA or pension adviser; and 6% would speak to a commercial financial advisor.

SMEs and their ownership of registered rights

Analysis conducted

When examining the IP landscape, it soon becomes apparent that while some companies amass a wide variety of intellectual property rights, a far larger number do not own anything that is formally recorded. This does not mean that they do not own IP. However, since registered rights are the easiest to measure, it is important to understand their distribution.

To achieve this, the IPO has recently conducted a new statistical exercise to match company identities from the FAME database with its own IP registration records, to obtain a more definitive view on the number of UK businesses which have two of the key IP rights, namely patents and trade marks. This report marks the first time they have been published.

For the purpose of conducting the analysis:

- Live patents were defined as patents granted and renewed as at 2011
- Pending patents were defined as published patents that had been applied for, but not granted, as at 2011 (ignoring those which had been pending for more than four and a half years for GB patents, and five years for European patents)

⁷⁰ based on 451 telephone interviews in May 2012 amongst SMEs turning over a minimum of £50,000.

- Trade marks included were those registered prior to 2011 with renewal dates after 2011, and all those registered during 2011.

Data on these IP rights was then matched with the FAME database from 2011. There was a comparatively small percentage of firms with rights identified on the IPO database that could not be matched with a corresponding organisation listed on FAME (approximately 8,500 “implied” firms out of a total of nearly 2.2 million, or around 0.4%).

The nature of the FAME database is that it only lists companies registered at Companies House. Accordingly, of all the rights identified on the IPO’s systems which meet the bullet pointed criteria above (consisting of 450,000 UK trade marks, 108,000 live and pending GB patents, and 1.04m live and pending European patents), only a subset of 255,000 registered rights can confidently be associated with UK companies. The remainder represent rights and applications made by firms registered outside the UK, by businesses in the UK that are not limited companies, and by individuals.

It should be noted that the research has not attempted to interpret relationships between members of wider company groups, so all firms shown at Companies House as being separate legal entities are included within the totals shown below. In the following summary, figures are rounded to the nearest 1,000 (for counts of more than 1,000), and to one decimal point for percentages.

The most important point to note, however, is that of necessity these statistics entirely exclude copyright assets, which as the awareness data and other sources below indicate is the most widely held type of IP right by some considerable margin.

Overall UK ownership of patents and trade marks

Of the 450,000 trade marks on the IPO database, there were 154,000 instances where a mark (but not a patent) was matched with an individual firm. There were 19,000 instances where a granted or pending GB or EP patent (but not a trade mark) was matched to a company; there were 82,000 instances where a match was found with both a patent (granted or pending) and a trade mark.

The level of multiple rights ownership becomes much clearer when the overall number of companies holding any rights at all is analysed. In overall terms, 61,000 firms have either a trade mark, a patent (published or granted) or both – meaning that the average level of rights ownership (where rights are owned at all) is in the order of four per company (being 61,000 as a proportion of the total 255,000 rights which were matched).

Further analysis comparing multiple IP rights ownership across the patent and trade mark landscape shows that there are just under 5,000 firms which have a single patent and 31,000 firms which have a single trade mark. However, the frequency of multiple ownership is shown by the counts of businesses which have between 2 and 10 trade marks (21,000) and between 2 and 10 patents (4,000). There are only 380 UK registered companies that have more than 50 trade marks and just 127 that have over 50 patents.

Ownership of patents and trade marks by business size

Applying the three standard definitions of business size (referenced in Chapter 1) to the available data on UK companies is not straightforward, chiefly because the statutory returns companies are required to provide annually do not necessarily reference two of the indicators, namely turnover and employee numbers.

Balance sheet data is more widely available (as even the abbreviated accounts submitted by many SMEs do include it), and is therefore the principle measure used here⁷¹. While it is helpful to provide an idea of rights distribution by company size, it is important to point out that this method of segmentation is imprecise, both due to timing issues for company reporting, and the absence of a cross-check against other criteria (for example, firms would seem quite likely to exceed the employment criteria for a micro-business but fall below the balance sheet threshold).

The following extracts are based on balance sheet data, with accompanying commentary on apparent variances with employment data where observed.

Roughly the same overall number of UK patents can be matched with micro businesses (8,000) as are associated with large companies (though an analysis of European patent ownership gives a different picture), and the total number of trade marks owned by micro businesses (around 69,000) is also broadly consistent with the overall number owned by large companies (72,000).

However, there are vastly more micro-businesses in the UK economy than there are large companies (over 2 million compared with around 26,000). Accordingly, when taken as a group, micro businesses unsurprisingly have the lowest level of patent and trade mark ownership at just 2.1% (and due to their sheer number, it follows that they have a strong effect on the overall percentage of businesses that have registered rights).

As businesses increase in size, their propensity to hold trade marks and patents increases substantially. Based on balance sheet analysis, over 9% of small businesses have patents and trade marks, rising to 14.5% of medium sized companies and just under 17% of large companies.

In the minority of cases where a similar analysis can be successfully performed using employment data, the figures are considerably higher: 13% for small businesses, 22% for medium-sized companies and over 34% of large companies can be positively identified as IP rights holders.

71 The balance sheet criteria set down by the EU have been converted at December 2011 rates for the purposes of this analysis at a rate of 1 Euro = 85.9 pence. Hence micro businesses are defined as having a balance sheet value of under £1.7m, small businesses are between £1.8m and £8.6m, and medium businesses are between £8.7m and £36.9m, above which they are viewed as large.

Ownership of patents and trade marks by business sector

As well as variations by business size, the varying 'knowledge intensity' of different sectors would seem likely to lead to different outcomes in terms of propensity to obtain registered rights, as the table below indicates:

Ranking	Trade marks	Patents (granted/published)	All registered IP
1	Beverages (21.3%)	Scientific R&D (13.1%)	Basic pharmaceuticals (24.7%)
2	Chemicals & chemical products (21.0%)	Basic pharmaceuticals (8.8%)	Chemicals/chemical products (23.4%)
3	Basic pharmaceuticals (20.9%)	Computer, electronic & optical products (8.0%)	Beverages (21.7%)
4	Food products (15.7%)	Machinery & equipment (7.2%)	Scientific R&D (17.4%)
5	Rubber & plastic products (12%)	Electrical equipment (6.8%) and rubber & plastic products (6.8%)	Food products (15.9%)
6	Computer, electronic, optical equipment (11.6%) and Apparel (11.6%)	Chemicals & chemical products (6.3%)	Rubber & plastic products (15.2%)
7	Electrical equipment (11.4%)	Motor vehicles and trailers (4.7%)	Computer, electronic & optical products (14.9%)
8	Other manufacturing (10%)	Other manufacturing (4.6%)	Electrical equipment (14.5%)
9	Textiles (9.1%)	Other transport equipment (4%)	Machinery & equipment (12.9%)
10	Paper/paper products (8.9%) and Machinery & equipment (8.9%)	Fabricated metal products (2.8%)	Other manufacturing (12.1%) and Apparel (12.1%)

To compile this table, the instances where IP rights were successfully matched to UK registered firms were broken down by sector according to two-digit SIC code. The number of businesses found to be owners of IP rights were then compared with the total population of firms associated with that particular SIC code, to get a view of the 'IP intensity' of individual sectors.

Given that just 2.9% of total firms were confirmed by the sample as owning IP rights, it was unsurprising to find a large number of sectors which emerged as being considerably more intensive, as is summarised in the following tables (any sectors with less than 1,000 associated businesses were ignored for these purposes). What may surprise is that the majority of the most IP-intensive industries overall are in manufacturing, traditionally associated with tangible asset ownership and the 'old economy'.

When the UK registered company populations of the more IP-intensive sectors highlighted in the table and commentary above are added up, they total 88,000.

Outside the manufacturing and scientific R&D sphere, trade mark ownership also emerges as being of much greater frequency than average in wholesale trades (7.8%), publishing activities (6.8%), information service activities (5.2%), advertising and market research (5.1%) and membership organisations (5%). These add a further 132,000 businesses to the total above.

Registered vs. unregistered assets: individual IP audits

During the course of 2012/13, the IPO offered fully subsidised, professional audits to approximately 200 companies identified as being high growth by partner organisations across the UK. In England, this was the GrowthAccelerator coaching programme; in Scotland, Scottish Enterprise; and in Wales, the Welsh Government.

Whilst the reports themselves are commercially sensitive, the IPO has reviewed a sample of one-third of the audits conducted, in order to establish which existing assets are being examined, and how many new assets are being identified that could be protected and/or exploited by the business.

The types of companies audited, all of whom had to be SMEs in order to qualify for the programme, were spread across a range of business sectors. Whilst not all the audits precisely characterised the activity, the distribution was broadly as follows:

Sector	Sample %
Manufacture of goods (ranging from toys and furniture to optical equipment and electronics)	25
Business-to-business services	24
Scientific activities (such as medical equipment and bioengineering)	18
Business-to-consumer services	15
Information technology	13
Creative & digital	4

Registrable rights

Across the sample of 67 businesses, the companies that were audited owned 21 patents, though one manufacturing firm accounted for one-third of the total. A further 23 patents were in progress, though again, eight of these related to a single scientific company. In addition, the audits identified 55 further patentable inventions across every sector; these were mostly opportunities to apply for one or two patents, though in the case of one scientific company, no less than nine potential patents were found (compared with its one current application). These patenting opportunities were spread across companies who already had patents granted or pending, and firms with no patenting history at all.

The audits also examined the number of trade marks owned by companies, and additional opportunities to apply for brand protection. The overall number of trade marks currently owned across the sample was 62. This was somewhat skewed by the existence of 22 trade marks registered by a single cleaning products company; however, as a result of the audit, no less than 14 additional unregistered trade marks were found. Overall, the number of potential trade marks discovered was 115, or an average of two per business (in fact there were only 16 of the 67 companies, or 24%, where *no* additional trade marking requirement was identified).

As might have been anticipated, the number of registered designs identified across the sample was relatively low – nine in total across only four firms. However, the potential to obtain this

relatively inexpensive and straightforward form of IP protection was very considerable. In all, 81 registrable designs were identified, with only 20 companies, or 30%, *not* found to have the potential to register at least one⁷².

This data tends to support the argument that IP is of particular relevance to companies identified as having the potential for growth, and that raising the awareness of IP protection amongst UK firms would tend to increase company appetite for formal registration. It also supports one of the conclusions of the Hargreaves Review, that design should be a particular focus for IP policy.

Non-registrable rights

Determining ownership levels of unregistered intangibles, including copyright assets, is by definition difficult. Whilst it is known from historical surveys that copyright is the type of IP right most widely held amongst businesses, breaking down that copyright ownership into its component parts over which a lender could obtain security (or an investor could gain confidence) is more problematic.

In addition, although guidance is given to providers on the desired scope of the IPO-sponsored audits, they do not use a prescribed template, with professional advisers able to use a report format they consider suitable for the needs of the company. Accordingly, unlike the structured data captured online and referred to in the next section, it is not possible to quantify precisely which non-registrable rights were found or how many different types were present.

However, most of the audit reports did make reference to the presence of previously unrecognised assets within the business, many of which will be subject to copyright protection. More than 75% of companies had at least one such asset, with two companies having as many as 10 items. In all, across the 67 businesses sampled, 157 such instances were found.

Many of the audits also made specific references to proprietary information and trade secrets which required protective measures to be in place. Across the sample, 21 such instances were found. There were also database rights identified in over half of cases – 34 out of 67 firms owned them – and 16 references were made to the presence of software code which was in some sense proprietary to the business.

72 It is likely that some of these companies may already have benefited from protection under unregistered UK or Community Design Right, but it is not possible to determine the probability that this is the case from the audit text.

Registered vs. unregistered assets: audit tools

To get a clearer sense of the likely profile of intangible assets owned by companies, Inngot has conducted further research into the assets identified by IP owners using its online profiling tool. For the purposes of this research, Inngot analysed a sample of approximately 400 profiles compiled by companies in two IP-rich sectors (environmental technology and software) and by universities participating in the 'Pipeline' community of licensable technologies, hosted by the Technology Strategy Board on its _connect online platform.

This latter data set covers the full range of technologies from across all sectors, including biotechnology and pharmaceutical, medical devices, electronics, communications and creative and media as well as software and environmental innovations. It therefore provides an idea of the range of assets being created across a range of technology-intensive activities, albeit at an early, typically pre-revenue stage.

Presence of registered rights

Universities are generally predisposed to file patents against their technologies in order to ensure that the potential to protect them is not undermined by subsequent publication. This was evident from the sample, with over 50% of university profiles featuring at least one registered right⁷³. The presence of any registered rights in the environmental technology sector was higher, at 58%, and software lower, at 33%.

When looking at the type of rights present, significant differences emerge. 34% of profiles recorded by universities had a UK patent applied for or granted, and 45% of profiles included rights which were in the process of being registered in other territories (typically by the use of a PCT, or Patent Co-Operation Treaty, application). It is fairly common practice to use the UK patent application for the purposes of priority, and re-visit UK protection following EPO examination of the PCT application.

Patenting is also a fairly popular strategy in the environmental technology space, with 19% of profiles indicating the presence of a UK patent application or grant, and 16% showing the existence of an international application. However, patenting in software is much rarer, with only 5% of profiles showing a UK patent applied for or granted, and only 2% with international protection granted or pending.

The position is reversed in respect of trade marks. Here, software businesses have the most registrations, with 27% of their profiles showing a registered UK trade mark and 6% having trade mark protection in other markets (usually a Community Trade Mark). Environmental technology companies have UK trade marks in 16% of cases and international marks in 6% of cases; for universities, the incidence of UK trade marks is just 2% and none had sought international trade mark protection. This reflects the fact that very few university technologies are recorded at the stage where they are actively being exploited in-market.

⁷³ This is likely to be an understatement of patenting activity, as certain universities intentionally hide or do not add their patent details when advertising the availability of their technology (particularly if the patent is at pre-publication stage, as many are).

Presence of potentially registrable rights, not yet registered

The overall use of design registration was very low across all three populations sampled (<1%). This is consistent with the broader use of registered designs across UK companies, which is known to be low. However, the profiling process also covers unregistered designs and unregistered trademarks, to identify cases where there may be potential for greater protection.

Proportion of profiles showing:	Universities	Environmental technology companies	Software companies
Unregistered designs ¹	17%	48%	35%
Unregistered trade marks	13%	32%	41%

Ownership of copyright assets

The Inngot classification system breaks down assets that attract copyright protection into a range of different headings to provide greater precision. All of the copyright assets have, by definition, to have been recorded in some way, and therefore go beyond 'know-how' and represent assets that a company or organisation can own and assign, and which can be charged. This asset class is particularly important because some of the earliest and most successful securitisations of IP (referenced in Chapter 7) relate to copyright assets.

For the three sample sectors, the key asset types (aside from 'websites') identified by users broke down as follows:

Proportion of profiles showing:	Universities	Environmental technology companies	Software companies
Artistic works	2%	10%	17%
Database rights	7%	0%	40%
Literary works ²	45%	6%	6%
Product/process documentation	88%	71%	51%
Proprietary literature	65%	23%	25%
Software code ³	27%	6%	69%
Test results	80%	10%	15%

Ownership of other non-registrable assets

Inngot profiles are also used to record information about other value-producing assets that a company may own which are not registrable under statute, but which can be protected under

-
- 1 Note: this questions is intended to identify whether there are original designs that are not yet protected. They may or not be covered under unregistered design right protection.
 - 2 Literary works include published articles, which are very important in the university sector. These often set out the nature of and/or applications for a discovery or invention and are therefore important assets.
 - 3 To meet the definition for profiling purposes the software code must have been authored by the business: whilst all software companies clearly use software code, not all write their own.
-

commercial contract law or which are separate from, but add value to, brand and reputation. The ownership pattern for four key asset groups is shown below:

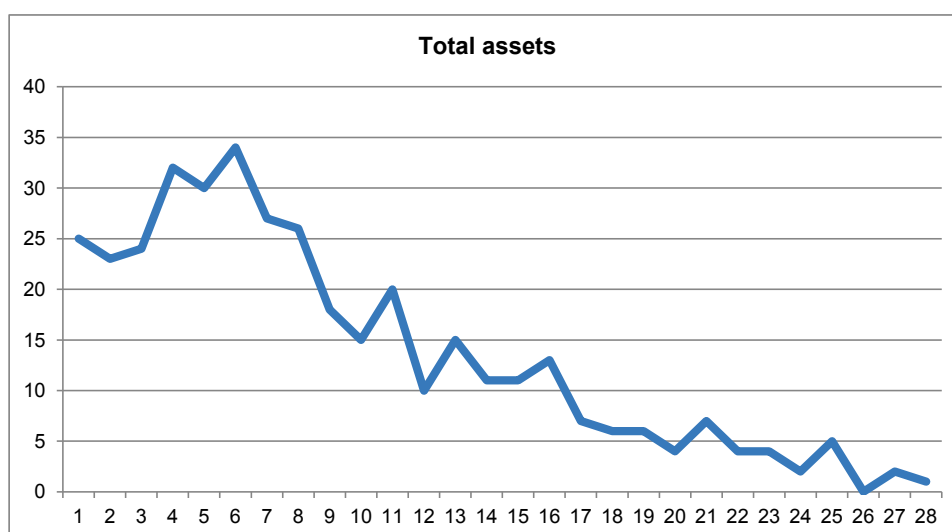
Proportion of profiles showing:	Universities	Environmental technology companies	Software companies
One or more proprietary processes	56%	48%	44%
One or more proprietary products	56%	16%	28%
One or more unique service formats	9%	6%	6%
Trade secret	35%	32%	25%

The high levels of ownership apparent for some of these asset types illustrates the importance of having a structured approach to the identification of IP and intangible assets when seeking to understand the level of substance underpinning a company's operations.

Overall non-registrable intangibles ownership levels

Inngot also analysed a separate sample of c 400 profiles compiled by SMEs (i.e. with no university content) across a range of industries to ascertain the average frequency with which they identified the presence of non-registrable intangible assets when presented with suitable definitions and tools. These covered four categories: copyright assets, embedded product or service assets (such as trade secrets and proprietary processes), resource and relationship assets (such as contracts or licences with customers and suppliers) and approvals and endorsements (such as quality certification).

The chart below shows the distribution of total asset types identified out of a possible total of 33 variants offered. It indicates that 73% of the SMEs sampled discovered five or more discrete types of intangibles within their business, and 37% identified ten or more.



High growth firms and intangible asset ownership

Research into intangibles: Big Innovation Centre

The Big Innovation Centre (BIC) has recently published the results of a new study into company intangible asset ownership using a dataset supplied by Experian⁷⁴.

In order to be able to compare the propensity of companies to use equity and debt finance, the study is based on firms which have received equity finance between 1997 and 2012 (and are therefore known to have had access to both). The data supplied by Experian included number of employees, turnover and balance sheet data, enabling the size classification of companies to be conducted with greater confidence than the IPO's IP matching exercise. In all 20,984 firms were included in the sample whose financing behaviour was followed over time, 90% of which were SMEs. The BIC research then segmented these into high growth and non-high growth companies.

The available balance sheet data included values attributed to intangible assets. It is important to stress that these figures should not be conflated with the presence of patents, trade marks, registered designs and similar, as the sums shown will generally relate to capitalised R&D expenditure which a company has considered prudent to write down or amortise over a period of time. Insofar as any of this expenditure has involved or led to the creation of IP, the accounts will only reflect the cost of obtaining them rather than the value they represent; the main exception being where assets have been acquired outright from another company, usually as a result of merger/acquisition activity. Any IP licensing activity would be shown in the company's profit and loss account.

Research findings

BIC's analysis of the data showed that the level of intangible assets owned by businesses generally was increasing. Within the sample, high growth firms had 74% more intangible assets on their balance sheet than non-high growth firms. It also concluded that where firms were funded by equity, each £1m raised led to an investment of £499,000 in intangible assets amongst high growth firms, compared with £195,000 across those who were not high growth.

The report contains a logistic regression run to estimate the impact of intangible assets on the probability of a firm being high growth, controlled for firm size, age and its industry:

Firms with higher levels of intangible assets as a proportion of total assets are more likely to be high growth firms; specifically, increasing the intangible asset ratio by 1% increases the probability of being high growth by 3.6%. This effect is much larger for firms in some sectors – for firms in the Business Services sector an increase in the intangible asset ratio increases the probability of being high growth by 9.8%. This suggests that a relationship exists between the intangible asset ratio and whether a firm is high growth⁷⁵.

74 *Disrupted Innovation: Financing small innovative firms in the UK*, Hiba Sameen and Gareth Queded, Big Innovation Centre, August 2013

75 *Ibid*, p31

And it reached the following conclusions:

Our analysis suggests that the disruptive innovation needed to create new markets, increase demand, raise productivity and kick-start the recovery, is currently being disrupted itself by an inability to finance intangible assets.

Our empirical evidence reveals that intangible assets held by firms are increasing substantially, revealing the importance of knowledge in an increasingly information-based and data driven economy. Particularly, young and micro high growth firms are increasing their investment in intangible assets, and yet they are also the most likely to not be able to access funds to finance their growth.

We also identify two systemic barriers in the access to finance faced by innovating firms, and specifically innovating small firms: the asymmetry of information and the intangibility of assets. A lack of information and trading history about the firm, and an inability to value the intangible assets of innovative businesses are currently preventing high growth [firms] from accessing finance ⁷⁶.

Research implications

As explained above, the data captured in the BIC research relates to expenditure on innovation (primarily in terms of research and development) rather than actual asset ownership, which is the main topic of this report. However, it highlights an important point about the availability of relevant data for lending and investment purposes.

The issue relates to the lack of a 'clear line of sight' through to the assets that actually exist, over which a lender could obtain appropriate controls.

The difficulty currently faced by banks is that the data they receive on the presence of intangible assets is frequently limited to the numbers shown on a company's balance sheet. Since the presence or absence of intangibles on SME balance sheets is generally a matter of accounting and management preference, and simply records expenditure, it is understandable and reasonable for a credit department to treat this figure differently from tangible assets; the latter will at least relate to an identifiable 'thing' that a company has purchased which may have some residual value.

The unfortunate consequence of this accounting treatment (investigated more fully in Chapter 9) is that the historical disregard of on-balance sheet intangibles not only weakens the balance sheet under analysis (thereby exacerbating the problem of obtaining comfort on a company's substance); it also obscures the financier's view of the vital assets which have been created. Accordingly, rather than ignoring the figure for intangibles shown, it needs to act as a prompt to investigate which assets have been generated as a result of the investment in intangibles, and what their relationship is to value generation.

76 Ibid, p 47

This point is picked up on page 21 of the BIC report:

The human capital involved [in R&D investment] goes with the employee, and usually he or she will capture any residual value from that in the form of wages in future employment. Nevertheless, most of the knowledge generated by employees is often codified in the firm, such as with the creation of copyright whereby the knowledge becomes a business asset. Where this is not acknowledged by external financiers, it will lead to the firm being undervalued.

As well as highlighting the general issue of understanding value, the report also makes the connection with the role of collateral:

In order to overcome problems of information asymmetry, banks typically require firms to provide collateral in order to provide finance – this provides a clear problem for firms with a high proportion of intangible assets, which are unable to as easily provide any... This preferential treatment towards tangible assets in banking business models is bad for innovation, and bad for growth⁷⁷.

Taken as a whole, the evidence highlights that there is no lack of assets amongst enterprises to address both information asymmetries and the specific issue of collateral. Whether these are adequately registered at present is open to question; however, a requirement to explain IP and intangibles for funding purposes would represent a substantial incentive for businesses to 'put their house in order', to the benefit of all concerned.

77 Ibid, p7. This also references *Evaluating Changes in Bank Lending to UK SMEs over 2001-12 – Ongoing Tight Credit?*, BIS, 2013, showing that around 55% of SME term loans had collateral requirements.

Chapter 6

Knowledge-based SME funding needs & experiences

Key points

The theory of the funding escalator is well known: it does not operate efficiently in practice, owing to funding gaps

The development stage of a business is highly predictive of its funding options

High growth equals greater IP intensity, but evidence suggests it does not equal higher risk

Introduction

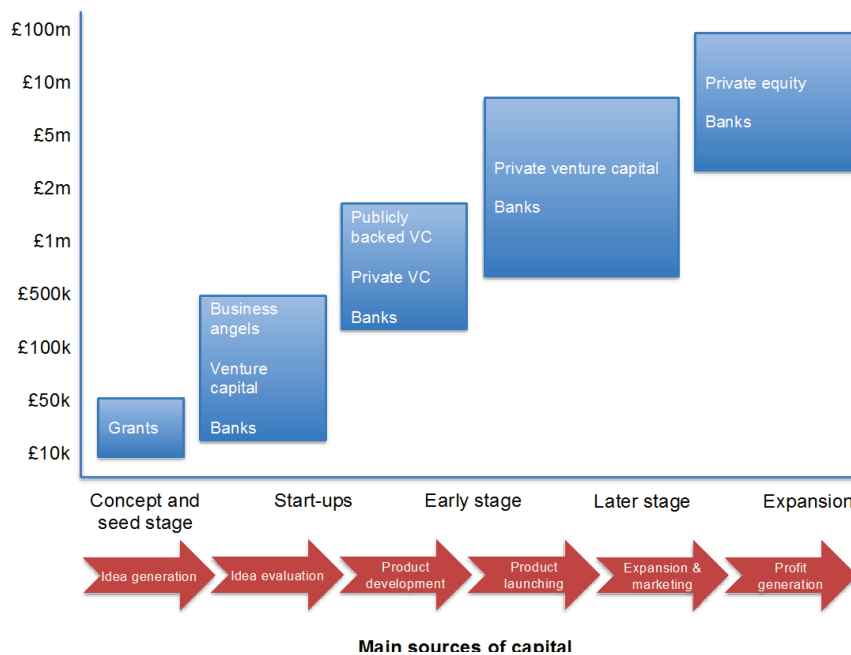
Having looked at the extent to which IP and intangibles are used by SMEs and companies generally within their businesses, this chapter considers the successes (and some failures) those businesses with IP experience in obtaining funding.

It starts by considering how current literature characterises the funding options open to businesses seeking to grow, summarising the ways in which these options may vary depending on development stage. The report then examines some highly relevant data from Experian research, originally conducted for Nesta, which calls into question the assumption that businesses which have the potential for high growth are necessarily high risk. Coupled with the link already demonstrated between high levels of intangible asset ownership and high growth, this builds a strong case for financiers generally to scrutinise IP with care.

The general issues presently facing SMEs seeking funding have been well documented in previous literature. For this report, it is important to understand whether IP provides better or additional routes to funding. Accordingly, the remainder of the chapter highlights some specific examples of funding where the company is either IP-rich, or has been able to leverage its IP in a direct and visible way to obtain finance. This is not always a straightforward process, as some of the case studies illustrate.

Available funding sources and costs

BIS Economics Paper 16, published in January 2012, summarises the different finance options which are theoretically available to businesses seeking growth capital. These are typically presented in an ‘escalator’ chart along the lines of the one reproduced below⁷⁸:



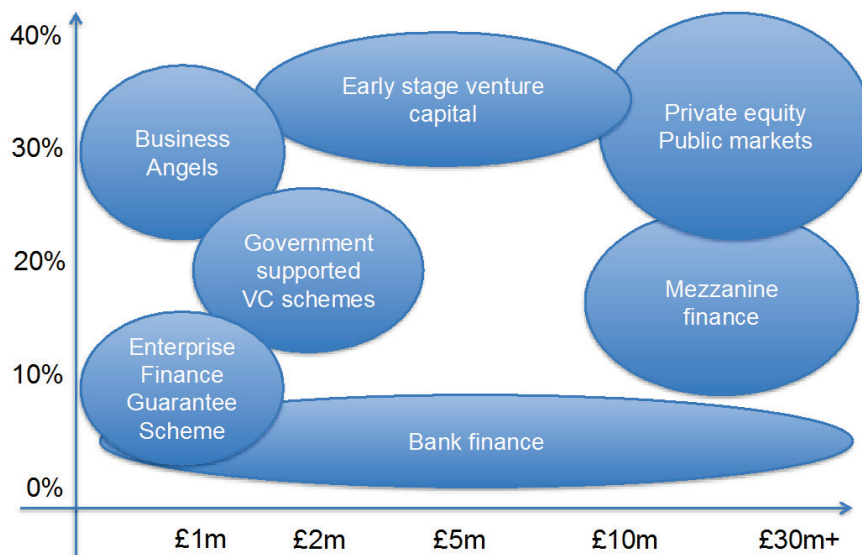
On the face of it, there are funding solutions available at each stage of development. However, the chart does not reflect the level of availability of each of these types of funding, nor is it an accurate representation of the space in which these funds currently operate. Venture capital is a case in point, with several interviewees pointing out that for a variety of reasons explained elsewhere in this report, this category of funders will only get involved in deals under £2m in exceptional circumstances.

The following diagram, based on one shown in BIS Economic Paper 16, provides a more nuanced view of where the different types of finance sit in relation to each other with an overlay of the effective cost to the business⁷⁹. However, this too only shows part of the picture, as it does not reflect the availability of any one of these funding routes to specific companies.

In the illustration below, the vertical axis represents the effective cost of each funding source, while the horizontal axis shows the typical range of amounts they are able to provide.

78 From *BIS Economics Paper 16*: reproduced from *Reshaping the Economy*, Nesta, 2009

79 *The Provision of Growth Capital to UK Small and Medium Sized Enterprises*, Rowlands (2009)



IP and business development challenges

When considering the potential for IP and intangibles to inform funding decisions, it is important to acknowledge that the IP and intangibles themselves are not static. As a business moves through different stages of development, its IP is likely to diversify and mature, but may also become subject to increasing internal and external threats. Some of the considerations which determine the suitability of different forms of funding, insofar as these relate to IP and intangibles, are briefly summarised below.

The foundation phase

When an IP-rich business is first established, it generally starts from an idea, invention, a market opportunity, or a new way of doing something. It is usually under-resourced in terms of people and assets. The idea itself may well need further research, is unlikely to be properly protected (it may not even be fully documented), and the business may lack the resources to develop or deliver it. However, since know-how is usually concentrated in a relatively small number of people, it is less likely to be stolen or compromised.

The IP may be at a later stage of development if it has been brought in from outside the business (for example, as a result of creating a university spin-out company). Under these circumstances, though, other parts of the company structure are likely to be even less settled, as they will not have been working with the idea from its inception.

If the business can gain market traction and become profitable during this early period, it may have an opportunity to finance part or all of its growth using debt funding (though credit scoring is likely to play a large part in decision-making, as will the availability of personal guarantees).

However, it is more likely that such a business will need to be supported by shareholders' funds, by friends and family, and potentially by external equity investors. These are most likely to be found via crowdfunding sites or business angel networks.

The expansion and development phases

Growing businesses face many challenges. It is widely accepted that many companies which do not survive are not necessarily lacking in market potential, but run out of cash before they can capitalise on it.

There is a substantial body of literature on the difficulties of getting a business (especially an IP or technology-based one) to a sustainable position, however promising the foundation phase of the business may have been⁸⁰. A business that is initially reliant on personal resources, credit cards, friends and family, and even angel investors may struggle to make this transition. As George Whitehead (quoted in Chapters 2 and 4) puts it:

As a consequence, you get highly innovative but chronically under-funded companies, which is not the way to build strong management teams and do great research and development work.

The pace of technological change means that many businesses have to innovate on a continuous basis. During this expansion and development phase, companies are often engaged in a particularly intense phase of product- or service-building activity, as they respond to the feedback of early adopters and seek to reach a more mature stage of development. They are investing primarily in intangible assets, which have significant potential value, as highlighted in the BIC report referenced in Chapter 5.

However, they may struggle to fund this activity from profits (as the need for development may prevent there from being any). As a result, companies at this stage can often face the 'double jeopardy' of having profits which are reduced by re-investment (thereby affecting debt serviceability and the overall business valuation), and making a type of investment that is not recognised by a financier (because even if it is reflected on a balance sheet at all, it will be ignored).

It is this group of companies which may benefit most from a better understanding of IP and intangibles. This will not be achieved by giving more credit to their balance sheets (since this only shows intangible expenditure, and cost is acknowledged to be a very imperfect predictor of value). It will be achieved by understanding what IP and intangible assets the company really owns and how they are helping it to generate turnover.

80 For example, one of the best known works exploring the challenges facing high-tech product businesses is *Crossing the Chasm* by Geoffrey A. Moore (1991), which looks at the difficulties of transitioning from early adopters of a technology to the 'early majority'. This has parallels in the phrase 'the valley of death', used to characterise the problems of taking innovation from the workbench and translating it into a commercially viable product. This phrase was recently used as the title of a House of Commons report on technology commercialisation (*Bridging the Valley of Death: improving the commercialisation of research*, House of Commons Science & Technology Committee, March 2013).

Where term debt is available to businesses in this phase of growth, it is less likely to come from mainstream banking operations, and more likely to be available at mezzanine-style levels of cost. It may come from banks with the support of EFG. Generally, companies in this expansion and development phase that are lucky enough to have a choice of funding routes may still conclude that expensive debt is still significantly less expensive than equity. Also, if they have strong sales ledgers, such businesses may be able to access invoice finance to smooth some of the cash flow variations that can otherwise prove fatal.

The mature company

Once a company reaches a point of sustainable profitability, even if this is at a modest level in absolute terms, it begins to have many more options in terms of funding its growth. However, it may also be faced with new demands, such as the need to expand internationally in order to support continued revenue development (which will raise new IP challenges) or to ensure that its revenues are not eroded by domestic competition (which is also closely related to whether it has IP).

If the intellectual capital of the business continues to have market traction, it will now have substantial value. However, this value may not be recognised by the business (not least because it is not explicitly acknowledged by financiers or by accountancy) and there is a risk that the company may fail to place sufficient emphasis on both the protection and the development of the assets that drive their revenue. As Chapters 7 and 8 explain, this represents a potentially significant exposure for financiers.

The relationship between high growth and high risk

In February 2011, Experian conducted analysis for Nesta on the performance of high growth firms⁸¹. This studied two cohorts of companies, one from 2003 and one from 2005, all with 10 or more employees: the first was studied 'pre-recession' between 2003-2006, and the second between 2008-2010. Each cohort was then divided between high growth (6-7% of the sample, which resonates with Nesta's work⁸²) and non-high growth.

For the purposes of the study, high growth was extrapolated from employment rather than turnover growth. Turnover data would have increased the sample size by about one-third, but the absence of this data from some smaller business's accounts meant that this method would, in Experian's view, have introduced a bias towards larger companies.

Propensity to become insolvent

The key findings of the study on insolvency rates were as follows:

- Rates rose across the 2005 cohort (high growth and non-high growth) because the companies were being measured during the recession

81 Presentation: *Nesta analysis of High Growth Firms before and during the recession compared to other firms*, Experian/pH group, February 2011

82 *The Vital Six Per Cent*, Nesta, 2009

- In both 2003 and 2005 cohorts, the insolvency rate was lower amongst firms that achieved high growth than those which did not, across all sizes of business
- Experian applied its 'pH Financial Megascore', used to predict the probability of insolvency within 12 months, banded into five levels from A-E, "*with As being very financially sound businesses and Es those that have severe weaknesses in their balance sheets.*" This showed both cohorts to have similar levels of predicted insolvencies across high growth and non-high growth firms, but high growth firms then improved faster than non-high growth firms as this score was re-run – by a significant degree in the 2005 cohort, being measured during the recession.

Experian commented:

Interestingly, the Megascore value calculated at the end of the period in which High Growth is measured (Year X+3) appears to undervalue high growth businesses relative to non-High Growth businesses:

- *At each level of Megascore Grade, from A (best) to E (worst), the subsequent insolvency rate is consistently lower for high growth businesses than non-high growth businesses of the same grade*
- *Since the Megascore is based on financial accounts, similar to the credit ratings used by lenders in making financial decisions, it is therefore likely that high growth businesses may find it harder to get credit at attractive rates than they actually deserve*
- *Indeed, examining typical components of credit ratings individually (profitability, cashflow, gearing, liquidity) confirms that at any level of each of these variables, high growth firms have lower insolvency rates than non-high growth firms*

Propensity to close

The insolvency analysis was then extended to include all business closures. This showed similar results: whilst there was more of a size effect, with larger firms being much less likely to dissolve than those at the smaller end of the population, the closure rate during the recession was significantly higher than pre-recession, and again, high growth firms emerged as being much less likely to close than non-high growth firms.

Experian also applied its Commercial Delphi analysis, a 1-100 score which draws on more sources of data than the pH assessment and is calibrated to predict all closures rather than insolvencies. Its findings were that:

In both cohorts, high growth firms are slightly more poorly scored in Year X than non-high growth firms, but improve at a faster rate to have a lower chance of closing by the end of their growth period and thereafter.

Longer-term behaviour

Finally, Experian sought to assess subsequent growth beyond the three-year period used to establish which businesses conformed to the high growth definition.

When measured by employment, this showed that a significant proportion of firms remained stable in terms of employment, but that high growth firms showed more volatility. Pre-recession, some continued to grow more strongly while others declined; during the recession the high growth firms found it more difficult to maintain growth than non-high growth firms.

However, when measured by turnover growth, the results were somewhat different:

- *Over both a 1-year and 2-year window, high growth firms tend to achieve higher levels of turnover growth subsequent to their high employment growth period than firms that did not go through high growth*
- *The pattern is the same both pre-recession and in the recession, although not surprisingly, both high growth and non-high growth firms achieved lower levels of turnover growth in the recession than pre-recession.*

The employment and turnover growth figures were then combined to study the populations of firms that were expanding (growing both turnover and headcount), becoming more productive (growing turnover but not headcount), becoming vulnerable (increasing headcount but not turnover) and contracting (shrinking both), against a population of stable businesses with less than 5% deviation in either. Not surprisingly, the number of expanding firms is less in the recession, but high growth firms are more likely to be expanding and less likely to be contracting – they are more likely to become productive. In Experian's view⁸³:

This implies that after a period of high growth, a significant number of firms will go through a period of consolidation and cost-cutting, to boost productivity and profitability which may have suffered during the growth period.

The report reached some interesting conclusions on liquidity and debt, showing that high growth businesses operate with significantly lower levels of liquidity than non-high growth businesses, and operate with higher levels of debt in order to fund their growth though the incidence of new charges being recorded at Companies House has declined steadily over time (perhaps reflecting the general trend towards deleveraging).

This presents strong statistical evidence for seeing high growth firms as desirable bank customers – they are more likely to survive even in a recession even though they are not necessarily financially stronger, and they are more likely to want to borrow in order to fund growth.

83 Further detail is also provided in the report

Demand side case studies

Introduction

This section uses a number of examples drawn from financiers and individual companies to examine funding journeys that relate to IP-centric businesses, or which have been financed using IP and intangibles. It starts with two sections on science and technology-intensive businesses regarding very significant amounts of development capital, and moves on to consider other funding contexts, including the relatively small amounts of finance sought by many SMEs to grow their businesses.

UK IP-rich companies: investment timelines

The experiences of Cambridge Display Technologies (CDT) provide an interesting overview of an IP rich company and its financing rounds through the various stages of growth:

- 1987: first patent filed (light-emitting polymers)
- 1989: initial discovery of organic electroluminescence from polymers by a research group at the Cavendish Laboratory of Cambridge University
- 1991: first working displays developed (3 x 5 pixels)
- 1992: CDT is founded by Cambridge University and seed venture capital
- 1996: the company enters into its first licence agreements
- 1997: \$10m raised
- 1999: over \$133m raised; sold to US private equity groups
- 2000: CDT and Seiko-Epson demonstrate the world's first colour active matrix ink-jet printed PLED display
- 2001: \$28m (internal financing round); Sumitomo takes a licence to CDT materials IP and invests
- 2002: CDT announces a new \$25m Technology Development Centre and the first high profile commercial PLED product when Philips launches its shaver with electronic display
- 2004: NASDAQ flotation
- July 2004: capital restructure involving \$15m debt capital
- 2006: P-OLED technology developed substantially for use in printers, scanners and similar
- 2007: Toppan Printing and CDT show roll printed display at SID - another world first
- 2007: CDT acquires assets of Next Sierra and wins an organic semi-conductor industry award for research and development for its Total Matrix Addressing. Sumitomo Chemical company, a long-term partner, acquires CDT in September

CDT (as part of Sumitomo) continues to be a leading developer of technology on polymer light emitting diodes (P-OLEDs). By raising cash through collateralising IP via debt, credit and various

facilities over time (with providers including Lloyds TSB and IPUI Financial Services), CDT shows one way in which a small company with good IP, but few fixed assets, can raise money and grow.

The Thomson Reuters database shows that a number of companies founded in different parts of the UK have managed to obtain significant funding through a sequence of rounds. Some of these have been supported by Nesta at the seed stage and have gone on to receive private equity backing. The companies identified include:

- Bio Fortuna Ltd, Wirral
- OrganOx Ltd, Oxford
- Convergence Pharmaceuticals Ltd, Cambridge
- Kalvista Pharmaceuticals Ltd, Porton Down
- Autifong Therapeutics Ltd, Welwyn Garden City
- Big DNA Ltd, Roslin
- NuCona BioMed Ltd, Edinburgh
- PLaxica Ltd, London
- Circassia Holdings, Oxford
- Topivert Ltd, London

As one example, Circassia Holdings, a biopharmaceutical company based at the Magdalen Centre on the Oxford Science Park, originally received seed funding from Carbon Trust Investments, the Low Carbon Seed Fund of Imperial Innovations and from Nesta, each of which invested some \$540,000 in August 2009. This was followed by an expansion capital round in August 2010, in which all three original investors participated joined by an unnamed fund managed by Invesco Perpetual in a round totalling nearly \$4.7m. Thanks to a subsequent third round, the business's funding has now increased to over \$150m.

Within the life sciences and pharmaceutical sectors, it is customary for large sums of money to be required at a comparatively early stage of investment. The following UK examples provide some instances of this:

- Vanti Therapeutics, a new UK-based R&D company based in Southampton and focusing on novel first-in-class therapies for unmet medical needs, was launched in 2008 with backing from an investor syndicate led by MVM Life Science Partners, along with SV Life Sciences and Novo A/S. The company, a spin-out of small molecule assets from Ferring Pharmaceuticals, raised up to £19m in investment for the development of its pipeline
 - Crescendo Biologics, based in Cambridge, announced in 2009 that it had raised £4.5 million in a seed-funding round to advance the development of its fragment antibody technology platforms. The funding round was led by Sofinnova Partners, a Paris-based venture capital firm, with Aitua, Avlar BioVentures and the Rainbow Seed Fund also participating. It brought together together highly innovative in vivo and in vitro technology platforms invented by scientists at the Babraham Institute.
-

- In 2010, Kymab and The Wellcome Trust investment division announced a £20 million Series A equity financing. Kymab is a biopharmaceutical company focused on the discovery, development and commercialisation of novel monoclonal antibody medicines. The company is a spin-out from The Wellcome Trust Sanger Institute, Cambridge, a leader in the Human Genome Project and genetic studies to determine the function of genes in health and disease.
- Also in 2010, Freehand Surgical Limited was launched with new funding of £3.25 million and a strengthened management team to acquire ProSurgics. The aim of the company is to exploit the laparoscopic (keyhole) surgery market in the UK and the US. The new money came from funds managed by Chord Capital, Hygea VCT and the Norwegian fund Fritas AS. Existing investors include UK based VCTs, business angels and high net worth individual investors. Significant personal investments were also made by the management team.

Sale of IP ‘vehicles’

There is a growing and significant volume of merger and acquisition activity that relates to ‘pure’ IP companies. Although these transactions only identify specific IP in the accounts of the acquirer, if compliant under IFRS 3 (AIM and fully listed companies), these deals illustrate the intrinsic value that intangible assets can have. They also demonstrate that there is an ability to create exits, identify positive cash flow with good predictability over time and relate these cash flows to the IP. Readily available statistics from the US in the oncology sector illustrate this trend:

Target	Acquirer	Date	Clinical Stage	Value
Plexixikon	Dallchi-Sankyo	2011	Phase III	\$805m + \$130m milestone payment
Callistoga	Gilead	2011	Phase II	\$375m + \$225m milestone payment
BioVex	Amgen	2011	Phase III	\$425m + \$575m milestone payment
Arresto	Gilead	2010	Phase I	\$225m + undisclosed
Gloucester	Celigene	2010	Approved	\$340m + \$300m milestone payment
Proteolix	Onyx	2009	Phase II	\$276m + \$575m milestone payment
BiPar	Sanofi	2009	Phase II	\$350m + \$150m milestone payment
Cougar	J&J	2009	Phase III	\$970m
Incyte	Novartis	2009	Phase II	\$210m + \$1.1bn milestone payment
Bioenvision	Genzyme	2007	Marketed	\$345m

Debt investments involving Clydesdale Bank’s Growth Fund

Chapter 3 highlighted the availability of venture debt and mezzanine-style finance to selected high growth companies. The following three examples provide an indication of how IP has been factored into the lending decision.

Cambridge Semiconductor (CamSemi) is a privately-held, fabless integrated circuit company focused on developing more cost and energy efficient power conversion products. The company is backed by multiple venture capital investors including DFJ Esprit, Scottish Equity Partners, Carbon Trust and NES Partners. CamSemi is headquartered in Cambridge, UK and has operations across South East Asia. The company was formed in 2000, and in 2012 had revenues of £9.7m.

CamSemi is an emerging leader in power management integrated circuits for cost-efficient mains power conversion products, helping power supply and solid-state lighting manufacturers develop products that are smaller, lower cost, more energy-efficient and easier to manufacture. CamSemi is a key supplier to many of the world's top networking, consumer electronics and mobile phone brands, holding multiple industry awards for its innovative technologies and products, as well as its international sales growth.

The multi-million pound Growth Finance package was initially advanced in July 2011, consisting of a mix of term loan and non-amortising invoice finance together with ancillary facilities used to fund the costs of expansion associated with a considerable increase in customer demand. Since then, further funding has been advanced to the business, in partnership with their equity providers, to support continued product development and working capital requirements.

CamSemi holds a portfolio of around 50 granted and pending patents across geographies such as the US, UK, China, Japan and Australia. CamSemi's strong and visible intellectual property portfolio, along with the significant revenues the portfolio was helping to generate, gave Clydesdale Bank significant comfort that these assets were valuable and could be leveraged.

Clydesdale commented: *"We don't lend solely against the intellectual property; we have to take a much wider view of the strength of the business, its product offering and position in the market. But we do recognise that IP is the key collateral that underpins the value of the company."*

DisplayLink Limited (DisplayLink) is a leading provider of network display technology. Founded in 2003, the business is headquartered in the UK, with operations in the US, Poland, Taiwan and Japan and employs over 100 people.

DisplayLink operates in the semiconductor and software solutions sectors. The company develops both hardware and software solutions enabling easier connectivity between monitors and computing devices over standard interfaces such as USB and wireless networks. The technology dramatically improves the user experience and economics of multi-monitor computing, bringing added productivity benefits to personal and professional users.

The Growth Finance package advanced in July 2012 was part of an overall \$10.4m financing round in conjunction with equity funding from existing investors. The funds are being utilised to fund significant growth in sales and to back this market traction up with continued substantial investment in next generation products.

DisplayLink has a wide suite of intellectual property rights including more than 20 granted or pending patents, copyrighted proprietary software and firmware and proprietary chip designs.

As part of the funding process, Metis Partners completed IP due diligence on behalf of Clydesdale Bank Growth Finance to confirm that the IP portfolio owned by DisplayLink tightly underpinned the revenue streams of the business. Clydesdale Bank was therefore able to take considerable comfort that the IP was a key asset contributing to the enterprise value of the business, and took security over this IP as part of the terms of the loan.

Speciality European Pharma Limited (SEP) is a privately owned marketer of speciality pharmaceutical products. Founded in 2006 by Advent Venture Partners, SEP's purpose is to acquire, develop, register, and commercialise therapeutic products in the growing European market.

SEP markets therapeutics focused primarily in urology and uro-oncology markets to treat a range of diseases and disorders including prostate cancer, bladder cancer, overactive bladder and acute variceal bleeding. The Company's products are marketed directly in the United Kingdom, Germany, France and Italy, as well as through commercial collaborations with expert partners in certain other key territories throughout Europe. SEP has grown through the acquisition and licensing of approved pharmaceutical products and its portfolio consists of Plenaxis, Mitem, Regurin, Haemopressin and more recently Bulkamid and Aquamid following the acquisition of Danish company Contura.

The Growth Finance package comprised a £2.5 million term loan together with ancillary facilities for four years through to December 2015 and is used by SEP to fund expansion plans and assist in delivering a period of forecast growth.

SEP has a diversified sales mix of both established, branded generic drugs with seasoned revenue streams and on-patent products that have strong brand recognition and considerable IP protection. The company holds a series of granted and pending patents and trademarks across its product portfolio, including Europe, the United States, Japan, Australia, and Canada amongst other countries. The strength of this IP gives confidence to the bank of the enterprise value of SEP and in turn the underlying security position.

IP in equity investments made by the Business Growth Fund

The Business Growth Fund (BGF), examined in Chapter 4, has invested in a number of IP-rich businesses. The following two examples relate to companies producing products with less of a scientific emphasis where IP is an integral part of their revenue generation strategy. In both cases, it needs to be strongly defended.

Wow! Stuff (Wow) is a toy, gift and gadget development business which markets and sells products direct to retailers in the UK, Europe and the US. The business markets its products with licences from The National History Museum, Science Museum, Doctor Who, Top Gear, Mensa, Wallace & Gromit and Animal Planet. The business was founded in 2006 and has a strong focus on innovative product designs and its commercialisation and marketing capability. Wow has appeared in the Fast Track 100 and its CEO Richard North won HSBC Business Thinker of the Year award in 2010.

Wow owns the IP or rights to the IP on the majority of its existing and "in development" toy products. The design and creative input is all UK based, with final manufacture usually being done by selected factories in Asia. Wow works with its advisors in UK to ensure all relevant intellectual property (IP) is registered both in UK and abroad and as of 2013, it has registered at least five patents. In addition to the IP Wow generates itself, it also takes licenses from inventors to turn their ideas and IP into commercial reality.

Because counterfeit toys are generally of inferior quality and therefore potentially unsafe for children, they tend to command a small proportion of the market and retailers only want to deal with IP owners and registered distributors. Nonetheless, this is an on-going risk faced by all toy brand owners, as the following example illustrates.

The company launched a toy created by a US inventor, patented and licensed exclusively to Wow. Wow added to the product and registered further IP in its own name. It launched the product at an international toy fair. Within weeks, infringing and fake products started to appear and be offered for sale at fairs and via direct approaches from factories.

Wow embarked upon a preventative 'cease and desist' communication programme and identified several factories in China making these toys. The time and cost of trying to stem the tide from these, their distributor contacts and others was considerable. Wow engaged with UK Trading Standards officers and tried to enlist the help of port and border agencies across Europe. The company also tried to use the toy and gift trade press to alert retailers to the risk to them in fake and potentially sub-standard products. Wow then went on the offensive and selected infringers in UK to prosecute to get its rights asserted in law and to get recompense for the damage caused. These cases are on-going.

Trunki designs, distributes and manufactures multifunctional travel products for children, and has been pioneering a new children's travel products category since launching its flagship ride-on suitcase in 2006. The company has focused on building its core UK business across multiple channels but the largest growth opportunity for its products is overseas. Trunki products are currently sold in 97 countries, and the company now has the potential for further growth through in-store merchandising and licensing opportunities across various markets.

The main barrier to entry is Trunki's brand but like many branded goods, its products are at risk of imitation. Magmatic, the firm behind Trunki, has gone to great lengths to protect its intellectual property both in the EU and further afield including patenting 6 innovative aspects of its designs, registering 29 designs, 8 trademarks and securing 90 internet domain names. An added benefit of the patents is an associated tax saving which has the potential to reduce the effective corporation tax rate to c. 10% in 5 years.

Trunki's main protection to IP risk is through these numerous design registrations and it has previously defended itself where necessary through litigation. In July 2013, Magmatic won a court case against PMS International, with the High Court ruling that PMS International's Kiddee Case infringed the European protected design of the Trunki. Magmatic started taking legal action against factories, distributors and importers of counterfeited products in March 2013.

Despite not having patent protection for the ride-on suitcase, the legal case was won on three counts: a registered community design filed in 2003, unregistered design on aspects of the design itself and copyright in aspects of the packaging.

Angel funding for early stage companies

Chapter 4 examined the importance of angel investors in providing seed and early stage capital to innovative businesses. The following example provides some insight into the benefits of being able to quantify IP and its value for the purposes of negotiation.

Based on feedback from its customers, **Exactrak** was formed to design a security device called Security Guardian, which could protect data on any laptop. It is based around a modified USB memory stick that has integrated GPS to identify its location, and GSM so that messages can be received from and sent to the device, which could include turning off or deleting the memory. The product has been featured on the BBC's 'Click' programme as well as in national newspapers. CEO Norman Shaw explains:

Clearly, our product has got a lot of innovation to it. As we were looking for funding, we had to see what we could offer potential funders. The advice was that we should really get our IP recognised and registered. One of our best investments has been to get a professional patent attorney, in our case Mathys & Squire, to look at the work that we had done. Not only did they agree that it was innovative, but they identified a number of areas that we wouldn't even have considered that were well worth patenting.

Since the IP was the only assets that the company possessed, Exactrak obtained an indicative valuation for it, before contracting with Norton Corporate Finance in Reading, who set up a series of meetings with people who met our criteria in terms of adding value to our business.

One of the interesting things about the IP valuation was that when it was presented to the potential shareholders, it almost immediately took away a lot of the haggling and negotiation, because it was from an independent third party who had looked at it from a completely dispassionate viewpoint.

Following the various negotiations we had six interested parties, and we were pleased to be able to raise just over £450,000 of external investment, all from people who are able to bring additional expertise into the company.

IP-backed pension-led funding

One of the contexts in which IP can be used directly in support of funding is when one or more assets are transferred into a new pension, liberating their value. The following brief examples of pension-led funding have been provided by Clifton Asset Management and illustrate the diversity of companies which can benefit from releasing varying amounts of capital from their IP in this way.

Dick Cormack left a position as head of UK motorsport operations at Pirelli to set up his own business, **DMACK Tyres**, in 2007. He worked with Chinese manufacturer Yongtai to develop a new brand of motorsport tyre, but while his bank was supportive, it was not able to lend the £150,000 needed to get to the point of production.

Following an independent assessment of the value of the DMACK tyre design and the potential product range, £75,000 was raised and put into the new business via a SIPP, matched by a further £75,000 from the bank.

The company grew rapidly and within a short time was able to offer 28 tyre sizes and 50 compound and tread combinations. However the biggest turning point came when DMACK

won one of two tenders to supply the World Rally Championship. *“We went overnight from literally selling a couple of thousand tyres to 10,000.”* The SIPP has grown and provided further funding, including for a new business to produce road tyres.

Kit for Kids, a children’s indoor furniture firm, was established in 1993. It had an existing bank facility being used to purchase stock for rapid fulfilment, but this left it exposed when the bank started to tighten lines of credit in 2008. Jan van der Velde decided to raise £125,000 via a transfer into a new SIPP scheme which could then be leased back to the business after acquiring the company’s IP:

The pension-led funding structure was very attractive, particularly because we could use the IP residing in the Kit for Kids name – which by now had a 15-year reputation – as an asset that was considered quasi-capital.

The process cost around £8,500 in fees, but as a consequence the company has expanded into new territories, increased turnover by 20% to £6m and repaid the pension fund with interest.

Imagnet was originally founded in 1995 in Newport, South Wales. It is a web solutions company which now employs 22 people. Having experienced difficulties in obtaining a bank loan to grow the business, due to the fact that his software company had very few tangible assets on its balance sheet, Nigel Roberts used a SSAS scheme to access funds from his existing pension using intellectual property from his business, and has since accessed them two further times.

Most recently, the funding was used to secure a £60,000 match funded grant from the Welsh Government’s Digital Development Fund, in order to adapt the company’s services for use on mobile devices. Roberts said: *‘This is a way of gaining ownership over your source of finance.’*

Tony Curtis of **Alago** was an unsuccessful Dragon’s Den entrant in 2010 with his heated gloves, originally invented after watching his child play rugby. He was offered a business banking account but without any lending options. His IP was subsequently valued at £30,000 and was used to unlock funds in his pension. He has subsequently become Guardian Start-Up Business of the Year and was referenced in Lord Young’s Growing Your Business report, having now grown the range to 9 products.

Finally, **ES Global Limited** was founded in 1974. It has a patented construction system which it uses to create temporary exhibition and event structures for a range of international clients. Two of its directors, Olly Watts and Jeff Burke, wanted to implement a management buyout. They were able to obtain some financial assistance from Coutts Bank but had to raise the remainder elsewhere.

This was ultimately done using a new SSAS scheme which acquired the ESG trademark at a valuation of £405,000, which has then been leased back to the business, freeing up the necessary sums.

Chapter 7

Realising IP value: in good times and bad

Key points

IP can contain a great deal of realisable value where there is market appetite for it

IP is important in achieving the best outcome in the event of distress or administration

The options and markets for disposal of IP are improving

Securitisation of IP (that retains its association with the business) can be a very effective fundraising strategy

Business failure is not synonymous with IP failure

There is evidence of increasing UK appetite to insure against the risks involved in financing IP

Introduction

As will be seen from evidence discussed in Chapter 8, having a proper degree of control over a company's IP and intangibles may prove to be very important under certain circumstances. These include ensuring that a bank can exercise the desired level of influence at the point where a business runs into difficulties, but where continuing on a going concern basis is agreed to be in the best interests of all interested parties. It is notable that in cases where venture debt techniques are being used (as referenced in Chapter 3), a first charge over all IP is always regarded as a priority.

However, for banks to lend positively and directly against the value of IP and intangibles in isolation (setting aside regulatory considerations), it is necessary for the bank to be confident that it can dispose of these separately from the business if the need should arise, in much the same way as it can expect to do with an item of tangible property.

Such 'secondary exit routes' are perceived as being difficult with IP for a number of reasons. One of these is that much IP is developed within a business for its own use and is particular to that model (which, by implication, has not worked as anticipated; or at least, not at the point when value needs to be realised). This logic is perhaps flawed: unless the failure is based on there being no market for the IP, it would seem merely to prove that this particular business has not been able to exploit it properly.

More fundamentally, IP is perceived as being at the opposite end of the asset spectrum from tangible fixed assets such as commercial property, cars, vans, plant and machinery. Whilst there is always some risk in disposals associated with fixed assets, such as those relating to market appetite and most particularly condition, there are perceived to be a number of characteristics about which a bank can be reasonably certain:

- There is a sufficient track record associated with similar assets to be confident that the realisable value is capable of being predicted (and that the uncertainties inherent in this process are either commercially acceptable or have already been factored into the initial financing arrangement)
- Where the assets are more specialised, there is access to expertise to determine the likely value of the assets (either at underwriting time, disposal time, or both)
- Marketplaces exist which will attract buyers for the assets, which can therefore be disposed of without unacceptable delays
- Other risks are capable of being managed through mitigating strategies (which might include some form of insurance or minimum value guarantee)
- Whatever happens, the asset's value is definitely not nil

This represents quite a high 'burden of proof' for IP and intangibles. Whilst intellectual capital has clearly become the foundation of many companies and many economies, the market for IP has not matured in parallel.

However, it is also evident that the routes available to assist with trading and divesting in IP assets have multiplied over recent years and that many more channels and reference points now exist that may give lenders and investors greater confidence that realising value from assets is possible even in distress.

Are all assets alike?

Interviews for this project have revealed a difference of opinion amongst respondents on the question of marketability. Within patents, for example Nick Goddard sees a distinction between different types of granted rights which he considers potentially important:

I think it comes down to enforceability. With 'state of matter' type patents, such as a material or chemical where you have put together building blocks in a pattern not found in nature, self-evidently no-one has ever done it before and discovered these properties. So when you have patented that state of matter, anyone caught using it in the manner specified in the patent is clearly in breach. It is easier to police, because you only have to find the artefact – and if the breach initially occurs elsewhere in a 'dodgy' territory, you just wait until it comes into a protected area and attack it.

With a process patent, infringement is a lot harder to prove – you may not even know that it has happened. You would need to get inside a factory to prove it, and where would you prosecute?

In the experience of Thomas Gardiner of TFF Group, who has a track record of financing various different types of business asset, it is a question of whether others can use the IP:

There might be a small amount of IP that is specialised and good for one business alone, but most could be used by someone else in a completely different way, and would generate additional income.

I know of a classic example of an app originally developed for the dating market. What the company had really created was a way of operating a closed group with a niche interest in common. This has now been used to power three or four completely different and separate communities that also assist people with niche interests.

Goddard also observes:

Companies have knowledge that is inherently valuable. Some of it is not easily removed from the company, so acquiring the knowledge might involve buying the company, which would attract a premium compared with the value of the knowledge alone. This tends to be the model in software and digital media businesses.

However, you can separate a ‘state of matter’ patent for a drug, which is exactly what biotech companies do with drug discovery – they seek out an acquirer to manufacture in scale, who has the muscle to enforce.

Methods of value realisation

Realising value in distress

For a lender to place any weight on IP and intangibles, they must first be satisfied that these assets can properly support recovery operations, as the primary purpose of security is to provide a secondary exit route in the event of distress (though, as has been shown, many forms of security such as personal guarantees are taken mainly in order to ensure the bank has influence, rather than any predetermined intention to foreclose).

One insolvency practitioner from a Top 10 accountancy practice, with many years’ experience assisting debt and equity funders with technology business workouts, explains the approach he takes:

If you market a pub for sale, its value is more than just the bricks and mortar. A technology business is similar, but better, because its assets are much more portable.

The business and its IP are marketed anonymously, so in many cases it will not be obvious that the business is in distress. But in any event, the existing indebtedness of the business is completely irrelevant. It’s a question of what the market will pay, and it is a worldwide market – interest can come from the US, from Brazil and increasingly from China.

We don't separately value the IP prior to marketing because it is very difficult to assess what value someone else may see in it. For example, we sometimes get purchasers coming in with specific intent to kill it off – and we find that the IP still has value in that context.

With a patent or source code, we will seek to find a buyer for the core technology, but if possible retain the rights to exploit other market opportunities, because buyers are often only interested in one market.

Marketing the IP is the priority, and we use the expertise of the management team to point out not just its current strengths but its potential and the synergies it may offer. Similarly, if you are trying to grow or maintain the business, you have to identify the key people who understand the markets and the IP. We find it better to manage the handover and supporting know-how at sale using short-term consultancy agreements if needed, rather than lose the resource to one market.

We quite often sell other intangibles like customer lists separately to the underlying IP, though it can be awkward to do due diligence on it. The same applies to information on key suppliers – how can you sell it without disclosing what is in it? Normally these are sold to other companies in the same industry.

Where possible, the objective is then to sell the business as a going concern. Here, a 'pre-pack' arrangement may be used to pre-empt IP dilution, including reputational damage. A quick sale or licence by an administrator may be preferable as a means of avoiding the potential for value dilution in drawn-out administration or insolvency proceedings:

'Pre-packs' can be very effective if a purchaser has already been lined up, with the knowledge of the business's creditors. The company is then put into administration and almost immediately sold. Technology companies lend themselves to this approach because of the importance of the people. Better value can be delivered if the key people are transferred to the new company under TUPE.

Mercer & Hole (Accountants) insolvency practice provides an illustration of how a technology company rescue process can work. It concerned a company with an exclusive licence to use a software package in the premium finance industry, which over time had received a lot of investment in adaptations and enhancements, and was the only significant asset the business possessed. However, it started to run out of investment funding before the company's customer base had grown sufficiently.

Whilst advising the directors on their duties, Mercer & Hole began direct negotiations with their bank, which also provided funding to most of the company's customers. £500k of additional funding was obtained to enable the company to continue to trade in administration so that the company could be rescued as a going concern. This was enough to provide a further year of trading, demonstrating the value of the company's offering and avoiding crystallisation of £m's in contingent liabilities by meeting the company's contractual obligations. A firm commitment was also obtained to acquire the business.

We negotiated an offer providing an enhanced return to the company's creditors, and also the prospect of a future return to the company's existing shareholders. Once we had implemented a mechanism to safeguard their future interests and the shareholders had agreed to sell their individual shares, we were able to present a Company Voluntary Arrangement (CVA) proposal to the creditors, with a view to exiting the administration.

Approval of the CVA resulted in the sale of the company's shares to the third party investor, a significant one-off contribution into the CVA and the establishment of a trust so that creditors and existing shareholders could benefit from the profitability of the company going forward.

Whilst a large number of the companies using FSE's Accelerator Fund (referenced in Chapter 3) achieved their plans and repaid their debts (which were typically then reinvested in new applications to a total of £14.7m of loans made), there were inevitably occasions when things did not go to plan, as Chief Executive Kevan Jones explains:

Under these circumstances, it is very important to understand how to behave in the insolvency process. Speed is important – recognising that there is a problem early on - but even then, there is always a risk that a secondary lender will end up having little say in what happens and can be marginalised. Ensuring that the IP value is protected and remains in the business is critical, as tangible assets of any value will be for the protection of senior lenders. Limited personal guarantees from the directors can help and other mechanisms such as performance warranties can be used.

It is important to try and encourage the widest possible marketing exercise for the company assets. This is clearly a critical activity which is undertaken by the insolvency practitioner who has been appointed. Hopefully an orderly sale can be achieved. It is frequently the case that a 'pre-pack' sale is put in place which, if it genuinely protects and maximises the IP value, may be the best approach.

It is not easy to dispose of IP in isolation, but it is always an important consideration in strategies to recover value. In a distress situation, it is very important to ensure that the management team is motivated and that the IP can be kept together with the know-how in the business. Often an acquirer will want to take on both the core IP and the people who know how to use it – we have had a number of cases where that is precisely what has happened.

Apart from insolvency practitioners, there are a small number of specialist companies serving the corporate recovery sector by supporting the identification of value-contributing IP and intangibles and supporting the process of selling them. One of these is Metis Partners⁸⁴, established in 2003 and based in Glasgow, whose website claims that they have supported clients in raising over £15m in selling assets purely out of insolvency.

As well as working with insolvency practitioners, Metis are sometimes instructed by banks to assist in restructuring debt by creative use of the underlying IP, and provided two case studies to illustrate how the process operates.

84 See website at www.metispartners.co.uk

In one instance, the firm was asked to help identify, value and sell the most valuable IP assets in an Aberdeenshire fire protection product manufacturer, established in 1989 with sales to over 20 countries. An investigation found that the company had a registered trade mark, but more significantly (in terms of its competitive advantage) it had testing certificates associated with each of its products, which were costly to obtain. In particular, the US certification and Marine certifications were of significant value.

The marketing documentation was tailored towards the market value of each product range, and steps were taken jointly with the appointed insolvency practitioner to resolve a problematic outstanding debt and address the imminent expiry of one of the certificates. By identifying probable buyers who would recognise the competitive advantage to be gained, this strategy maximised the return for the bank and other creditors.

A chemical cleaning solutions provider to the oil and gas industry, formed in 2000 as a university spin-out, had patented chemical technology for the separation of oil, water and solids, together with associated know-how. It sold via a global network of distributors, agents and manufacturers but was in default with its bank, who asked Metis Partners to review the assets for additional security or potential disposal.

An assessment was made of all the company's IP assets and a set of recommendations formulated on how their value might be enhanced. A relief from royalty valuation method was used, based on current rather than future earnings to reflect the distressed nature of the IP. Whilst this was lower than the company's expectations, the bank was satisfied that it better reflected the current context, and the business was able to retain their support.

What implications does this have for the value of IP? As Gardiner explains:

If you look at an asset in terms of what's sitting in a cupboard, it's not worth a lot. And in a fire sale, everything goes with the business.

However, what's driving business cash flow is the fact that the IP is not in the cupboard, it's in a process or a website. In this sense, banks are actually already funding the exploitation of IP.

What banks don't look at is what else could be done with the IP outside the business. Could it be licensed to people in other territories? Because this really does represent additional value. With a film, for example, it can be stratified into different territories or different markets.

Clearly you can't do this sort of thing blind, but being able to do more outside the business itself is important and is not currently counted in potential overall business value. And at least with IP, you will never lose everything, because there is an underlying asset that someone could buy.

Stuart Ager, referenced in Chapter 3, referenced his own experiences in this area during interview:

It's always difficult to value IP. If it has established revenue streams based on the IP, it is possible, but for an early stage business, it's hard to do. An administrator won't know whether there is a value to the IP, they will just sell it for whatever they can get.

But Andrew Mullinger of Funding Circle sees that the environment may be changing:

Even in a downside case, the IP will have an inherent value. Clearly, you want to understand the cash flows of an asset, which need to have been going for some time. We would want to understand the investment that has gone into, for example, SaaS [Software as a Service] models. There, even if things go wrong, there are some customers that will need to be served. The question will be, how wedded are they to the supplier?

Obtaining value from licensing

Where value is realised for IP selectively for certain markets (whether based on geography or sector), it is generally desirable to use licensing rather than selling or assigning the IP outright. IP licensing is an activity which continues to grow rapidly, and is now an important contributor to the global economy.

Licensing itself is by no means a new concept. Many innovators invent knowing that they will not have the resources to bring a product to market on their own, but that they can sell or licence the rights to other people. As Daniel Papst pointed out in a recent article⁸⁵:

Ever since the assembly line of the early 1900s ushered in an era of specialisation and turned businesses and workers into specialists, inventors no longer need to manufacture or sell something to make a significant contribution to economic growth. Thomas Edison, for example, was primarily a licensor of patents... he filed and owned over 1,000 patents, and many of them were licensed to companies to manufacture goods or deliver services. In fact, Edison owned a patent for a time clock, and the firm that licensed this patent later on became what is today known as IBM.

85 *NPEs and Patent Aggregators – New, Complementary Business Models for Modern IP Markets*, Daniel Papst, Les Nouvelles, June 2013

Global License, the journal of news and trends of global consumer products and the licensing industry, recently released its annual list of the top 150 licensors on May 1st 2013⁸⁶. The top 150 licensors account for around \$230 billion in retail sales of licensed products and information. The top 10 licensors on the list include:

Company	Value \$bn	Brands include
Disney Consumer Products	39.3	Mickey Mouse, Avengers
Iconix	13	Starter, Zoo York, Umbro, Buffalo
PVH Corporation	13	Tommy Hilfiger, Calvin Klein, Izod
Meredith	11.2	Better Homes, Garden and Parents
Mattel	7	Barbie, Fisher-Price
Sanrio	7	Hello Kitty
Warner Bros Consumer Products	6	Superman, Batman
Nickelodeon Consumer Products	5.5	Dora the Explorer, Diego
Major League Baseball	5.2	NY Yankees
Hasbro	4.8	Transformers, Nerf

The scale of international licensing activity is also illustrated by data from the World Bank, which reports the level of payments and receipts between residents and non-residents for the authorised use of intangible assets and registered IP rights⁸⁷. The figures also include licensing fees for 'produced originals' of prototypes, such as films and manuscripts. In summary, this data collection illustrates an increase from \$150bn in 2005 to nearly \$250bn at the end of 2011.

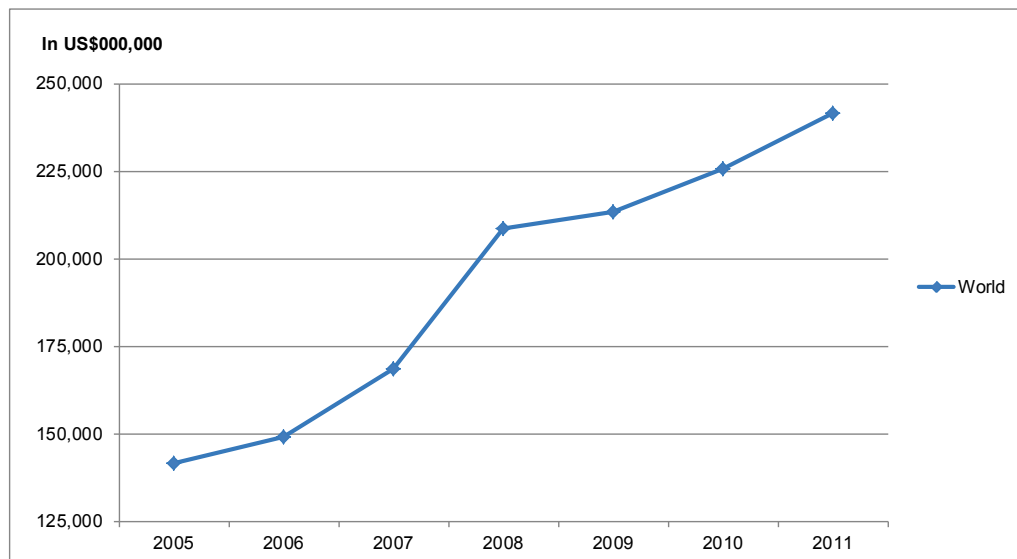
86 Available to view at the Global License website, <http://licensemag.com>

87 Information used here is reproduced from data.worldbank.org/indicator/BM.GSR.ROYL.CD/countries?display=default.

The table below is an extract featuring only those countries which have recorded revenues in excess of \$1bn per annum over the past few years (all figures shown in \$m's – some figures are not yet reported):

Country	2008	2009	2010	2011
Argentina	1,463	1,461	1,551	1,739
Australia	3,026			
Austria	1,598	1,280	1,315	1,438
Belgium	1,876	1,933	1,902	2,618
Brazil	2,697	2,512	2,850	3,301
Canada	8,648	8,126	8,665	9,218
China	10,319	11,065	13,040	14,706
Finland	2,109	1,336	1,311	1,038
France	5,456	8,985	9,348	9,955
Germany	12,852	17,633	13,353	13,139
Hong Kong	1,610	1,700	1,978	
Hungary	2,008	1,438	1,334	1,380
India	1,529	1,860	2,438	
Indonesia	1,328	1,530	1,616	1,786
Ireland	35,455	35,014	37,467	40,621
Italy	7,779	6,849	7,153	7,206
Israel	1,107	896	860	1,064
Japan	18,312	16,835	18,769	19,173
Korea, Republic	5,656	7,188	9,031	7,302
Malaysia	1,268	1,133		
Netherlands	3,532	4,073	3,707	3,751
Poland	1,773	1,542	2,248	2,407
Russian Federation	4,595	4,107	5,066	6,105
Singapore	12,472	11,584	15,857	
South Africa	1,676	1,658	1,941	2,118
Spain	3,358	3,189	2,729	2,782
Sweden	1,840	1,695	1,530	1,695
Thailand	2,559	2,250	3,084	
United Kingdom	10,615	9,498	8,499	10,651
United States	29,623	29,848	33,450	36,580

The growth trend, illustrated in the graph below, summarises the overall position using data drawn from all 214 countries.



Adding value through re-structuring

Whilst the participation of so many countries in cross-border licensing, highlighted above, shows that markets for IP are global, not all of the figures shown reflect the level of IP innovation particular to each country. Careful structuring of IP presents an opportunity for businesses that trade internationally to isolate these assets into a ring-fence vehicle which may have a higher intrinsic value than the underlying business and therefore create a profit centre in its own right, and one which can also be used to raise finance.

Aggregating a variety of rights under a single control can have significant benefits. A catalogue or pool of rights has more value than a single item and IP management efficiencies can be considerable. For example, where a given product requires multiple licences to avoid infringement (whether under patent from different groups, or because there are different effective licensors or copyright for different titles), the value of each individual patent or copyright will be lower. Value is enhanced when only one licence is required, and competitors will find it more difficult to avoid infringement; also, in the case of patents, it may also allow better protection of weaker but otherwise valid patents through aggregation with stronger ones.

Since IP rights are interlinked, conflicting ownership within a group can cause limitations, sometimes even creating the possibility of mutually overlapping injunctions⁸⁸. The passage of time without enforcement leading to acquiescence (whether statutory or not) may affect the ability of any one proprietor of an IP right to protect or exploit it, which destroys value. The fact that all registered rights are territorial in nature leads to a further limitation on the right of the owner to exploit any particular registered right.

88 For an example, see *Inter Lotto (UK) Ltd v Camelot Group Plc* 2003, EWCA Civ1132

Where IP consolidation in a holding company makes strategic sense, there may be inter-group issues. While it is obvious that owners need to protect their IP against external users, unregulated IP policies within a group of companies can lead to the creation of competing rights. Consolidating ownership and creating certainty of title within a single IP holding company or vehicle (off-shore or not) invariably adds value, which is why corporates view this kind of exercise as more than self-financing.

The figures above reflect the fact that Ireland has been a favoured location for IP holding companies for many years. Following the choice of location, each individual IP right held by each different group company is accorded an arm's length valuation for assignment to the IP holding company. A licence is then granted back to participating group members on a similarly arm's length 'fair market value' basis, at an appropriate commercial royalty rate. Group holding companies will nearly always also be licensed to use trademarks, the consideration being that they will use the mark wherever possible to promote goodwill and brand value, the ownership of which remains with the IP holding company.

If structures such as this are put in place, and the IP holding company licences operating companies and/or other entities, it will receive a steady income stream. This gives rise to a number of favourable further commercial opportunities, including the potential to securitise the income stream as a financing vehicle, or to sell the income streams and their capital value, which may be done using a special purpose vehicle.

As shown in the following section, rating agencies are becoming increasingly familiar with this type of transaction and may accord the bundle of IP rights, and the licences granted with them, a better credit rating than the underlying business, thereby improving the capital to interest ratio. For financing purposes, the fact that the rights are all related to a single corporation provides a clearer 'line of sight' compared with other securitisation practices.

Companies will also ensure in this process that the structure provides the significant benefit of surviving an insolvency of the underlying business: another reason for using an IP holding company. This also applies to pension funds, as described elsewhere in this report.

Realising value through securitisation

The use of intangible assets as loan collateral has been studied by Maria Loumioti of the Harvard Business School Accounting and Management Unit in a 2011 paper⁸⁹. This study sought to explore the role of intangible assets in reducing financing frictions in credit markets using a sample of secured syndicated loans.

While the predominant managerial (and scholarly) perspective suggests that intangible assets are not sufficient collateral, it was found that 11% of US originated secured loans included intangible assets as loan collateral, and that the practice of collateralisation of intangibles had significantly increased. Loumioti's research concluded that the redeployability of intangibles and borrower reputation are positively related to the probability of using intangibles as loan collateral, and that collateralising intangibles has significantly increased the supply of credit to firms. Moreover, loans secured by intangibles emerge as being of similar quality as loans secured by tangibles. Overall, the results suggest that intangible assets can and do increase firm value not only in equity markets, but also in credit markets.

89 <http://ssrn.com/abstract=1748675>.

There are a number of factors concerning IP (including copyright) that make it potentially attractive as a secured asset class. The very fact that the assets are seldom used to maximum effect, or properly represented on balance sheets, may in itself be beneficial as it represents an opportunity to generate new and additional value from assets that a business may have held and used for some time. IP is also mobile, desirable, capable of attracting favourable tax treatment, and is well aligned with the underlying business because these rights convey a competitive advantage to the user and barriers to entry to a competitor.

These attractive characteristics need to be contextualised by the potential difficulties in guaranteeing the validity of IP rights, and the fact that they may in some cases have a finite and/or limited life. However, IP does benefit from the fact that royalties are often traditionally used to exploit it, and being generally based on turnover, these provide a broad sense for computation based on identifiable cashflows.

The importance of different IP rights, and their availability for securitisation, varies by sector. In manufacturing and industrial design, as the statistics in Chapter 5 indicate, patenting is important (as are confidential information and trade secrets). In consumer group companies, branding involving trade marks and design rights are important, as are know-how and formulations. Data-based businesses tend to rely on copyright and database rights, whilst telecommunications companies may use all of the above. In the TMT sector more generally, there are 'layered' rights involving performance, recorded material and broadcasting.

There is no doubt that the value attributed to IP can be very substantial. Global brands are an obvious example, but patent and technology portfolios in areas such as medicine and communications also underpin multinational corporations (hence the reason why they attract strong competitive bidding, as illustrated elsewhere in this chapter).

Investors have an interest in identifying new classes of asset to buy, and have a preference for those which have a proximity and access to value via cash flow. It is interesting to note that well protected and properly structured IP portfolios can prove to be more valuable or creditworthy than the company from which they originate.

Examples of these IP financings, which have unlocked value previously largely overlooked by markets and providers of capital, are not hard to find. There have a number of very public milestones, starting in 1997 with the securitisation of music copyright and publishing rights by David Bowie (\$55 million). These were followed in 1999 by Ashford and Simpson (\$25 million) and James Brown (\$30 million), and then by further deals for the Isley Brothers, Marvin Gaye, Iron Maiden and Rod Stewart. The film receivables of DreamWorks Pictures started in 1995 with mostly slate financing collateralised via a portfolio of films to be released; this amounted to approximately \$8 billion over time, mostly rated AAA.

AAA is the highest rating assigned to securities such as bonds of an issuer by credit rating agencies (Moody's, S&P and Fitch). AAA is perceived to have little risk of default; it offers investors the lowest yields among bonds of comparable maturity. Ratings range from AAA for long term prime and have graded designations through to A3, BBB (upper to lower medium grade), BA2 (non-investment grade speculative), CAA (highly speculative with substantial risk) through to the D's (default).

Other sectors have subsequently followed the example of the entertainment industry. Royalties from retail franchises provide further examples of approximate size and ratings; in 2000 Arby's (\$290 million AAA), 2003 Athlete's Foot (undisclosed, and BAA 3), 2005 QFA Royalties LLC (\$250 million, BAA 2) and 2006 DB Master Finance (rated AAA), backed by Dunkin' Donuts and Baskin Robbins to finance the Private Equity LBO from Allied Domecq.

Patents and pharmaceuticals followed with deals including Biopharma Royalty Trust (issuer Royalty Pharma, approximately \$80 million in December 2000, not rated), Royalty Pharma Finance Trust (issuer Royalty Pharma, approximately \$225m, closed July 2003, AAA), Royalty Securitisation Trust 1 (issuer Paul Capital, \$228m, closed December 2004, rated AAA) and Drug Royalty Trust 2005 – 1 (issuer Drug Royalty, \$68m closed March 2005, not rated).

There are also examples of trade mark licensing securitisations. These have included Universal Credit Trust 1999-B (issuer Bill Blass, \$25 rated BAA 3), Candies (issuer Candies, \$75m, BAA 3), Guess (\$75m rated BAA2), MLA Multibrand (issuer BCBG, \$53m rated BAA3/AAA and KCD IP LLC (private, \$1,800m, rated BAA 2).

At the mature end of the scale, Sears Holdings Corporation in 2006 illustrated the largest securitisation of IP rights in history, according to analysts at Standard & Poor's, in creating a separate, wholly owned, bankruptcy-remote subsidiary for its three biggest brands, Kenmore, Craftsman and DieHard. This was done by transferring ownership to an IP holding company that charges Sears royalty fees to license these brands, and uses royalties to pay the interest on bonds sold to the insurance subsidiary. In total, this involved approximately \$1.8 billion worth of securitisation and transferred ownership.

In this period Moody's Investor Services stated that IP based securitisations accounted for as little as 1% of all public asset backed securities, but patent and trademark transactions were thought to have good growth prospects. The main issues for consideration were considered to be legal ones (cleared definition and identification of IP, who owns it, how the IP is being used, how it is being licensed and ensuring that the IP is properly protected).

Accounting was needed to clear up records of royalty streams in a better way that had traditionally been reported. Legal risks were being identified as product liability, patent challenge or infringement, expiration (technology and economic life and such like) and bankruptcy. Risks could be seen as minimised by the provision of backup for others to service the business, for example, licensing out the current patent or trademark position to third parties. The picture was summarised in 2007 as follows:

The technical nature of intellectual property and its ambiguities make investment a complicated proposition. It requires a firm to have many different skill sets as well as a willingness to incur high due diligence costs while monetisation strategies are fussy and timetables to exit are unclear. For those who understand all this, however, there are substantial opportunities⁹⁰.

90 Source: *Introduction: Welcome To The IP Century* – Joff Wild 2007

Major acquirers of IP

'Offensive' patent aggregators (OPAs)

In a recent article, Daniel Papst of Papst Licensing (referenced below) examined the market effects of offensive and defensive aggregators⁹¹. He summarised the strategy of an OPA as follows:

The first strategy, OPA, comprises the acquisition of patents for the sake of licensing them. Patent owners that pursue this strategy usually seek to extract value from their IP assets by licensing or, if necessary, enforcement through litigation. OPA might be used by 'practising' businesses... it is also widely used by so called 'non practising entities' or 'NPEs'.

An OPE NPE could be defined to be a patent owner which neither carries out research nor files for patents, nor uses patented innovations to manufacture respective products. Instead, it seeks to generate revenue mainly or even exclusively by licensing or selling patented inventions to 'practising' businesses such as manufacturers that, at the time when licensing royalties are claimed, already uses the NPR's patent.

Whilst NPEs who are OPAs have a number of detractors, often being associated with the term 'patent trolls', many small inventors facing difficulties in bringing their IP to market and who are not able to access finance for commercialisation themselves have found access to a NPE beneficial. Some OPAs are start-up companies, some are spin-offs from major corporations, and some are manufacturing or research organisations seeking to extract value from IP and patents they might not use any more, including Papst Licensing.

The Papst story is instructive. Papst Motoren was a leader in electric drive technology for tape recorders, hard disk drives and electronic cooling applications based in Germany. Faced with massive infringements in the 1980s, predominantly from Asian companies, the company's lenders forced the sale of the business in 1992, but did not value the IP portfolio, which included more than 600 patents and patent applications. Georg Papst bought back the patent portfolios, founded Papst Licensing, and concluded more than 160 licensing agreements with many well-known IT and electrical engineering companies, including all current HDD manufacturers.

NPEs with the largest patent holdings as at January 2011⁹² include Intellectual Ventures, Ground Rock Research, Interdigital, Wisconsin Alumni Research Foundation, IPG Healthcare 501 Ltd, Rambus, Tesser Technologies Inc, Mosaid Technologies Inc, Acacia Technologies, Jerome H Lemelson, Commonwealth Scientific and Industrial Research Organisation, Scenera Research LLC, WiLan, Papst Licensing, GmbH, Altitude Capital Partners, Intertrust Technologies Corp, Rembrandt IP, Innovative Sonic Ltd, Alliacense, IpVenture Inc, Tronteck Licensing Inc, Cheetah Omni LLC, Patent Category Corp, St Claire Intellectual Property Consultants Inc, Illinois Computer Research, Innovation Management Services LLC, MobileMedia Ideas LLC and MicroUnity Systems Engineering Inc.

91 *NPEs and Patent Aggregators - New, Complementary Business Models for Modern IP Markets*, Daniel Papst, Les Nouvelles, June 2013

92 Source: Patent Freedom <https://www.patentfreedom.com/research-ml.html>

In terms of their activity levels by number of counterparties and litigations⁹³, the leading NPEs as of 2010 are Acacia Technologies, Plutus IP, Ronald A Katz Technologies Licensing, ArrivalStar, WIAV Solutions LLC, Scenera Research LLC, Jerry Harthcock, Leon Stambler, Technology Patents LLC, Sorensen Research and Development Trust, Guardian Media Technologies, Millennium LP, Catch Curve Inc, F & G Research Inc, Rates Technology Inc, Jerome H Lemelson. The total litigations between them, between 2005 and April 2010, have been reported as 2,162.

Of all NPEs, Intellectual Ventures⁹⁴ (IV) is perhaps the best known. It is a partnering network of 4,000 inventors, purchasing patents from individuals and businesses or creating IV's own inventions. It has reportedly spent approximately \$2 billion creating one of the world's largest patent portfolios, which in 2011 accounted for more than 30,000 patents mostly covering software, semi-conductors, communications and e-commerce.

Intellectual Ventures is structured as a series of funds: those for acquisition from individual inventors, those for small and large companies and those for its own inventions. In partnership with scientists its business includes that of developing and acquiring pre-filing inventions, mostly from universities in Asia through a variety of technology transfer deals.

As Harvard Business School reports⁹⁵, the significant feature setting Intellectual Ventures apart from similar businesses is that many of its investors are strategic and include prominent technology companies such as Amazon, American Express, Cisco, eBay, Google, Intel, Microsoft (which was the lead investor), Nokia, SAP, Sony Samsung and Verizon.

Nvidia provides one example of a company which has invested in two of Intellectual Ventures' 'Invention Investment' Funds and co-operated with them to improve its IP stable. Nvidia is reported to have approached Intellectual Ventures in 2012 to support the acquisition of the IPWireless patent portfolio. This move was in part prompted by Nvidia's previous purchase of Icera, a fabless semiconductor designer of 3G/4G baseband processors, operating in a similar area of technology

The IPWireless patents had a long and complex transactional history, reflecting the fact that popular patents can change hands many times. However, whilst these particular patents had been assigned on a number of occasions, they had no history of generating income from licensing revenues. The motivation was therefore essentially strategic, protecting Nvidia's position in a new market, whilst leaving open the option of benefiting from future licensing incomes.

NPEs change the dynamic of the IP marketplace because a manufacturer does not have the option of preventing them from trading with a competing product, as would often be the case in a dispute between manufacturers. Also, they have an information advantage because they do not have to reveal how they make their money in detail, which the large companies they target often do.

93 Ibid

94 See www.intellectualventures.com

95 *Intermediaries for the IP Market*, Harvard Business School working paper, Hagiu and Yoffie 2011

‘Defensive’ patent aggregators (DPAs)

As Hagiu and Yoffie further observe⁹⁶, defensive patent aggregators have also emerged as a consequence of the increasing threat posed to operating companies by NPEs. Papst summarises the role of these DPAs as follows⁹⁷:

A ‘patent pool’ is created in order to keep patents which touch on an important invention or technology out of the hands of competitors or NPEs.

These patent pools generally purchase IP on behalf of investors (manufacturers and inventors) to mitigate risk for an annual fee, which also buys the investors a licence to use them. There are two different operating methods, exemplified by two of the best-known organisations operating in this space, RPX⁹⁸ and Allied Security Trust⁹⁹, both mentioned above. RPX is a commercial firm, whilst AST is a not-for-profit entity owned by its members (though interestingly, there is an overlap with RPX’s client list).

RPX favours a model dubbed “catch and hold”. This involves purchasing patent rights off the open market which could pose a threat to clients if they were enforced. This removes the patents from the market, and places them in an ‘IP Library’. The cost is spread across its investors, which include IBM, Cisco and HP.

The second model, used by AST, has been described as “catch and release”. AST is a member-owned trust whose members finance the acquisition of patents in which they are interested, deciding which ones to buy. They then license it, after which the rights can be sold on or (sometimes) donated. AST members include ARM, Avaya, Google, HP, IBM, Intel, Oracle, Philips, Sony and Research in Motion. This reflects a particular intensity in litigation activity in the ICT space, though the categories in which AST has interest are significantly broader.

One transaction at the end of 2012 provides an illustration of how defensive aggregators work. MIPS Technologies’ operating business was purchased by Imagination Technologies, a UK graphics IP vendor, for \$60 million, providing access to 160 engineers and 82 MIPS patents, and protecting royalties coming from current and future licensees. Separately, ARM led a consortium called Bridge Crossing, an acquisition vehicle for AST, buying the rights to the MIPS portfolio totalling 498 patents, paying \$350 million in cash, of which ARM itself contributed \$167.5 million. Industry commentators have observed that this strategy addressed the risk to AST investors that MIPS would be acquired by a ‘troll’ and broken up into separate units with litigation consequences.

DPAs can be seen as helping the market because they provide a way to resist NPE activity. They also assemble pools of patents which make it easier for new entrants to enter the market legally, leading ultimately to more competition in downstream markets. Overall, the demand that has been created for quality patents from this new activity would appear to be good for IP values, and also good for the mechanics of enforcement – though it should also be pointed out that

96 Ibid

97 *NPEs and Patent Aggregators*, Papst, 2013.

98 See www.rpxcorp.com

99 See www.alliedsecuritytrust.com

patent trolls have sometimes been associated with 'hold-up' tactics where a patent of questionable quality is used to slow down the progress of a target company.

IP trading platforms

Intellectual Property Exchange International (www.ipxi.com) in the US is a recently opened public exchange that allows IP rights to be traded as a commodity; it is the world's first financial exchange for licensing and trading intellectual property rights. The first contract offering took place in June 2013.

To quote from its website:

The mission of IPXI is to meet the price discovery, transaction efficiency and data distribution needs of intellectual property owners, investors and traders by creating the central marketplace for tradable IP assets. IPXI is funded by a group of US and European investors, including CBOE Holdings Inc (NASDAQ CBOE) and Koninklijke Philips NV (Philips).

The product traded is called a unit license right and allows the holder to use the underlying technology a certain number of times and it is this that is sold by IPXI.

IPXI has attracted considerable interest within the US, with the US Department of Justice looking closely at its potential effect on competition. Approached for its enforcement intentions, the department declined in March 2013 to state these because "*we simply do not know enough to conclude that IPXI's activities, once operational, will not raise competitive concerns.*" However it did acknowledge that "*the proposed exchange could create efficiencies to benefit the IP marketplace and boost innovation, including through increased licensing efficiency, sublicense transferability and greater transparency*¹⁰⁰."

As a non-exclusive price-discoverable market, if a significant number of buyers and sellers use IPXI, this could prove to be an effective way of addressing the problem of a lack of liquidity and transparency in the IP market place.

Tynax www.tynax.com is a global technology trading exchange that brokers a range of technology related transactions whose clients range from SMEs, sole inventors to Fortune 100 multinationals, universities, industry associations research laboratories, government organisations and private equity firms. The Tynax exchange is adopted by the Patent and Intellectual Property Intermediaries Association (PIPIA) and facilitates sales and other transactions such as licensing from PIPIA members in the US, Asia, Europe and other markets.

100 Reported at <http://www.ip-watch.org/2013/03/26/us-justice-dept-antitrust-concerns-over-ipxi-patent-exchange/>

IP auction and brokerage

Companies wishing to obtain maximum value for a portfolio of patents will typically look to work through an open or closed auction process. Users have found that working towards a set event for sale tends to focus the minds of prospective purchasers, though having the auction 'in the open' can provide competitors with more insights into the nature and extent of market demand than the seller might like.

In the technology marketplace, much attention has been paid to the very high prices paid to acquire key patent portfolios over the past few years. The Nortel portfolio, for example, was acquired for \$4.5 billion in mid-2011 – equivalent to around \$1 million per patent – in an auction process where the starting offer of \$900 million was considered remarkable. It left a situation where the patent portfolio was worth more than the company which held them.

The circumstances at the time (when there was a great deal of patent litigation in progress) doubtless affected the price paid, but the market today remains more driven by litigation rather than freedom to operate considerations. Nevertheless, analysts now routinely recognise that much of the value attributed by the market to large technology-centric organisations is attributable to their patent portfolio. For example, an August 2013 article in the *Wall Street Journal* looking at BlackBerry¹⁰¹ focused on Scotiabank analysts' views on the value of the company's 5,100+ patent portfolio, concluding that this was likely to run into \$billions in its own right.

The world's largest IP brokerage business dedicated to IP sales is ICAP Patent Brokerage, based in the US but with European and Asian presence. Its roots are in the Ocean Tomo organisation, which started as a patent analytics/expert witness firm, moving into patent ratings before engaging in IP investment analysis and IP merchant banking. Founder Dean Becker started to trade patents in the auction format in 2005, coming to the attention of ICAP, who bought the IP Brokerage business in June 2009.

ICAP Patent Brokerage organises six public IP sales (auctions) per annum as well as private brokerage which is more similar to investment banking sales. The company tends to be fairly selective about what it consigns for sale. Most of the sales tend to be for granted US patents within a wider portfolio in key technological domains, with broad, well-drafted claims and with early priority dates.

The motivation for IP purchase has changed, partly due to the economic climate, but also due to the emergence of new players in the market who purchase patents for defensive or aggressive purposes.

A number of other companies are active in the US in the technology area of patents. Examples include ThinkFire¹⁰², Epicenter IP Group LLC¹⁰³, IP Value¹⁰⁴ (with partners including BT, Xerox,

101 See <http://blogs.wsj.com/corporate-intelligence/2013/08/26/the-numbers-behind-blackberrys-patent-goldmine/>

102 See www.thinkfire.com

103 See www.ipotential.com

104 See www.ipvalue.com

PARC, MPT, Round Rock Research and NXP); IP Pluritas¹⁰⁵ and Competitive Technologies¹⁰⁶ are a few examples. The activities of some of these organisations were featured in a *San Francisco Business Times* article¹⁰⁷:

An expanding group of brokers has emerged in recent years to line up deals that can top \$1 million apiece for companies or inventors selling patents covering all manner of products...IPotential LLC, a San Mateo broker, said it had a record-breaking year in 2007: 29 transactions produced more than \$104 million for customers. Like most IP brokers, IPotential earns commissions in the double-digits on each deal.

There are no statistics on how much money is raised by selling patents. But U.S. companies could reap \$500 billion by 2015 from patent licensing, up from \$110 billion in 2000, according to estimates from accountants at Ernst & Young.

Brokers in the Bay Area, some of whom were previously intellectual property lawyers, rely on contacts developed through deal making and other references to get the highest number of interested buyers. They must be careful not to reveal too much about either side of the transaction: buyers, especially large companies, prefer to remain anonymous until a deal is consummated, lest their identity lead a seller to jack up the price. A company selling a patent doesn't want its name released for fear of tipping off competitors to strategy behind the sale. Increasingly, companies are buying patents for strategic reasons, said Ronald Laurie, managing director of IP brokerage Inflexion Point Strategy LLC of Palo Alto. "To fill holes in a (patent) portfolio, to counter in case of a lawsuit, for protection in a new market area."

To date, most auction and brokerage activity has been driven from the US, but it is interesting to note a growing level of UK-based activity. 2013 has seen the announcement of a new online auction platform, BVipr, which is establishing facilities for private brokerage and online auction of IP assets:

In the UK today, a number of advisors provide a valuable IP service based on assisting companies in maximising value from their IP assets. This is more often than not in distressed situations or insolvency. We believe IP is not a 'last resort' for a business and represents value that should be put to work for a company through the life of the asset and the company. By creating an active and competitive marketplace for IP, we want to ensure that IP assets are recognised as highly valued assets to a company and are leveraged to the benefit of a company.

105 See www.pluritas.com

106 See www.competitivetech.net

107 *San Francisco Business Times*, 2008

As well as seeking to attract IP for sale, BVipr also has access to 'Bona Vacantia' trade mark assets from the Treasury Solicitor's Office (hence the name) and has also been engaged to market a telephone patent portfolio. Its auction platform is yet to go live at the time of compiling this report.

There is also an interesting new UK development from the creative organisation for Anti-Copying In Design ('ACID'), which is in the process of launching an on-line market place¹⁰⁸ for creators of design works protected by design rights and copyright.

Dids Macdonald, CEO of ACID explains:

ACID has always championed original and independent design and its value as a unique selling point. ACID Marketplace will allow creators to exhibit existing and new products and prospective design buyers can register and view. The site will provide a permanent exhibition zone but at a fraction of the price of an exhibition stand and the creator can control who visits the stand."

The site will offer a market place through a safe on-line trading platform. Participants will agree to a corporate charter and IP tracker software will provide a secure viewing and trading environment. Underpinning the site will be legal affiliates who will provide an arbitration service in the event of disputes between parties. There are also plans to link the site to IP finance organisations for funding for creative businesses.

The marketplace will cover buying, selling and licensing. Each year 25,000 designs are lodged with ACID which provides an audit trail and established data base on which to build the trading platform.

Using insurance to mitigate risk

Insuring against financial risks in the US

As has been amply illustrated in other chapters, IP is a property asset, but its behaviour and the opportunities and risks associated with it differ from other types of asset with which markets generally, and lenders in particular, are more familiar. One of the ways in which some of these inherent risks can (in theory) be mitigated is by insuring against them, in the same way as businesses might cover other unforeseen events: for a premium, there is a safety net if things go wrong.

North Carolina-based MCAM underwrites the value of patents for lenders. It is paid a fee by the finance provider - usually a bank - to guarantee the value of a portfolio of patents rather than individual rights within it. As part of its service, MCAM provides a valuation for the portfolio to which it is prepared to insure. The bank then pays the insurance premium, and will lend up to the insured value.

In the event of default, MCAM takes title to the IP, pays the bank and (usually) sells off the IP. The company reports that there is generally a surplus, because MCAM's valuations for lending incorporate a margin (which could be as high as 50%).

108 <http://www.acid.uk.com/acid-marketplace.html>

Discussions indicate that MCAM sometimes ends up holding the surplus IP for a period of time, and it does have an income stream arising from pursuit of infringers, but it does not set out to be a patent assertion entity, and the majority of its income is derived from insurance premia.

MCAM does not use brokers and does all its business direct. It bases its valuation methodology on three aspects: its own proprietary search systems for patent information in the surrounding landscape, its assessment of whether patents are in danger (from other innovators, or from infringers) and its own track record of earlier searches and transactions.

MCAM uses state level data on firm defaults or insolvencies to help it understand a firm's risk of insolvency. The majority of the companies that are the subject of their services are medium-sized unquoted firms, likely to be in a growth phase.

The current UK status of IP insurance products

The UK IP insurance market as a whole is currently immature, with a comparatively small number of specialist underwriters and brokers providing services at what businesses have historically regarded as a relatively high cost. Firms currently underwriting IP-related products include Aon, JLT, Samian, and Munich Re.

There has traditionally been something of a 'Catch 22' at work: insurers need a spread of risk across a large number of customers in order to offer affordable services, but to do that, they need to understand the risk, which requires a degree of due diligence that tends to push costs up, rather than down, thus reducing the size of the market. This, in turn, means that the insurance tends to be purchased primarily by those most at risk. As the submission from Aon for this study puts it:

'Selection' is where there is a greater likelihood of the insurance being bought by those who anticipate a claim. Often, these fears are realised, resulting in increased costs to the insurer and the need to increase premiums. With premium costs being higher still, cover is only bought by those who are confident of a claim and the cycle continues until costs are so high no one can afford the cover and the policy ceases to be sold.

Conversations with brokers also suggest that the opportunities for policy renewals, common in other areas of insurance activity, are reduced because the threat has either passed by the renewal point, or it has materialised, in which case a claim has already been triggered. This makes it harder to recoup up-front costs over an agreement term.

However, there are some signs that the picture is changing due to market pressure. In Aon's view:

It is becoming increasingly common for some businesses to have little or no tangible asset base, but generate income revenue solely from the exploitation of intellectual property. This represents a problem for insurers, whose traditional asset protection solutions focus almost exclusively on tangible assets that can be burnt down, blown up, crashed, lost or stolen. How relevant is asset insurance to the modern business? Well, significantly less than it was in 1975 and getting less all the time.

Aon's current objective is therefore to build a series of insurance products that support the innovation process and protect the considerable investment that businesses of all sizes make in the development of new ideas whilst at the same time enabling the use of intangible assets in debt related and similar transactions where the 'value' of the IP must be guaranteed to some extent.

What IP insurance covers

Historically, IP insurance has not been concerned with insuring the IP itself against a loss of value. Instead, it has sought to address the costs associated with either pursuing an infringer, or defending against an infringement action. Cover has been provided up to a specified maximum level, with costs rising according to the perceived risk as well as the level of cover required.

Nigel Swycher is an IP and technology specialist with 20 years' experience in large law firms (Slaughter and May and Olswang). At Tangential Solutions, he is seeking to create new risk management solutions for SMEs. His analysis of the current position is as follows:

There is increasing appetite for developing pursuit and defence policies for SMEs. The reality is that there are very few infringement actions, and insurance is a perfect way to spread this risk. But it does require there to be a spread, in order for this to be economically viable.

It is also helpful for SMEs that there is an increasing array of models which can ease the financial burden of enforcement, including contingency arrangements in the US, litigation funding and cost-effective venues such as the Patents County Court. As the insurance markets become more familiar with the new IP risk landscape, you can expect new insurance products to emerge.

Noting the increasing level of acceptance of IP valuation methodologies, Aon notes that:

It would be a natural process to use this valuation as a starting point and design an insurance product to protect the owner from loss if the value of the IP was diminished... A good example of which would be the contamination of Perrier mineral water in 1990, which undoubtedly had a deleterious effect on how the brand is perceived and consequently how it would be valued by a potential purchaser. The key questions for the insurer is how long was valuation impaired, to what extent value recovered and when?

However, Aon also notes that the value of the IP is a starting point, but not one that necessarily provides a suitable basis for designing a product to protect it, as the IP may represent different things to different stakeholders. In its paper, it identifies several specific areas where an insurance product could have particular relevance for IP exploitation and protection.

Insurance to support bank lending

Suitable insurance is one way in which bank uncertainties associated with the ultimate realisable value of IP and intangibles could be mitigated. Aon envisages that an insurance product to go alongside debt could be structured as follows:

In a traditional lending model, the role of the insurer is to guarantee the value of the property against which the debt is secured. If it is damaged or lost, the insurer meets the cost of reinstatement or replacement. In the event of default, the bank takes ownership of the asset and realises this value on the open market to mitigate its loss.

Where IP is used as collateral, the role of the insurer is slightly different. Rather than insure the value of the IP, the insurer would offer a guarantee to the bank to secure a proportion of their debt in the event of default, say 80%. The insurer would then take ownership of the IP in question and sell it to mitigate loss. This means the risk of the IP not fulfilling its value on the open market is transferred to the insurer.

In terms of generating demand for IP insurance, Swycher suggests the following:

One way in which this could happen would be to make it a requirement of an enhanced lending scheme. This would create a 'virtuous circle', because due diligence (which is otherwise one of the barriers to entry for insurers, and a reason why costs are high at present) would be covered elsewhere.

The need is for a process which can turn something that looks very company-specific into a generic offering, by applying a set of criteria that can be met by many companies without specific study of their particular market sector.

Insurance to address pension deficits

When IP assets are transferred to a pension fund in order to address deficits, as described in Chapter 9, trustees (given their fiduciary duties) closely question the valuation in a downside scenario such as the Perrier example above. One potential role for insurance is to put a guarantee in place to enable the distress value that is being placed in the IP to be maintained in the case of an unexpected event. Aon notes:

It is inevitable that in such circumstances the market value of the trademark will decrease, which would theoretically trigger a loss under a policy. However, unlike a material loss to a tangible asset, the means by which the loss (for example of reputation damage and the valuation consequences) is reinstated through careful management of the situation and the passage of time needs to be considered. Costs incurred in additional communication to customers, product recall, legal defence and public relations consultancy would be covered by the policy, and any shortfall in the value of the IP would be covered by the insurer issuing a letter of credit (or similar financial guarantee) to make up the shortfall on the books of the pension scheme.

In this scenario, the insurer would expect the need for its guarantee to reduce progressively, and would only pay out if the company were to become insolvent, potentially up to 60% of the guarantee.

Other opportunities to mitigate risk via insurance

Aon identifies two further areas where insurance-backed interventions could be beneficial to the management of IP risks by mitigating losses or addressing unexpected costs:

- Franchise and licensing operations. Much of the value of a franchise arrangement lies in its associated IP, representing a risk to franchisees in terms of loss of income as well as dilution to the value of their own investment. A similar risk exists for licensees of patents if these are not successfully defended against infringement actions, and could also lead to significant costs in negotiating a new licence with the successful party
 - Underwriting the innovation process. Aon is working on a policy that would indemnify the applicant for costs incurred in developing the subject of a patent application and the cost of the application itself, in terms of plans, prototypes and professional fees. Such a policy would cover situations in which the application could not proceed because of the emergence of prior art or a similar unforeseen event, by covering costs of redesign or legal fees relating to negotiation and licensing
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Chapter 8

Gaining effective controls over IP & intangibles

Key points

Proper identification of IP and intangibles is essential for appropriate protection when lending

There is strong evidence that banks are not currently protecting themselves adequately against the risk of valuable registrable assets going outside their control

There is at present no effective notice mechanism for unregistered IP and intangibles

SMEs could benefit from there being more visibility and transparency regarding charges over IP assets

Introduction

Better use of IP

As this report demonstrates, there are a number of areas in which greater awareness, understanding and use of IP assets offers potential benefits to lenders. Broadly speaking, interviews indicate that there are three levels at which these benefits can be realised:

- i) Addressing the widely acknowledged ‘information asymmetries’ that exist between borrowers and lenders, as a means of informing credit appetite (applicable to all forms of lending)
- ii) Providing lenders with better controls than generally exist at present over important value-producing assets (i.e. taking more effective security over the assets, but still regarding the facility itself as unsecured)
- iii) Harnessing the business value of the assets themselves as collateral (i.e. lending directly against them)

There is increasing acknowledgement of the advantages of i) for both borrowers and lenders. Corporate financier Thomas Gardiner of TFF Group has recently started creating structured deals that are explicitly IP-backed (including a canine obesity treatment and a new haptic technology). He comments:

The difference between debt and equity relates to risk and return, or rather, the level of return people think should be provided. Banks do not think they can charge enough

for the risk they are taking, as they perceive it. However, debt providers also have ways to mitigate this risk by funding sales and suppliers.

In reality, banks all do take risks in the IP space, because they are already funding IP that is being exploited. As the market develops, they will be keen to show that they have been doing it for years. It's focusing on smaller scale activity that presents a bit of a problem...

Being better informed is one thing: but to understand the feasibility of harnessing IP assets as security in either context ii) or iii) above, it is necessary to study the 'fit' of IP and intangibles in the legal and regulatory environment governing lending, and how compatible this asset class is with long established principles and practices.

Before examining these issues in detail, two overarching concepts require definition and clarification.

The concept of security

Simply put (and as explained in more detail below), taking security over an asset (or group of assets) involves either taking ownership of them, or agreeing that a lender will gain ownership if the borrower does not meet a given set of obligations, which may involve placing controls over the assets in the interim.

In some contexts, such as asset finance, this is a very straightforward process. If a person wishes to borrow money to buy a car, a lender (acting directly or through a dealer as its agent) may purchase the car on their behalf, in exchange for an agreed schedule of payments. Depending on the nature of the agreement, ownership may pass to the borrower once the debt is satisfied, or the agreed repayments may only relate to part of the total price, with the remainder payable at the end of the agreement if the borrower wishes to obtain title.

In the event of default, the car is already the property of the lender, and is repossessed in order to satisfy the outstanding loan. Since there is a well-established market for car assets, the lender is able to assess with some degree of certainty what the asset is likely to be worth at different points over the scheduled payment term. The borrower is motivated to maintain the payments because he or she wishes to retain the use of the car.

In the business-to-business context, both company and personal assets can be harnessed as security. As Chapter 3 illustrated, notwithstanding turbulence in recent times, domestic and commercial property (i.e. real estate) still emerges as the asset of choice in lending decisions because it represents a substantial amount of value, in one place, in an asset class which is well understood, and which is of real value to the owner (and therefore motivates them to maintain their repayments). It is also common for lenders to take ownership of book debts, plant and machinery and other assets which are deemed to have a readily realisable value which will substantially persist even if the business does not continue to trade.

IP and intangibles have many qualities, but not all of them overlap with the characteristics of these tangible fixed assets with which lenders are generally familiar and which they have

traditionally adopted. There are also regulatory considerations governing the use of different asset classes as security, addressed later in this chapter.

The concept of priority

In the absence of agreements to the contrary, debt has priority over equity when determining distributions of value from businesses which go into administration or liquidation – the crucial point at which a lender would need to ‘call in’ the value of their loan¹⁰⁹. This means that equity investors stand behind creditors (particularly secured creditors) in the queue; it is one reason why, when using instruments such as venture debt, lenders take considerable comfort from the presence of established venture capital investors with an equity stake – the latter are well motivated to ensure that the business is successful, as they stand to lose all their money if it is not.

Graeme Sands of Clydesdale Bank explains how it gains additional protection from the existence of equity investment:

The equity stakeholders are primarily interested in growth. If things don't work out, the secondary exit route is that the investors put in more money; some sort of sale would be a third exit, and not one we would contemplate lightly.

However, this is not the only priority issue that arises. Whenever an asset is used as collateral for a debt, regardless of the type of financial instrument to be used, there will be a question of whether the lender will in fact be ‘first in line’ to realise the value of a particular asset (or set of assets) at the point this may be needed.

The risk can be characterised as having three main dimensions to it:

- Is the borrower the legal owner of the assets which are to be used as security (in other words, is it possible for them to pass good title to the lender)?
- Could anything happen after the facility is put in place that would undermine the legal rights which the lender would otherwise have?
- At the point of determining the loan agreement, does anyone else have a prior existing interest in the assets which could prejudice a lender's rights?

For IP and intangibles to be suitable for use as security, a lender will have to be confident that appropriate mechanisms exist (at an affordable cost) to satisfy the ownership point, check for existing interests and be in a position to assert their own claims.

References

To investigate these issues, the authors have studied the underlying principles and their application in practice through primary and secondary research, discussions with the Prudential Regulation Authority, IP and finance legal experts, insolvency practitioners and through informal

109 Not all debt has equal priority; the pricing of so-called mezzanine finance reflects the fact that it does not generally have the same priority as secured senior debt, and it is priced accordingly.

discussions with lender credit teams. They would like to acknowledge the work done by Professor Iwan Davies, Hodge Chair in Law at Swansea University, and Charles Kerrigan, Partner at Olswang, who have examined and documented the theoretical and practical issues, and whose observations are reproduced with permission throughout this chapter.

Professor Davies is the author of a frequently cited paper in the Oxford Journal of Legal Studies which examined the issues around intellectual property and security in detail. In it, he states¹¹⁰:

Patents, trademarks and designs are registrable rights under the IP statutes which are fully transferable to third parties and are property rights in the sense that they are owned and are exclusive and binding against third parties. This is the effect of registration...

Historically, IP has rarely been used as security for debt financing and where it has been used, this has been in addition to security taken over intangible assets almost as a catch-all security provision with little acknowledgement being given to the value of the IP... evaluation of IP as specific collateral has not generally occurred.

The facilitation of security is not simply a matter of ensuring priority for creditors. The control rights provided by security will be important to a financier and this is especially the case with technologically-driven small and medium sized enterprises as the line between equity and debt finance may become blurred. When such a small and medium sized enterprise is in financial difficulty, creditors care about issues of management capability or the threat of the business over-extending itself. A security interest gives creditors a voice in these decisions.

Nigel Swycher of Tangential Solutions develops this point further:

IP is property, and therefore it is conceptually capable of being bought, sold and licensed: there is a close analogy with real estate. The disadvantage the banking sector imposes is to attribute zero value to this entire asset class. It follows that the advantage of recognising the value of IP would be to dramatically increase the value of the asset class and to create 'liquidity' in line with other assets.

And as Thomas Gardiner puts it:

All the documents are available and can be used to take security. They were originally produced many years ago, based on property precedents.

110 *Secured Financing of Intellectual Property Assets and the Reform of English Personal Property Security Law*, I.R. Davies, Oxford Journal of Legal Studies, 2006 (The title relates also to the work of the Law Commission on security interests at or around the time of publication).

Types of security interest

Options available to lenders

When considering ways in which to obtain security or control over an asset, assuming ownership by taking a straightforward assignment of the IP is not normally the preferred route. Whilst there is no legal impediment to doing this (because IP can be bought and sold just like any other type of property), practical considerations mitigate against such an approach. As Davies explains:

This is often a blunt instrument as it will involve the financier in the management and future commercial exploitation of the asset which few lenders could exploit themselves so, in practice, they would need to licence back the right to the debtor¹¹¹.

In a practical guide recently produced for Lexis Nexis, Kerrigan comments on practice as follows:

Different finance techniques may be used in this area. On one hand a lender may make a secured loan to an operating business which owns and uses valuable IP as part of its day to day operations. On the other hand, it is possible for IP to be the subject of a securitisation transaction in the capital markets if the IP rights have a very predictable revenue stream. A lender will need to be satisfied that it has sufficient control as well as security over the IP assets it has identified.¹¹²

In the SME context, the first of these options would normally be the primary route under consideration and is the main focus for this chapter, though as explained in Chapter 7, there have been a number of successful instances of securitisation transactions around intellectual assets. This area would start to become very important if appetite to invest in IP could be stimulated in, for example, offshore funds.

Swycher comments on his own experiences of advising on security requirements relating to IP:

There are no legal difficulties with granting security over IP - just a perception gap. Security gives you the 'long stop': charges can easily be applied to registered rights, but drafting warranties and covenants that balance the needs of the parties requires care and attention.

Copyright can be harder to identify, but is relatively easy in some areas, such as software (which can then be put into escrow for example). Other unregistered rights are more complicated, but the challenge can be met.

Depending on circumstances, the international dimension will be important because IP is global. The sort of things that need to be confirmed are local bankruptcy laws, which can impede the administrator's ability to enforce.

111 Ibid

112 *Taking security over intellectual property – practical points*, a Lexis PSL document produced in partnership with Olswang, 2012

English lenders have four types of security interest open to them: mortgages, charges, pledges and liens. Of these, the pledge and the lien are both possessory in nature, and need to be evidenced with a negotiable title document (which certificates of registration for patents and trade marks do not constitute). Pledges are commonplace in commodity trading and pawnbroking, but do not confer a right to appoint a receiver or foreclose; liens are also normally associated with physical possession of tangible assets and create a right to refuse to return possession until payment.

The chief problem raised by any possessory right is that if the collateral is in the hands of the lender, the borrower cannot use it to repay the debt. Accordingly, whilst these instruments can be relevant for certain types of IP rights which are linked to physical property (such as master recordings of film or music) they are not generally used otherwise. The charge and the mortgage, being non-possessory, form the backbone of business financing in respect of both tangible and intangible assets, because the enterprise does not lose the use of the assets in question.

Mortgages

Technically, whilst the borrower retains possession of the asset under a mortgage, it involves an assignment of personal property which transfers the title to the lender until such time as the borrower has discharged all their obligations. Davies explains:

Since the intellectual property will be needed by the mortgagor in its business, it will usually be necessary for the mortgagee to grant a licence-back to the mortgagor and this may also include giving the mortgagor a further power to grant sub-licences which could prove to be problematical for the financier¹¹³.

This licence will normally be exclusive and royalty-free, and will enable the borrower to exploit the patent, trade mark, design or other IP in the ordinary course of business. This also means that the borrower can continue to protect the IP, because it will be able to sue in the event of infringement.

However, it is fair to observe that legal mortgages in the area of IP and security are not common because a company and proprietor may not be able to easily and freely act in the case of infringement and damages on the IP without the lender becoming part of the action (although this issue can be addressed by joining as co-defendants in any action). Additionally, if the IP is exploited worldwide, there may be jurisdictional issues of a mortgage affecting the validity of its registrations, as previously noted by Swycher.

The matter of ultimate ownership can also be a concern for trade mark holders. As Kerrigan points out:

An assignment can give rise to difficult questions regarding the use of the trade mark and, in particular, to which business goodwill in the mark accrues as a result of its use¹¹⁴.

113 See Davies, 2006

114 See Lexis/Olswang, 2012

Fixed charges

Davies sets out the advantages and implications of a charge as opposed to a mortgage when obtaining security over IP assets as follows:

A charge does not remove the chargor's title but places an encumbrance on it to the value of the outstanding debt. A charge is a more appropriate security mechanism because all that is needed is a declaration of charge but since this arises in equity and not law, notice must be given to third parties if priority is to be preserved. In this context, the requirement of registration is crucial to establishing and fixing priority for secured creditors and, as such, a distinction can be drawn between registrable and non-registrable IP rights¹¹⁵.

Charges are either 'fixed' or 'floating', and the difference between the two can prove to be quite important when such charges are applied to IP and intangibles.

Where a lender has provided money to purchase assets such as premises or vehicles, it is clearly important that the company does not dispose of this asset without permission, and so it is normal for these to be covered by a fixed charge¹¹⁶. Fixed charges are also commonly used in invoice discounting and factoring, because the bank needs to 'own' these debts in order to be able to collect them if needed. Whilst the actual invoices which are valid naturally change over time, it is possible for the debtor book as a whole to be defined with sufficient precision that a fixed charge can be applied to it. This is necessary to prevent the business from trading its debts (for example by setting up a secondary agreement to borrow against their value).

Fixed charges are also attractive to lenders because they establish priority over other types of creditor; if there is distress, floating charges and assets subject to it may suffer deductions and dilution (see below). However, it is important for banks to be clear that the definitions they apply to different types of charge reflect the nature of the agreements into which they enter. In discussing the subject matter, Stephen Pegge of Lloyds Bank, Jason Oakley of Metro Bank and David Gill, formerly of HSBC, all referenced the *Brumark* case¹¹⁷, where the UK Privy Council was asked to rule over a New Zealand case where Brumark Investments Ltd had given security over its debts to Westpac.

The effective nature of the charges became critical because when Brumark became insolvent, a dispute arose over the rights of preferential creditors in relation to the collected debts. The Privy Council determined that the charge was in fact floating, despite references within the agreed documentation to a fixed charge, because of the rights conferred on Brumark to use the proceeds from collecting its own debts. It concluded that the book debt and the proceeds were both assets, but different ones. The subsequent *Spectrum* case¹¹⁸ confirmed the position in UK case law in 2005.

115 See Davies, 2006

116 Interviews for the study have shown that the nature of the charge can still vary according to the business type, however. For example, where funds are used to acquire plant and machinery assets to hire companies, the charge over them will be floating because of the need to use, and even dispose of, the assets in the ordinary course of business – effectively they are 'stock'. The risk this poses to the financier is generally managed using regular audits and/or returns by the borrower.

117 *Agnew vs Commissioners of Inland Revenue Re: Brumark Investments Limited* [2001], UKPC 28

118 *National Westminster Bank vs. Spectrum Plus Ltd* [2005]

As a result, where a bank now enters into an invoice discounting arrangement with its customer and the customer continues to collect the debts, it is clearly doing so as the bank's agent, and the Brumark case is borne in mind when formulating debenture wording in relation to overdrafts which involve book debts (which historically only required the borrower to maintain a minimum overall value of such debts in relation to their facility).

In law a fixed charge is equitable. It does not involve a transfer of the legal title to a lender, nor does it require the lender to be involved in protecting or maintaining the IP. The borrower retains title as registered holder and continues to be responsible for the asset, in the case of IP for example, paying registration fees and defence in litigation.

Until comparatively recently, it was the case that only lenders with fixed charges could appoint an administrator; however, this has changed since September 2003 to provide floating charge holders with similar rights.

Floating charges

This mechanism acknowledges that there are particular assets within a business that are used to generate business which change regularly, and that it would be impractical to itemise them separately. It may also be inappropriate to do so, because a fixed charge places legal limits on the company's ability to use these assets to run its business (and thereby repay the debt). Assets under a floating charge can be dealt with and disposed of as the borrower sees fit.

The description most often cited to explain the characteristics of a floating charge came from Lord Justice Romer in 1903:

I certainly do not intend to attempt to give an exact definition of the term "floating charge", nor am I prepared to say that there will not be a floating charge within the meaning of the Act, which does not contain all the three characteristics that I am about to mention, but I certainly think that if a charge has the three characteristics that I am about to mention it is a floating charge. (1) If it is a charge on a class of assets of a company present and future; (2) if that class is one which, in the ordinary course of the business of the company, would be changing from time to time; and (3) if you find that by the charge it is contemplated that, until some future step is taken by or on behalf of those interested in the charge, the company may carry on its business in the ordinary way as far as concerns the particular class of assets I am dealing with¹¹⁹.

Whilst the first two of these properties are not necessarily inconsistent with a fixed charge, the third one is distinctive of a floating charge. As a result, assets such as cash, stock and raw materials generally fall into this category; if they were associated with a fixed charge, the business would have to seek the debenture holder's permission every time an item was sold, replaced or disposed of.

In the absence of being itemised on a fixed charge, IP may be covered by a floating charge, particularly if it is unregistered and only identifiable as a group (though it is not uncommon for 'goodwill' to be associated with a fixed charge). The significance of this is that provided it pays

119 Romer LJ, *In re Yorkshire Wollcombers Association Ltd* [1903] 2 Ch D 284

the loan in accordance with the terms of the debenture (see below), the chargee can sell, replace or otherwise dispose of assets under the floating charge in the normal course of business. This means that a business will be within its rights to dispose of IP (which if it starts to become distressed, but has not yet gone into default, it may well be tempted to do).

At present, the information asymmetries which exist around IP make it unlikely that value-producing assets will be clearly identified as part of the lending process. The wording of floating charges is often not very specific. Accordingly, when these charges crystallise (see below) they may attach to IP assets generally rather than specifically, and for the reasons stated above, they may not provide the lender with the priority they are seeking.

One particular area of concern for a lender is the ability to grant licences over IP assets. While this may be crucial to a business's success, inadvisably granting exclusive licences could effectively place control of IP assets outside a lender's reach.

As referenced in the discussion over Brumark above, in the event of a liquidation, floating charge claims will rank behind mortgages and fixed charges and generally also behind preferential creditors such as employees and HMRC.

Debentures

The type of charges which apply in each particular case are generally set out in a debenture document, alongside other terms and conditions which apply to the loan.

Importantly, it has become an implied term in these documents that in the event of a default or other identified event, any floating charge will 'crystallise' and convert to a fixed charge, meaning that the company's right to deal with the assets in the ordinary course of business will cease. Other events apart from non-payment would include invalidity of any of the lending or security documents, insolvency or liquidation.

Prior to drawing up the debenture it will be necessary to conduct due diligence associated with the Law of Property (Miscellaneous Provisions) Act 1984. This deals with borrower guarantees, the right to grant a charge in the first place and that there are no other encumbrances (and similar).

Lenders also need to be mindful of the fact that notwithstanding this due diligence and the need to observe the registration requirements set out below, IP can be challenged. If significant value is being attributed to IP in the context of a transaction, it will be important to assess the likelihood of registered intellectual property being vulnerable to potential challenge and how likely it is to be successfully defended should this occur.

Filing and notice mechanisms

Where to file registered rights

Once a debenture has been signed by the company, the lender sends the debenture and loan deed together with Form 397 to Companies House to register the charge. This registration has to take place within 21 days after execution of the documentation. This is an important step in establishing priority for the lender and preventing other people obtaining security against the assets in question¹²⁰. The Companies Act 2006 specifies that certain security interests (including specified types of IP and goodwill) have to be registered, and that they will be void against a liquidator if this is not done.

However, filing at Companies House can best be described as 'necessary, but not sufficient'. If an enquiry were made with Companies House to determine whether IP is encumbered, it would be difficult to tell, because the instrument detailing the charges is not historically shown and if there is any reference made to IP within the forms filed by lenders, it may be buried in very detailed particulars. Also, as Companies House has pointed out, the registrar is not in a position to check whether all charges that should be registered against IP are actually presented for registration.

This position has improved a little since new procedures were introduced in April 2013, since the recordal form now includes an area to show the extent of any fixed charge, which is output to the web (but only if it is completed correctly, which Companies House cannot verify). The copies of the instruments themselves are also now retained, so searchers can now consult these as well as the form, though the presence of a floating charge is only indicated on the output data by a tick-box.

The issue relates to establishing priority, which is a matter of making sure that actual notice of the existence of the interest has been given. This is not a clear-cut matter, as Davies explains:

If a charge is registered on the companies charge register and not on the relevant IP register, then it follows that this register will show that the patent or trademark or design right is unencumbered. Whilst the onus is upon the financier to search the registers, if this is not achieved then apparently binding charges could be void in a companies context for failure to register in either register. It is unlikely that registration in the companies registry will be notice for the purposes of the Patents Act 1977 since s33(1)(c) refers to knowledge, that is, where the subsequent interest holder "did not know of the earlier transaction or event". The Trade Marks Act 1994 provides that a later transaction will have priority over an earlier one if the party to the later transaction is ignorant of the earlier one.

The problem is that the Patents Act and the Trade Marks Act refer to actual notice being sufficient unless the interest is registered. Does this mean that unless the subsequent interest holder can be shown to have known about the previous interest he will not be bound by it?¹²¹

120 If a number of lenders are involved in a particular transaction, it will also be necessary to draw up a Deed of Priority which sets out their relative claims to the assets involved.

121 See Davies, 2006

For this reason, as Kerrigan identifies:

It has not been conclusively determined whether registration at Companies House amounts to notice for priority purposes in relation to IP. The safer view is that both the Patents Act 1977 and the Trade Marks Act 1994 require actual notice of security interests to be given and therefore registration at Companies House alone is not sufficient¹²².

In a similar (but not identical) way to the rules governing registration of property interests at the Land Registry, it is therefore important for registered IP rights to be appropriately recorded¹²³, in order to provide a notice mechanism to prevent unauthorised transfers from taking priority over the lender's interests. This has to be done within six months in order to provide the lender with the ability to claim costs in proceedings for infringement of the patent prior to registration.

There are three official registries in the UK:

- Charges and mortgages against patents need to be recorded at the Patents Registry
- In the case of registered trade marks, this will be either the UK Trade Mark Registry and/or OHIM (in the case of a Community Trade Mark)
- If the design is registered, the charge has to be registered in writing at the Designs Registry (if UK) and at OHIM (if EU). At the latter, there are additional fees to be paid and formalities to be observed both at creation of the charge and any subsequent transfer

Designs can prove to be more complicated because there may be up to four different types of rights at work – both registered designs and unregistered design right, for both the UK and the EU. These provide different levels of protection, for different aspects, and last for varying periods of time. However, for transfer purposes, the registered right normally subsumes the unregistered portion provided the Registrar is satisfied that the applicant is entitled to transfer both.

Interests in unregistered rights

If the application comprises multiple IP rights, then these may be subject to security interests either en bloc or individually. As Kerrigan points out:

IP rights do not necessarily align themselves with single assets in the business world. A single asset in legal terms may be made up of a number of IP rights. A website, for example, will include a trade mark in the domain name, copyright in the layout and design of the website, as well as the content posted on the site and copyright in the computer code, among other things¹²⁴.

122 See Lexis/Olswang, 2012

123 See Patents Act 1977, s30; Trade Marks Act 1994, s24; Registered Designs Act 1949, s19.

124 See Lexis/Olswang, 2012

The situation with these unregistered rights is a little more complex, according to Davies:

At least in the case of registered IP there is a notice mechanism for equitable mortgages and charges and a process for creating security interests. This is obviously more problematical in the case of a non-registered right such as copyright or a database right because the financier who holds a legal title to the right under a legal mortgage has no mechanism of putting others on notice of the financier's interest through public registration. Of course, it may be possible to publicly include on a piece of art (in respect of a copyright or a database right) that the IP in question is subject to a security interest but this is not a commercial solution as it could give the wrong impression as to the financial means of the originator of the work of art.

Furthermore, in the case of database rights, there is no means of registering any form of mortgage or charge under the Companies Act 1985 because whilst s396(1) and s396(4) provide for registration, this only extends to certain forms of IP¹²⁵.

This makes it all the more important to confirm ownership and to ensure that this has not been undermined by collaborative methods of creation. Kerrigan:

Copyright is also vulnerable to a challenge that the work in question is not original and the lender will wish to protect itself against this risk by investigation, representations and warranties and, potentially, insurance...

The lender must obtain written waivers of the copyright author's moral rights as this would affect the value of any copyright interest being secured and impede the process of enforcement¹²⁶.

The registration process: Companies House

Lenders are already well practised in filing charge documents at Companies House, so what follows is a brief outline.

As of 6 April 2013, a certified copy of the original document, together with the appropriate form and applicable fee, has to be provided within 21 days, as referenced above (and it may be rejected if filed late unless there is a court order). The fee is currently £10 for online filing and £13 for paper filing. There are separate forms to be submitted when the debt has been wholly or partly paid off, and when the property or undertaking has been released from the charge or is no longer the company's property.

125 See Davies, 2006

126 See Lexis/Olswang, 2012

Certain forms, including the most commonly used ones, include a short description field. The Companies House online guidance¹²⁷ states that where this applies:

You need to submit only a short description of any land, ship, aircraft or intellectual property which is registered (or required to be registered) in the UK subject to a charge (not a floating charge) or fixed security included in the instrument.

If there are a number of plots of land, aircraft and/or ships, you can simply describe some of them in the text field and add a statement along the lines of, “for more details please refer to the instrument”.

It is notable that this only applies to intellectual property which is registrable, and may in fact only apply to information which is actually already registered as the only ‘requirement’ for registration would be one imposed by the lender.

Companies House does not keep records in respect of the number or percentage of charges that have any reference to intellectual property. It does retain records on the total number of charges registered, which for the last three years has been 98,564 (2012/13), 101,339 (2011/12) and 98,920 (2010/11).

It will immediately be noted that these numbers are, on the face of it, surprisingly low when compared with the total number of finance agreements relating to SMEs referenced in Chapter 3 – over 700,000 were approved in 2011/12 which fell within the scope of the appeals process. Even if the majority of these are unsecured, there appears on the face of it to be a significant level of under-registration.

The description also only applies to fixed charge items, though the principal form (as amended from 6 April 2013) also has a tick-box section to note the presence of a floating charge and whether this is expressed to cover ‘*all the property and undertaking of the company*’. There is also a tick-box section to indicate whether a negative pledge is included to ‘*prohibit or restrict the chargor from creating any further security that will range equally with or ahead of the charge.*’

The registration process: statutory IP registers and the Intellectual Property Office

By contrast with Companies House procedures, it is clear that lenders are currently unaccustomed to registering charges against IP at the Intellectual Property Office (while the authors have not studied the frequency of registration at OHIM, it seems reasonable to assume it will if anything be lower).

The forms to be completed vary according to the IP right involved, and the information provided is processed using systems with different capabilities. For example, the TM10 trade mark system has been introduced in 2013, while the Patent Optix system can trace its origins back at least 30 years.

By definition, a company with registered rights will already have a ‘footprint’ on the register, and when a financier records an interest, a system identity is created to streamline the recording of information subsequently.

127 See www.companieshouse.gov.uk/InfoAndGuide/faq/companyCM.shtml

It is important to see the functionality of these systems in the appropriate legal context and the purpose for which they were devised. As Davies explains:

The current IP registries are concerned with documenting the conferral of rights, the identity of the original owner and all the assignees in the case of patents, trademarks and design rights and essentially were designed for transaction filing. Further, whilst the registration systems are ownership based, they do not necessarily show all ownership, for example, assignments do not have to be filed. In any event, the registration process itself is flawed because whilst the patent system describes the rights that are claimed, trade mark registration does not describe the actual use made of the mark and non-use can lead to invalidity, whilst at the same time, there is no official copyright register¹²⁸.

The fundamental point Davies makes about all three registration statutes is as follows:

They seek to be both non-compulsory, as well as compulsory registration schemes. Whilst the common law environment is that a legal interest binds the world, nevertheless, neither the Patents Act 1977 (as amended) nor the Trade Marks Act 1994 establish a compulsory system of registration. As a result, legal interests are treated as equitable interests since they have no effect against a subsequent interest holder who does not have actual notice of their existence.¹²⁹

Recording interests against patents

All interests to be added, amended or removed in relation to patents are done using Form 21, accompanied by a £50 fee (though one form and one fee can be used to provide notification against as many patents as are affected by a particular mortgage or charge, commonly added as a separate schedule). The same form is used to record anything that could affect ownership, including details of licences which have been granted or probate where applicable.

At present the form has one general question (5) to provide “*details of the transaction, instrument or event which affects the rights*”. In the absence of classification provided by the party making the filing, the IPO determines which of a number of categories the interest falls into: assignment, probate, merger, mortgage, security agreement (charge, lien or pledge), memorandum, debenture, exclusive licence or non-exclusive licence). The authors note that Form 21 is currently the subject of a redesign which may include clarifying the meaning of different interests which might be shown on it.

Figures provided for this report show that the total volume of agreements processed in 2012 was 1,075, with a further 195 entries relating to licences or sub-licences. This is understood to relate to the number of patents which have been affected by an agreement rather than the number of Form 21s received, which is likely to be far lower – anecdotal evidence suggests that the schedules of patents sometimes provided can run into three figures.

128 See Davies, 2006

129 Ibid

In terms of historical data, 2011 records show 431 instances of patents having agreements recorded against them (plus 163 licences): in 2010, these figures were 1,080 (195); in 2009, 2,626 (200); and in 2008, 870 (216).

These schedules also have to be checked for accuracy and queries raised where the information supplied is incorrect. It is a labour-intensive process which is partly conducted on paper and partly electronic depending on the ages of the patents involved.

Recording interests against trade marks

The system for recording interests against trademarks has recently been revised and there is now a separate form to record/amend security interests (TM24) from that used to cancel them (TM24c). There is also a separate form TM16 to record a change of ownership, TM16P used for partial assignments, and TM50 and TM51 used respectively to register a licensee and to amend/remove the licence record.

On form TM24, there is a question relating to whether the charge is fixed and floating, fixed, or floating. There is also a separate question (5) to provide further details if the nature of the security is '*something other than the right to take ownership of the trade mark in the event of default*', though this field is free-form.

As with patents, it is common practice to supply a schedule of marks affected by a charge or mortgage, all of which will be processed for one £50 fee. Since all paperwork is scanned on receipt, the usual method of processing is that a task is raised and the interest is reviewed using dual screens. Terms are keyed in and attached to the appropriate rights. However, as with patents, all originals have to be submitted by post or fax.

In 2012, the total number of TM24 forms (which would have included cancellations) was 335: historical data stretching back for the four prior years suggests this figure is broadly typical, with totals ranging between 267 and 376. By contrast, the figure for TM16 change of ownership forms in 2012 was 3786 (historically varying between this figure and a peak of 4050). The number of licensing agreements is lower, at 212 in 2012 (including amendments and removals as well as additions).

No breakdown is available for the balance between the different types of charges applied.

Recording interests against registered designs

Design registration interests are all supplied using Form 12a, which is also used to capture a change of ownership, record or cancel a licence or record a security interest. The system operates in much the same way as it does for patents and trade marks but is all done using paper files at present (there is an intention to move to electronic processing at some point).

The total number of design registration forms processed in 2012 was 173, which compares with ranges between 227 and 272 for 2011, 2010 and 2008 (2009 saw 698 forms processed and appears to be anomalous). Because of the nature of the data capture involved, no further breakdown on Form 12a is available.

Regulatory considerations

The role of the Prudential Regulation Authority

Since 1 April 2013, the Prudential Regulation Authority (PRA) has been the body responsible for the regulation and supervision of banks, building societies, credit unions, insurers and major investment firms. Its two statutory objectives, as laid down in the Financial Services Act 2012, are to promote the safety and soundness of these firms and, specifically for insurers, to contribute to the securing of an appropriate degree of protection for policyholders.

In promoting safety and soundness, the PRA is charged with focusing on the harm that firms can cause to the stability of the UK financial system. Ensuring that banks have an adequate degree of 'headroom' to withstand shocks is fundamental to this mission, and hence PRA is closely involved with, and interested in, the implementation of Basel III as enshrined in regulations relating to capital adequacy.

There are two ways in which regulatory capital requirements for credit risk are determined:

- A 'standardised' approach which sets out rules for different classes of assets and prescribes a capital requirement based on asset type and a small number of parameters
- An internally modelled basis which reflects the bank's own estimate of default and loss risks and is founded on actual experience of historical default and loss rates (the internal model being subject to regulatory approval prior to adoption)

Where banks lend against tangible assets such as domestic or commercial property, one of these two mechanisms is used to determine the extent to which the value of those assets (or rather, a proportion of it) can be used to adjust the regulatory capital requirement reflecting the fact that losses given default should be lower than would be the case for an otherwise identical unsecured loan.

Discussion with the PRA confirms that the 'standardised' approach does not attribute security value in the case of IP and intangibles. The regulations do not provide for any account to be taken of these assets when arriving at a judgment of value for capital adequacy purposes.

Where a bank's regulatory capital requirements are derived using internal models there is the possibility of taking into account a wider range of collateral types, as banks are able to take their own view on the ultimate losses likely to be experienced with a particular asset class, provided that they have the data to support such a calculation. The regulations do not specify what type of assets these need to be, so IP is not excluded *per se*. However the PRA also confirmed that it is not aware of any instances where banks have requested it as regulator to opine on the suitability of intangible assets as security.

Were the PRA to be asked such a question, the EU Regulation governing capital requirements requires that a firm could present reliable evidence that the value of IP and intangibles is capable of being recovered when needed. The regulator would need to be presented with detailed

evidence on the default and recovery rates experienced by a lender when dealing with these assets, with particular reference to net losses after assets have been liquidated independently of the business.

Moreover, the regulations explicitly state that when looking at a bank's own balance sheet, any intangibles shown are to be subtracted for the purposes of calculating capital resources.

Implications of the regulatory position

As more transparent markets for transacting IP are established, it will become easier to gather evidence on sales and disposals independently of companies, and to furnish the type of insights required by the regulator. At present, it would be very problematic for most (potentially all) lenders to provide such information, because they do not hold the data on instances when IP and intangibles have formed part of the security 'envelope', or how much has been realised for them in distress.

In the meantime, the essential first step in taking any form of security is for lenders to create accurate records of charged IP and intangibles. When recording this data, asset categorisation will also be important, as IP and intangibles consist of several different asset classes rather than one, and are likely to have different levels of recovery associated with them.

Whilst the PRA's emphasis on evidence is wholly understandable, there is a more fundamental point at issue. There is an inherent bias in the current banking regulations which the PRA is tasked to enforce which mitigates against IP and intangibles (affecting old and new economy companies) in favour of conventional, tangible assets. This may appear especially incongruous in the light of the well-documented 'chilling' effect that ownership of such assets (particularly commercial property) has had for the last few years on banks' ability to lend.

This, in turn, illustrates a disconnect between economic policy promoting innovation and the business finance infrastructure. Not only do regulations encourage banks to 'ignore' the assets knowledge-based businesses possess: they incentivise them to seek out commodities that add comparatively little to actual business value. Furthermore, if part of the purpose of taking security is to obtain the full attention of the company in the event of difficulties, it is at the very least questionable whether this focus on commodities rather than unique value-producing assets meets that requirement.

A further inconsistency is apparent on consideration of the practicalities. Even if a bank intends to focus purely on tangible fixed assets, it can be very difficult (and undesirable) to eliminate IP and intangibles from consideration when seeking to value them. Two examples illustrate this point:

- Valuations of franchise operations and occupational premises such as hotels, nursing homes, restaurants, pubs, casinos, shopping malls and similar often need to take into account the fact that for efficient operation, these properties have to be run by branded entities. These brands are themselves intangible assets which drive cash flows, and hence will influence a surveyor's Red Book valuation
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- Many high value fixed assets, such as specialist plant and machinery, are now inoperable without software and process patents to drive them. One example is printing, which is almost universally computer-controlled. Accordingly, the valuation of the asset includes not only an assessment of how far its brand will assist in obtaining a given residual value, but also acknowledges the inclusion of a specific IP component without which the asset cannot operate

As a consequence, it can be argued that the calculations already being performed for capital adequacy purposes will inevitably include elements that have been derived from an assessment of the value contributed by IP and intangibles.

Practical management of security

Initial due diligence

Thomas Gardiner summarises the starting point as follows:

A lender must first identify and value its borrower's IP. It will distinguish between types of IP, for example IP with proprietary qualities and IP comprised in contractual rights. It will recognise that IP within a business is usually interrelated, such as a patent and the associated know-how which makes the patent valuable in practice.

The primary challenge, therefore, is to identify what assets exist and whether they make a meaningful contribution to the cash flows in which a lender's primary interest lies. As has been explored in previous chapters, most businesses will not have an existing inventory of intangible assets available for review, and the range of assets they will in fact own is potentially very diverse.

Whilst many different types of intangible asset can be fundamental in a business context, it is clear from the above that there is an important distinction in law and in practice between rights which are (or can be) registered, and those which cannot. For the purposes of registering an effective fixed charge at Companies House, and being able to establish actual notice on the public register at the Intellectual Property Office, it is necessary for IP to be registered. Accordingly, the first priority is to determine whether there are any registered rights which ought to be the subject of a charge.

Interviewed for this report, IP attorneys Marks & Clerk (and Marks & Clerk solicitors, its sister firm specialising in IP litigation) provided insights into the main issues:

Assessing IP value will mean not only confirming ownership and assessing its commercial worth and potential but also identifying factors which may detract from that worth. The existence and ownership of patents, trade marks and registered designs can be verified by checking the registers at the relevant Intellectual Property Offices, although this due diligence will also entail ensuring that these registrations are up to date. For example, it is not uncommon, when a patent or trade mark is assigned, for the parties to forget to register the change of ownership. Without this registration, the new owner may not be able to assert its rights against infringing parties and claim damages.

Once the IP is identified, the lender will need to verify that the company really does own it. Even if a borrower assumes that this is the case and has registered its ownership, investigation can reveal that this is not actually the case. Marks and Clerk cite two common mistakes:

- *Individual inventors founding a company but never assigning their rights in the original inventions to that company. Despite this, patent applications are then made in the company's name. Filling this gap in the chain of title at a later date may be difficult, particularly if, for example, one of the inventors has left the company and cannot be located, or can be located but is reluctant to co-operate*
- *The company hiring a consultant to do work for it and assuming that, because it has paid for that work, it will own the intellectual property contained in it. In fact, it won't unless that IP is expressly assigned to it in the contract. Again, securing such an assignment after the event may not be easy*

Once registered rights have been identified and their ownership confirmed, and before thinking more generally about value-producing intangibles present in the business (such as trade secrets, proprietary processes or know-how that has been embodied in other ways), the next stage of enquiry is likely to involve consideration of copyright assets (in businesses that deal with software or handle databases, as well as those that are outwardly 'creative'). Although copyright is unregistered, it is nevertheless recognised in law as being intellectual property, and there are (as referred to above) many instances in which copyright materials are a clear driver of business value. There are also specific steps that can be taken to safeguard a lender's interests in copyright material that is digital, for example by placing it into escrow.

As Marks and Clerk observe, these assets can have considerable business value:

Copyright resides in software, films and publication. Recipes are a valuable trade secret. These assets may be as crucial and valuable as any patented technology or trade marked brand.

Determining the ownership of copyright materials is not always straightforward, however, as is reflected by Kerrigan in identifying three main areas of due diligence enquiry:

As a minimum it is necessary to ensure that the borrower is the owner of the IP to be secured...

In addition to an investigation of ownership it is necessary to establish that the IP to be secured in favour of a lender is not the subject of existing security in favour of another person...

When drafting to take security over IP it is important to be sure that the description of the IP is precise and accurate... If the IP is insufficiently defined the security may fail for uncertainty on normal contractual principles or it may be found to suffer from a technical security defect such as that a charge purporting to be a fixed charge is in fact a floating charge¹³⁰.

Gardiner, who is well versed in dealing with assets where copyright is the primary class, provides a practical example:

The fundamental risk is whether the company has the IP or not – it may not be registered anywhere. So you need to ask questions on the ownership of IP and the chain of creation. But due diligence is a question of making sure not only that the IP is owned, but also that there are controls over what can be done with it. You don't want a company selling an exclusive perpetual licence for £2.50...

Lenders will also need to satisfy themselves on a number of other points. Based on their experience of due diligence and litigation, Marks & Clerk suggest the following points for consideration:

- *Is the company's intellectual property open to challenge? Is it being infringed, or could its exploitation infringe a third party's rights and invite legal proceedings?*
- *Have valuable trade secrets been undermined by unauthorised disclosure or lax security?*
- *Most intellectual property rights have a finite life. For example, patents only last for twenty years. A patent nearing the end of its life is therefore a much less valuable asset to lend against than a newly granted one*
- *The value of intellectual property may also be undermined by commercial factors. A company's core technology may be protected by an impressive patent portfolio, but that is small comfort if there is no market for it or if a competing product or process has hit the market which is better. The lender's due diligence will therefore need to encompass an analysis of the market that the company's intellectual property is exploited in, not just that intellectual property in isolation*

This last point resonates with lender and investor observations that the IP and intangibles have to relate to clear markets and cash flows in order to be considered relevant in the funding context. Marks & Clerk continue:

In addition, the value of the target company's intellectual property may be enhanced or detracted from by its relationships with third parties. It may depend on licensing intellectual property in but, if its obligations under that licence are stringent or the licensor has wide rights of termination, there could be a risk that it will lose that licence and access to the IP which it conferred.

On the other hand, the company may seek to generate revenue by licensing intellectual property out. In such circumstances, those licences also will need analysing. Are they profitable? Are the licensees contractually incentivised to maximise the value of the IP licensed to them? Is the licensor being paid all the sums due to it? Underpayment of royalties is a common problem.

These points also have implications for companies thinking of using their IP in this way, particularly when negotiating contracts which could affect their ability to assign IP if needed:

Good record keeping is essential. A company which can produce on request a full list of its IP and the contracts, rights and liabilities which it is subject to will have a much easier ride than one which, when faced with a due diligence questionnaire, suddenly has to trawl through a chaotic filing system which may not paint the full picture or which, once brought under control, may expose worrying and possibly irremediable gaps.

Where rights exist internationally, or a borrower is generating income streams overseas which form part of the cash flows under consideration, the due diligence will also have to consider two aspects: whether the IP is effectively protected, and whether their interests will apply to it.

Since registered IP rights are territory-specific, an IP strategy needs to be in place for all the relevant jurisdictions where a borrower has commercial operations or needs to be able to enforce its rights.

Here, the process of scrutinising copyright may be more straightforward. If ownership questions have been satisfactorily answered, the lender can take some comfort from the fact that similar copyright rules to the UK automatically apply in other countries which are signatories to the Berne Convention. The question then will be whether systems are in place to detect and address infringement, and these can vary quite substantially by territory.

With multi-national businesses, while lenders may have a charge over a potentially substantial IP portfolio in English law, many jurisdictions may have entirely different processes, laws and applications of what charges are and what they mean. If the lender observes value in IP worldwide, their due diligence would need to include specific understanding of security rights by law in other jurisdictions.

Benefits of actual notice

Notwithstanding the observations made regarding the implications of notice for a rights holder's financial standing, providing visible registration of a lender's financial interest in IP could serve another important function.

One of the key complaints frequently made by SMEs in the context of protecting their IP rights is that these are vulnerable to challenge by larger organisations with deeper pockets. Once a large and established lender has a visible involvement in an IP family, this dynamic could change considerably.

Gardiner is one of a number of interviewees who thinks this could be beneficial:

Visibility of a bank's security position would help with enforcement and deter others from going down the same route. However, this would be a lot more effective if there were a worldwide register that could identify and collate all the charges in one place.

For example, anyone serious about looking for US film rights knows they need to look at the Washington register, which has everything online.

Whilst lenders would wish to protect themselves against the likelihood of being drawn into expensive legal battles regarding IP ownership, in reality this is a risk that borrowers face in any event that is likely to undermine their ability to repay debt.

Interviews conducted for this study have confirmed that lenders operating in the venture debt space and insolvency practitioners do intervene in maintaining and safeguarding IP ownership where necessary in order to protect their position. The financial resources available to lenders would almost certainly give most infringers pause for thought were these interests to be made more visible.

On-going maintenance

After security has been granted, lenders still have to take steps to safeguard their interests. IP rights have to be maintained, which may involve payment to keep them alive when renewals fall due. If the type of security taken (such as a mortgage) has transferred ownership to the name of the lender, the lender may be responsible for ensuring this happens; however a lender can also appoint an agent to act for it in protecting rights in which it has an interest, which can be the borrower.

In particular, where IP is amended, or new IP is created, the lender's interest needs to be protected and applied to it. Gardiner sees a number of ways in which this risk can be managed:

I have seen a French bank require monthly supplementary schedules of new licenses and new IP that a company has created. However, there is probably a less onerous way to achieve something similar. For example, employment contracts normally contain an explicit assignment of any new IP at an employee level to the company, so perhaps these rights can be reassigned?

Swycher of Tangential Solutions agrees, and goes further:

Banks can use covenants to obtain an appropriate degree of control. For example, the bank could require the implementation of an IP strategy, either to exploit or to protect the IP. There is also the need for 'good housekeeping' including review of registered rights and any material changes in the IP. This all resonates with responsible lending.

Lending at the moment strikes me as being too much of a 'beginning and end' thing. IP enhanced lending should be an 'in-life' programme - part of a continuous process.

There is a need to develop positive interventions that support and increase the value of the IP during the term of the loan, in the interests of the business as well as the lender. Lending is part of the innovation ecosystem, so every time you lend, you should make sure you are supporting innovation.

A lender could also consider using a retention mechanism to fund the IP strategy – to make sure an action plan is formulated and that money is set aside associated with the performance of those actions. It would be possible to create economies of scale by developing ‘best in class’ procedures which could be standardised.

Gardiner supports the principle of requiring companies to work on their IP, but cautions:

Working independently on the IP to build its value would be a change of approach and mentality. You would need to get into the corporate lawyers before the transaction happens to see how far this can be bolted in, and set the parameters.

Enforcement of security

As Kerrigan notes:

A lender to a business will also have a strategy which it would apply on an enforcement of security. This will be designed to balance considerations relating to the IP (such as whether it has value outside the business and the liquidity of the market for it), to the terms of any contracts relating to or constituting the IP (such as whether the contracts are terminable on insolvency or security enforcement) and to the rules which will apply in an insolvency...

A key question will be how the lender might exploit the relevant IP on an enforcement of security. Answering this question in each case will require an understanding of how the borrower’s business operates and how IP contributes to this¹³¹.

One insolvency practitioner interviewed for this report explains that the trigger point for his involvement is generally when cash is running out, a further funding round is being proposed, or *“people are starting to play strategic games over valuation.”* Activities include business reviews, supporting second or third round fundraising, and in extreme cases restructuring the company or handling an administration process (but around 90% of companies are rescued provided action is taken at the profit warning stage).

All these processes involve thinking about where the business value is and how it might be realised. He comments:

The problem for banks is that they try to think of IP as a physical asset. To get into this market, banks need to think more like investors and do a similar amount of due diligence. The process of deriving value takes time and is slightly higher risk, but the risks are quite similar to physical assets: Is it there? Who owns it?

131 See Lexis/Olswang, 2012

The amount of information on IP that is initially made available in this context is generally quite poor:

The better investors will have a lot of this information; lenders won't, because they don't have it. The key questions are: do you have the rights, and do you have them in the right place? In other words – who owns them, and where are they located? Are there key suppliers who own IP on which the company is reliant? If the assets are software, are they in escrow? Is this copy usable, and is it up-to-date?

If you have a problem, it will be because the IP is not actually owned by the business, or is no longer in it: under insolvency legislation, this is an offence, but possession is nine-tenths of the law.

One of the scenarios under which this can be a problem is if the founders or management team intend to start up the same business again under a different name, sometimes known as 'phoenixism'¹³²:

This can provide a good exit, but not if the business has not been marketed properly. Their intent is not to get maximum value out, but to leave debt behind and wipe the slate clean.

The previous chapter has discussed what can be done to realise value from IP in good times and bad.

These comments go to the heart of why more effective controls over IP are essential in a lending environment increasingly driven by the need to understand borrowers better.

132 This particular term is popularly attributed (in this context) to Sir Robin Jacob.

Chapter 9

Valuing, and accounting for, IP and intangibles

Key points

Balance sheets are not a reliable indicator of the real asset value of businesses

Established valuation methods exist for IP and are acknowledged by HMRC, court processes, accounting and in the RICS Red Book

Valuations have proven sufficiently robust to pass the scrutiny of large pension funds

New tax incentives are prompting more businesses to take IP seriously and understand its value

Accounting rules for IP

In general accounting practice, the value of intellectual property is still only recognised when it changes hands and even then this is only in part. This heading provides a brief history of how the accounting position has developed, with particular reference to IFRS3 and IAS36.

History

The concept of a 'fair' valuation of acquired assets and liabilities has been accepted for some time. However, the degree to which the goodwill (a word applied in this context to all the non-fixed assets of a business which are typically intangible) element of the purchase price is required to be broken down into its constituent parts has a chequered history.

In the US APB 16 was published in 1970 and required separable intangible assets to be identified and valued. However, the continued use of merger accounting negated its purpose.

International Accounting Standards (IAS) 22 followed in 1983, a standard similar to the US rules which was applicable to all listed companies in the EU from 2005.

The UK Accounting Standards Board issued FRS 7 in 1994 which required all acquired assets to be fair valued but excluded intangible assets, notwithstanding the fact that they did not appear on the balance sheet of the acquired entity. This proved unpopular and was supplemented three years later by FRS 10 which specifically dealt with the issue of acquired goodwill and other intangible assets. Under this standard acquired intangible assets could be separately identified

and valued in the balance sheet if their value could be reliably measured; the UK Accounting Standards Board at this time had historically been suspicious about whether the value of intangible assets could be measured and this led to few UK companies capitalising their acquired intangible assets.

In 2001, the US Financial Accounting Standards Board issued new standards 141 and 142 dealing with the recording of assets acquired in a 'business combination' and their treatment thereafter. These standards were different from APB 16 and 17, which they replaced, attempting to make the accounting for intangible assets both more uniform and more comprehensive.

FAS 141 requires all business combinations to be accounted for at acquisition and abolishes merger accounting. This of itself is a major step in furthering the recognition of intangible assets used in business, as acquisition accounting requires the acquiring company to identify and fair value all the assets acquired irrespective of whether they are shown in the target's financial statements, whereas merger accounting simply requires that the balance sheets of the combining companies are added together. It requires that the purchase price be allocated across the fair value of all the acquired assets and liabilities including all the intangible assets that meet the specified recognition criteria.

As PwC highlighted when making its 2002 report¹³³, the move to greater transparency was a result of analysts and others seeking to better understand what a transaction means to the acquiring company, what actually has been acquired and, particularly, why the transaction was undertaken.

The sister standard to FAS 141 is FAS 142, which introduced further change. Under these rules goodwill is no longer deemed to have a finite life and is therefore not amortised. Instead it is treated as having an indefinite life and is reviewed for impairment at least once a year (or more often if there is reason to believe that impairment has occurred). Other intangible assets may also be deemed to have indefinite lives but this was expected to be rare and to be limited to certain trademarks and other generally long lived assets. PwC identified that most intangible assets other than goodwill would be amortised over their expected useful lives.

International Financial Reporting Standard (IFRS) 3 and International Accounting Standard (IAS) 36

The latest significant step is International Reporting Standard 3 (IFRS3) on business combinations, requiring intangible assets obtained through such combinations to be separately recognised and valued in the accounts.

This purchase accounting must be applied to all acquisitions (business combinations are also treated as acquisitions, and there is no more merger accounting). Many intangible assets that would previously have been subsumed within the goodwill definition must now be separately identified and valued. Explicit guidance is provided for the recognition of such intangible assets and IFRS3 includes a list of assets that are expected to be recognised separately from goodwill.

133 *Building and Enforcing IP Value*, Price Waterhouse Coopers, 2002

Examples of intangible assets to be separately recognised and categorised within the purchase cost are set out in the regulations and include marketing related items (trademarks, brands, domain names, newspaper mastheads): customer related items (customer lists and contracts): artistic related items (television programmes, photographs, films, publications): contract based items (e.g. licensing and royalty agreements, contracts for numerous situations such as advertising, construction and supply); and technology based items (patents, computer software, databases, trade secrets and so on).

Additionally under IAS 36, valuations need to be independently tested for impairment by an IP valuation expert on a regular basis. One of the IP valuer's first questions in that process will be whether there has been any diminution of the legal, technological or economic nature of the IP that was originally categorised.

IFRS3 is mandatory for all new transactions from 31 March 2004 and applicable to fully listed and AIM companies, though not SMEs because, typically, they do not report under IFRS.

R&D reporting: putting IP & intangibles on the balance sheet

Whilst the value associated with IP and intangibles is, for the reasons stated above, not generally shown on a company balance sheet, there are certain circumstances under which activity leading to the creation of IP and intangibles might be capitalised and therefore become a balance sheet item, under the heading of research and development reporting. However, it should be emphasised that such activity will only reflect the cost associated with the development activity.

IAS 38

This standard states that the intangible asset/completed product arising from development (or from the development phase of an internal project) shall be recognised if (and only if) an entity can demonstrate all of the following:

- The technical feasibility of completing the intangible asset so that it will be available for use or sale
 - The intention to complete the intangible asset and use or sell it
 - The ability to use or sell the intangible asset
 - How the intangible asset will generate probable future economic benefits
 - The existence of a market for the output of the intangible asset itself (or if it is to be used internally, the usefulness of the intangible asset)
 - The availability of adequate technical, financial and other resources to complete the development and to use or sell the development/asset
 - The ability to measure reliably the expenditure attributable to the intangible asset during its development.
-

If all the conditions above are not met, the expenditure of the intangible asset shall be recognised as an expense in the year that it is incurred.

The standard states that the following expenditure cannot be recognised as an intangible asset:

- Start-up activities
- Training activities
- Advertising and promotional activities
- Relocating or reorganising part or all of an entity

In addition, expenditure on an intangible asset initially recognised as an expense cannot be recognised as part of the cost of an intangible asset at a later date. If the conditions are satisfied, then under IAS 38.54, development costs may be capitalised.

Statements of Standard Accounting Practice (SSAP) 13

This standard states that research and development expenditure must be shown to fall into one or more of the following broad categories:

- Pure or basic research
- Applied research
- Development

It needs to be shown that the development expenditure was undertaken because there is a reasonable expectation of specific commercial success or future benefits arising from the work, either from increased revenue and related profits or from reduced costs. In addition there can only be future benefits of the expenditure if:

- There is a clearly defined project
- The related expenditure is separately identifiable
- The deferred or future development costs are expected to be exceeded by future sales or revenue
- There are adequate resources to complete the project as well as provide consequential increases in working capital

If a customer intangible and its development has not been outsourced in some development way, it is an excluded class: it is necessary to have had external involvement on an 'arm's length' basis. Copyright, computer software, licenses, customer relationships, patents and marketing rights are stated examples of 'possible intangible assets' among many other categories.

How accounting rules affect business behaviour

Impact on SMEs

As will be evident from the preceding sections, acquired IP and internally generated IP are treated in fundamentally different ways. The implications of accounting policy for SMEs have been studied and summarised very effectively for the World Intellectual Property Organisation by Dr Roya Ghafele, its then Associate Economic Officer, IP and Economic Development Department. This section owes much to her piece, *Getting a Grip on Accounting and Intellectual Property*¹³⁴.

Accounting has so far developed a very scarce vocabulary and syntax to communicate the value of IP to investors and managers. In accounting, the financial position of a company is phrased in terms of profits or losses, assets or liabilities...

Internally generated IP is treated as an immediate expense. The same applies to Research and Development (R&D) related to the creation of IP. This means that the balance sheet offers distorted information on how IP is made. The costs incurred for the creation of IP are reported at one single point in time, while the IP is accounted for only in the context of a commercial transaction. However, this approach is not exclusively reserved for IP, but reflects the general way in which the accounting profession approaches a business.

*Unlike internally-generated IP, acquired IP is reflected on the balance sheet; for example, according to US GAAP, IP is valued at its acquisition cost and amortized over a maximum period of 40 years. However, this may lead to serious confusion; whereas internally-generated IP is considered to be worth nothing, the IP that change hands may be worth hundreds of millions of dollars. Thus, a company which decides to sell or license internally generated IP appears to create profits virtually out of nothing, as the IP that generated these profits does not appear on its balance sheet. To outsiders, this might look like magic, whereas it is nothing but the expression of unfortunately stated information*¹³⁵.

Dr Ghafele makes the point that IP exists independently of a product or service, and therefore has business value regardless of whether or not an adequate reporting system exists. However, the difficulty raised is that the profit and loss account of the company may not reflect its economic profitability if IP underpins the business model and/or business strategy:

*As IP is not explicitly stated on the balance sheet and investments in creating IP are usually expensed as they occur, both the earnings and the book value of equity are understated by the accounting model*¹³⁶. *The consequence of this is twofold. Firstly, the cost of capital increases, meaning that IP-intensive SMEs may find it even more*

134 www.wipo.int/sme/en/documents/ip-accounting

135 Comment attributed to Licensing Executive Society, 2002

136 Attributed to Caninbano L./Garca-Ayuso M./Sanchez P., 2000; Lev B./Zarowin P., 1999; Brown S./Lo K./Lys, 1999)

difficult to pass the funding hurdle. Secondly, the management of a company becomes a much greater challenge since adequate information on all the assets and liabilities of a company is not available.

Implications for business funding

Dr Ghafele summarises the difficulties that are caused by the lack of transparency in language reminiscent of the characterisation of the 'information asymmetries' referred to in numerous government publications on access to finance:

For investors, "no news is bad news." Investors charge a premium in deals where the risk rate cannot be adequately determined, increasing henceforth the costs of borrowing money for the creditor... The perception of risk is, however, not caused by the underlying IP, but by a financial reporting system that provides investors with insufficient financial information about such IP.

In this situation all firms, including SMEs, find it increasingly difficult to pass the funding requirements of financial institutions. Due to current reporting standards, IP is absent from the discourse in accounting and financial circles. Since information about IP is not adequately communicated, there is a lack of awareness and a high degree of scepticism surrounding the possibilities of financing on the basis of IP. This results in ensuring that investors continue to adhere to their traditionally reluctant approach to funding of SMEs on the basis of their IP.

Dr Ghafele suggests that quoted stocks in sectors that have a strong IP dependence are also considered riskier and experience greater volatility than those of industries which have a stronger tangible asset base. She attributes this not only to the inherent technological risk factors, but also the inadequacies of communication about IP in capital markets. She also suggests that the lack of visibility of IP has an effect on company valuations:

Commonly used valuation ratios such as the price/earnings ratio, the price/sales ratio or the market/book value may be considered distorted due to the inadequate reporting of IP. These ratios are calculated on the basis of the data provided in the balance sheet. Since IP is missing in the financial report, the calculations do not well reflect the profitability of a business¹³⁷.

137 Attributed to (Lev B./Sarath B./Sougiannis1999)

Implications for IP management

Dr Ghafele also believes that the scarce reporting on IP has an impact on the management process, in particular that it makes it hard for management to think about developing and honing strategies to exploit IP:

Since the bulk of the space on the balance sheet is occupied by tangible assets, the focus of management is concentrated on these assets, which, in an increasingly knowledge-driven economy, are no longer the main determinants of the success of an increasing number of businesses in not only high-tech industries, but in all knowledge intensive and/or creative industries.

She quotes Roger Carlile as saying:

Companies today are spending a majority of their time managing a minority of their assets (the tangible ones). With the pressure on management for bottom-line results, it is difficult to persuade CEOs to spend money on installing processes for managing IP company-wide if they cannot see any value.

As further evidence, Dr Ghafele cites estimates by Rivette and Klein that 67% of US companies own IP that is in no way commercially exploited¹³⁸. And in her article she also quotes McKinsey & Company research¹³⁹ which found that:

In the US, companies create on average not more than 0.5% of their operating income from the licensing of IP. McKinsey, however, calculates that firms could earn up to 10% of their revenues from the sale or licensing of IP.

138 Rivette K. G./Kline D. 2000

139 (Elton J./Shah B./Voyzey J. 2002)

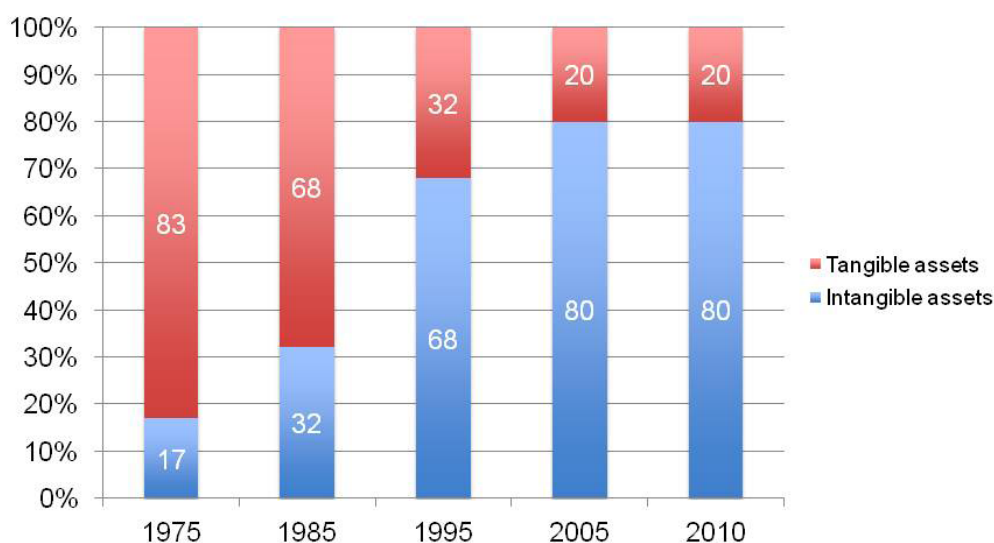
The business value of intangibles

If it is the case that a significant proportion of business value is omitted from company accounts, it follows that quantifying the scale of this omission will be helpful in determining the urgency of action to address it.

One method that has been used to illustrate the scale of the missing element is to consider the relationship between the fixed assets present in a company's accounts and the value that the market attributes to the business as a whole. Performing this analysis with quoted companies has the advantages that balance sheet data is readily available and that the value of the company at any point in time can be seen from its market capitalisation.

In 1999, Dr. Margaret Blair of the Brookings Institution studied the shift in the mark-up of company assets of thousands of non-financial companies over the 20-year period from 1978 to 1998, and found a significant shift in the relationship between tangible and intangible assets over time. Her study¹⁴⁰ indicated that in 1978, approximately 80% of corporate value was due to tangible assets, with 20% accounted for by intangibles. By 1998, the proportions had been reversed, with 80% of corporate value associated with intangible assets and only 20% with tangibles.

In recent years, the US organisation most often quoted in this context has been Ocean Tomo, who point out that this method of analysis highlights what they term 'the great reversal'. Back in 1975, less than 20% of the value across the Standard & Poors 500 was not capable of being found on the company's balance sheet in its tangible assets. Today, echoing Blair's findings, the figure is 80%. The evolution can be seen from the following chart:



Components of S&P 500 market value: percentages (source: Ocean Tomo)

140 Summary quoted from *Journal of Intellectual Capital*, Vol 1 No 4, 200, pp 328-340.

Clearly, the companies included within this analysis are not the same across the period sampled, but the chart makes the point that the nature of the businesses which are regarded as the largest and most significant players in the quoted market has fundamentally changed.

Interviews with valuation practitioners also indicate that this 80/20 rule is frequently evident when valuations are performed in post-acquisition accounting in line with IFRS3 rules. Whilst the position varies by sector, with manufacturing businesses typically having rather more fixed assets and software companies rather less, informal soundings confirm that it is common to find only 20-25% of the purchase price of a company being accounted for by tangible assets, with the remainder attributable to a combination of specifically identifiable intangible assets and goodwill.

IP & intangibles valuation standards

Making best use of the value inherent in IP, and not otherwise visible, requires there to be standard approaches which have an appropriate degree of acceptance and professional oversight. This is particularly important where the asset is to be attributed a specific value, for instance in the context of a pension-related transaction.

Royal Institution of Chartered Surveyors (RICS) and the revised Red Book

The RICS Red Book established the benchmark for real estate valuation in the early 1980s. The Red Book is recognised worldwide as a gold standard of valuation and can only be carried out by a qualified chartered surveyor. Red Book is fully compliant with and incorporates International Valuation Standards (IVS) and is mandatory for all RICS members practising valuation globally. The new IVS came into force in January 2012 and RICS responded to the latest changes with an edition of Red Book that has been completely updated to be fully compliant with global IVS requirements.

For years the business and intangible asset valuation industry has not been bound by such standards. RICS picked up the baton establishing a Valuation of Business and Intangible Assets Group. Similar to real estate practice RICS felt Guidance Notes were needed to help members who undertake business, intellectual property and intangible asset valuations and incorporated two new chapters in Red Book. These notes set precedent, mandatory rules and best practice for valuers specialising in these areas.

The purpose of RICS Standards is to provide users of valuation services (typically and substantially lenders) the confidence that a valuation provided by a RICS qualified valuer has been undertaken in compliance with high professional standards. It also assures users that the valuation is independent, objective and consistent with the internationally recognised standards set by the International Valuations Standards Council (IVSC); standards that set out procedural rules and guidance for valuers and now within RICS Rules of Conduct and best practice in the execution and delivery of valuations for different purposes. There is a mandatory obligation on the individual valuer or firm registered for regulation by RICS to follow these standards and effective sanction if there is a material breach.

The IVCS of which RICS is a sponsor publishes and periodically reviews IVS. These are adopted and supplemented where appropriate by RICS and reflected in successive Red Book editions as part of the overall framework of standards which is backed by the comprehensive scheme of regulation to ensure effective implementation and delivery. While some Standards are occasionally presented in a different way to those of IVS, the principles, objectives and defined terms of the same. Thus RICS considers that a valuation that is undertaken in accordance with Red Book is also compliant with IVS.

All this means that, as historically is the case with Chartered Surveyors and real estate Red Book valuations, the RICS Registered Business Valuer credential will establish a similar reputation and deliverable for lenders, ensuring operation to the high standards of best practice for business and intangible asset valuation.

In David Gill's opinion:

Traditional banking loves the Red Book, so an extension to cover intangibles could be very helpful. However, with intangibles, there may be a more difficult issue around percentages.

Red Book guidance on valuation of intangibles¹⁴¹

The following are extracts and summary from the Guidance Note concerned with the valuation of intangible assets, reproduced with the kind permission of RICS. It does not deal with the valuation of land, plant and machinery, or other tangible assets that may sometimes constitute part of a business, or indeed the valuation of the businesses themselves.

As defined by International Valuation Standard 210, an intangible asset is “...*a non-monetary asset that manifests itself by its economic properties. It does not have physical substance but grants rights and economic benefits to its owner.*” An intangible asset can be identifiable, i.e. separable, capable of being separated or divided from a business entity and sold, transferred, licensed, rented or exchanged individually or with a related asset, liability or contract. Non-identifiable intangible assets, arising from contractual or other legal rights which may or may not be separable from the entity or other rights and obligations, are generally termed “goodwill”.

Following IVS and International Financial Reporting Standards intangible assets include:

- **Marketing related** - typically those assets associated with, and primarily used in, the marketing or promotion of a company's products or services (trademarks, brands, trade names, trade dress, internet domain names, newspaper mastheads, non-compete agreements)
- **Customer or Supplier related** - assets which arise from relationships with, or knowledge of, customers and suppliers, and are utilised in the development, procurement, management and maintenance of a company's customers (customer lists, order or production backlog, customer contracts and related relationships, non-contractual customer relationships)

141 Note: Kelvin King authored the RICS Valuation Standards Red Book's new Guidance Note on Valuation of Intangible Assets following the recently created RICS designation of Chartered Valuation Surveyor and Registered Business Valuer.

- **Artistic related** – assets arising from artistic products or services which are protected by a contractual or legal right, for example copyright and design, and giving rise to benefits including royalties from artistic works such as plays, operas, ballet, books, magazines, newspapers, musical works, pictures, photographs, videos, films, television programmes
- **Technology related** - assets representing the value of technological innovation or advancements, and can arise from non-contractual rights to use technology, or be protected through legal or contractual rights (patented technology, computer software, unpatented technology, databases, trade secrets, in process R & D, manufacturing processes and know-how)

Some intangibles are contract-based, namely assets representing the value of rights which arise from contractual arrangements (licensing, royalty and standstill agreements, contracts for advertising, construction, management, service or supply, lease agreements, construction permits, franchise agreements, operating and broadcasting rights, use rights such as drilling, water, air, mineral, timber cutting and route authorities, servicing contracts, employment contracts). Within each of the classes referred to above, assets may be either contractual or non-contractual.

The importance of these definitions within the project brief is that accounting and financial regulators have, after significant and lengthy due diligence, established these assets as identifiable and capable of rigorous valuation.

A major intangible asset is goodwill. It is a future economic benefit that arises from a business or interest in a business, or from use of a group of assets. The benefits that may form part of goodwill include synergies that follow a business combination and are company specific, for example economies of scale not otherwise reflected in the values of other assets, growth opportunities such as expansion into other markets, and organisational capital, e.g. the benefits obtained from an assembled network. Goodwill is often perceived to be the amount remaining after the values of other identifiable tangible and intangible assets have been deducted, from the overall value of the business.

Intangible assets are differentiated from one another by characteristics such as ownership, function, market position and image. For example, ladies' fashion shoe brands may be characterised by use of particular colours and styles, and also price. Also, whilst intangible assets within the same class will inevitably have similar characteristics, there will also be characteristics that differentiate them from other similar ones.

For definitions of many of the terms used in the Guidance Note, the reader is referred to the International Glossary of Valuation Terms produced by the International Valuation Standards Council. The Guidance Note is intended to comply with the requirements of the relevant International Valuation Standard, in this case IVS 210 Intangible Assets. To satisfy the Red Book requirements on knowledge and skills it is important that the valuer is regularly involved in business valuation as practical knowledge of the factors affecting any particular asset, business or share is essential. This Guidance Note is of global application.

IP and intangibles valuation methodologies and techniques

In broad terms, valuation theory recognises three distinct methods or approaches to the valuation of any asset including intangibles. These are usually referred to as the Market Approach (sometimes known as the Direct Market Comparison Approach), the Income Approach, and the Cost Approach.

Each approach requires the valuer to adopt an estimate as to the asset's remaining useful life. This could be a finite period set by the length of a contract or normal life expectancy in the sector, or it could be indefinite. A number of factors will have to be considered in determining life expectancy including legal, technical, economic and functional ones. The presumed life expectancy of an asset which has been licensed for a particular period may in reality be less if a superior competitor product is likely to reach the market before the licence expiration, and the valuer would take a view on this.

The market approach

The Market Approach measures the value of an asset through the analysis of recent sales or offerings of similar or substitute property and related market data. However, it has to be recognised that it is rarely possible to find such evidence relating to identical assets.

The two primary market approach methodologies are the Market Multiple Method and the Similar Transactions Method.

The Market Multiple Method focuses on comparing the subject asset for example a brand, patent or copyright to guideline data such as industry royalty rates. In applying this method, such royalty rates are evaluated and adjusted based on the strengths and weaknesses of the subject asset relative to similar assets, and applied to the appropriate operating data of the subject asset to arrive at an indication of value. Appropriate adjustments to reflect different properties or characteristics are usually made to the derived data.

The Similar Transactions Method utilises valuation data based on historical transactions that have occurred in the subject asset's industry or related industries to arrive at an indication of value. The derived data is then adjusted and applied to the appropriate operating data of the subject asset to arrive at an indication of value.

In certain industries, businesses and assets are bought and sold on the basis of established market practices or rules of thumb, often, although not exclusively, derived from multiples or percentages of turnover, and not linked to profit generation. Where such rules of thumb exist, they may need to be considered by the valuer.

The income approach

The Income Approach has a number of variants. As applied using, for example, the Discounted Cash Flow Method, it measures the value of an asset by the present value of its future economic benefits. These benefits can include earnings, cost savings, tax deductions, and proceeds from its disposition.

When applied to IP valuation, value indications are developed by discounting expected cash flows to their present value at a rate of return that incorporates the risk-free rate for the use of funds, the expected rate of inflation, and risks associated with the particular investment. The discount rate selected is generally based on rates of return available from alternative investments of similar type and quality as of the date of value.

The Income approach also embraces methods such as the 'Relief from Royalty' method, defined by IVS 210 as one that *"...estimates the value of an intangible asset by reference to the value of the hypothetical royalty payments that are saved through owning the asset, as compared with the cost of licensing it from a third party."*

There is also the Multi Period Excess Earnings method, defined as *"...a method of estimating the economic benefits of an intangible asset over multiple time periods by identifying the cash flows associated with the use of the asset and deducting a periodic charge reflecting a fair return for the use of contributory assets."*

The Income Approach, as applied using the capitalised earnings basis of valuation is also common in intangible asset valuation. In application a thorough understanding of accounting and economic profits, their historical record and forecasting, is necessary in each case.

The cost approach

The Cost Approach measures the value of an asset by the cost to create or replace it with another like asset. When applied to intangible asset valuation, obsolescence, maintenance, and the time value of money are considerations.

The role of appraisal

Appraisal in the valuation of intangible assets and IP includes techniques to identify the earnings specifically associated with the subject asset; gross profit differential, excess profits and relief from royalty. Following identification of the profit attributable to the subject asset, capitalisation of earnings and discounted cashflow techniques are adopted.

Issues to consider in relation to the present value techniques (PVT) include:

- the number of years over which the cashflow is applied
 - the capitalisation rate or discount rate applied at the end of the term
 - the discount rate(s) adopted
 - whether inflation is built into the cashflow
 - what other variables need to be considered in respect of the cashflow in the future
 - the trading profile of the asset
 - initial and running yields, IRR (Internal Rate of Return) and the terminal value
-

Where a valuer decides that a PVT approach is appropriate, it is important that market transactions (comparables) that reflect the same approach to valuation are taken into consideration. The details of market transactions may be more difficult to obtain where a PVT approach is adopted. However, such transactions will assist in assessing, among other things, the discount rate to be adopted, the IRR and the general approach taken by the market.

If the valuation subject is a specific intangible asset, before undertaking the detailed cashflow modelling, quantification of the remaining useful life and decay rate associated specifically with the use of asset(s) is required. Typically this remaining useful life analysis will quantify the shortest of the following:

- physical life
- functional life
- technological life
- economic life
- legal life

Thus economic use valuation will involve key components; a financial forecast, identifying specific intellectual capital and business earnings and discount rate determination and risk (cost of capital). Unsystematic and systematic risk will be considered and discount rate determination in its basic application will require identification and application of the cost of capital to known and projected cashflows.

Discounting appropriately weighted asset cost of capital and more basic discount rate building will be adopted. The two basic ingredients of the cost of capital are the cost of debt and the cost of equity. To assist in the calculation of appropriate rate of return and discount rates valuers utilise a number of different methodologies including the Capital Asset Pricing Model, Arbitrage Pricing Theory, and hybrids depending on the particular circumstances, as well as the preference and judgement of the valuer.

Valuers may be required to consider intangible assets in a licensing context, for example licensing in or licensing out of technology or patents. Much of what has been covered in the Guidance Note is relevant in the calculation of an appropriate rate of return in royalty rate calculations.

IP valuation for pension securitisation

In recent years the IP solution has been used to good effect to address the pension deficit crisis, and companies are looking at creative ways to fill gaps with quality bond-like assets.

In a similar way to the Sears structure (namely, the securitisation of Diehard, Kenmore and Craftsman referred to in Chapter 7), an inter-group partnership is typically put in place where pension scheme trustees effectively buy agreed IP from the company and in return have rights

(for a specified period of time) to those assets. The trustees can then also receive income from the IP through licencing, franchising and so on.

There is significance in the fact that this most conservative world, with significant fiduciary duties and the need not to accept any risk, has placed the ability to value and use IP assets ahead of the use of traditional assets such as real estate. With sound valuation processes now established for intellectual property actuaries, the Pension Regulator, HMRC, legal and accounting professionals have facilitated and participated in the following case studies that have become public domain (and there are also a growing number of examples that are not yet in the public domain):

- Diageo used whisky and contingent cash in an asset-backed contribution structure; (2-2.5 million barrels of maturing whisky in a 15-year partnership and annually purchase £25 million of maturing whisky providing cashflow stream to the pension fund)
- GKN used trade marks from property in an assets-backed contribution structure of cash (£13m per annum for 20 years which was valued at £331 million), reflecting an internal licencing fee for the GKN trademark, rental income for five UK properties and the ability to use future service costs if in surplus
- Philips made a €350 million cash contribution to the pension plan which was used to purchase Philips' 17% in NXP Semi-conductors
- John Lewis' minority stake of 29% in Ocado was valued at £128 million and given to Trustees, who have now sold their stake in two bits with total sale proceeds amounting to £336 million
- Costain's PFI Investments were valued at £22 million and transferred to the pension fund
- TUI Travel plc in 2011 announced that it was using the brands Thomson and First Choice as collateral to help finance its defined scheme. The partnership received royalty payments from the UK operating subsidiary for the use of the brands and plans to make annual income distributions to the pension schemes totalling around £16.5 million for 15 years until 2026. Pension trustees will own the Thomson and First Choice names for a period of 15-20 years so TUI UK will have to make payment each year into the partnership vehicle.

Taking a hypothetical example to further illustrate these innovative solutions to solve pension deficits; in a £500m pension deficit scenario, the company would have to clear it over perhaps a 15 year period. With a securitised asset structure with IP, it has a commitment to pay £50m over 10 years, but that commitment is provided through a partnership vehicle which is backed by a company asset, in these cases IP such as a trade mark, copyright, software or patents, backed by guarantees collateralised and treated like a bond payment.

The collateralised payments get treated as a £500m asset on day one in the pension scheme. So rather than eliminating the £500m deficit over 10 years, the deficit is eliminated straight away because of the presence of what is essentially a securitised bond.

A further advantage is that because it is securitised, the commitment is backed by an asset, so the trustees are happier to have a longer period to recover the deficit. So the commitment could

then be to pay £35m say over 15 years which due to the securitisation would still result in the deficit being eliminated straight away.

Professional Pensions reported in February 2012 that Britvic Pension Plan agreed a £105m funding deal with its sponsor to funnel income from Britvic soft drink brands and real estate assets to its scheme; a 15 year funding arrangement was agreed by trustees of the scheme and will see funds from the sale and lease-back of Britvic soft drink brands and real estate through a partnership structure.

Valuing IP in such a manner and in such a high profile, risk-averse fiduciary area for employer covenant assessment communicates a significant ability to meet such obligations. It also demonstrates the ability of expert IP valuers to satisfy those fiduciaries and the numerous professional advisors acting for company and pension trustees, Pension Regulator and HMRC, that IP valuation processes and methodology are robust. This is no less than the scrutiny HMRC subjects IP valuation in tax efficient exploitation matters and concerning litigation and infringement actions, the court process of cross examination. However it is the pension sector and IP use that prove that rigorous inspection processes exist and may encourage them to be used more in lending and credit risk situations.

Ratios commonly used to assess business performance

In the process of lending and debt provision there also exist business, accounting and financial measurements and tools to assist analysis. The IP valuer will consider financial ratios familiar to bankers and lenders.

In terms of liquidity, the Current Ratio (current assets/current liabilities) indicates the extent to which the claims of short-term creditors are covered by assets which are expected to be turned into cash within 12 months (also known as the working capital ratio). The Quick Asset Ratio (current assets less stock or work in progress/current liabilities) is a variation of this method, sometimes called the 'acid-test' ratio. Cashflow is often assessed considering depreciation plus profit after tax plus increase in deferred tax minus dividends. Capital Gearing (borrowed funds/total funds less Intangibles) and Income Gearing are considered.

Activity Ratios consider stocks/sales, trade debtor and trade creditors turnover. Profitability Ratios considering profit margins are typically expressed as gross margin/sales, trading profit/sales and/or net profit before tax/sales.

Operating ratios are used as the basis of forecasts for future profitability on projected sales figures multiplied by future profit margins. Return on Capital Employed (profits before tax plus interest/capital employed less intangibles) is a ratio for measuring profitability and the efficiency of a company.

Methods of business valuation, in the context of intangible asset valuation

Lenders may request that IP valuation is placed in the context of a full 100% valuation of a business.

Similar to the methods of intangible asset valuation described above the income approach present value techniques measure the value of an asset by the present value of its future economic benefits. These benefits can include earnings, cost savings, tax deductions, and proceeds from its disposition.

When applied to equity interests in businesses, value indications are developed by discounting expected cash flows to their present value at a rate of return that incorporates the risk-free rate for the use of funds, the expected rate of inflation, and risks associated with the particular investment.

One of the key assumptions underlying present value techniques (often described as discounted cash flow) is the discount rate used to discount the cashflows and residual value. The discount rate would be calculated based on the Company's Weighted Average Cost of Capital (WACC). The WACC represents the company's blended after-tax costs of debt and equity assuming an industry level capital structure. The cost of equity is likely to be estimated using the Capital Asset Pricing Model referred to above.

The market approach measures the value of an asset through the analysis of recent sales or offerings of comparable property. When applied to the valuation of an equity interest, consideration is given to the financial conditions and operating performance of the company being valued relative to those of comparable companies operating in the same or similar lines of business, potentially subject to corresponding economic, environmental, and political factors and considered to be reasonable investment alternatives. The two primary market approach methodologies are (again) the Public Company Market Multiple method and the Similar Transaction Method.

These ratios and multiples so derived reflect the opinion of investors seeking control of target companies. Revenue multiples will be adjusted for differences in profitability as appropriate. Valuation multiples considered in establishing the enterprise typically include: Enterprise Value (EV) to revenue, EV to Earnings before Interest, Tax, Depreciation and Amortisation (EBITDA) and EV to EBIT.

Because of substantial differences between companies, debt levels, and associated interest payments, it is common practice to compare debt-free or interest-free market multiples. Rather than analyse price/earnings multiples in isolation, enterprise value is compared to both earnings and revenues, namely EBIT and EBITDA. Enterprise value is equal to the total market value of a company's total equity plus all interest bearing debt less cash.

Consideration of numerous factors and inputs results in a calculation of the cost of equity. The WACC will then be calculated based on an industry-derived appropriate capital structure using the cost of equity and the cost of debt capital. After applying the calculated WACC to the net cash flows, and residual value, there will be an indicated enterprise value. Sensitivity analysis on

this value may be run by varying key valuation inputs such as the discount rate. This analysis can therefore indicate an enterprise value range and place the value of IP contextually.

The cost approach measures the value of an asset by the cost to replace it with another of similar utility. When applied to the valuation of equity interests in businesses, value is based on the net aggregate value of the entity's underlying assets. The technique involves a restatement of the balance sheet of the enterprise substituting the fair value of its assets and liabilities for their book values. The resulting equity value is reflective of a 100% ownership interest in the business. This approach is frequently used in valuing investment companies or capital-intensive firms.

The UK Patent Box

It is important to reference one further accounting-related area which has an effect on IP value. In Chapter 2, it was noted that some of the initiatives introduced internationally to encourage innovation amongst companies have sought to do so via the tax system. The UK has recently adopted a similar strategy by introducing special tax reforms in its March 2012 budget, which look likely to bring one particular form of IP – the patent – to the attention of more finance directors.

Patent Box is calculated by reference to an examination of the economic contribution made by both technology and marketing assets (patents, trade marks and brands – with the latter two required to be valued in order to exclude them). This change will stimulate observable and rigorous valuation of two of the most significant intangible asset classes. Typically, such valuations will need to be agreed with HMRC's business and intangible asset valuation department.

What Patent Box offers

In March 2012, the UK Government announced corporate tax reforms, implementing a wide-ranging programme of changes, one of which was the introduction of the 'Patent Box'. This aims to create a more competitive tax environment for companies developing and exploiting patents in the UK, and thereby to establish an incentive to retain and commercialise patents and encourage investment in growth.

The Patent Box allows companies to elect to apply a 10% rate of UK corporation tax on worldwide IP profits arising from inventions covered by qualifying patents. It is effectively a deduction in the corporation tax computation. It was effective from 6 April 2013, but is being phased in over five years.

Existing and new patents and acquired patents (in certain circumstances) fall within the boundary of relief. As might be expected, the legislation applies a very specific and detailed formulaic approach to the profit calculation, and Patent Box is only a beneficial consideration if a company makes or will make a taxable profit.

Any UK corporate tax payer (UK companies, UK subsidiaries of foreign companies, foreign-owned UK companies and IP holding companies) can be a qualifying company. A group company qualifies provided that it takes a significant role in managing the other group companies' qualifying rights.

How Patent Box works

Additional guidance is now being produced to indicate how Patent Box rules will be applied. The most recent indications are that involvement in development leading to or arising from a patent will be regarded as important. If a company owns an exclusive license of a qualifying IP right and/or receives income from a qualifying IP right, this may fall within the Patent Box. Acquired patents and patents developed under partnership, joint venture and cost sharing arrangements may also fall within Patent Box.

Qualifying IP rights include patents granted by the UK IPO or European Patent Office, supplementary protection certificates (i.e. biologically active agents and similar), regulatory data protection and plant variety rights, secret patents and patents granted by regimes with similar rules (for example Austria, Bulgaria, Czech Republic, Denmark, Estonia, Finland, Germany, Hungary, Poland, Romania, Slovakia and Sweden). However, utility or 'petty' patents are excluded.

Profit that qualifies is effectively a proportion of worldwide profits (referred to as relevant IP income or 'RIPI') from any of the following: licensing income (royalties and others), sale of a patented invention and rights, sales of products significantly incorporating a patented invention, use of a patented invention in a company's trade, damages and proceeds from infringement claims and insurance and income while a patent is pending (though these can only be included later, once a patent is granted). Profits that do not qualify include routine profit of manufacturing or development, exploitation of marketing intangible assets such as trade marks and brands, profits from non-exclusive patent rights, income from copyright and income from passive ownership.

There are various stages in calculating the profit. The detailed provisions can be briefly summarised as follows:

- From taxable trading profit (total gross income of the trade excluding finance income) it is necessary either to apportion (standard calculation) total profits in the ratio RIPI to total gross income or as an alternative and if not appropriate, to perform a streaming calculation allocating expenses on a just and reasonable basis which is in practice a divisionalisation between RIPI and non-RIPI
 - In this process it is necessary to remove routine return on costs which for example is provided as 10% of relevant tax deductible expenses (e.g. outsource costs, material costs) to arrive at Qualifying Residual Profits (QRP)
 - In further calculating the available profit the return on marketing assets is removed from QRP; the remainder is Relevant Profit (RP). Thus a complex calculation which first establishes routine profit and reduces that to residual profit and results in Relevant IP Profit for Patent Box purposes
-

Implications of Patent Box

The opportunity to make a significant difference to a corporation tax calculation is of interest to patent-owning businesses of all sizes. Whilst the measure has obvious and immediate applicability to multinational organisations operating in science or technology-intensive areas, it is equally capable of being used by SMEs, which (based on the patenting statistics discussed in Chapter 5) should include a reasonable proportion of manufacturers.

Whilst the measure places UK tax legislation on a more equal footing with other countries seeking to incentivise innovation and growth, those who will benefit most in the first instance are those who have innovated historically. There has been debate in the IP industry as to the ultimate contribution of the measure to growth, and its impact on the frequency and strength of patenting activity. In particular, concerns have been raised that the tax incentive will encourage businesses to create weaker or more highly specialised patents which do not in fact contribute the same level of enterprise value.

However, one thing Patent Box is undoubtedly achieving is to raise the profile of patents as a form of IP that can make a substantial difference to overall company profitability, and therefore value. This in turn should make a positive contribution to the amount of information available (and provided) to prospective financiers.

Chapter 10

Conclusions and recommendations

Report findings

Introduction

The central question behind this report has been: is there more that companies and financiers could do to leverage the value inherent in IP and intangible assets? The answer is an emphatic ‘yes’.

In the course of reaching this conclusion, the authors have studied and incorporated information on a wide range of operational and technical matters relating to IP and intangibles; to obtain insights from a wide range of practitioners; and to obtain statistical information which helps to quantify both the issues identified and their significance. This approach has led inevitably to the production of a lengthy, detailed study, but the subject matter deserves no less.

The issues identified in this report represent a particular challenge for the development of the knowledge economy, but also place potentially serious constraints on the growth of companies in traditional industries. There are two overarching principles advocated by this study; ten more detailed recommendations follow them.

Below are set out the study’s main conclusions, in the order in which the report has examined them. The authors then make ten recommendations based on two overarching points of principle, set out at the end of this final Chapter.

Attitudes and practices in lending

Clearly, banks understand that there is a connection between a business’s IP and intangibles and its cashflows; or, as an ACCA report put it, that “*intangible assets provide the basis of superior profits and enterprise value beyond that determined by competitive market conditions*¹⁴²”. Whilst intangibles do not emerge as the ‘asset of first choice’, a high proportion of commercial lenders interviewed for this report had an awareness of their value and felt that more could be done with them – to improve control, inform appetite, or both.

142 SME Intangible Assets, ACCA Research Report no.93, Dr Chris Martin & Julie Hartley, 2006. However, this report also observed that “*the lack of concrete form and the general absence of functioning markets for intangible assets make their valuation problematic in comparison with that of physical assets that are regularly bought and sold in transparent markets.*”

The main obstacle is that IP is generally regarded as being too complex an asset class to finance within the constraints of normal lending margins, mainly due to the difficulties in understanding what it is, how it relates to cash, and where its value can be realised independently of a business. However, this is a perception that is open to challenge, not least because these are the primary assets modern businesses own and use.

Under most circumstances, it is clear that the information provided to lenders on IP and intangibles is imperfect. As things stand, it is not unreasonable for banks to pay very little attention to the intangibles commonly found on balance sheets; these indicate expenditure, but do not confirm that assets exist (unlike tangible fixed asset accounting).

The difficulty is that few banks are currently probing any deeper.

Similarly, it is hard to criticise the prevailing banking view that IP lacks the transparent markets which exist for commodified tangible assets. However, that does not mean it is not valuable (as the authors hope this report has amply demonstrated). It is also the case that where a relationship exists between specific intangibles and cashflow – arguably, more often the case than not – it is very hard to dispose of the business successfully *without* its IP.

When seeking to address this deficit of attention in mainstream lending, the margins referred to above are clearly an issue. As Schizas of ACCA explains, *“When a VC does due diligence, you get a lot of a person’s time. Banks do not have this available. As it stands, not every deal is viable in isolation.”*

It follows that, if it is to make better use of IP, mainstream lending will undoubtedly need to adopt standardised, affordable assessment methods that are capable of being integrated within its culture and processes, including systems for considering value and evaluating default probabilities. This has to start by requesting and gathering information on IP and intangibles within formal and informal lending applications. It stands to benefit borrowers as well as lenders.

Feedback from those who have used IP in financing strongly suggest that loss levels are low. This appears to be attributable to two factors. The first is that these lenders have been satisfied that the particular IP being funded is a core business asset that underpins customer service and cashflow. The second factor, harder to measure but nonetheless present, is that senior management often have a personal and financial stake in the IP they have created. Accordingly, obtaining proper controls over IP can perform some of the ‘focusing the mind’ benefits that banks traditionally associate with personal guarantees.

Alternative financing routes which directly harness IP are now gaining in scale and popularity, such as pension-led funding. At the moment, banks (understandably) view such funding as being complementary, because it delivers cash into the business. Would they take a slightly different view on placing these assets outside their security net if they were aware of their true business value?

For IP to be used more extensively in lending, measures will be needed to address risk. Here the UK benefits from already having the Enterprise Finance Guarantee, examined in Chapter 2,

which is acknowledged to be a useful vehicle for IP-centric businesses. The recent independent report for BIS appears to confirm that it offers real additionality to companies who take it up.

Levels of usage of the scheme are running substantially below what they have been in the past, and this appears to be attributable to a perceived high risk of default (combined with other factors, such as the 9.75% cap on the government guarantee explained in Chapter 2). However, given that recent research¹⁴³ concludes that £33.50 of benefit accrues to the economy for every £1 the scheme costs the government, EFG looks like a missed opportunity both for banks and for IP-owning businesses lacking tangible collateral.

Attitudes and practices in investment

The prospective returns available to an equity investor are of a different order of magnitude from debt funding. That said, equity investors in general, and (arguably) business angels in particular, accept a far greater risk of losing all their money than a bank could. They are highly motivated to address risk (including a business's intellectual capital) in all possible ways, because all their capital is in jeopardy.

Investors regard a protectable competitive advantage (barriers to entry) and freedom to operate as being fundamental preconditions for getting involved with a business – both of which are directly connected to IP, though not necessarily registered IP. Also, where they are involved with comparatively early stage businesses, investors are used to working in circumstances where there are very few fixed assets on the table and making decisions based on what they perceive to be the quality of the off-balance sheet intangible assets.

In other ways, the interests and concerns of equity and debt financiers are quite well aligned. Both have a strong vested interest in whether a business has market traction, contracts, cash flows and profits. Both also recognise the importance of quality and experience in the management team. And equity investors appear to experience some of the same issues as lenders in finding business that properly understand their own IP and intangibles.

The Big Innovation Centre's recent report concluded that equity funding is inherently more suitable for funding innovative and growth businesses. The ability of angels and venture capital providers to spend sufficient time to understand what makes a business 'tick' may be part of the reason for this.

Unfortunately, the fact is that only a small minority of businesses are suitable for, and successfully access, informal or formal equity funding from business angels and venture capital companies. Many are perfectly viable businesses, but cannot raise this form of finance because they will never generate the types of returns that equity investors require.

This model is starting to change with the 'democratising' effect of crowdfunding platforms – but these have a long way to go before they can make a really substantial impression on the overall funding landscape.

143 Ibid

Ownership of IP and intangibles

This report has had access to valuable new information on companies and their IP and intangibles. It has enabled a number of conclusions to be reached about the landscape as it currently stands:

- The overall level of recorded patent and trade mark ownership is quite low – lower than past surveys have indicated. However, from a financing viewpoint, any attempt to characterise the market as a whole will be somewhat distorted by the vast number of micro-businesses included within the overall UK data set. Other studies referenced earlier in this report have shown that many of these would not be bankable or investable other than on the basis of personal credit scoring in any event.
- Whilst they address very different samples, the IP awareness survey data and the analysis of official register content both confirm the relationship between firm size and IP asset ownership. Once a firm becomes small rather than micro, the likelihood of registered IP rights being present increases markedly, and it keeps on growing with size.
- Business sector is also predictive of the presence of registered IP rights. Many of the companies more usually associated with intensive use of tangible assets (for manufacturing purposes) also make significant use of patents and trade marks, demonstrating that IP is not the ‘niche’ preserve of those sectors commonly regarded as most knowledge-centric; IP is both old and new economy.
- In terms of unregistered IP: the data from the IP awareness survey, individual audits and online audit data all confirm that the majority of businesses own potentially valuable copyright assets, and many own other important intangibles such as trade secrets, know-how and processes that are proprietary to them.
- The intelligence gathered from the audit methodologies clearly demonstrates that companies have a vastly higher number of important assets than are formally registered at present. This reflects the value being added by the audits, but also shows the need for solutions that can scale to address the wider issue of asset under-identification and intangible asset valuation.
- The intangible asset data gathered from balance sheet analysis is at best a ‘proxy’ indicator for the presence of actual assets. However, it does establish a clear connection between the presence of these intangibles and high growth. It therefore suggests that, while the balance sheet entries themselves may not be meaningful, they should at least be acting as a prompt to ask further questions.

Driving value from IP

The market for IP will always be complicated by the inherent nature of the asset class, namely that within the different IP classes (such as patents and trade marks) it is by definition individually unique and therefore requires study in order to determine its quality and relevance. It is also fair to observe that certain types of asset are well suited to transfer to another entity for value, whereas others are intrinsically part of the business that created them. However, this makes the

point that IP and intangibles need to be identified to ensure that value can be retained within the organisation if it gets into difficulties.

The main challenge in terms of achieving value in distress is perhaps the lack of confidence that it is there to be had at all. Several interviewees expressed the view that if a company fails or gets into difficulties, it suggests that the underlying IP was of poor quality or little interest. However, this is inconsistent with the experiences or preferences of investors, many of whom have experienced great IP which has not been successful because of failings on the part of the management team. It is therefore a *non-sequitur*.

The more practical obstacle lies in the difficulty of identifying prospective purchasers. The marketing strategy for IP is less obvious than it is for tangible fixed assets, and while no market functions perfectly, there is clearly room for more and better solutions to intangible asset disposal, especially where this needs to happen independently of the business. As things stand currently, demand for assets may never get properly tested.

The fact that IP can have significant value in this context is not in doubt, and the briefest study of global licensing activity reveals it to be an immensely valuable, highly tradable and very portable asset class. There have also been highly successful securitisations of IP which have raised very substantial sums for the companies in question, and larger multinational companies in particular have become highly adept at using intangibles to create tax-efficient structures.

Global developments, chiefly in the US, on the aggregation of patents for offensive and defensive purposes serve to reinforce the point that these assets are central to value creation. There are active auction and brokerage markets for IP which are starting to be replicated here.

There is also clearly a role for insurers. At present the IP insurance market in the UK is very niche; whilst existing policies can provide good value, it is arguably locked in a cycle where the incentive for negative selection are very great (i.e. companies do not buy policies unless they are likely to claim). Since all insurance policies can only be affordable if there is a spread of risk, wider conscious financing of IP and intangibles has the potential to be widely supported by insurers – provided it is clear what the assets are and the risks they pose.

Effective controls

Equity investors and providers of venture debt generally obtain a degree of control over IP and intangibles through covenants and/or voting rights, and have the on-going advantage of having paid closer attention to them during initial due diligence. However, lenders are not in the same position. Kerrigan, quoted in Chapter 8, summarises the situation as follows:

Taking security over IP requires more than the execution of a security document. The IP must be identified, valued and subjected to due diligence. The lender and the borrower must agree on the practical steps required to create, register and maintain security interests in relation to the particular IP. The lender must maintain good information and an informed strategy in relation to any enforcement it may be required to pursue¹⁴⁴.

At present, this is simply not happening in the majority of cases. Lenders regard IP as being essentially the company's problem or responsibility; they generally use a floating charge because they do not actually know what the assets are. This leaves them highly exposed to the risk of losing priority over valuable IP assets, especially because companies that get into difficulties may do (or omit to do) many things which will undermine this value.

This fact alone, which is crystal clear from the statistical analysis conducted for this report, should be sufficient to motivate lenders to do more to identify and assess the IP (particularly, but by no means exclusively, registered IP) in the companies they are financing. However, there is no difficulty in standardising good practice in this regard, and creating resources to facilitate this emerges as a priority. Drawing up a series of templates for charging documents and debentures looks likely to be a helpful first step.

Two further points are apparent from a study of the legal and regulatory environment:

- Firstly, discussions with the Prudential Regulation Authority confirm that the environment is not currently conducive to the use of IP and intangibles as 'full' security; they do not help banks meet capital adequacy requirements. Change would require individual institutions to understand and demonstrate the performance of the asset class (and particularly the rates of recovery) in downside scenarios. At present this data would not be available – another reason why asset identification is an essential first step.
- Secondly, the systems available to the Intellectual Property Office (and therefore to the market more generally) do not provide a scalable approach to interest registration. The IPO does not itself need to provide this functionality, but it may need to open up its data resources in order to facilitate the establishment of private sector solutions.

Accounting and valuation

As Dr Roya Ghafele notes, accounting practices have not generally been helpful to the identification and realisation of IP value. Companies wishing to articulate this more clearly, for example to communicate value to investors, need to undertake separate reporting. She suggests that this will produce new insights which will help businesses understand how IP drives growth.

It is important to note, however, that the key purpose of accounting is to record and represent transactions that have happened. In this regard the steps taken to incorporate IP and intangibles, at a fairly granular level of detail, within post-acquisition accounting do make an important contribution to the discussion on IP value, although these do not normally affect SMEs.

A number of methodologies exist by which IP and intangibles can be valued, and it is notable that the concept of being able to determine their worth is now being accepted in some of the most closely regulated environments such as corporate pensions. Inclusion of intangible valuation models within the RICS Red Book is further evidence of increasing industry acceptance that there is realisable value to this asset class.

The UK vs. international context

The negative conclusion of this report is that at present, IP and intangibles are not being properly harnessed to drive growth, and that this failure amounts to a real and important disconnect between banking practice and regulation and public policy. How can the assets companies create and own, whose commercial development is central to a successful knowledge-based economy, be valuable in one context and seemingly valueless in another? From a bank viewpoint, how can lending truly support growth when it cannot benefit properly from the valuable assets growing and maturing companies have to offer?

The positive conclusion of this report is that measures and structures do already exist which could address these issues. However, they need to be addressed without delay, as there are plenty of examples from faster growing economies to demonstrate how other countries have developed a good understanding of this issue.

Two overarching principles

The first principle concerns the fundamental ‘information asymmetry’ which currently exists. In the case of IP and intangibles, the problem is more profound than asymmetry, because such a term presupposes that the business seeking funding knows more than the financier.

The issue that must be tackled is that in many cases, SMEs is not much better placed to understand and communicate the IP and intangibles they own than the lender or investor. This makes it harder than it should be for financiers to obtain the information they need to make an informed decision about whether any IP is valuable or fundable. It amounts to a fairly profound degree of IP ‘illiteracy’.

The conclusion of this report is that a **resource toolkit** must be put in place, tailored to the funding context, aimed at helping SMEs, lenders and other financiers to make more effective use of the value IP and intangibles represent within businesses.

A toolkit is not much use if it is not used. Accordingly, it must be accompanied by steps to secure financier commitment to trials, appropriate training/familiarisation, and measures to monitor the economic effectiveness of the support provided. Given the level of interest in the subject matter this report has stimulated, such commitments should not be too difficult to obtain. They are, however, vital to ensure that the toolkit is fit for purpose and that further measures to assist in value realisation are identified.

The second principle is that the programme must **build on existing initiatives**. The change needed to help companies leverage the investments they make in IP and intangibles can come by inserting the necessary components into existing practices, rather than trying to create completely new financing paradigms.

To take one example: the Enterprise Finance Guarantee already seeks to tackle one of the fundamental problems facing IP-rich businesses, which is the absence of tangible security. The scheme’s approach of augmenting existing established practices by addressing the risk element

is logical and sensible: it simply needs to recognise and harness the assets that such businesses *are* in a position to bring to the table, for the benefit of both lenders and borrowers.

There are other examples. The Business Finance Partnership is already providing SME support through existing channels; funds which specialise in hard-to-back business sectors such as software should be encouraged to apply. Similarly, there are already some helpful tax incentives to encourage investment in early stage companies, such as the Enterprise Investment Scheme: a toolkit could work alongside those working to create deal flow, to ensure that due diligence procedures are properly conducted. There is also the small matter of the Patent Box, the greatest benefit of which may prove to be that it provides companies (and advisors – and Government!) with a very good reason to think more seriously about IP and its visible value.

It is important to emphasise that this report *does not* advocate changes to the legislative framework, to policy priorities, or to accounting standards. Whilst it would be perfectly reasonable to argue that change could be beneficial in some areas, it is not necessary. The steps required to unlock the business value of IP are pragmatic measures that build on principles and practices that exist today.

The crucial factor is that these pragmatic steps must be adopted widely. IP and intangibles are not niche or exotic – they are mainstream assets which have simply been hidden out of sight of businesses, and financiers, for too long.

The ten recommendations

1. IP and intangibles must be identified during the financing process

If IP and intangibles are to be given any consideration within credit decision-making, tools to identify and describe the actual assets (not merely evidence of expenditure) need to be embedded within the lending process. Businesses must use them, and lenders must understand and take note of them.

This step will have the wider benefit of boosting IP awareness amongst the business community as a whole and will establish base data for the possible future use of IP as ‘full’ security.

The first steps are to provide a means for companies to identify the assets they own, and to build information on IP and intangibles into the templates companies use when presenting information to prospective funders.

2. The value in IP needs to be taken into account

Whilst immature markets mean that disposal of IP for value is not always straightforward, the most important step in harnessing IP is to acknowledge that its business value is not nil, and therefore requires active consideration within lending and investment decisions.

Robust approaches to determine the value of intangibles exist in the same way as for tangible property and are now included alongside them within the Royal Institute of Chartered Surveyors’ Red Book, regarded as a banking industry reference point.

The obstacle that must be addressed here is to demonstrate, reliably and repeatedly, how an SME’s ‘real’ IP and intangibles may deliver value which bears no relation to anything

that may be called an intangible on their balance sheet; this generally only shows a sunk cost.

3. Due diligence guidelines can help to control costs

IP and intangibles that are worth something are, by definition, unique. Because the assets are not commodities, checks will be needed to create confidence that the ownership and quality of the IP and intangibles are understood, that they contribute to cashflow (particularly in the case of debt finance), and that their maturity is in line with what it would be reasonable to expect, given the development stage of the business.

These checks are unfamiliar to most lenders: investors are more practised at them, but it is clear that they too face challenges in obtaining and assessing appropriate data.

Guidelines will involve providing templates, training and/or access to professional advice at a cost lending margins can support, within a turnaround time that meets business requirements.

4. More effective charges should be part of the lending package

Once IP and intangibles are captured, assessed and verified, it becomes possible to create a proper and meaningful interest over them, beyond a simple floating charge. This is not happening at present; there is no real notice of these charges, leaving many lenders exposed to unnecessary risk.

Proper controls are an essential precondition if lenders are to place any reliance on the value inherent in IP and intangibles – which in turn benefits the borrower.

Legal templates and the resource toolkit will help lenders to achieve this at modest cost, firstly by providing appropriate wording for the instruments, and secondly by providing guidance on the procedures which must be followed when recording them to ensure their effectiveness.

5. IP markets and IP financing could be facilitated through infrastructure improvements

The development most likely to transform IP and intangibles as an asset class is the emergence of more transparent and accessible marketplaces where they can be traded. This is a domain where services must stand or fall on their commercial merits; however, the available infrastructure needs to support rather than impede their establishment. A parallel lies in the way value has been added, cost reduced and enforcement activity enhanced across a range of motoring-related services by facilitating access to data held by the Driver and Vehicle Licensing Agency.

As IP and intangibles become more clearly identified and are more freely licensed, bought and sold (together with or separate to the business), services available to register and track financial interests will need to be improved.

This is not a job for government - but solutions will require the co-operation of official registries and the establishment of administrative protocols.

6. On-going management of IP and intangibles should also be supported

IP does not stop being important once credit is granted. Despite being long established, the asset class is unfamiliar in the lending context. Businesses need to understand how to use and protect it so that risk is reduced. Financiers, too, will require assistance in motivating and monitoring appropriate activity; as examples, there could be a role for the introduction of 'milestones' within payment schedules (as commonly used in equity and venture debt) and periodic impairment tests.

The proposed toolkit needs to include measures to inform and encourage SMEs to adopt appropriate IP management practices.

7. Affordable risk mitigation strategies ae to be encouraged

Alongside certain guarantees, access to appropriate insurance policies to guard against unforeseen events could greatly increase banking confidence in adding further weight to IP and intangibles within the lending decision. Evidence provided to this report indicates there is private sector appetite to provide these solutions, if lenders are willing to create the demand.

More detailed dialogue on the requirements of both lenders and insurers is urgently required, to ensure that commercial sector activity is able to provide workable and affordable solutions.

8. Asset-based finance techniques should be adapted for IP and intangibles

Recent financial upheavals have triggered something of a return to first principles in lending and a greater emphasis on assets for business finance (reflected, for example, in 'challenger' bank activity). This greater emphasis on assets needs to be extended to include IP.

Alongside mainstream lending, where EFG is an obvious area of focus, asset-based and alternative financing methods should be prioritised for IP-backed finance interventions; these are the parts of the industry most accustomed to understanding and assessing individual assets and their value.

9. Steps to stimulate private investment need closer study

IP rights can be well suited to securitisation (patents, trade marks, registered designs and copyright portfolios). Given the successful track record of venture debt, more work is needed to understand onshore and offshore fund appetite to support investment in IP-rich companies, working with managers that have the necessary expertise.

This work fell outside the scope of the current IP and finance project, but is clearly desirable as a follow-up stage.

10. IP demands joined-up thinking

The Intellectual Property Office exists "to promote innovation by providing a clear, accessible and widely understood IP system, which enables the economy and society to benefit from knowledge and ideas". It therefore has an important role to play in scrutinising Government and finance industry initiatives to boost lending, to ensure that the assets produced by knowledge receive appropriate consideration.

Index of attributed individuals

Interviewed for this report, in order of first appearance

Name	Organisation
Emmanouil Schizas	Senior Economic Analyst, Association of Chartered Certified Accountants
Stephen Pegge	Director of SME and Corporate Communications, Lloyds Banking Group
Richard Holden	Head of Manufacturing, Lloyds Banking Group
David Gill	MD, St Johns Innovation Centre: former Head of Technology and Innovation, HSBC
Stuart Ager	Senior Fund Manager, FSE Group: former Head of Technology Sector Group, NatWest
George Whitehead	Founder, Angel Co-Investment Fund: member, Octopus Investments Ventures team
Bill Morrow	Founder, Angels Den
Jenny Tooth	Chief Executive, UK Business Angels Association
Sandy Finlayson	Senior Partner, MBM Commercial LLP
Sam Geneen	Managing Director, Five Arrows Leasing Group
Peter Starmer	Director, Mid-market credit team, Barclays Bank
Jason Oakley	Managing Director, Commercial Banking, Metro Bank
Martin Cooper	Finance Director, Lloyds Bank Commercial Finance
Christopher Hawes	Director, Corporate, RBS Invoice Finance
Neeraj Kapur	Finance Director, Secure Trust
Danny Harrison	Director of Operations and Internal Control, PNC Bank
Phillip Monks	Chief Executive, Aldermore
Ian Henderson	Chief Executive, Shawbrook Bank
Philip White	Chief Executive, Syscap
Erin Lockwood	Director of Commercial Banking, Silicon Valley Bank
James Cooksey	Director, Growth Finance, Santander
Neil Pitcher	Director and Founder, LGF Partners: former Chief Executive, ETV Capital
Graeme Sands	Head of Growth Finance, Clydesdale Bank
Kevan Jones	Chief Executive, the FSE Group
Andrew Mullinger	Co-Founder, Funding Circle
Adam Tavener	Chairman, Clifton Asset Management
Darren Westlake	Founder, Crowdcube
Mark Florman	Strategic Advisor and Industry Ambassador, British Venture Capital Association
Nick Goddard	Former corporate financier at BNP Paribas, ING Barings, ABN Amro, Alta Innovations
Alistair Brew	Investment Director, Business Growth Fund (and two others)
Thomas Gardiner	Chief Operating Officer, TFF Group
Nigel Swycher	Founder, Tangential Solutions: former Partner, Slaughter & May and Head of Technology, Olswang

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The authors would also like to express their thanks to the many contributors who provided their expert insights for this report, but were not able to do so under attribution.

Appendix: IP, education and training

There are many different situations when ‘intellectual property rights’ and ‘education’ will be topics of interest and enquiry. The authors asked the Intellectual Property Awareness Network (IPAN)’s Education Group¹⁴⁵ to highlight some existing providers and resources of informational and training materials.

Self-managed learning resources can be found on the Intellectual Property Office site www.ipo.gov.uk, which is an ideal starting point for questions. The World Intellectual Property Organization has a global perspective, and interesting case studies at www.wipo.org. Resources for the creative industries, provided by Own-it www.own-it.org include IP short courses.

Teachers and academics have long been keen to know what their intellectual property rights are in respect of learning and teaching materials created in the course of their work, or in respect of journal articles or other publications. Universities UK www.universitiesuk.ac.uk and the Higher Education Academy www.heacademy.ac.uk have addressed these issues, and make helpful information available.

All involved in projects will want to know more about ownership and exploitation of IP created and used in the course of their research. University technology transfer organisations provide IP education opportunities, including the Association for University Research and Industry Links www.auril.org.uk. Much can be learnt from the recently published <http://www.ipo.gov.uk/ipasset-management.pdf> about how IPR is managed in institutions.

Employers and employees needing to learn more about the intricacies of IP ownership and how to make the most of intellectual property will find the Intellectual Property Office site helpful.

Those considering a career advising others how to protect, manage and exploit their intellectual property can find IP education opportunities at many universities or through the intellectual property professional bodies, some of which are detailed below.

The universities of Bournemouth, Brunel, Manchester, Nottingham, Nottingham Trent and Queen Mary UL all have IP research centres and post graduate programmes accredited by the Chartered Institute of Patent Attorneys www.cipa.org.uk and Institute of Trade Mark Attorneys www.itma.org.uk. Many other universities offer Intellectual Property Rights studies as part of LLM, MSc, MBA and PhD programmes.

145 IPAN (www.ipaware.net) is a network of professional and business organisations with a shared interest in improving general awareness and understanding of patents, trade marks, designs, copyright and other intellectual property rights. The appendix was compiled by Professor Ruth Soetendorp, Associate Director of the Centre for IP Policy and Management at Bournemouth University, and Janice Denoncourt, IPR Research Group Lead at Nottingham Law School.

The Intellectual Property Regulation Board www.ipreg.org.uk regulates the IP professions, and is currently consulting on a revised qualification regime for patent attorney and trade mark attorney litigators to facilitate the grant of relevant rights to registered patent and trade mark attorneys. The Licensing Executives Society www.lesi.org offers IP education opportunities for professionals engaged in IP exploitation.

The European Patent Office Academy 'Patent Kit' provides a resource for teaching students about patents www.epo.org/learning-events/materials/kit.html. The UK IPO 'Think Kit' has online case study resources appropriate for higher school and undergraduate learners <http://www.ipo.gov.uk/whyuse/education/education-thinkkit.htm>.

The European Intellectual Property Teachers Network www.eiptn.org provides a forum for sharing and developing IP education ideas amongst university teachers who deliver IPR programmes across disciplines and faculties. A resource sponsored by the Higher Education Academy Engineering and Law subject centres <http://www.engsc.ac.uk/resources/intellectual-property-rights> contains diverse materials to help introduce IP education in the non-law curriculum.

In relation to the pioneering field of Intellectual Property Finance, the publicly available information is unfortunately still quite limited. However, those who are interested in this burgeoning multi-disciplinary field (researchers, inventors, academics, STEM professionals, accountants, bankers, financiers, investors, IP professionals, lawyers) should start with articles published in the World Intellectual Property Organization's (WIPO) Magazine entitled *IP Finance: An Introduction* (November 2008) and *IP Financing: the Ten Commandments* (September 2008) at http://www.wipo.int/wipo_magazine.

WIPO also provides more detailed information concerning IP and financing in its 'IP for Business' webpages (http://www.wipo.int/sme/en/managing_ip.html). In terms of IP Finance research, the first European research centre focused on IP Economics and Finance is the IP Finance Institute (IPFI), a non-profit organization based in Torino, Italy (<http://www.ipfinance-institute.com>). There is no equivalent institute in the UK.

For those wishing to obtain higher educational qualifications in law and finance in the UK, the Said Business School at Oxford University and Queen Mary, University of London offer postgraduate degree programmes as does Germany's Institute of Law and Finance (ILF), a graduate school of Goethe University in Frankfurt-Am-Main (www.ilf-frankfurt.de). Queen Mary and Leeds University both offer Master of Laws degrees in banking and finance. As yet, there is not believed to be a post-graduate qualification available anywhere in the world that specifically focuses on the subject of IP finance.

The IPAN Education Group offers the above suggestions as a starting point. Numerous opportunities to acquire IP education have, for reasons of being concise, been omitted. IPAN knows also that intellectual property rights awareness, amongst SMEs especially, could be improved. IPAN is working to encourage professional bodies to include IP education in the accreditation requirements for new members. IPAN feels UK plc's fortunes would improve if graduates left university knowing something about intellectual property rights.

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