



## Balance sheet analysis and farming performance, England 2015/2016

This release presents the main results from an analysis of the profitability and resilience of farms in England using data from the Farm Business Survey. Six measures have been examined; liabilities, net worth, gearing ratios, liquidity, net interest payments as a proportion of Farm Business Income and Return on Capital Employed (ROCE). The key results are:

### Liabilities ([section 1](#))

- The average (mean) level of liabilities (debt) across all farms was £188,500 per farm, little changed from 2014/15. Around 13% of farms had liabilities of at least £400,000; 28% had liabilities of less than £10,000.
- Specialist pig and poultry (£350,000), dairy (£325,700) and general cropping (£319,000) farms had the highest average liabilities. Grazing livestock, LFA and Lowland, maintained the lowest average liabilities of £63,300 and £92,100 respectively.
- Average liabilities increased with farm size (both per farm and per hectare) from £50,400 (£810 per ha) for spare and part-time farms to £603,700 (£1,740 per ha) for very large farms.
- Farms in the South East had the greatest average liabilities of £269,700; more than 40% of these farms had liabilities of at least £150,000, compared to a third or less in other regions.

### Net worth ([section 2](#))

- The average net worth across all farms was £1.75 million; more than a third (37%) of farms had a net worth of at least £1.5 million.
- Cereal and general cropping farms had the highest average net worth of £2.62 million and £2.90 million respectively, driven by the larger area and quality of land owned by these farms. Horticulture farms had the lowest average net worth of £0.77 million.
- Average net worth also increased with farm size; from £1.10 million for spare and part-time farms to £3.78 million for very large farms. However, this is reversed on a per hectare basis from £17,600 per ha for spare & part-time to £10,900 per ha for very large farms.
- Mixed, mainly owner occupied farms had the highest average net worth of £2.45 million, wholly tenanted farms had an average net worth of £0.28 million.
- Region also played a part, with those farms in the South East of England having a larger average net worth.

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**Enquiries on this publication to:** Zara Gerrard & Lindsey Clothier, Department for Environment, Food and Rural Affairs. Tel: ++ 44 (0) 20802 66337, email: [FBS.queries@defra.gsi.gov.uk](mailto:FBS.queries@defra.gsi.gov.uk).

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### **Gearing ratio ([section 3](#))**

- The average gearing ratio was just under 10%, continuing the slight downward trend observed over the last 3 years.
- Just over half (52%) of farms had a gearing ratio of less than 5%, whilst 8% had a gearing ratio of at least 40%. This indicates that the vast majority of farms are in a favourable situation.
- Compared to other farm types, pig and poultry farms had the highest average gearing ratio of 22%.
- The gearing ratio increased with farm size from 4% for spare and part-time to 14% for very large farms.
- Tenanted farms had a higher average gearing ratio (27%), compared to other tenure types. Owner occupied farms had an average gearing ratio of 7%.

### **Liquidity ([section 4](#))**

- The average liquidity ratio was 235%. There has been some fluctuation but no overall upward or downward trend over the last 6 years.
- Around two thirds of farms had a liquidity ratio of at least 200%, indicating that the majority of farms are able to meet their current liabilities using their current assets. However, 19% of farms potentially face financial difficulties with a liquidity ratio of less than 100%.
- On average, grazing livestock farms had the highest liquidity ratio, 289% for those in lowland areas and 284% for those in the LFA; for specialist dairy farms the average ratio was 157%.
- The liquidity ratio generally decreased with farm size from 273% for small farms to 226% for very large farms.
- Farms with a greater level of ownership tended to have a higher liquidity ratio; the average liquidity ratio for owner occupied farms was 250% compared to 191% for tenanted farms.

### **Net Interest payments as a proportion of FBI ([section 5](#))**

- Net interest payments were around 15% of Farm Business Income, carrying on the steady increase since 2011/12. Whilst there was a small increase in net interest payments, the increase from 2014/15 was driven by the reduction in income.
- A third of farms paid no interest or were net recipients of interest; a further 14% had a negative Farm Business Income before interest payments and would not have been able to pay some or all of the interest on their debts, without further borrowing or drawing on their assets.

### **Return on Capital Employed ([section 6](#))**

- Over the period since 2009/10, the median Return on Capital Employed (ROCE) peaked in 2011/12 at 1.6% but has declined in each subsequent year. In 2015/16, the median across all farms was -0.7%. There is a wide range of values across farms.
- Only cereal and general cropping farms had positive median ROCE values, of 0.1% and 0.3% respectively. For all other farm types the median values were less than zero.
- Larger farms tended to have a greater ROCE than smaller farms.
- Almost all high performing farms all had a positive ROCE, compared to low performing farms of which all had a negative return.

## Detailed results

This release presents the main results from an analysis of the profitability and resilience of farms in England using data from the Farm Business Survey. This notice provides an analysis of six indicative measures:

Measure	Rationale
Liabilities	A measure of indebtedness
Net worth	A measure of wealth
Gearing	To explore investment habits and the potential risk associated with farming enterprises
Liquidity	To examine the short term financial viability of farms
Net interest payments as a proportion of Farm Business Income	To examine whether farms can afford to pay the interest on their debts
Return on Capital Employed (ROCE)	Provides an indication of productivity and efficiency

The data used for this analysis is from those farms present in the Farm Business Survey (FBS) during the period 2009/10 to 2015/16 and that had complete returns on their assets and liabilities. Annual weights were derived for this sub sample in line with the method described in the [survey methodology](#) section (e.g. to preserve the population totals for robust farm types and farm size groups).

Where data have been presented in real terms, a GDP deflator has been used.

The results are presented together with [confidence intervals](#). The results presented in this notice can be found at: <https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/series/farm-business-survey#publications>

Figures in italics are based on fewer than fifteen observations and should therefore be treated with caution.

Regression models were fitted to the key results to help determine the main factors driving response in 2015/16. In each case six factors were considered - farm type, farm size, farm tenure, region, and farm economic performance.

### Revisions

Minor revisions have been made to the net worth results for 2009/10 to 2014/15 published in July 2016 to correct an error in the weighting of farms. The revisions can be found in the accompanying spreadsheet.

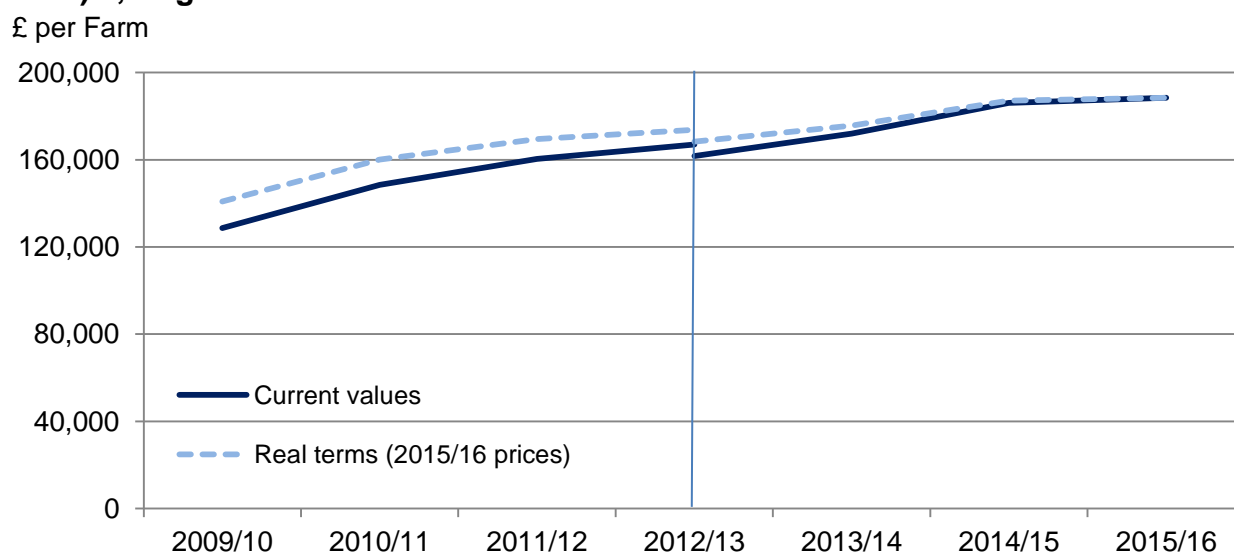
## 1 Liabilities

### Key findings for 2015/16:

- The average (mean) level of liabilities (debt) across all farms was £188,500 per farm, little changed from 2014/15.
- Thirteen per cent of farms had liabilities of at least £400,000; 28% had liabilities of less than £10,000.
- Specialist pig and poultry (£350,000), dairy (£325,700) and general cropping (£319,000) farms had the highest average liabilities. Grazing livestock, LFA and Lowland, had the lowest average liabilities of £63,300 and £92,100 respectively.
- As would be expected, average liabilities increased with farm size (both per farm and per hectare) from £50,400 (£810 per ha) for spare and part-time farms to £603,700 (£1,740 per ha) for very large farms.
- Farms in the South East had the greatest average liabilities of £269,700; more than 40% of these farms had liabilities of at least £150,000, compared to a third or less in other regions.

This section examines liabilities to consider the indebtedness of farm businesses. Liabilities are the total debt (short- and long-term) that the farm business holds, including mortgages, long term loans and monies owed for hire purchases, leasing and overdrafts. A farm with high levels of liabilities will require consistent income flows to ensure that interest payments can be met.

**Figure 1.1 Average liabilities per farm in current values and real terms (2015/16 prices)<sup>(a)</sup>, England**



Farms with at least 25,000 euros of Standard Output.

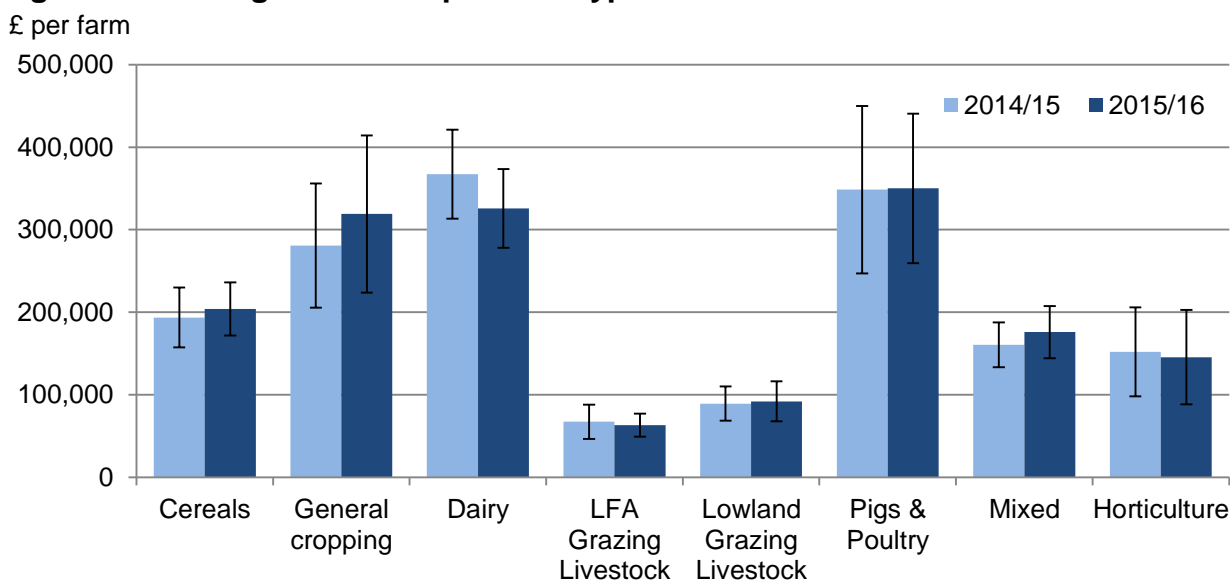
(a) Deflated by GDP.

(b) Standard output coefficients were updated in 2012/13 from a 5 year average centred on 2007 to a 5 year average centred on 2010. Results for 2012/13 have been calculated using both for comparability.

The average level of debt across all farms in 2015/16 was around £188,500, little changed from the previous year. The longer term increase has been driven largely by increases in bank term and other long/medium term loans rather than by changes to overdrafts or other short term loans.

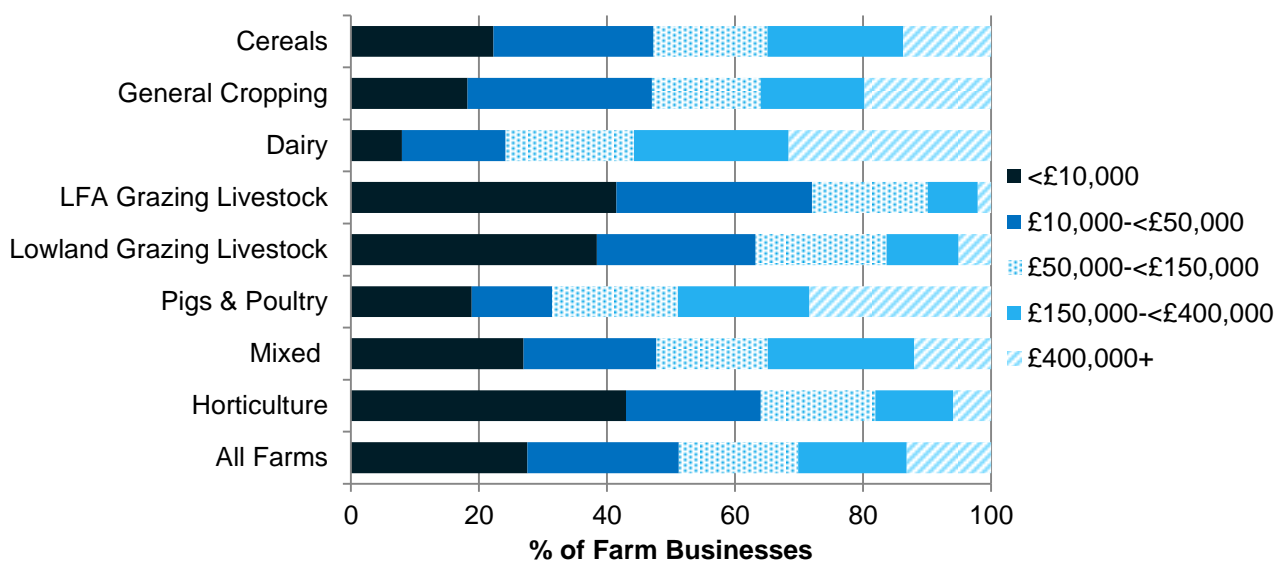
Farm type, size and region were found to be significantly related to the level of debt<sup>1</sup>. The variation between farm types may be due to differences in the amount of capital investment required, or differences in farm profitability. The average level of debt was greatest for farms specialising in pigs and poultry (£350,000), dairy (£325,700) and general cropping (£319,000 in 2015/16; Figure 1.2). The changes for general cropping and dairy farms between 2014/15 and 2015/16 are small compared to the confidence intervals and are unlikely to be significant. Grazing livestock farms (LFA and Lowland) had the lowest average liabilities at £63,300 and £92,100 respectively.

**Figure 1.2 Average liabilities per farm type**



Thirteen per cent of all farms had liabilities exceeding £400,000, similar to 2014/15, with 28% owing less than £10,000. Over half of dairy (56%) and 49% of pigs and poultry farms had liabilities of at least £150,000 (Figure 1.3). Around 40% of grazing livestock farms and horticulture farms had liabilities of less than £10,000.

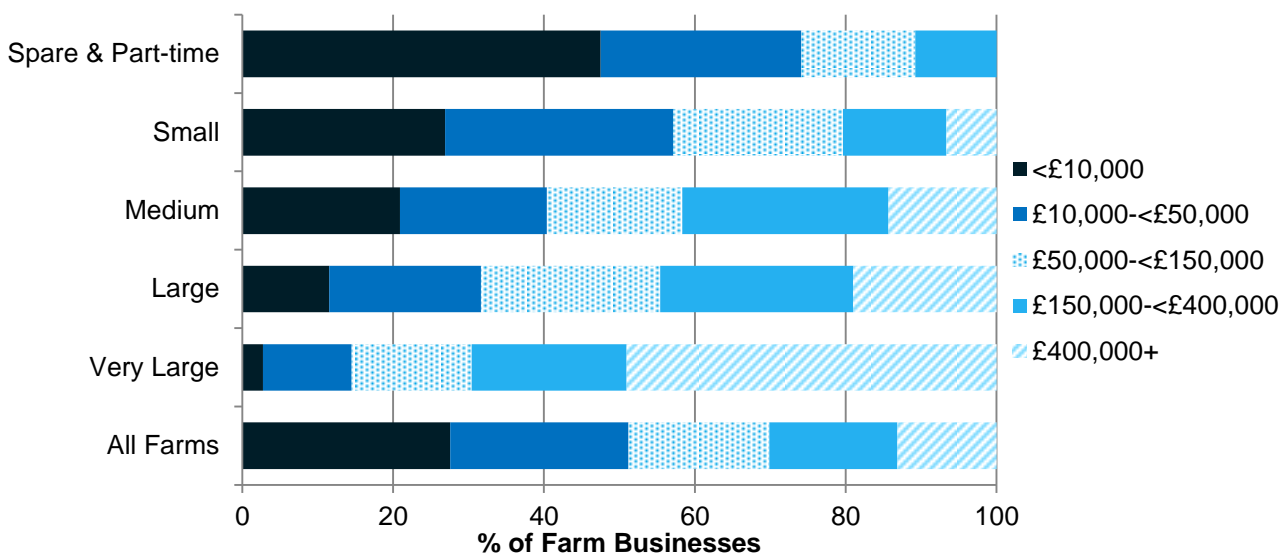
**Figure 1.3 Distribution of liabilities by farm type 2015/16**



<sup>1</sup> A generalised linear regression model was fitted to examine which factors (farm type, farm size, region, tenure and economic performance) were significant in 2015/16. Farm type and size were found to be highly significant ( $p < 0.001$ ), with region also being significant ( $p = 0.019$ ).

The level of debt tends to increase with farm size<sup>2</sup>, as might be expected, rising from an average of around £50,400 for spare and part-time farms to £603,700 for very large farms. This pattern does not change when the farms' area is taken into account, with very large farms still having the highest average liabilities per hectare<sup>3</sup> compared to spare and part-time farms, with a debt level of £1,740 and £810 per hectare respectively. Across all farms the average debt per hectare was £1,350. Forty-seven per cent of spare and part-time farms had liabilities under £10,000 compared to 3% of very large farms. Almost half (49%) of very large farms had at least £400,000 worth of debt (Figure 1.4).

**Figure 1.4 Distribution of liabilities by farm size 2015/16**



(a) Categories £150,000 - <£400,000 and £400,000+ were combined for Spare & Part-time due to insufficient observations.

Farms within the South East of England had the highest average debt level of around £269,700, over twice that of farms in the North West (£128,600). Around half of farms in each region had under £50,000 worth of liabilities, except for the South East where the proportion was 40%.

The gearing ratio<sup>4</sup> can provide a deeper understanding of indebtedness. For those farms with less than £10,000 worth of liabilities, almost all (98%) had a gearing ratio of less than 5%, which suggests that these farms are in a favourable situation. For further information on the gearing ratio please see [section 3](#).

<sup>2</sup> Farm sizes are based on the estimated labour requirements for the business, rather than its land area. Please see the section on [definitions](#) for more information.

<sup>3</sup> Per hectare of farmed area. Farmed area = Utilised Agricultural Area + net land hired in (i.e. land hired in minus land hired out)

<sup>4</sup> The gearing ratio gives a farm's liabilities as a proportion of its assets.

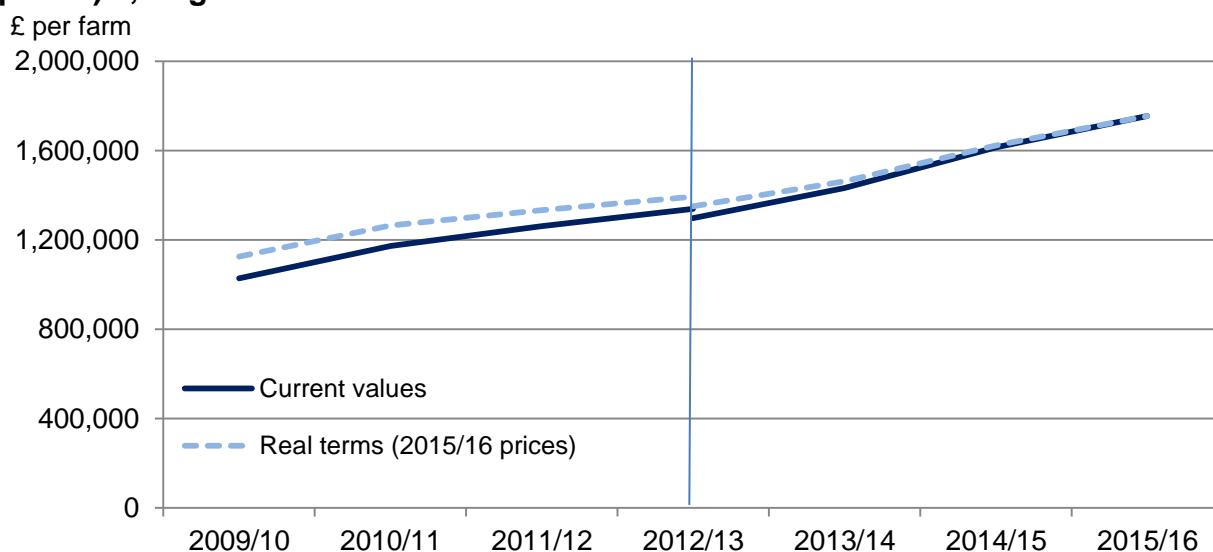
## 2 Net worth

### Key findings for 2015/16:

- The average net worth across all farms was £1.75 million; more than a third (37%) had a net worth of at least £1.5 million.
- Cereal and general cropping farms had the highest average net worth of £2.62 million and £2.90 million respectively, driven by the larger area and quality of land owned by these farms. Horticulture farms had the lowest average net worth of £0.77 million.
- Average net worth increased with farm size; from £1.10 million for spare and part-time farms to £3.78 million for very large farms. However, this is reversed on a per hectare basis from £17,600 per ha for spare & part-time to £10,900 per ha for very large farms.
- Mixed, mainly owner occupied farms had the highest average net worth of £2.45 million, wholly tenanted farms had an average net worth of £0.28 million.
- Region also played a part, with those farms in the South East of England having a larger average net worth.

This section examines the net worth of farm businesses in England. Net worth represents the wealth of a farm if all of their liabilities were called in. It is measured by subtracting the value of the total liabilities from total assets, including tenant type capital<sup>5</sup> and land. Those farms with a high net worth are more likely to be resilient to changes in their income in the short term as they can draw on their reserves to support the business if the financial position of the farm deteriorates.

**Figure 2.1 Average net worth per farm in current values and real terms (2015/16 prices)<sup>(a)</sup>, England**



Farms with at least 25,000 euros of Standard Output.

(a) Deflated by GDP.

(b) Standard output coefficients were updated in 2012/13 from a 5 year average centred on 2007 to a 5 year average centred on 2010. Results for 2012/13 have been calculated using both for comparability.

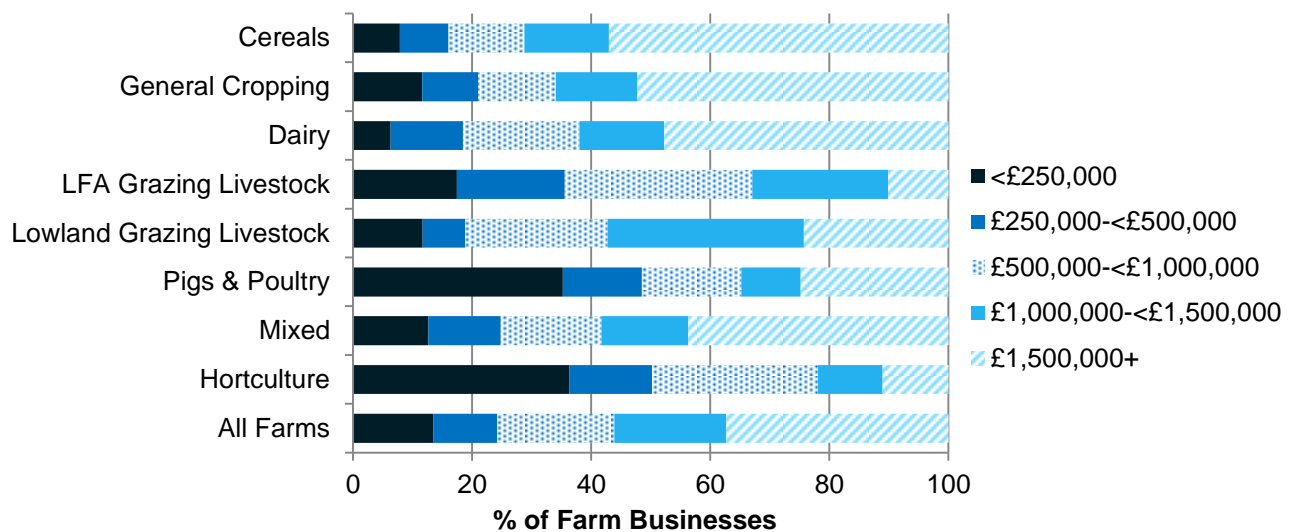
The average net worth across all farms in England was £1.75 million in 2015/16. This is an increase in real and current terms since 2009/10 (Figure 2.1), driven mostly by an increase in the value of land and other assets. More than a third (37%) of farms had a net worth of at least £1.5 million in 2015/16. Farm type, size, region, tenure and economic performance

<sup>5</sup> For a definition of tenant type capital see the section on [definitions](#)

were all found to be significantly related<sup>6</sup> to net worth. As in 2014/15, on average cereal and general cropping farms had the highest net worth, at £2.62 million and £2.90 million respectively, driven by the larger average area of land owned by these types of farms. Dairy farms had the highest average net worth of the livestock based enterprises, at £1.66 million, followed by pigs and poultry (£1.23 million), and grazing livestock (LFA and Lowland; £0.83 and £1.22 million respectively). Horticulture farms had the lowest average net worth, at £0.77 million.

There are differences in the distribution of net worth between farm types (Figure 2.2); over half of cereal (57%) and general cropping (52%) farms had a net worth of at least £1.5 million compared to around 10% of LFA grazing livestock and horticulture farms. On a per hectare basis<sup>7</sup>, horticulture and pig & poultry had greater average net worth compared to other farm types, at around £29,200 and £24,000 per hectare respectively. LFA grazing livestock farms (£6,100) averaged the lowest levels of net worth per hectare.

**Figure 2.2 Distribution of net worth by farm type 2015/16**



As with liabilities, the average net worth of farms increased with farm size<sup>8</sup>; from £1.10 million for spare and part-time farms, to £3.78 million for very large farms. The proportion of farms with a net worth of over £1.5 million increases as the size of the farm increases, from 24% of spare and part-time farms to 63% for very large farms (Figure 2.3). However, net worth per hectare<sup>7</sup> decreases as farm size increases, with spare and part-time farms having an average of £17,600 per hectare compared to £10,900 for large farms (Figure 2.4).

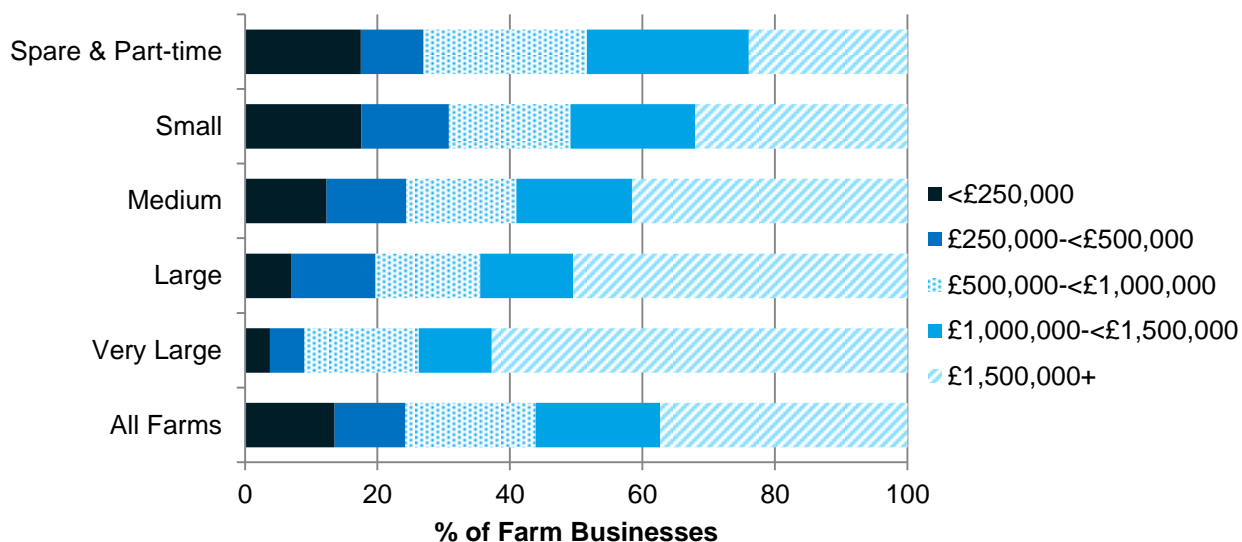
<sup>6</sup> A generalised linear regression model was fitted to examine which factors (farm type, size, region, tenure and economic performance) were significant. All factors were found to be highly significant ( $p < 0.001$ ).

<sup>7</sup> Per hectare of farmed area. Farmed area = Utilised Agricultural Area + net land hired in (i.e. land hired in minus land hired out)

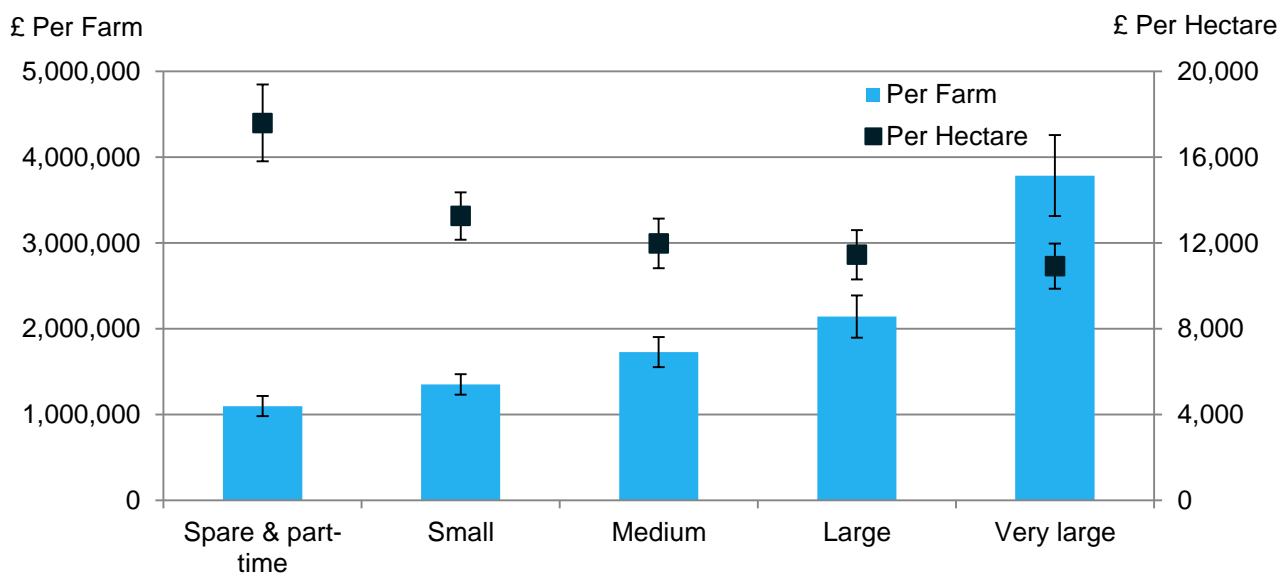
<sup>8</sup> Farm sizes are based on the estimated labour requirements for the business, rather than its land area. Please see the section on [definitions](#) for more information



**Figure 2.3 Distribution of net worth by farm size 2015/16**

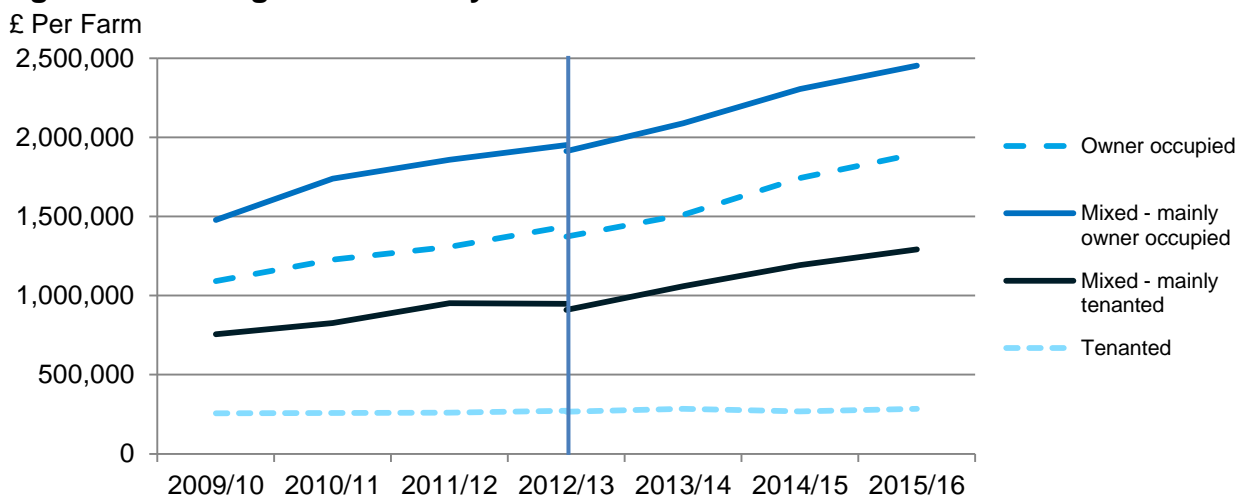


**Figure 2.4 Total average net worth per hectare of farmed area<sup>7</sup> by farm size 2015/16**



Those farms with greater land ownership tend to have a greater net worth (Figure 2.5). Mixed mainly owner occupied (£2.45 million) and owner occupied farms (£1.90 million) had the greatest average net worth, as these have the largest proportion of ownership. Mixed mainly tenanted and wholly tenanted farms, had a much lower average net worth of £1.29 million and £0.28 million respectively. Only a small proportion of owner occupied farms (6%) had an average net worth of under £250,000 in 2015/16 compared to 58% of wholly tenanted farms.

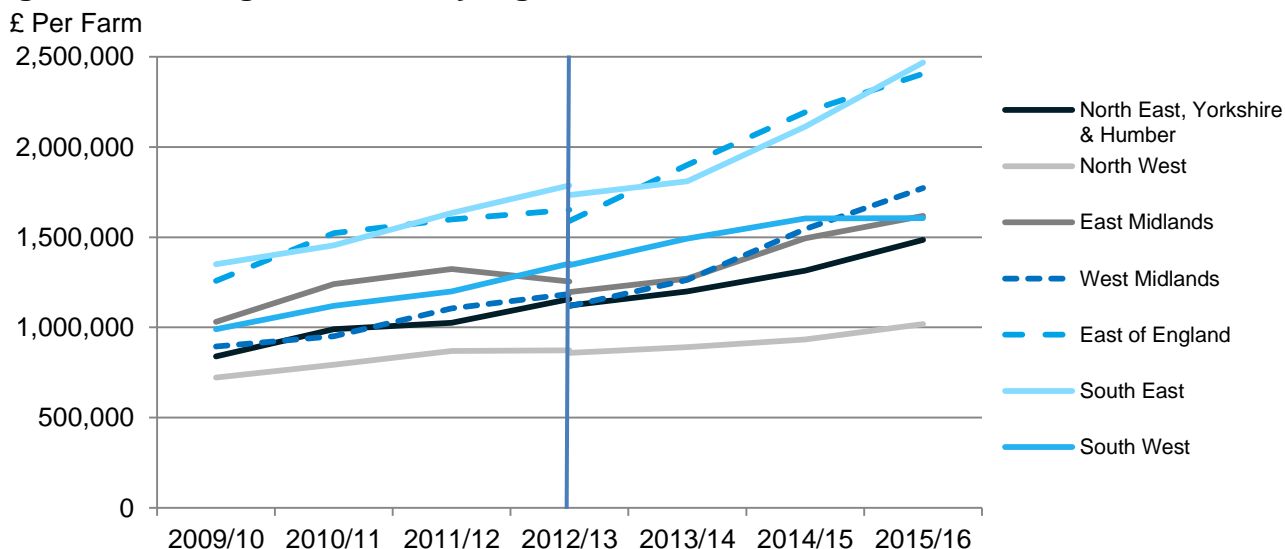
**Figure 2.5 Average net worth by farm tenure**



(a) Standard output coefficients were updated in 2012/13 from a 5 year average centred on 2007 to a 5 year average centred on 2010. Results for 2012/13 have been calculated using both for comparability

The region in which the farm resides is also significantly related to net worth after allowing for other factors such as farm type and size. Farms in the South East had the highest average net worth at £2.5 million in 2015/16 (Figure 2.6); those in the North West, on average, had the lowest net worth at £1.0 million. More than half of farms in the South East (55%) had a net worth of over £1.5 million. This compared to the North West and North East, Yorkshire and Humber, with only 21% and 34% possessing a net worth of over £1.5 million.

**Figure 2.6 Average net worth by region**



(a) Standard output coefficients were updated in 2012/13 from a 5 year average centred on 2007 to a 5 year average centred on 2010. Results for 2012/13 have been calculated using both for comparability

The gearing ratio<sup>9</sup> compares what the business owes with its assets. The proportion of farmers with a gearing ratio of 40% or more decreases as the amount of net worth increases, from 34% who have a net worth of under £250,000 to 1% of those with a net worth of over £1.5 million. For further information on the gearing ratio please see [section 3](#).

<sup>9</sup> The gearing ratio expresses a farm's liabilities as a proportion of its assets.

### 3 Gearing

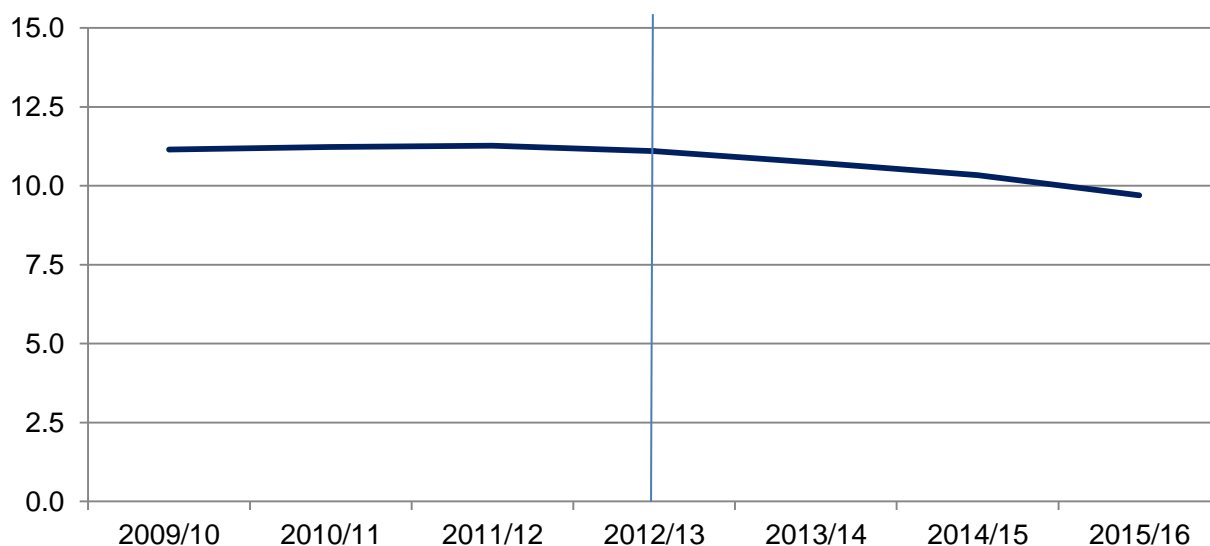
#### Key findings for 2015/16:

- The average gearing ratio across all farms was 10%, continuing the slight downward trend observed over the last 3 years.
- Just over half (52%) of farms had a gearing ratio of less than 5%, whilst 8% had a gearing ratio of at least 40%. This indicates that the vast majority of farms are in a favourable situation.
- Pig and Poultry farms had the highest average gearing ratio of all farm types with 22%.
- The gearing ratio increased with farm size from 4% for spare and part-time to 14% for very large farms.
- Tenanted farms had a higher average gearing ratio (27%), compared to other tenure types. Owner occupied farms had an average gearing ratio of 7%.

In order to get a deeper understanding of the indebtedness of a farm we can compare what the business owes with the assets that the owners have tied up in the business. We use an accounting measure which expresses a farm's liabilities as a proportion of its assets, sometimes referred to as the gearing ratio. If a farm has assets equal to its liabilities, this will give a gearing ratio value of 100%, and if their assets are twice as large as its liabilities, the gearing ratio will be 50%. This provides a measure of the **long term financial viability** of a farm. A lower ratio (less than 50%) is generally seen as more acceptable because this suggests that the farm business is more likely to be able to meet its investment needs from earnings. A higher ratio may be seen as a greater risk as interest costs will be higher and the farm will have lower funds to borrow against. However, being highly geared does not necessarily imply an unsuccessful business. Investment can increase profitability, so increasing the gearing ratio can lead to better performance.

**Figure 3.1 Average gearing ratio per farm, England**

Gearing Ratio %



Farms with at least 25,000 euros of Standard Output

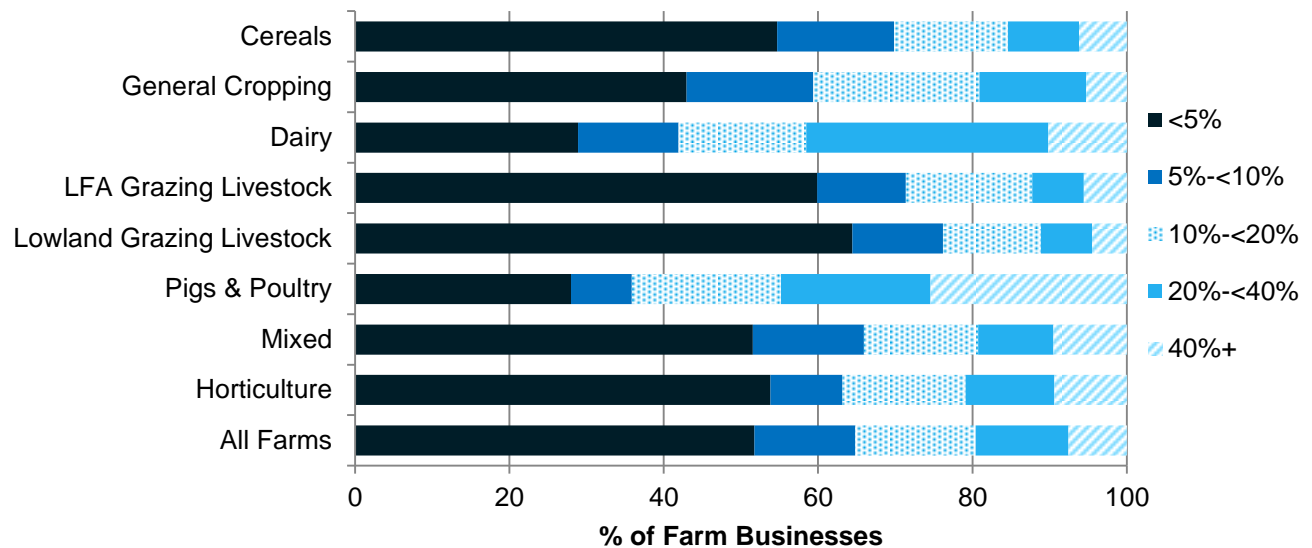
(a) Standard output coefficients were updated in 2012/13 from a 5 year average centred on 2007 to a 5 year average centred on 2010. Results for 2012/13 have been calculated using both for comparability.

The average gearing ratio across all farms was just under 10% in 2015/16, continuing the gradual decline observed over previous years (Figure 3.1). Just over half (52%) of farms in England had a gearing ratio of less than 5%, whilst 8% had a gearing ratio of at least 40%.

This indicates that the vast majority of farms are in a favourable situation. Farm type, size, tenure and economic performance were found to be significantly related to<sup>10</sup> the gearing ratio.

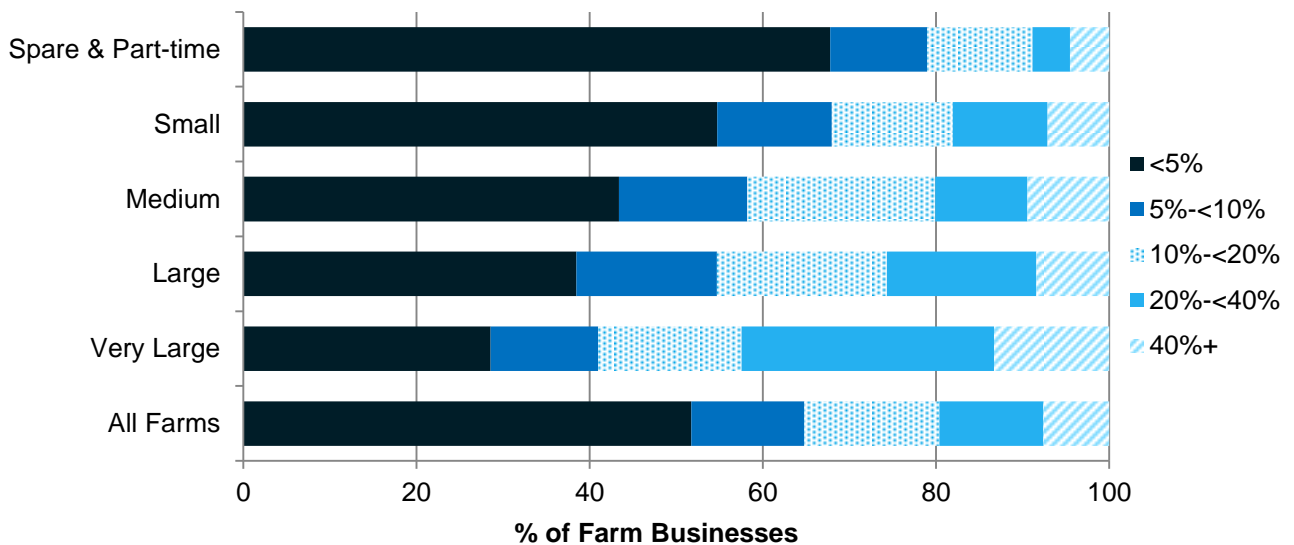
Pigs and poultry farms continued to have the highest average gearing ratio (22%) in 2015/16, with a quarter having a gearing ratio that exceeded 40% (Figure 3.2). Cereals and grazing livestock (LFA and lowland) farms had the lowest average gearing ratio, each at around 7%.

**Figure 3.2 Distribution of Gearing Ratio by farm type 2015/16**



The average gearing ratio increased with farm size, from 4% for spare and part-time farms to 14% for very large farms. Very large farms were much more likely to have a gearing ratio of at least 20% than smaller farms (Figure 3.3).

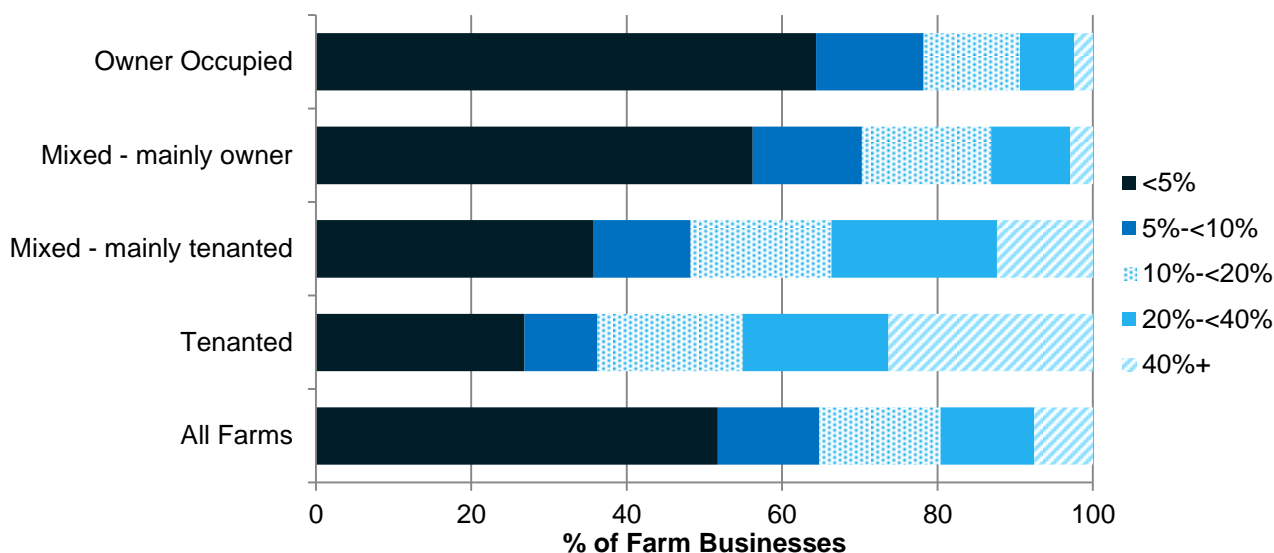
**Figure 3.3 Distribution of Gearing Ratio by farm size 2015/16**



<sup>10</sup> A generalised linear regression model was fitted to examine which factors (farm type, size, region, tenure and economic performance) were significant. Farm type, size, tenure were found to be highly significant (p<0.001) and economic performance was significant (p 0.002)

The gearing ratio tends to reduce with the level of land ownership. Tenanted farms had an average gearing ratio of 27% whilst owner occupied farms had an average gearing ratio of 7%. Just 2% of owner occupied farms had a gearing ratio of 40% or above compared to around a quarter (26%) of tenanted farms (Figure 3.4). These findings highlight the importance of the value of land in contributing to owner occupied and mixed tenure farms' asset base.

**Figure 3.4 Distribution of Gearing Ratio by farm tenure 2015/16**



Almost all (98%) of those farms with less than £10,000 liabilities, had a gearing ratio of less than 5% (Table 3.1), which indicates that these farms are in a favourable situation as they have a very small amount of liabilities compared to assets. However, for those farms with at least £400,000 of liabilities just under a quarter (24%) had a gearing ratio of over 40%, with the proportion of farms in this group increasing as the amount of liabilities increases. Although, investment can increase profitability, so a high gearing ratio does not necessarily make the farm a poor business.

**Table 3.1 Proportion of farms by Gearing ratio and liabilities, England 2015/16**

Gearing Ratio	Liabilities				
	<£10,000	£10,000- <£50,000	£50,000- <£150,000	£150,000- <£400,000	£400,000+
<5%	98	72	31	8	3
5%-<10%	2*	8	31	22	8
10%-<20%		14	16	37	22
20%-<40%	0	4	11	20	43
40%+	0	2	11	13	24
<b>All farms</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

\*Some data have been grouped due to insufficient observations.

Over a third of farms (34%) with a net worth of under £250,000 had a gearing ratio of over 40%, compared to 1% of farms with a net worth of over £1 million (Table 3.2), starkly highlighting that as net worth increases the proportion of farms with a high gearing ratio decreases. Similarly, over a quarter of farms (27%) with a net worth of under £250,000 had a gearing ratio of under 5%, compared to over half (58%) of farms with a net worth of at least £1 million.

**Table 3.2 Proportion of farms by Gearing ratio and net worth, England 2015/16**

<b>Gearing Ratio</b>	<b>Net Worth</b>			
	<b>&lt;£250,000</b>	<b>£250,000- &lt;500,000</b>	<b>£500,000- &lt;£1,000,000</b>	<b>£1,000,000+</b>
<5%	27	46	54	58
5%-<10%	7	8	16	14
10%-<20%	18	18	11	16
20%-<40%	14	15	14	10
40%+	34	13	5	1
<b>All farms</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

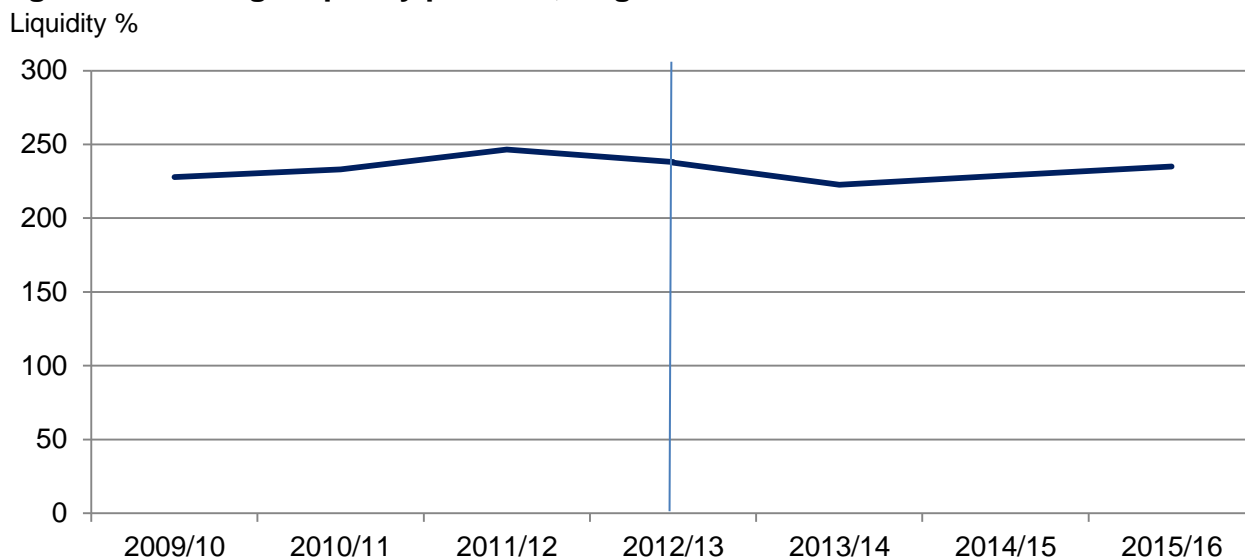
## 4 Liquidity

### Key findings for 2015/16:

- The average liquidity ratio was 235%. There has been some fluctuation but no overall upward or downward trend over the last 6 years.
- The majority of farms had a strong liquidity ratio, with around two thirds having a ratio of at least 200%, indicating that the majority of farms are able to meet their current liabilities using their current assets. However, 19% of farms potentially face financial difficulties with a liquidity ratio of less than 100%.
- On average, grazing livestock farms had the highest liquidity ratio, 289% for those in lowland areas and 284% for those in the LFA; specialist dairy farms had the lowest average liquidity ratio of 157%.
- The liquidity ratio generally decreased with farm size from 273% for small farms to 226% for very large farms.
- Farms with a greater level of ownership tended to have a higher liquidity ratio; the average liquidity ratio for owner occupied farms was 250% compared to 191% for tenanted farms.

'Liquidity' is a measure of the **short term financial viability** of farms. A large proportion of the assets on a farm, such as land or machinery, will typically have a monetary value that is difficult or costly to realise in the short term. The liquidity ratio<sup>11</sup> provides an indication of the ability of a farm to finance its immediate financial demands from its current assets, such as cash, savings or stock. If the liquidity ratio is equal to or above 100%, then a farm is able to meet its current liabilities using current assets. If the ratio is less than 100%, then a farm is unable to meet its immediate financial demands using current assets.

**Figure 4.1 Average liquidity per farm, England**



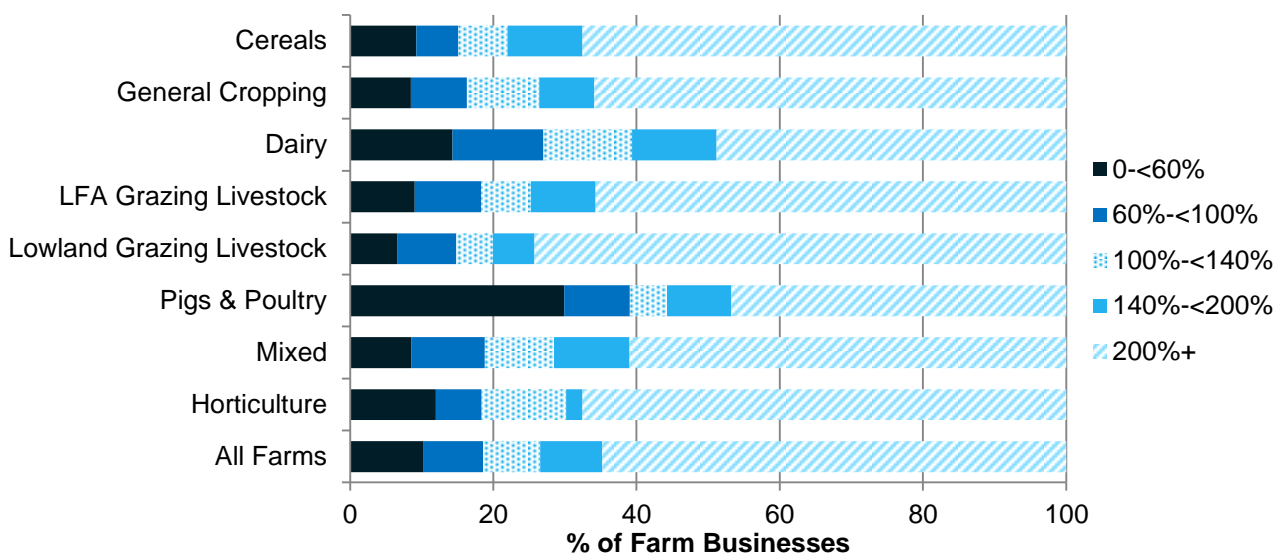
Farms with at least 25,000 euros of Standard Output

- (a) Standard output coefficients were updated in 2012/13 from a 5 year average centred on 2007 to a 5 year average centred on 2010. Results for 2012/13 have been calculated using both for comparability.
- (b) A small number of farms (46) with no recorded current liabilities have been excluded from this analysis.

<sup>11</sup> Liquidity ratio is current assets divided by current liabilities.

The average liquidity ratio was 235% in 2015/16. There has been some fluctuation but no overall upward or downward trend over the last 6 years (Figure 4.1). Farm type, size, tenure and economic performance were found to be significantly related<sup>12</sup> to the liquidity ratio. The majority of farms continue to have a strong liquidity ratio; around two thirds (65%) had a ratio of at least 200% (Figure 4.2). Just under one in five farms (19%) had a liquidity ratio below 100% and could potentially face financial difficulties. These farms were more likely to be pigs & poultry farms, and those with a low economic performance (the likelihood of having a liquidity ratio of less than 100%<sup>13</sup> was significantly related to farm type and economic performance). Grazing livestock farms, lowland and LFA, had the highest average liquidity ratios at 289% and 284% respectively. Dairy farms had the lowest average liquidity ratio (157%), remaining relatively unchanged from the previous year, although nearly three quarters of these farms had a liquidity ratio of more than 100%.

**Figure 4.2 Distribution of liquidity ratio by farm type, England 2015/16**



A small number of farms (46) with no recorded current liabilities have been excluded from this analysis.

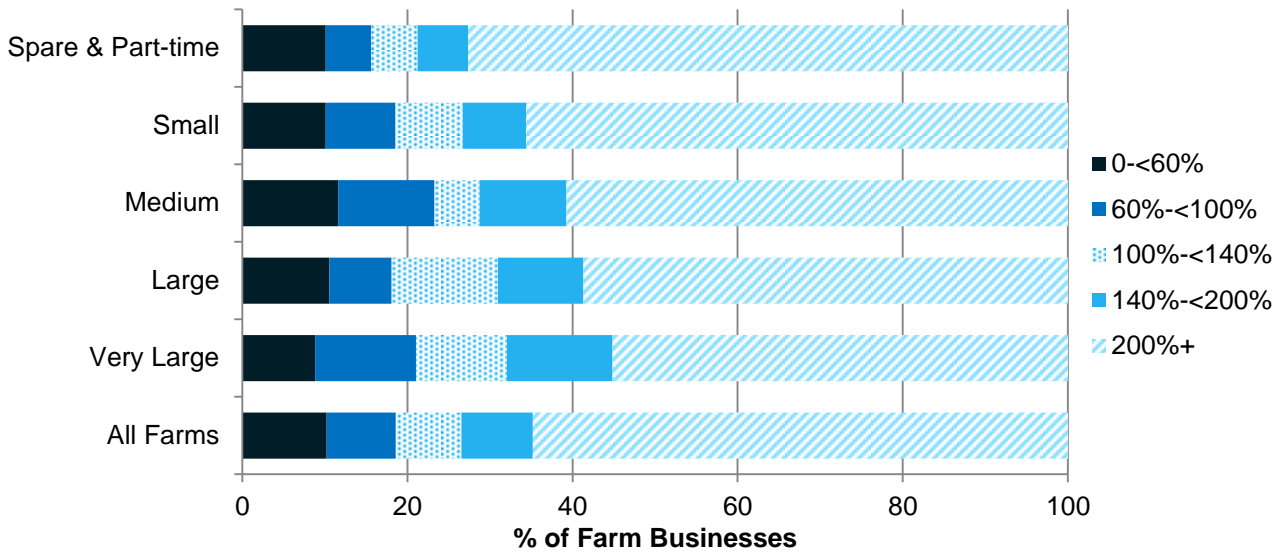
The liquidity ratio generally tends to decrease with farm size from 273% for small farms to 226% for very large farms. Around 21% of very large farms had a liquidity ratio of less than 100%, compared to 16% of spare and part-time farms (Figure 4.3). At the other end of the scale, 73% of spare and part-time and 55% of very large farms had a liquidity ratio of over 200%, suggesting that they could easily cover their immediate financial demands with their current assets.

<sup>12</sup> A generalised linear regression model was fitted to examine which factors (farm type, size, region, tenure and economic performance) were significant. Farm type was found to be highly significant ( $p < 0.001$ ), farm tenure ( $p = 0.003$ ), size and economic performance ( $p = 0.001$ ) were also found to be significant.

<sup>13</sup> A generalised linear regression model was fitted to examine which factors (farm type, size, region, tenure and economic performance) were significant for those farms with a liquidity ratio of less than 100%. Farm type was found to be highly significant ( $p < 0.001$ ) and economic performance was also significant ( $p = 0.002$ ).



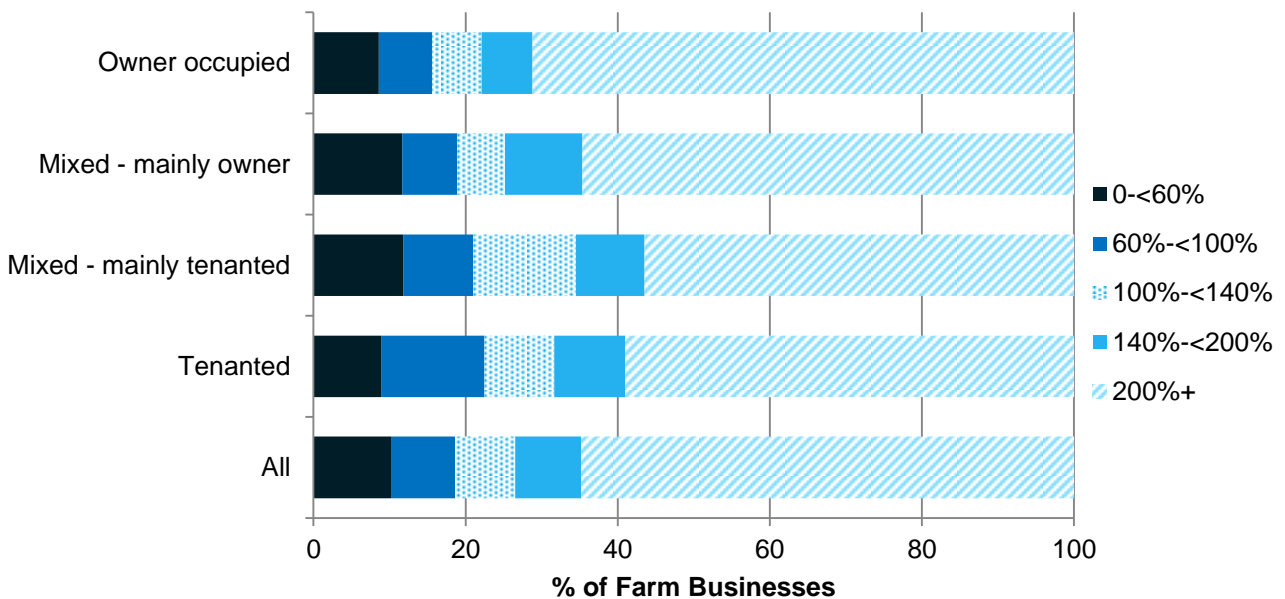
**Figure 4.3 Distribution of liquidity ratio by farm size, England 2015/16**



A small number of farms (46) with no recorded current liabilities have been excluded from this analysis.

Farms with a greater level of ownership tended to have a higher liquidity ratio; the average liquidity ratio for owner occupied farms was 250% compared to 191% for tenanted farms. However, the proportions in each of these groups with a liquidity ratio of under 100% were broadly similar at around 20% (Figure 4.4).

**Figure 4.4 Distribution of liquidity ratio by farm tenure, England 2015/16**



A small number of farms (46) with no recorded current liabilities have been excluded from this analysis.

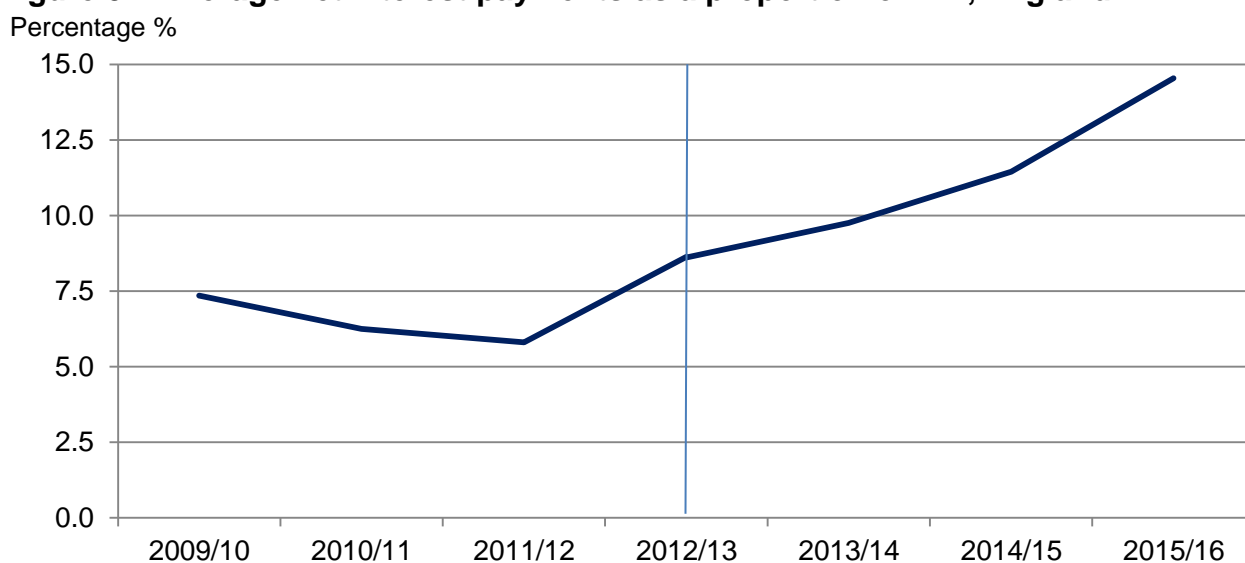
## 5 Net Interest payments as a proportion of Farm Business Income (FBI)<sup>14</sup>

### Key findings for 2015/16:

- Net interest payments were just under 15% of Farm Business Income, continuing the steady increase since 2011/12. Whilst there was a small increase in net interest payments, the increase from 2014/15 was driven by the reduction in income.
- A third of farms paid no interest or were net recipients of interest; a further 14% had a negative Farm Business Income before interest payments and would not have been able to pay some or all of the interest on their debts, without further borrowing or drawing on their assets.

This section examines net interest payments as a proportion of Farm Business Income. This measure provides an indication of whether farms can afford to pay the interest on their debts.

**Figure 5.1 Average net interest payments as a proportion of FBI, England**



Farms with at least 25,000 euros of Standard Output.

- (a) Standard output coefficients were updated in 2012/13 from a 5 year average centred on 2007 to a 5 year average centred on 2010. Results for 2012/13 have been calculated using both for comparability.

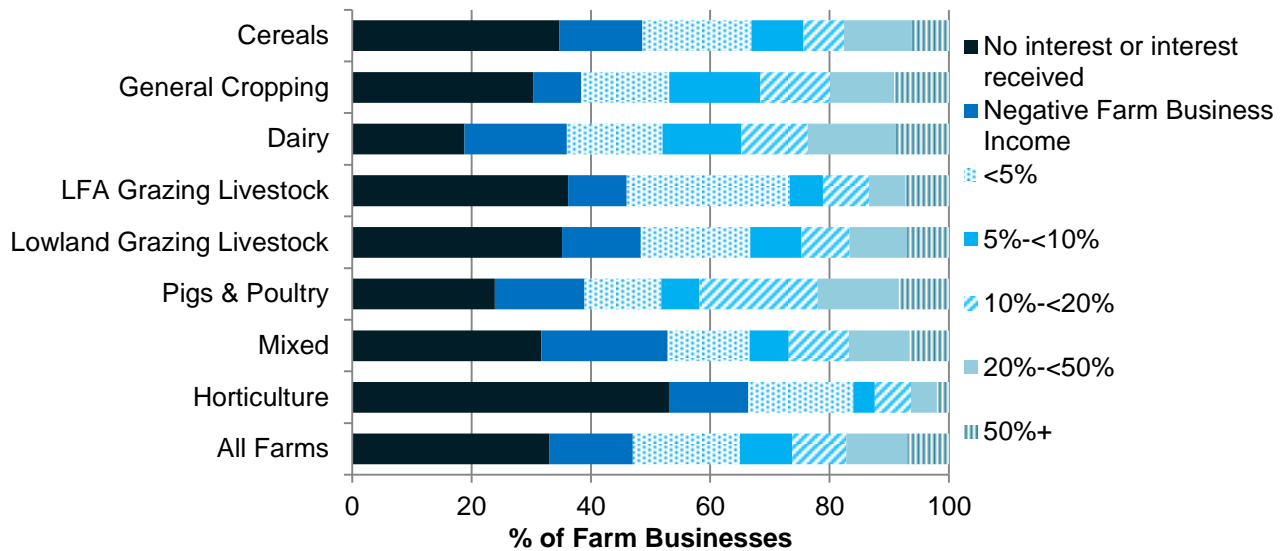
Net interest payments were, on average, 15% of Farm Business Income (FBI) in 2015/16. This measure has steadily increased since 2011/12 (Figure 5.1) as average net interest payments have tended to increase and Farm Business Income has declined. This measure was greatest for mixed farms (21%) and lowland grazing livestock farms (20%), and least for LFA grazing livestock and horticulture farms (10%).

A third of farm businesses paid no interest (i.e. no loans) or their interest received (i.e. on savings or investments) was greater than the interest paid on loans. These farms were more likely to be high performing farms or horticulture farms. Over half of horticulture farms were in this group, compared to 19–36% of other farm types (Figure 5.2). Fourteen per cent of farms already had a negative FBI (before interest payments) and would have been unable to pay some or all of the interest on their debts without further borrowing or drawing on their assets.

<sup>14</sup> Before deducting interest.

For the remaining group of farms that had a positive income and made net interest payments, farm type, size and economic performance were found to be significantly related to<sup>15</sup> the size of the measure. After allowing for these factors, net interest payments as a proportion of income tended to be lower on horticulture and LFA grazing livestock farms, smaller farms and on higher performing farms. For 3% of farms, net interest payments were greater than the available income.

**Figure 5.2 Distribution of net interest payments as a proportion of Farm Business Income by farm type, England 2015/16**

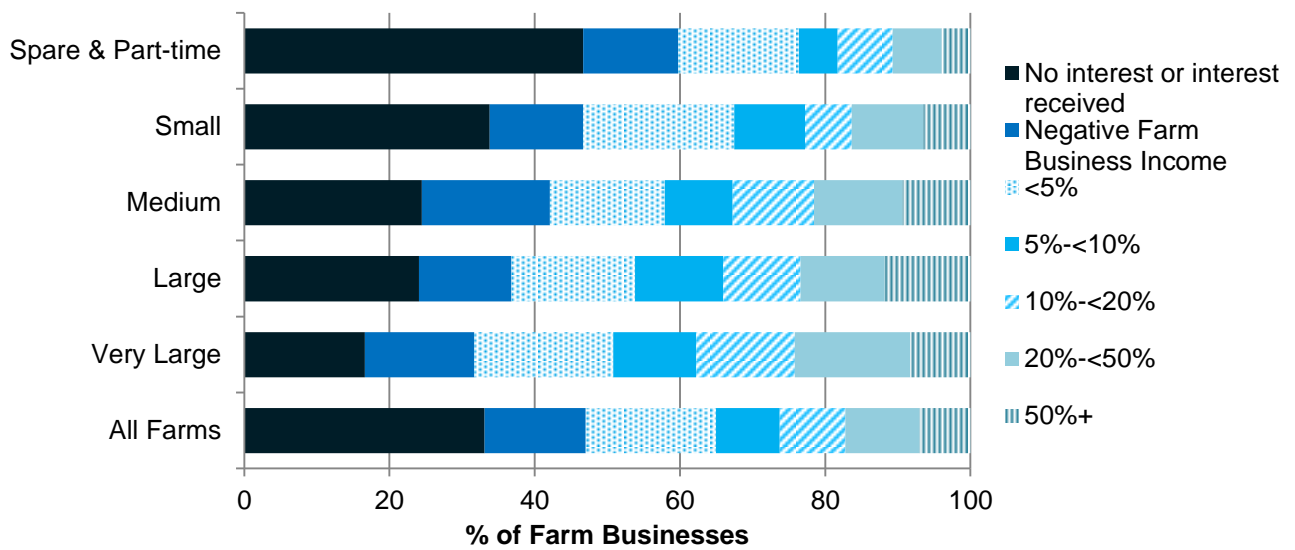


The negative Farm Business Income (FBI) group includes farms for which FBI was negative before paying interest payments but excludes farms paying no interest or net recipients of interest.

Almost half of spare and part-time farms (47%) paid no interest or received interest, with the proportion decreasing with farm size (Figure 5.3).

<sup>15</sup> A generalised linear regression model was fitted to examine which factors (farm type, farm size, region, tenure and economic performance) were significant. Farm type and economic performance were found to be highly significant ( $p < 0.001$ ), with size also being significant (0.011).

**Figure 5.3 Distribution of net interest payments as a proportion of Farm Business Income by farm size, England 2015/16**



The negative Farm Business Income (FBI) group includes farms for which FBI was negative before paying interest payments but excludes farms paying no interest or net recipients of interest.

For more information on Farm Business Income please see [Farm Accounts in England](#).

## 6 Return on Capital Employed

### Key Findings for 2015/16:

- Over the period since 2009/10, the median Return on Capital Employed (ROCE) peaked in 2011/12 at 1.6% but has declined in each subsequent year. In 2015/16, the median ROCE was -0.7%. There is a wide range of values across farms.
- Only cereal and general cropping farms had positive median ROCE values, of 0.1% and 0.3% respectively. For all other farm types the median values were less than zero.
- Larger farms tended to have a greater ROCE than smaller farms.
- Almost all high performing farms all had a positive ROCE, compared to low performing farms of which all had a negative return.

Return on capital employed (ROCE) is a measure of the return that a business makes from the available capital. ROCE provides a more holistic view than profit margins, focusing on efficient use of capital and low costs and allowing an equal comparison across farms of differing sizes. A positive ROCE value shows that a farm is achieving an economic return on the capital used.

$$\text{ROCE} = \frac{\text{Earnings before Interest and Tax}}{\text{Total Assets less Current Liabilities}}$$

Earnings have been calculated by using Defra's main income measure, Farm Business Income (FBI), minus the imputed cost of all unpaid labour. Capital employed is the available amount that each farm could use to earn profit in the upcoming financial year. It has been calculated by subtracting current<sup>16</sup> (i.e. short term) liabilities from total assets.

Given the importance of land as an asset base for farming, an additional measure of ROCE has been investigated that excludes the value of land from assets. These results can be found in the accompanying workbook of results.

A negative ROCE value<sup>17</sup> indicates that a farm is not achieving an economic return on the capital employed. The median ROCE for all farm businesses has fallen since 2011/12 and was -0.7% in 2015/16 (Figure 6.1), with 62% of farms having a negative return. Around 3% of farms had a ROCE of over 10%. Farm type, size, tenancy and economic performance were all found to be significantly related<sup>18</sup> to ROCE.

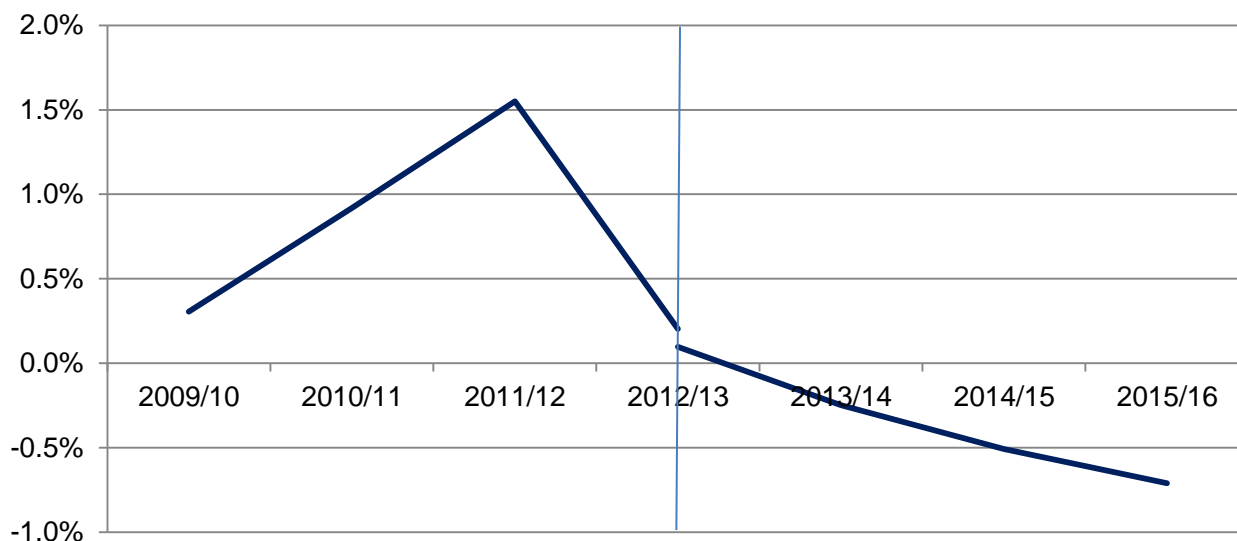
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<sup>16</sup> Short term liabilities are deducted in order to measure the capital assets that would remain after short term commitments have been met. Overdrafts are treated as a long term liability and therefore not deducted.

<sup>17</sup> Note that the incidence of negative ROCE is higher than the incidence of negative FBI. This is because the value of unpaid labour has been deducted from FBI.

<sup>18</sup> A generalised linear regression model was fitted to examine which factors from farm type, size, region, tenure and economic performance were significant. Farm size, tenancy and economic performance were highly significant ( $p < 0.001$ ).

**Figure 6.1 Return on capital employed (ROCE, median values) per farm, England**

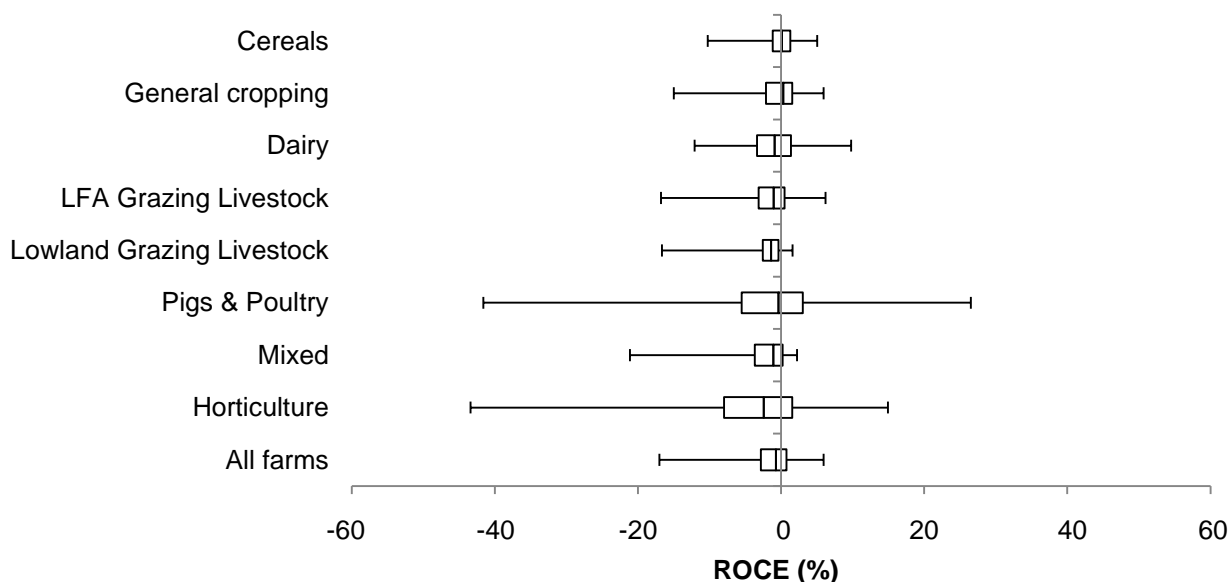


Farms with at least 25,000 euros of Standard Output.

(a) Standard output coefficients were updated in 2012/13 from a 5 year average centred on 2007 to a 5 year average centred on 2010. Results for 2012/13 have been calculated using both for comparability.

Only cereals and general cropping, farms had a positive median ROCE for the year 2015/16 (Figure 6.2). Horticultural farms had the lowest median ROCE (-2.4%) whilst general cropping farms had the greatest median return (0.3%). The median ROCE for dairy farms was negative for the first time since 2009/10, after having the highest median return for the two previous years.

**Figure 6.2 Box plot showing spread of ROCE by farm type covering 5%, 25%, 50%, 75% and 95% of farms, England 2015/16.**

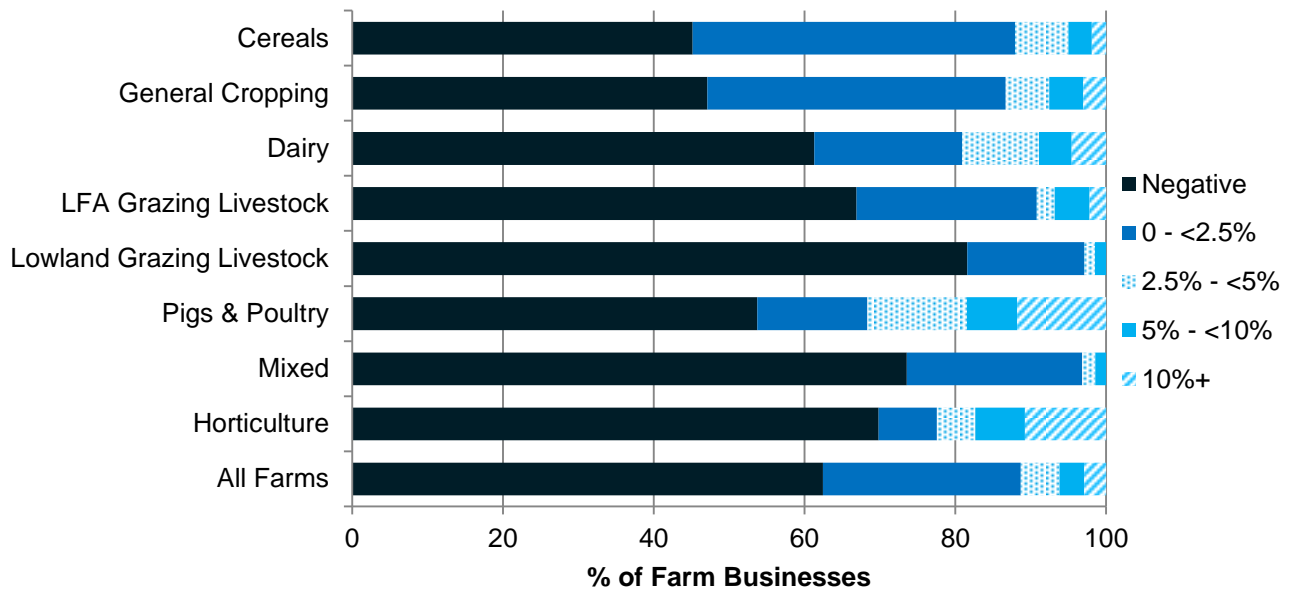


The vertical line represents the median ROCE, with the box itself showing the spread of the first and third quartiles; the spread between this and the first 5% of farms and the top 5% of farms are represented by the horizontal lines

The majority of dairy, grazing livestock, horticulture and mixed farms had a negative ROCE, with 82% of lowland grazing farms having a negative return, compared to 45% of

cereal farms and 47% of general cropping farms (Figure 6.3). Twelve percent of pig & poultry and 11% of horticulture farms had a positive return of 10% or more, compared to around 2% of all other farm types.

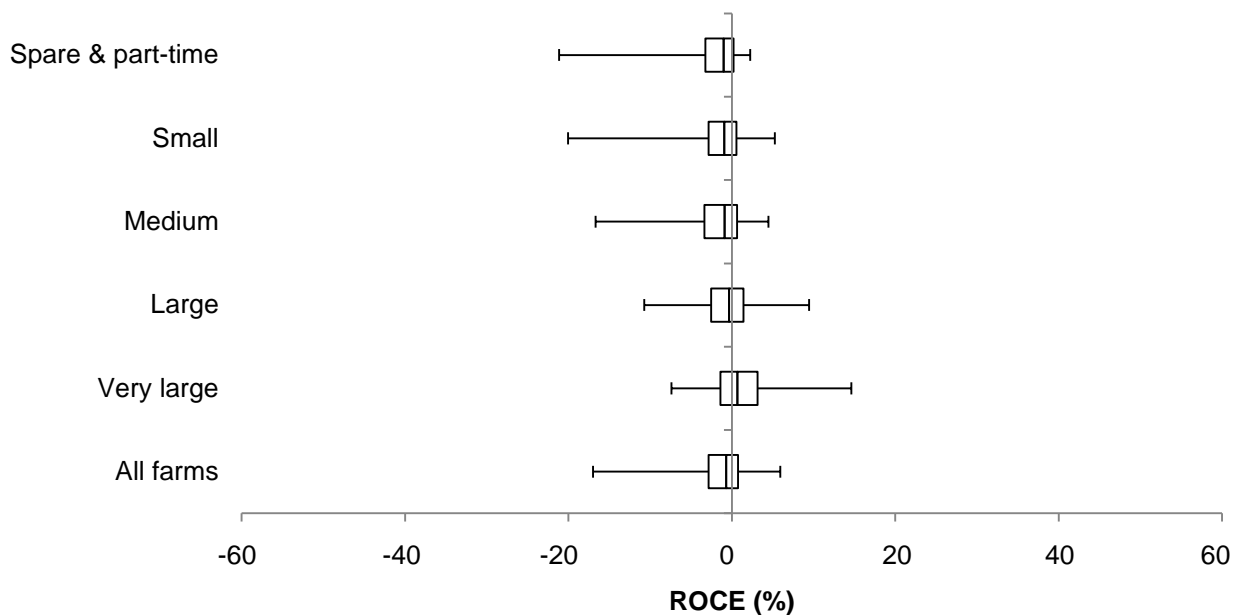
**Figure 6.3 Distribution of ROCE by farm type, England 2015/16.**



The 5%-<10% and 10%+ groups have been combined for lowland grazing and mixed farms due to insufficient observations.

Larger farms tended to have a greater ROCE than smaller farms, with a median of 0.7% for very large farms compared to -1.0% for spare and part-time farms (Figure 6.4).

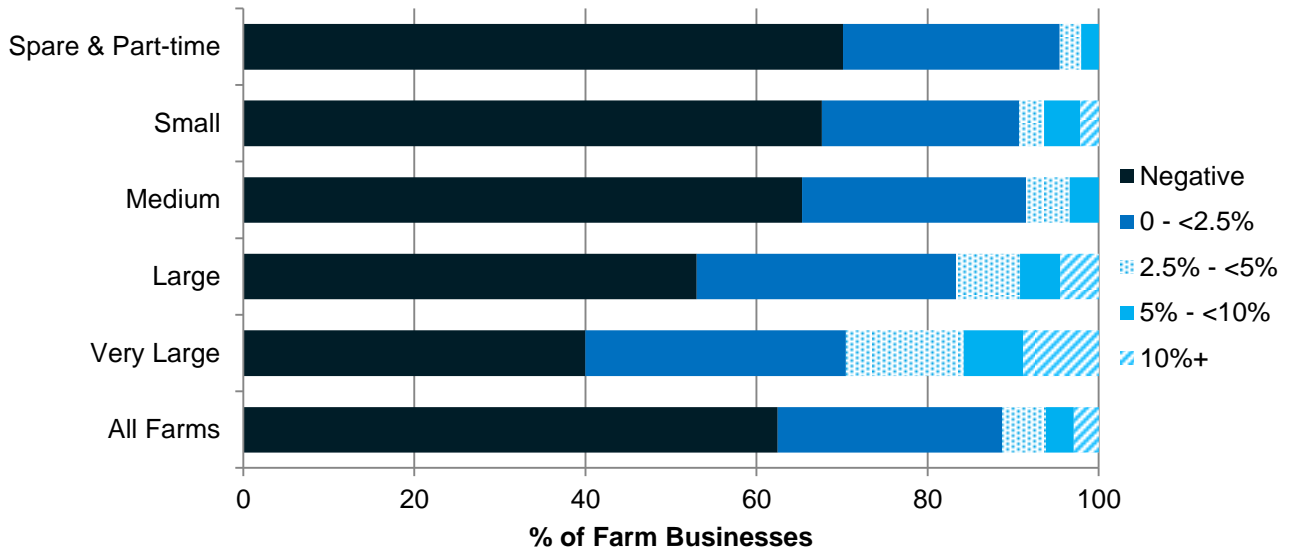
**Figure 6.4 Box plots showing spread of ROCE by farm size covering 5%, 25%, 50%, 75% and 95% of farms, England 2015/16.**



The vertical line represents the median ROCE, with the box itself showing the spread of the first and third quartiles; the spread between this and the first 5% of farms and the top 5% of farms are represented by the horizontal lines

Figure 6.5 shows the distribution of ROCE by farm size. A smaller proportion of very large farms have a negative ROCE compared to other farm size groups. A larger proportion of very large farms were also more likely to have a return of 10% or more (9%), compared to less than 2% of spare and part-time farms.

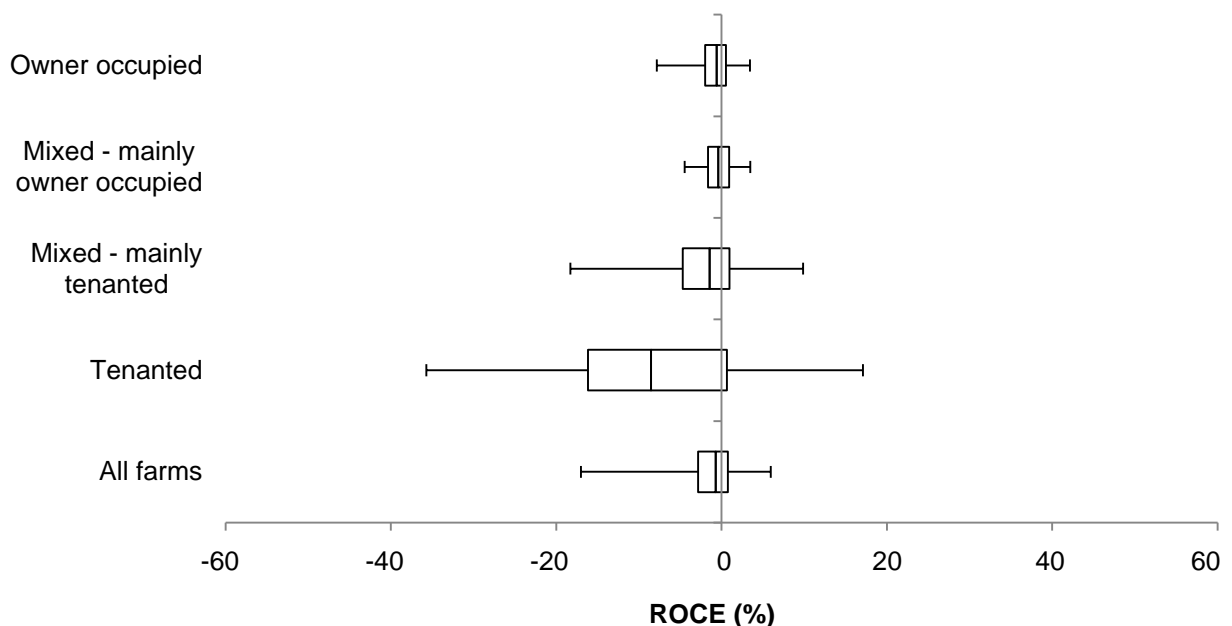
**Figure 6.5 Distribution of ROCE by farm size, England 2015/16.**



The 5%-<10% and 10%+ groups have been combined for spare & part-time and medium farms due to insufficient observations.

All farm tenure groups had a negative median return ROCE in 2015/16 (Figure 6.6). Note that the measure does not include imputed rent for owner occupied farms.

**Figure 6.6 Box plot showing spread of ROCE by farm tenure covering 5%, 25%, 50%, 75% and 95% of farms, England 2015/16.**

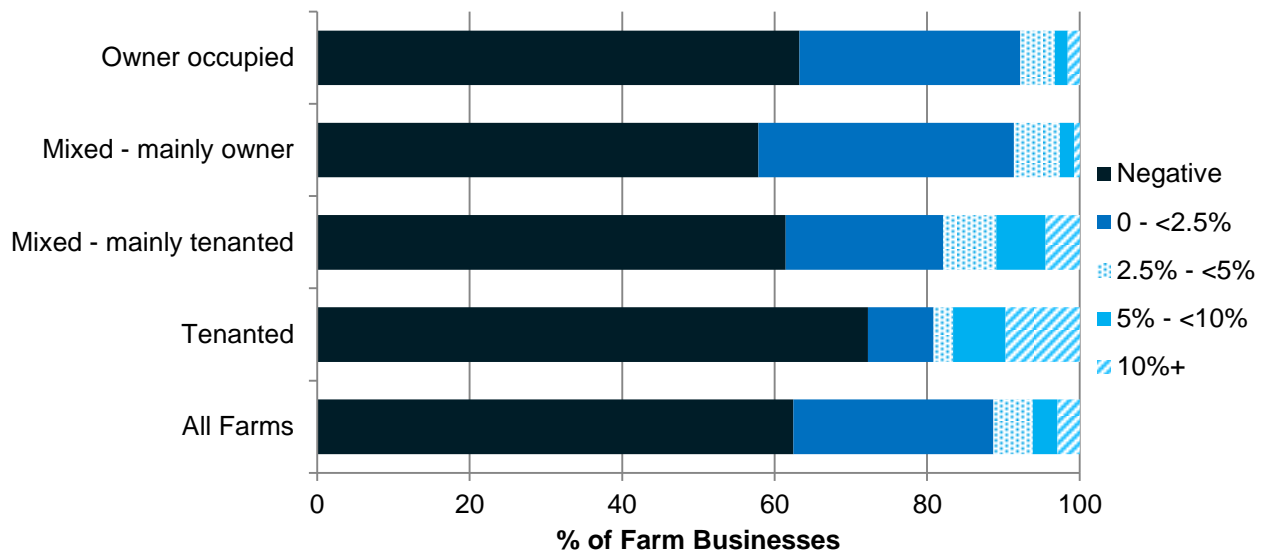


The vertical line represents the median ROCE, with the box itself showing the spread of the first and third quartiles; the spread between this and the first 5% of farms and the top 5% of farms are represented by the horizontal lines



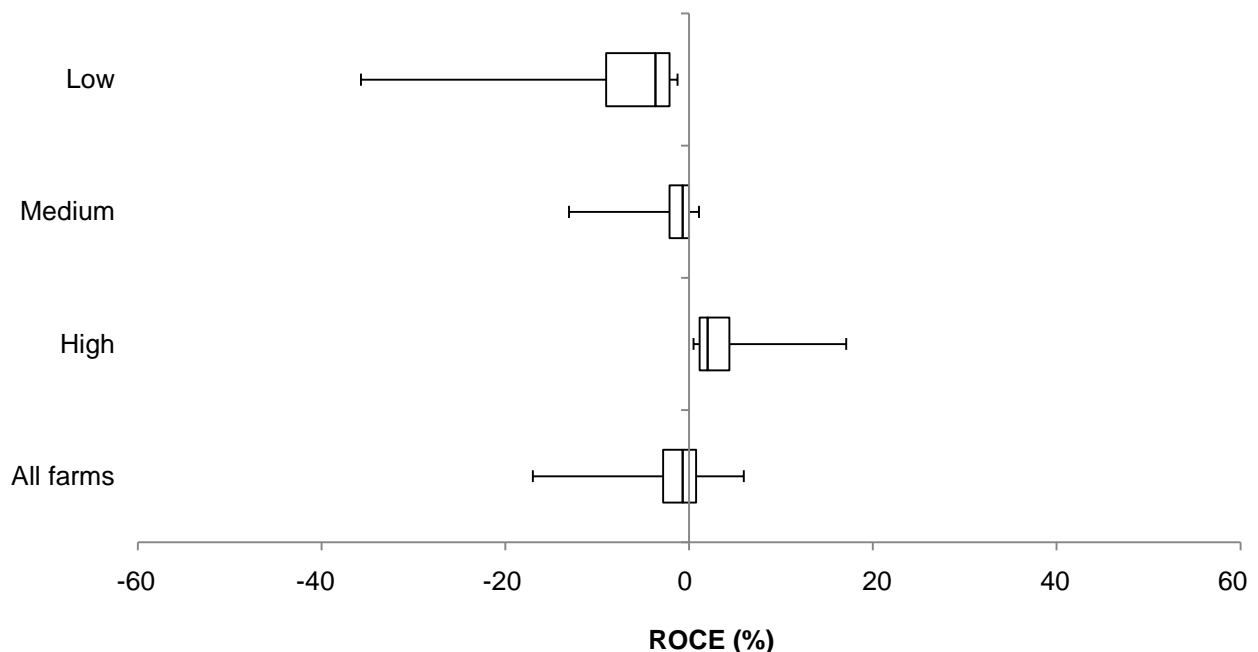
Almost three quarters of tenanted farms (72%) had a negative ROCE (Figure 6.7) compared to other tenure types. Tenanted farms were also more likely to have a return on capital of 10% or more compared to other tenure types.

**Figure 6.7 Distribution of ROCE by farm tenure, England 2015/16.**



Higher economically performing farms tended to have a greater ROCE than those exhibiting a poorer performance (Figure 6.8). The lowest and highest quartiles of performing farms had a median ROCE of -3.7% and 2.0%, respectively.

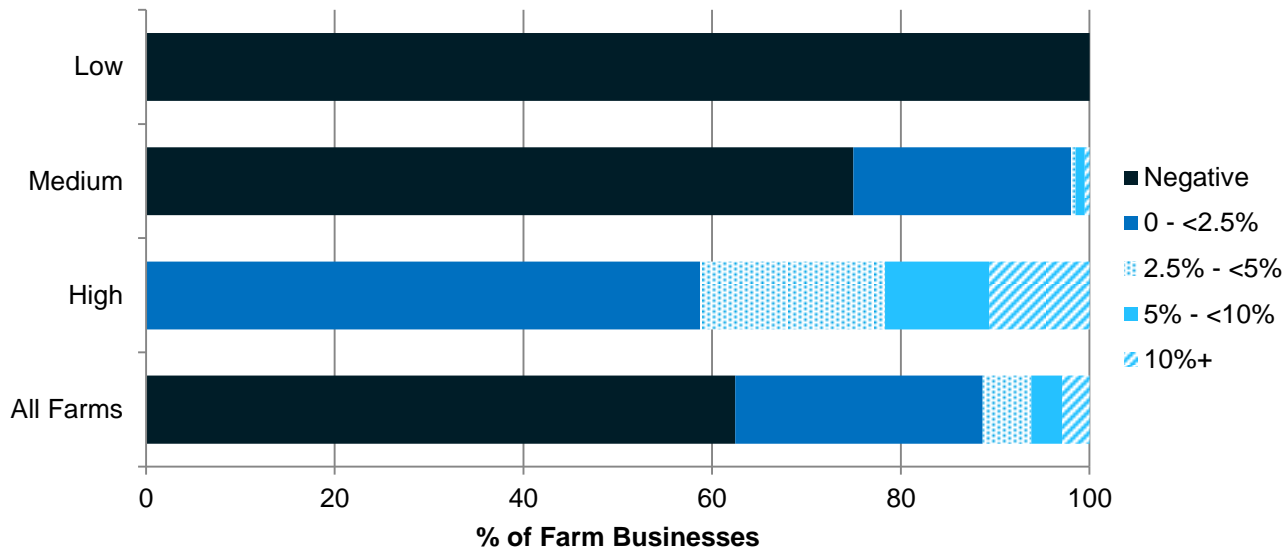
**Figure 6.8 Box plots showing spread of ROCE by farm economic performance covering 5%, 25%, 50%, 75% and 95% of farms, England 2015/16.**



The vertical line represents the median ROCE, with the box itself showing the spread of the first and third quartiles; the spread between this and the first 5% of farms and the top 5% of farms are represented by the horizontal lines

As in 2014/15, all farms classed as low performers had a negative ROCE. In comparison, almost all of the highest performing farms had a positive ROCE, as shown in Figure 6.9.

**Figure 6.9 Distribution of ROCE by farm economic performance, England 2015/16.**



The negative and 0-<2.5% groups have been combined for high performing farms due to insufficient observations.

## Survey details

### Survey content and methodology

The Farm Business Survey (FBS) is an annual survey providing information on the financial position and physical and economic performance of farm businesses in England. The sample of around 1,800 farm businesses covers all regions of England and all types of farming with the data being collected by face to face interview with the farmer. Results are weighted to represent the whole population of farm businesses that have at least 25 thousand Euros of standard output<sup>19</sup> as recorded in the annual June Survey of Agriculture and Horticulture. In 2015, this accounted for approximately 56,500 farm businesses<sup>20</sup>.

For further information about the Farm Business Survey please see:

<https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/series/farm-business-survey>

### Data analysis

The results from the FBS relate to farms which have a standard output of at least 25,000 Euros. Initial weights are applied to the FBS records based on the inverse sampling fraction for each design stratum (farm type by farm size). These weights are then adjusted (calibration weighting<sup>21</sup>) so that they can produce unbiased estimators of a number of different target variables.

The data used for this analysis is from those farms present in the Farm Business Survey for 2009/10 to 2015/16 that have complete returns on their assets and liabilities. In 2015/16 this sub sample consisted of 1792 farms. This subsample has been reweighted using a method that preserves marginal totals for populations according to farm type and farm size groups. As such, farm population totals for other classifications (e.g. regions) will not be in-line with results using the main FBS weights, nor will any results produced for variables derived from the rest of the FBS (e.g. farm business income).

### Accuracy and reliability of the results

We show 95% confidence intervals against the results. These show the range of values that may apply to the figures. They mean that we are 95% confident that this range contains the true value. They are calculated as the standard errors (se) multiplied by 1.96 to give the 95% confidence interval (95% CI). The standard errors only give an indication of the sampling error. They do not reflect any other sources of survey errors, such as non-response bias.

For the Farm Business Survey, the confidence limits shown are appropriate for comparing groups within the same year only; they should not be used for comparing with previous years since they do not allow for the fact that many of the same farms will have contributed to the Farm Business Survey in both years.

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<sup>19</sup> For a definition of standard output please see the UK classification document here <https://www.gov.uk/farm-business-survey-technical-notes-and-guidance>

<sup>20</sup> Prior to the 2010/11 campaign, the coverage of the FBS was restricted to those farms of size  $\frac{1}{2}$  Standard Labour Requirement (SLR) or more. For a definition of SLR please see the UK classification document here: <https://www.gov.uk/farm-business-survey-technical-notes-and-guidance>

<sup>21</sup> Further information on calibration weighting can be found here: <https://www.gov.uk/farm-business-survey-technical-notes-and-guidance>

We have also shown error bars on the figures in this notice. These error bars represent the 95% confidence intervals (as defined above).

For the FBS, figures based on less than 15 observations these have been highlighted in the tables.

### **Availability of results**

This release contains headline results for each section. The full breakdown of results, by farm type, farm size tenure, region and economic performance can be found at:

<https://www.gov.uk/government/collections/farm-business-survey#documents>

Defra statistical notices can be viewed on the Food and Farming Statistics pages on the Defra website at <https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/statistics>. This site also shows details of future publications, with pre-announced dates.

### **Data Uses**

Data from the Farm Business Survey (FBS) are provided to the EU as part of the Farm Accountancy Data Network (FADN). The data have been used to help inform policy decisions (e.g. Reform of Pillar 1 and Pillar 2 of Common Agricultural Policy) and to help monitor and evaluate current policies relating to agriculture in England (and the EU). It is also widely used by the industry for benchmarking and informs wider research into the economic performance of the agricultural industry.

### **User engagement**

As part of our ongoing commitment to compliance with the Code of Practice for Official Statistics <http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html>, we wish to strengthen our engagement with users of these statistics and better understand the use made of them and the types of decisions that they inform. Consequently, we invite users to make themselves known, to advise us of the use they do, or might, make of these statistics, and what their wishes are in terms of engagement. Feedback on this notice and enquiries about these statistics are also welcome.

## Definitions

### Mean

The mean (average) is found by adding up the weighted variable of interest (e.g. liabilities or net worth) for each individual farm in the population for analysis and dividing the result by the corresponding weighted number of farms. In this report average is usually taken to refer to the mean.

### Percentiles

These are the values which divide the population for analysis, when ranked by an output variable (e.g. ROCE or net worth), into 100 equal-sized groups. For example, twenty five percent of the population would have incomes below the 25th percentile.

### Median

The median divides the population, when ranked by an output variable, into two equal sized groups. The median of the whole population is the same as the 50<sup>th</sup> percentile.

### Farm Type

Where reference is made to the *type of farm* in this document, this refers to the 'robust type', which is a standardised farm classification system.

### Farm Sizes

Farm sizes are based on the estimated labour requirements for the business, rather than its land area. The farm size bands used within the detailed results tables which accompany this publication are shown in the table below. Standard Labour Requirement (SLR) is defined as the theoretical number of workers required each year to run a business, based on its cropping and livestock activities.

<b>Farm size</b>	<b>Definition</b>
Spare & Part time	Less than 1 SLR
Small	1 to less than 2 SLR
Medium	2 to less than 3 SLR
Large	3 to less than 5 SLR
Very Large	5 or more SLR

### Farm Economic performance

*Economic performance* for each farm is measured as the ratio between economic output (mainly sales revenue) and inputs (costs). The inputs for this calculation include an adjustment for unpaid manual labour. The higher the ratio, the higher the economic efficiency and performance. The farms are then ranked and allocated to performance bands based on economic performance percentiles:

- **Low performance band** - farms who took part in the fertiliser survey and were in the bottom 25% of economic performers
- **Medium performance band** - farms who took part in the fertiliser survey and were in the middle 50% of performers
- **High performance band** - farms who took part in the fertiliser survey and were in the top 25% of performers.

### Assets

Assets include milk and livestock quotas, as well as land, buildings (including the farm house), breeding livestock, and machinery and equipment. For tenanted farmers, assets can include farm buildings, cottages, quotas, etc., where these are owned by the occupier.

Personal possessions (e.g. jewellery, furniture, and possibly private cash) are not included.

### **Net worth**

Net worth represents the residual claim or interest of the owner in the business. It is the balance sheet value of assets available to the owner of the business after all other claims against these assets have been met. Net worth takes total liabilities from total assets, including tenant type capital and land. This describes the wealth of a farm if all of their liabilities were called in.

### **Liabilities**

Liabilities are the total debt (short and long term) of the farm business including monies owed. It includes mortgages, long term loans and monies owed for hire purchase, leasing and overdrafts.

### **Tenant type capital**

Tenant type capital comprises assets normally provided by tenants and includes livestock, machinery, crops and produce in store, stocks of bought and home-grown feeding stuffs and fodder, seeds, fertilisers, pesticides, medicines, fuel and other purchased materials, work in progress (tillages or cultivations), cash and other assets needed to run the business. Orchards, other permanent crops, such as soft fruit and hop gardens and glasshouses, are also generally considered to be tenant-type capital.

### **Return on capital employed (ROCE)**

Return on capital employed (ROCE) is a measure of the return that a business makes from the available capital. ROCE provides a more holistic view than profit margins, focusing on efficient use of capital and low costs and allowing an equal comparison across farms of differing sizes. It is calculated as economic profit divided by capital employed.

### **Liquidity ratio**

The liquidity ratio shows the ability of a farm to finance its immediate financial demands from its current assets, such as cash, savings or stock. It is calculated as current assets divided by the current liabilities of the farms.

### **Gearing ratio**

The gearing ratio gives a farm's liabilities as a proportion of its assets

### **Utilised Agricultural Area (UAA)**

Utilised Agricultural Area (UAA) is the crop area, including fodder, set-aside land, temporary and permanent grass and rough grazing in sole occupation (but not shared rough grazing) i.e. the agricultural area of the farm. It includes bare land and forage let out for less than one year.

### **Farm business income (FBI)**

Farm Business Income (FBI) for sole traders and partnerships represents the financial return to all unpaid labour (farmers and spouses, non-principal partners and directors and their spouses and family workers) and on all their capital invested in the farm business, including land and buildings. For corporate businesses it represents the financial return on the shareholders capital invested in the farm business. Note that prior to 2008/09 directors remuneration was not deducted in the calculation of farm business income. It is used when assessing the impact of new policies or regulations on the individual farm business. Although Farm Business Income is equivalent to financial Net Profit, in practice they are likely to differ because Net Profit

is derived from financial accounting principles whereas Farm Business Income is derived from management accounting principles. For example in financial accounting output stocks are usually valued at cost of production, whereas in management accounting they are usually valued at market price. In financial accounting depreciation is usually calculated at historic cost whereas in management accounting it is often calculated at replacement cost.

## Annex A: How the Return on Capital Employed measure has been calculated using the FBS

Return on capital employed (ROCE) is a measure of the return that a business makes from the available capital. ROCE provides a more holistic view than profit margins, focusing on efficient use of capital and low costs and allowing an equal comparison across farms of differing sizes. Return on Capital Employed (ROCE) is calculated as:

$$\frac{\text{Earnings before Interest and Tax}}{\text{Total Assets less Current Liabilities}}$$

**'Total assets less current liabilities'**, or TALCL, gives the value of the assets held by a farm which contribute to its ability to generate revenue.

**'Earnings before interest and tax'**, or EBIT, is the net revenue generated by the farm's use of this asset base. This therefore allows for direct comparisons of the efficiency of different farms at using their assets to generate revenue, taking into account their relative ability to keep costs down.

This means that a higher ROCE can be achieved by either having a large net profit relative to the assets held by the farm, or by having a small capital employed base. A low ROCE will be generated where a farm has low profits and/or has a large amount capital employed relative to profits.

The Farm Business Survey collects detailed accounting data on a sample of around 1,900 farms per year. This information can be used to build up a measure of ROCE for each farm by calculating the associated EBIT and TALCL.

Although the calculation is simple there are issues which need to be addressed in order to ensure that the measure is robust and that any comparisons that are made give insight into real differences in profitability and efficiency of farms, and are not simply an artefact of the measurement process.

There are three particular areas which will determine the robustness of the measure:

- Ensuring that the large fluctuations in farm income from year to year do not distort the picture of profitability;
- How farms of different tenure types are treated.
- Ensuring that we understand the structure of farm debts and the psychology behind farm borrowing and how this relates to the definition of current and long term liabilities.

### Tenure types

Tenanted farms have much smaller capital bases than owner occupied farms. Given the use of the asset base in the denominator of the ROCE measure, comparing the ROCE of an owner occupied farm and a tenanted farm of the same type, size and with the same EBIT, the ROCE of the tenanted farm will be artificially inflated. Many farms are partially tenanted so ways to ensure that the measure treats tenanted and owner occupied farms equally were considered. Two ways were considered of how to do this.

- An imputed rent could be calculated for owner occupied farms and taken from their EBIT. The FBS systematically calculates an imputed rent for all owner occupied



land on the basis of the grade of the soil and the rental value of surrounding land. Given that the profitability of both tenant type capital and owner occupied farms now allows for a return on the value of the land (which is siphoned to the real or assumed land owner), ROCE should be measured with EBIT relative to tenant type capital (less current liabilities). This measure may mean that some large owner occupied farms will show negative EBIT as a result of charging imputed rent where they would not have done otherwise.

- A net present value of tenanted land could be calculated and added onto the tenant type capital of tenanted farms to make their asset bases comparable to owner occupied farms. EBIT would then be calculated without subtracting rent from tenanted farms' gross incomes. This is more difficult to do because of the need to make assumptions about the length of the tenancies.

The ROCE measure represents the return on the money invested into the business, so for owner occupied farms these farms do not in fact have any associated rent. Therefore within this statistical notice it was decided that the ROCE measure presented (Farm Business Income based) would not deduct an imputed rent for owner occupied farms

### **Structure of debt**

Current liabilities are defined as liabilities which could be called in over the next year. Generally current liabilities include the cost of hire purchase, leasing, creditors and bank overdraft. It is important to understand the structure of debt in the farming industry. Capital employed (or TALCL) is meant to capture the capital the farm has at its disposal with which to earn profit on over the year. Farms often have very large overdrafts, making up a large proportion of their total liabilities. Farmers enjoy the flexibility of using overdrafts to borrow money compared to using structured loans. This raises the question of how overdrafts should be treated. A previous study using the 2007/08 to 2009/10 FBS showed that a little over 40% of farms did not use their overdrafts; these farms would not be affected by the treatment of the overdraft. However, about 1/3 farms were overdrawn for all three years of 2007-2009 so it was not clear cut whether overdraft should be treated as a long or short term liability.

Table A.1, shows ROCE (Net Farm Income based) where the overdraft was treated as a short term liability on the horizontal against ROCE (Net Farm Income based) where the overdraft was treated a long term liability on the vertical. The impacts of using the ROCE measure that treats the overdraft as a long term liability were:

- Many farms which appeared to have a negative ROCE in the measure treating an overdraft as a current liability had a positive ROCE in the measure with the overdraft as a long term liability. It is likely that these farms are using overdrafts as a flexible form of borrowing.
- Returns tend to be suppressed relative to the measure treating the overdraft as a short term liability. This is because treating the overdraft as a short term liability reduces the level of working capital for farms, implying higher returns relative to the capital employed. If a farm does not intend to pay off their overdraft in that year then the measure treating the overdraft as a short term liability will inflate the apparent profitability of that farm.

Treating the overdraft of the farm as a long term liability was therefore preferred.

**Table A.1: Comparing Impacts of Treating Overdraft as a Long and Short Term Liability in Measuring ROCE (Net Farm Income based), 2007-2009 FBS**

		ROCE (overdraft short term liability)						
		Negative	≥0 <0.1	≥0.1 <0.2	≥0.2 <0.4	≥0.4 <0.6	≥0.6 <1	≥1
ROCE (overdraft long term liability)	Negative	65%	0%	1%	0%	0%	0%	0%
	≥0 <0.1	27%	97%	11%	2%	0%	3%	5%
	≥0.1 <0.2	4%	2%	88%	17%	1%	8%	0%
	≥0.2 <0.4	3%	0%	0%	81%	42%	24%	2%
	≥0.4 <0.6	1%	0%	0%	0%	56%	16%	21%
	≥0.6 <1	0%	0%	0%	0%	0%	50%	8%
	≥1	0%	0%	0%	0%	0%	0%	65%

Source: Farm Business Survey, 2007/08 to 2009/10

### Calculation

The ROCE measure presented in this statistical notice has been calculated in the following way:

- Earnings are calculated by using Defra’s main income measure, Farm Business Income (FBI), minus the imputed cost of all unpaid labour. Capital employed has been calculated by subtracting current liabilities<sup>22</sup> (i.e. short term) from total assets.

### Issues with the measure

The FBS survey will take the capital base of a farm at a certain point in the year. Where farms can seasonally have large differences in the tenant type capital we will not be correctly capturing the denominator of the measure. For example, it is possible that the FBS survey of a poultry farm could take place immediately after all the birds have been slaughtered, although this is only likely to happen on farms that are very small. This would make the capital much lower than it is in reality, making the apparent profitability too high.

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<sup>22</sup> Short term liabilities are deducted in order to measure the capital assets that would remain after short term commitments have been met. Overdrafts are treated as a long term liability and therefore not deducted.