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of Defence



Defence Inflation Estimates Statistical Notice 2012/13

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Executive Summary

The defence inflation statistic measures the average change in pay, and prices of goods and services, making up the defence budget, with quality and quantity held constant.

This statistical notice presents estimates of defence inflation for financial years 2005/06 to 2012/13.

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Revisions to the previously published 2012/13 Statistical Notice

Following the publication of the 2012/13 Statistical Notice on 30 January 2014, an error was identified within the calculation of the low value commodities and service contracts inflation rate. The correction has impacted on the low value and service contracts inflation rate (revised from 2.2% to 1.3%), the overall contract inflation rate (revised from 2.3% to 2.2%) and the overall Defence inflation rate (revised from 1.7% to 1.5%). These corrections are indicated with an 'r' marker within tables.

Rounding

All percentages are quoted to 1 decimal place. Individual percentages may not sum to the total due to rounding.

IMPORTANT NOTE: Changes to the GDP deflator

Users may wish to note that this revised report contains updated figures for the Gross Domestic Product (GDP) deflator, using the latest data from the Office for National Statistics (ONS). The 2012/13 estimate of the GDP deflator has been revised since the original Defence Inflation Estimates publication in January 2014.

Further information on the recent revisions to the GDP deflator can be found at the following link: <http://www.ons.gov.uk/ons/rel/naa2/second-estimate-of-gdp/q4-2013/stb-second-estimate-of-gdp--q4-2013.html#tab-background-notes>

Although all comparisons with general inflation in this report are correct at the time of publication, it is possible that ONS will make further revisions to the GDP deflator during the year. For the latest data users should refer to the ONS website: <http://www.ons.gov.uk/ons/index.html>

Key Findings

- Defence inflation was 1.5% in 2012/13 (**Table 1**).
- The 2012/13 estimate of defence inflation is the lowest since estimates began in 2005/06; it is both lower than the previous year's figure (3.4%) and the year-on-year average from 2005/06 (3.5%). The previous lowest estimate of defence inflation was 3.2% in 2009/10.
- The biggest driver for the low overall rate of defence inflation in 2012/13 was low inflation in defence labour costs. Defence labour cost inflation was 0.5% in 2012/13, considerably lower than the figure for 2011/12 (3.4%) and the year-on-year average from 2005/06 (3.7%). The largest decrease was for military labour cost inflation, which was 0.5% in 2012/13 compared to 3.9% in 2011/12; the key drivers were lower inflation in basic and specialist pay and low inflation in employer pension contributions. Civilian labour cost inflation has also fallen, to 0.5% in 2012/13 compared to 1.3% in 2011/12, driven largely by low inflation in gross pay.
- Inflation in defence contract expenditure was 2.2% in 2012/13, which is lower than in any previous year. The 2012/13 estimate is 1.2 percentage points lower than the year-on-year average from 2005/06 to 2012/13 (3.3%), and 1.3 percentage points lower than last year's figure (3.4%). This reflects the downward pressure on prices in many industry sectors over this period. Inflation has fallen in all the main contract types except for High Value Firm contracts, which saw a slight increase in inflation compared to in 2011/12.
- Inflation in cash offices expenditure was 1.2% in 2012/13, 0.6 percentage points lower than in 2011/12. Annual inflation rates have been more volatile for this spending area than for labour costs or contract expenditure, and it has a small weighting in the overall defence inflation estimate. Although 1.2% is not the lowest level of inflation seen for cash offices to date, it is considerably lower than the year-on-year average of 4.3%.
- In 2012/13, inflation in the GDP deflator was 1.1% and inflation in RPIX (a widely accepted proxy for UK general inflation) was 3.1%. Between 2005/06 and 2009/10 defence inflation remained higher than both the GDP deflator and RPIX. Since 2010/11 defence inflation has remained higher than the GDP deflator, but lower than RPIX.

Table 1: Defence Inflation, 2005/06 to 2012/13

<i>Weights¹</i>	Defence Contracts²	Labour Costs²	Cash Offices²	All Defence (UK)
	<i>630</i>	<i>351</i>	<i>18</i>	<i>1000</i>
Financial Year	Growth Rate³			
2005/06	3.4%	5.6%	0.9%	4.1%
2006/07	3.4%	3.5%	1.4%	3.4%
2007/08	3.7%	4.3%	2.4%	3.9%
2008/09	4.2%	3.6%	9.3%	4.2%
2009/10	2.5%	4.0%	8.2%	3.2%
		-----		-----
2010/11 ⁴	3.8%	4.7%	9.7%	4.2%
	-----			-----
2011/12 ⁵	3.4%	3.4%	1.7%	3.4%
2012/13	2.2%^r	0.5%	1.2%	1.5%^r

[1] These weights apply to the 2012/13 measure. Due to chain-linking, weights reflect the expenditure pattern within the base year not the reference year e.g. for the 2012/13 inflation measure weights reflect expenditure in 2011/12. Due to rounding the weights may not sum to 1000.

[2] For the definitions of 'Defence Contracts', 'Labour Costs', and 'Cash Offices' used for the defence inflation estimates, refer to the **Glossary**.

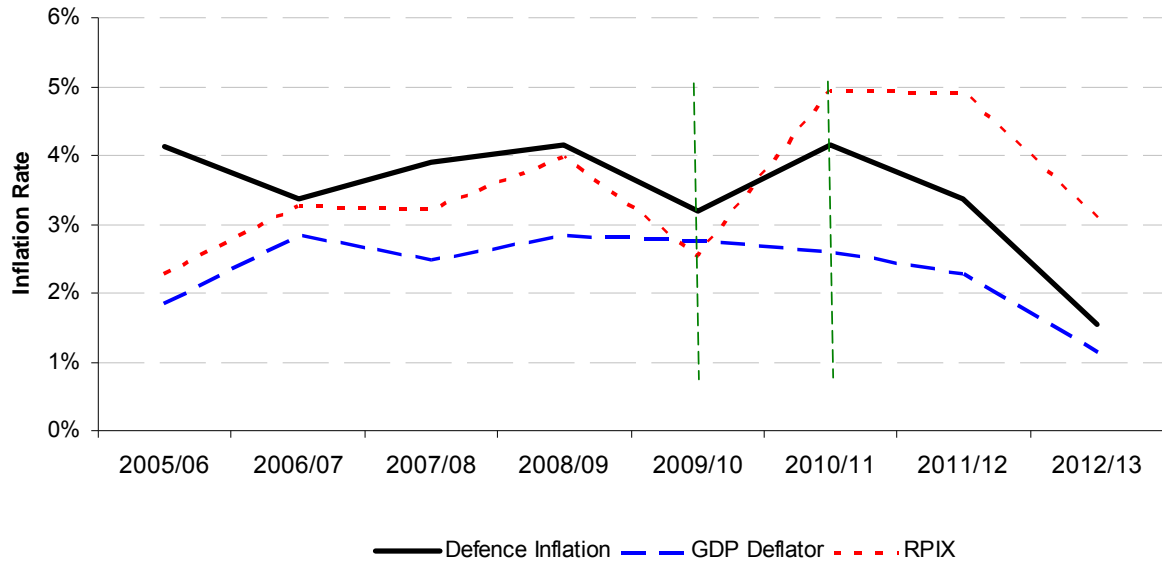
[3] Growth rates are year-on-year and calculated from unrounded data.

[4] From 2010/11, the methodology for estimating inflation in military labour costs was reviewed and improved following availability of new data sources. The change in methodology means comparisons of 2010/11 and onwards military labour cost inflation rates with historical estimates are not possible. For further details refer to [Defence Inflation: Military Labour Costs – Statistical Bulletin No. 12](#).

[5] From 2011/12, the methodology for estimating the adjustment to contract inflation as a result of foreign exchange was reviewed and improved following availability of a new data source. The change in methodology means comparisons of 2011/12 and 2012/13 contract inflation rates with historical estimates are hindered. For further details refer to **Chapter 5: Methodology**.

[r] Indicates a change to the figure previously published in the 2012/13 Statistical Notice.

Figure 1: Defence Inflation and General Inflation, 2005/06 to 2012/13



Source: Annual inflation rates for RPIX and the GDP deflator from the Office for National Statistics.

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1 Defence Inflation: Summary Results

The defence inflation estimates capture inflation in the inputs to Defence. They reflect the mix of goods, labour and services bought each year, and do not take account of productivity or efficiency improvements.

Headline Results

In 2012/13, defence inflation was 1.5%. As **Figure 2** shows, the 2012/13 estimate of defence inflation is the lowest since estimates began in 2005/06, and is considerably lower than the previous year's figure (3.4%) and the year-on-year average from 2005/06 (3.5%). The previous lowest estimate of defence inflation was 3.2% in 2009/10.

There were no major changes in the defence inflation methodology between 2011/12 and 2012/13. However, a change in methodology for calculating inflation in military labour costs between 2009/10 and 2010/11 hinders direct comparisons with earlier years. For further information refer to [Defence Inflation: Military Labour Costs – Statistical Bulletin No. 12](#). An additional change in methodology to calculate contract inflation adjustments as a result of foreign exchange, between 2010/11 and 2011/12 also hinders direct comparisons with earlier years. Further details on the methodology improvements can be found in **Chapter 5: Methodology**.

Figure 2: Defence Inflation, 2005/06 to 2012/13

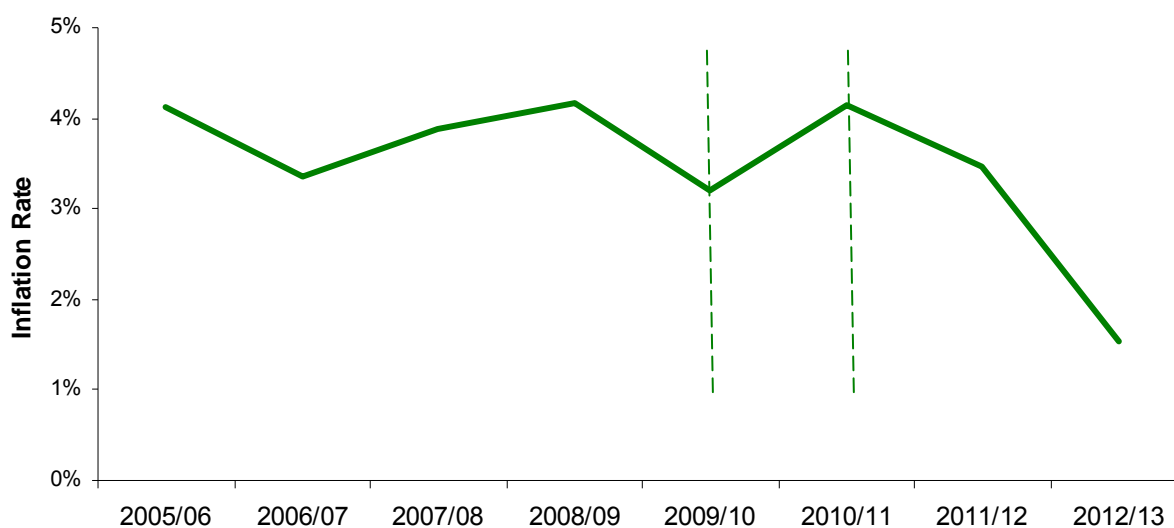


Table 2 presents chain-linked Laspeyres price index numbers and equivalent year-on-year growth rates for the three main components of defence – defence contracts, labour costs and cash offices – as well as overall defence expenditure. The weights are expressed as values out of 1000 and reflect the contribution each component makes to the overall measure of defence inflation. For further details on the methodology refer to **Chapter 5: Methodology**, [Defence Inflation Statistical Bulletin No. 10](#) and [Defence Inflation: Military Labour Costs – Statistical Bulletin No. 12](#).

Table 2: Defence Inflation, 2005/06 to 2012/13

	Defence Contracts ²		Labour Costs ²		Cash Offices ²		All Defence (UK)	
<i>Weights¹</i>	630		351		18		1000	
Financial Year	Index & Growth Rate ³							
2004/05	100.0	-	100.0	-	100.0	-	100.0	-
2005/06	103.4	3.4%	105.6	5.6%	100.9	0.9%	104.1	4.1%
2006/07	106.9	3.4%	109.2	3.5%	102.2	1.4%	107.6	3.4%
2007/08	110.9	3.7%	113.9	4.3%	104.7	2.4%	111.8	3.9%
2008/09	115.5	4.2%	118.0	3.6%	114.4	9.3%	116.5	4.2%
2009/10	118.4	2.5%	122.6	4.0%	123.8	8.2%	120.2	3.2%
2010/11 ⁴	122.9	3.8%	128.3	4.7%	135.8	9.7%	125.2	4.2%
2011/12 ⁵	127.1	3.4%	132.6	3.4%	138.2	1.7%	129.4	3.4%
2012/13	129.8	2.2% ^r	133.3	0.5%	139.8	1.2%	131.4	1.5% ^r

[1] These weights apply to the 2012/13 measure. Due to chain-linking, weights reflect the expenditure pattern within the base year not the reference year e.g. for the 2012/13 inflation measure weights reflect expenditure in 2011/12. Due to rounding the weights may not sum to 1000.

[2] For the definitions of 'Defence Contracts', 'Labour Costs', and 'Cash Offices' used for the defence inflation estimates, refer to the **Glossary**.

[3] Growth rates are year-on-year and calculated from unrounded data.

[4] From 2010/11, the methodology for estimating inflation in military labour costs was reviewed and improved following availability of new data sources. The change in methodology means comparisons of 2010/11 and onwards military labour cost inflation rates with historical estimates are not possible. For further details refer to [Defence Inflation: Military Labour Costs – Statistical Bulletin No. 12](#).

[5] From 2011/12, the methodology for estimating the adjustment to contract inflation as a result of foreign exchange was reviewed and improved following availability of a new data source. The change in methodology means comparisons of 2011/12 and 2012/13 contract inflation rates with historical estimates are hindered. For further details refer to **Chapter 5: Methodology**.

[r] Indicates a change to the figure previously published in the 2012/13 Statistical Notice.

Comparison with General Inflation

Input measures of inflation (such as defence inflation) do not take account of productivity or efficiency improvements. Consequently, input measures generally have higher growth than comparative output measures. Therefore, the overall measure of defence inflation (an input measure) is not directly comparable to output measures of general inflation such as the Gross Domestic Product (GDP) deflator or the Retail Price Index excluding mortgage interest payments (RPIX).

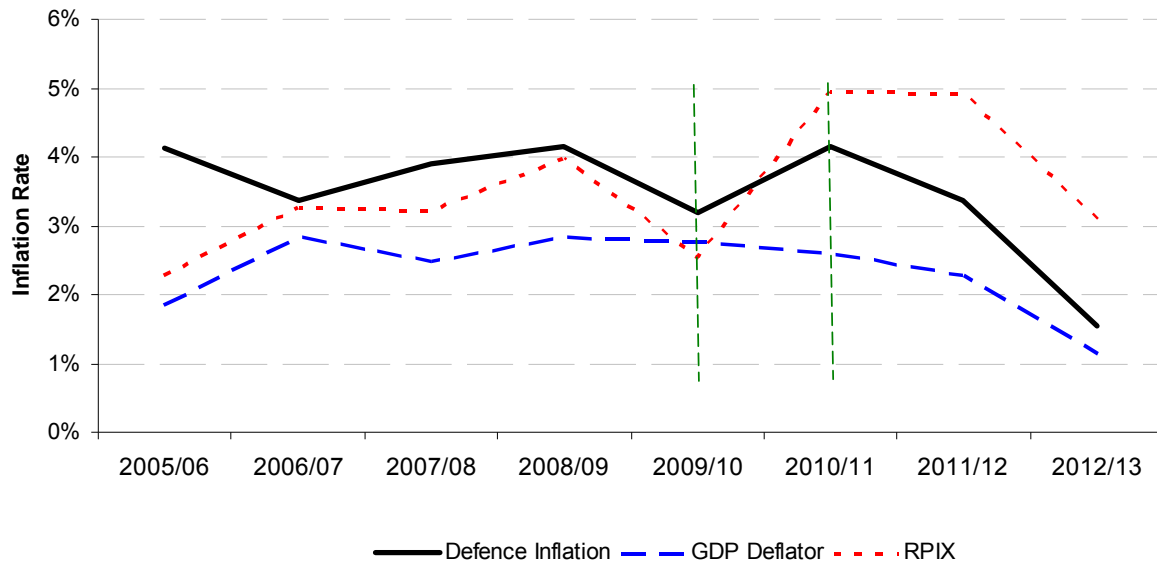
Inflation in the GDP deflator was 1.1% in 2012/13, and inflation in RPIX (a widely accepted proxy for UK general inflation) was 3.1%. In 2012/13, defence inflation was 1.5 percentage points lower than inflation in RPIX, and 0.4 percentage points higher than inflation in the GDP deflator.

This is a similar pattern to 2010/11 and 2011/12, when defence inflation was lower than RPIX but higher than the GDP deflator, but in contrast to the five years from 2005/06 to 2009/10, when defence inflation was higher than both of these inflation measures (**Figure 3**). As **Figure 3** shows, the decrease in defence inflation since 2010/11 closely reflects the decrease in RPIX inflation over the same period.

When we originally published the 2012/13 defence inflation estimates in January 2014, we found that for the first time, defence inflation was slightly lower than inflation in the GDP deflator, which at the time was 1.8%. Since that publication, inflation in the GDP deflator has been revised by the Office for National Statistics, and is now 1.1% for 2012/13. This means that defence inflation is now above the GDP deflator, as it had been in previous years. However, the gap between defence inflation and inflation in the GDP deflator has reduced over the last three years.

Between 2005/06 and 2012/13, defence inflation was on average 1.1 percentage points higher than inflation in the GDP deflator and 0.1 percentage points lower than RPIX.

Figure 3: Defence Inflation and General Inflation, 2005/06 to 2012/13



Source: Annual inflation rates for RPIX and the GDP deflator from the Office for National Statistics.

Cost Growth, Optimism Bias, and Intergenerational Effects

Cost growth, optimism bias and intergenerational effects make it difficult to determine the underlying impact of external economic conditions on defence expenditure.

Cost growth is when a MOD project suffers cost or schedule over run. This apparent cost growth is often an “accounting problem” or a failure to specify needs accurately, rather than the result of external economic conditions flowing into defence. Additionally, the Department may be over-optimistic in its initial estimates of equipment and support contracts; known as **optimism bias**. The subsequent changes in price merely reflect realism.

As the Department moves to new platforms there are usually step increases in unit costs, known as **intergenerational effects**. Intergenerational effects result from the Department choosing to buy more expensive platforms as they adapt to changing threats, rather than as a result of economic conditions flowing into defence. Defence Economics estimate that the average real intergenerational cost growth is between 3.5% and 6%, varying by platform type.

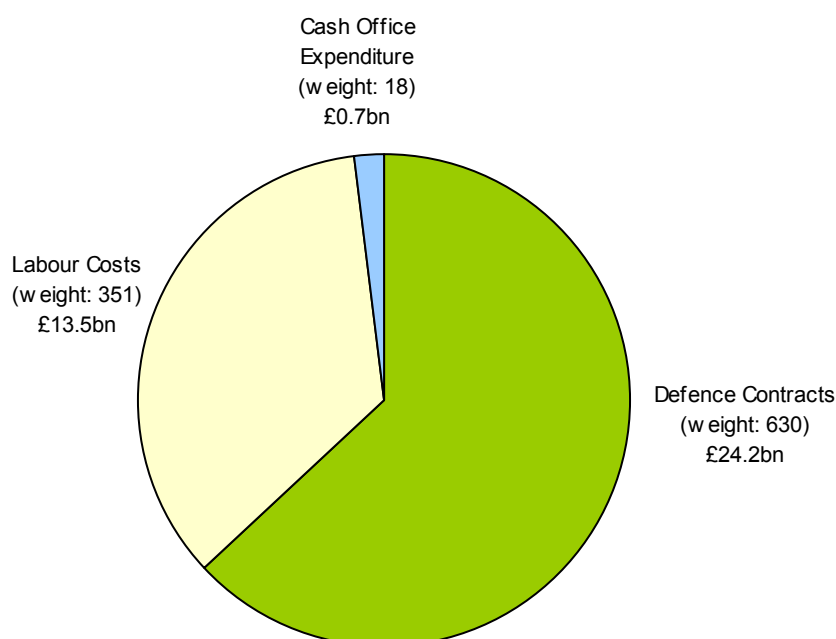
Users and Uses of Defence Inflation estimates

The main motivation for the development of a measure of defence inflation was to inform parliamentary and national debate on Defence expenditure. The statistics have been used by academics for research purposes and by the government in making and monitoring policy. The key external users include the general public, media, defence industry, academics, the National Audit Office and Parliament (in particular the House of Commons Defence Committee and Parliamentary Accounts Committee).

Many of the key users of the defence inflation estimates are internal users within the MOD. The statistics are useful to the department in planning for budget and Spending Round negotiations with HM Treasury, dealing with parliamentary interest in the Department’s expenditure, assessing the effectiveness of commercial policy and allocating budgets.

Expenditure and Weights

The 2012/13 defence inflation estimates utilise expenditure figures for the base year 2011/12 (**Figure 4**). For further details refer to **Chapter 5: Methodology**.

Figure 4: Defence Inflation Expenditure by Category, 2011/12

Expenditure in 2011/12 – used within the 2012/13 defence inflation measure – was £38.4bn, a decrease of £185million (0.5%) compared to 2010/11.

Table 3: Defence Inflation Expenditure by Category, 2004/05 to 2011/12

	<i>£ million</i>							
	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
All Defence (UK)	29,386	30,879	31,387	34,361	37,438	38,652	38,611	38,426
Defence Contracts	17,065	18,085	18,352	20,795	23,653	24,873	24,567	24,218
Labour Costs	11,313	11,703	11,896	12,166	12,598	13,193	13,453	13,504
Cash Office Expenditure	1,008	1,091	1,139	1,399	1,186	586	592	703

Contracts

Expenditure on contracts accounts for nearly two-thirds of the total expenditure captured within the 2012/13 defence inflation measure.

In 2012/13, inflation in defence contract expenditure was 2.2%, which is lower than in any previous year (**Table 2**). The 2012/13 estimate is 1.2 percentage points lower than the year-on-year average from 2005/06 to 2012/13 (3.3%), and 1.3 percentage points lower than last year's figure (3.4%). Inflation has fallen in all the main contract types except for High Value Firm contracts, which saw a slight increase in inflation compared to in 2011/12.

Between 2005/06 and 2012/13, inflation in contract expenditure ranged from 2.2% in 2012/13 to 4.2% in 2008/09.

The methodology for estimating inflation in defence contracts is dependent on price indices published by the Office for National Statistics (ONS). **Chapter 2: Contracts** presents further information on inflation within different types of contracts and further details on the key drivers.

Labour Costs

Expenditure on labour costs accounts for just over one third of the total expenditure captured within the 2012/13 defence inflation measure.

In 2012/13, inflation in labour cost expenditure was 0.5% (**Table 2**). The rates of inflation for military and civilian labour cost expenditure were the same; both were 0.5% in 2012/13 (**Table 6**). Between 2005/06 and 2012/13 inflation in labour costs averaged 3.7% year-on-year growth. Low inflation in labour costs was the biggest driver for the low overall rate of defence inflation in 2012/13.

Chapter 3: Labour Costs presents further information on the inflation rates within the components of labour costs for military and civilian personnel. This includes inflation rates within pay, employer National Insurance contributions (ERNIC), employer pension contributions (SCAPE), travel and subsistence, and allowances.

There were two small changes made to the labour costs methodology in 2012/13. These do not hinder comparability with the overall labour cost inflation estimates for previous years. Further details can be found in **Chapter 5: Methodology**. For details of earlier methodology developments refer to [Defence Inflation: Military Labour Costs – Statistical Bulletin No. 12](#).

Cash Office Expenditure

Cash office expenditure accounts for almost 2% of the total expenditure captured within the 2012/13 defence inflation measure.

The inflation rates within cash offices represent inflation due to expenditure on foreign currency by MOD cash offices, and domestic inflation within those countries.

In 2012/13, inflation in cash office expenditure was 1.2%. Broadly speaking the rate of inflation for cash offices is driven by the inflation rates affecting US Dollar and Euro purchases – the two currencies which contribute most to the total level of foreign currency spend – and movements in the exchange rates of these currencies against Sterling. For further details refer to **Chapter 4: Cash Office Expenditure**.

Contract Payments in Foreign Currencies

There is an additional inflationary pressure when contracts are paid in foreign currency. To account for this, in 2012/13 an adjustment of -0.3 percentage points, based broadly upon exchange rates the MOD achieved in its currency purchases, has been added to the estimates of inflation within contract expenditure.

The overall measure of contract inflation, and thus the overall defence inflation estimate, therefore captures the inflationary effect of paying for some contracts in foreign currencies. It is assumed that the impact is the same across all contract types. The breakdowns of inflation by contract type, presented in **Chapter 2: Contracts** also capture this effect, including the analysis of contracts by industry type.

In 2011/12 the methodology for estimating overall expenditure for contract payments in US Dollars, Euros and other foreign currencies was reviewed and improved. As a result, comparisons with estimates produced before that year are hindered. Further details on the methodology and historical adjustments are provided in **Chapter 5: Methodology**.

2 Contracts

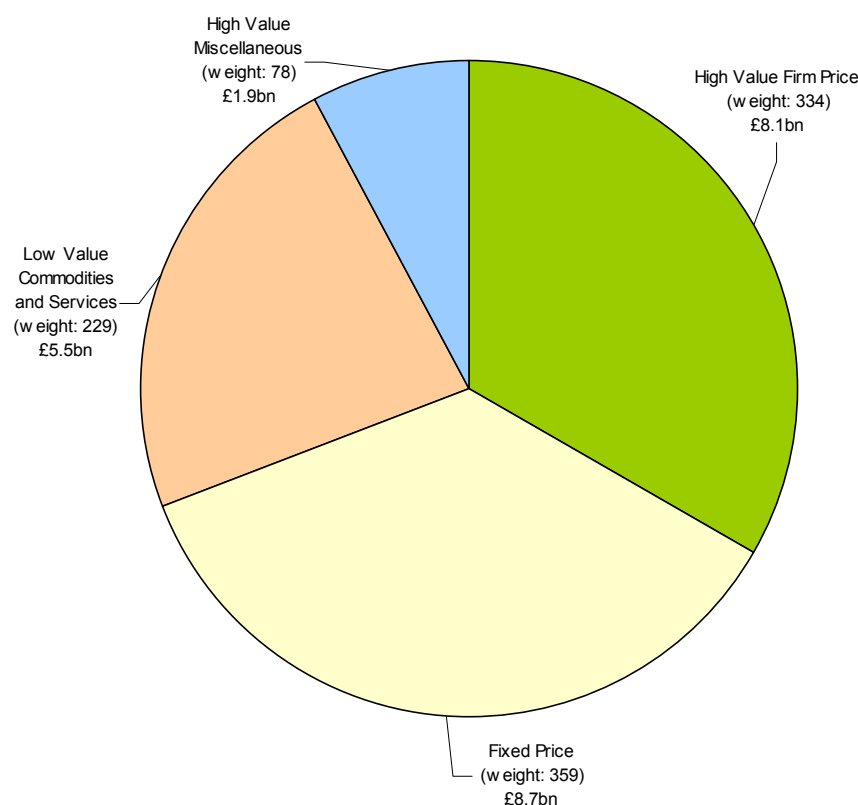
Key Findings

- Inflation in contract expenditure was 2.2% in 2012/13.
- Inflation in equipment and non-equipment contracts was very similar: with an overall rate of 2.3% for equipment contracts in 2012/13 compared to 2.2% for non-equipment contracts.
- Approximately one sixth of contract expenditure (16.5%) was associated with the aircraft and spacecraft industry group. The inflation rate for these contracts was 2.6%, compared with the overall contract inflation rate of 2.2%.
- In 2012/13, inflation fell for all the main contract types except for high value firm priced contracts, which saw a slight increase in inflation (3.4% in 2012/13 compared to 3.3% in 2011/12). Inflation in fixed price contracts fell from 3.7% in 2011/12 to 1.7% in 2012/13, reflecting the downward trend in many industry-specific price indices over this period.

Expenditure and Weights

In 2011/12 the MOD had over 29,000 contracts with payments against them, accounting for £24bn (almost two thirds) of the Department's annual expenditure. Some of these contracts are for the provision of complex defence equipment and support, and can last for decades; some are for off-the-shelf goods and services; and some are miscellaneous payments, such as those to local authorities and international collaborative projects.

Defence Economics have defined four sub-groups of contracts (see **Glossary** for definitions). **Figure 5** presents the proportion of total contract expenditure spent on each sub-group.

Figure 5: Expenditure by Contract Type, 2011/12


Inflation Rates across Defence Contracts

In 2012/13, inflation in contract expenditure was 2.2% (Table 4), 1.2 percentage points lower than the average year-on-year growth rate (3.3%) between 2005/06 and 2012/13.

A change in methodology in 2011/12 for calculating the contract inflation adjustment as a result of foreign exchange hinders direct comparisons with historical estimates.

Table 4: Defence Inflation – Defence Contracts, 2005/06 to 2012/13

Contract Type	High Value Firm Price ²		Fixed Price ^{2,3}		Low Value Commodities and Services ²		High Value Miscellaneous ²		Defence Contracts	
Weights ¹	334		359		229		78		1000	
Financial Year	Index and Growth Rate ⁴									
2004/05	100.0	-	100.0	-	100.0	-	100.0	-	100.0	-
2005/06	102.9	2.9%	104.2	4.2%	103.2	3.2%	103.3	3.3%	103.4	3.4%
2006/07	106.2	3.2%	108.2	3.8%	106.8	3.4%	106.6	3.2%	106.9	3.4%
2007/08	109.7	3.3%	113.1	4.5%	110.7	3.7%	109.7	2.9%	110.9	3.7%
2008/09	114.0	4.0%	117.8	4.2%	115.5	4.3%	114.7	4.5%	115.5	4.2%
2009/10	119.2	4.5%	119.4	1.3%	117.6	1.8%	116.9	2.0%	118.4	2.5%
2010/11	124.2	4.2%	123.9	3.8%	121.2	3.1%	121.4	3.8%	122.9	3.8%
2011/12 ⁵	128.4	3.3%	128.5	3.7%	124.7	2.9%	125.8	3.6%	127.1	3.4%
2012/13	132.7	3.4%	130.7	1.7%	126.4 ^r	1.3% ^r	127.7	1.5%	129.8 ^r	2.2% ^r

[1] These weights apply to the 2012/13 measure. Due to chain-linking, weights reflect the expenditure pattern within the base year not the reference year e.g. for the 2012/13 inflation measure weights reflect expenditure in 2011/12. Due to rounding the weights may not sum to 1000.

[2] For the definitions of 'Contract Types' used for the defence inflation estimates, refer to the **Glossary**.

[3] Includes defence fuel contracts.

[4] Growth rates are year-on-year and calculated from unrounded data.

[5] From 2011/12, the methodology for estimating the adjustment to contract inflation as a result of foreign exchange was reviewed and improved following availability of a new data source. The change in methodology means comparisons of 2011/12 contract inflation rates with historical estimates are hindered. For further details refer to the methodology section of the 2011/12 Defence Inflation report:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/280007/2011-12-revised.pdf

[r] Indicates a change to the figure previously published in the 2012/13 Statistical Notice.

High Value Firm Price Contracts

High value firm price contracts are those with a non-variable inflation rate embedded in the contract price. Typically, rates will have been set by looking at long-term inflation of a relevant price index. As a result inflation within high value firm price contracts tend to more closely reflect long-term inflation.

Expenditure on high value firm price contracts accounts for one third of the 2012/13 defence inflation measure for contracts. The inflation rate for these contracts was 3.4% in 2012/13, compared with 3.3% in 2011/12 and a year-on-year average of 3.6% since 2005/06.

Fixed Price Contracts

Fixed price contracts contain an indexation adjustment linked to real-time changes in specific ONS price indices, as defined in the corresponding Variation of Price (VoP) clauses. Inflation within fixed price contracts tends to be more volatile as it 'tracks' year-on-year inflation of relevant price indices.

Expenditure on fixed price contracts accounts for 36% of the 2012/13 defence inflation measure for contracts. The inflation rate for these contracts was 1.7% in 2012/13, considerably lower than the 2011/12 inflation rate (3.7%).

One-third of expenditure on fixed price contracts was linked to the Retail Price Index excluding mortgage interest payments (RPIX), which reduced from 4.9% in 2011/12 to 3.1% in 2012/13. The overall fall in defence inflation closely follows this downwards trend in RPIX over the last year.

Fixed price contracts include defence fuel contracts. Defence fuel inflation rates were estimated to be 29% and 26% respectively in 2010/11 and 2011/12. However, in 2012/13 the department experienced deflation in defence fuel contracts (estimated at -1.5%) reducing the overall inflation estimate for fixed price contracts even further.

Low Value Commodities and Service Contracts

Expenditure on low value commodities and service contracts accounts for just under a quarter of the 2012/13 defence inflation measure for contracts. The inflation rate for these contracts was 1.3% in 2012/13, which is 1.6 percentage points lower than the average year-on-year growth rate between 2005/06 and 2012/13.

Low value contracts are assigned a Standard Industrial Classification (SIC) (see **Glossary** for further details), each with its own derived inflation rate. Inflation rates in 2012/13 are lower for three-quarters of the SIC groups assigned to low value contracts than in 2011/12, resulting in lower inflation overall.

High Value Miscellaneous Contracts

Expenditure on high value miscellaneous contracts accounts for 8% of the 2012/13 defence inflation measure for contracts. The inflation rate for these contracts was 1.5% in 2012/13, 1.6 percentage points lower than the average year-on-year rate between 2005/06 and 2012/13.

Similarly to low value contracts, inflation for high value miscellaneous contracts is linked to low inflation in the relevant SIC groups.

Inflation by Industry Group

The method of estimating inflation often relies upon the SIC code assigned to the contract. Defence Economics allocates each contract into one of 51 homogeneous groups, based upon its SIC code which reflects the good or service being procured. These 51 groups provide a useful tool for identifying relevant price indices for contracts, where information about inflation is not explicitly available. A contract's SIC group can also be used to indicate whether the contract relates to equipment or non-equipment acquisitions. Of the 51 SIC groups, 31 relate to equipment acquisitions and 20 relate to non-equipment acquisitions. For further details see [Defence Inflation Statistical Bulletin No. 10 \(Appendix 1\)](#).

In previous Defence Inflation publications the foreign exchange adjustment has not been applied to industry inflation rates. This has been changed for the 2012/13 measure in order to make these directly comparable with the overall contract inflation figure.

Table 5 presents inflation in contract expenditure broken down by industry, and grouped into equipment and non-equipment acquisitions. The ten industries with the highest expenditure are presented along with their associated inflation rates. For comparison, the 2011/12 inflation rates are also presented.

Table 5: Industry groups with the Greatest Contract Expenditure, with Inflation Rates

Industry	Weights ¹	Inflation rate	
		2011/12 ³	2012/13
Aircraft	165	2.5%	2.6%
Ships	74	3.3%	2.1%
Weapons and Ammunition	65	2.4%	1.5%
Mechanical Engineering	48	3.0%	2.6%
Other Equipment	105	2.7%	2.2%
All Equipment	457	2.7%	2.3%
Real Estate	63	3.6%	3.1%
Construction	52	2.6%	2.8%
Computer Activities	52	3.5%	2.2%
Legal, Accounting & Marketing	51	1.8%	1.4%
Wholesale & Retail Trade	40	13.3%	0.5%
Telecommunications	32	2.4%	1.7%
Other non-equipment	127	4.2%	2.6%
All non-equipment	417	4.2%	2.2%
Excluded Contracts ²	125	—	—

[1] These weights apply to the 2012/13 measure. Due to chain-linking, weights reflect the expenditure pattern within the base year not the reference year e.g. for the 2012/13 inflation measure weights reflect expenditure in 2011/12. Due to rounding weights may not sum 1000.

[2] Low value contracts without an industry classification assigned to them are not included in the industry analysis.

[3] The 2011/12 foreign exchange adjustment of -0.1% has been applied to allow comparison with the 2012/13 inflation rates. For this reason the industry inflation rates listed here differ from those published in the 2011/12 Defence Inflation Estimates Statistical Notice.

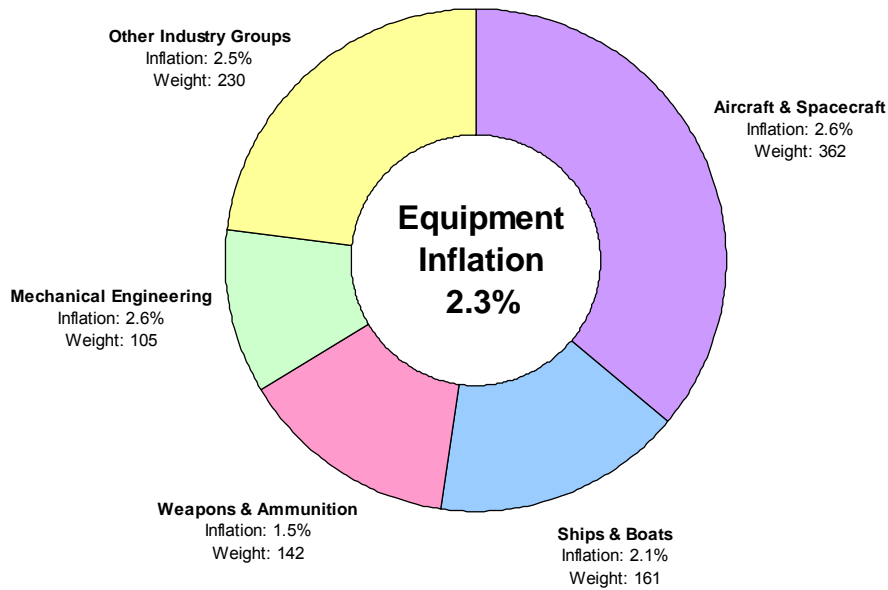
Contracts associated with the aircraft and spacecraft industry group accounted for approximately one sixth of expenditure on contracts (16.5%) and had an inflation rate of 2.6% in 2012/13, compared with 2.5% the previous year. Of the ten most significant industry groups by proportion of contract expenditure, the industry group with the highest inflation rate in 2012/13 was real estate (3.1%), although this was lower than in the previous year (3.6%).

Figure 6 and **Figure 7** show the distribution of expenditure within equipment (**Figure 6**) and non-equipment (**Figure 7**) contracts.

In 2012/13, equipment contracts had an overall inflation rate of 2.3%. Within equipment contracts, over one third of expenditure (36.2%) was associated with the aircraft and spacecraft industry group.

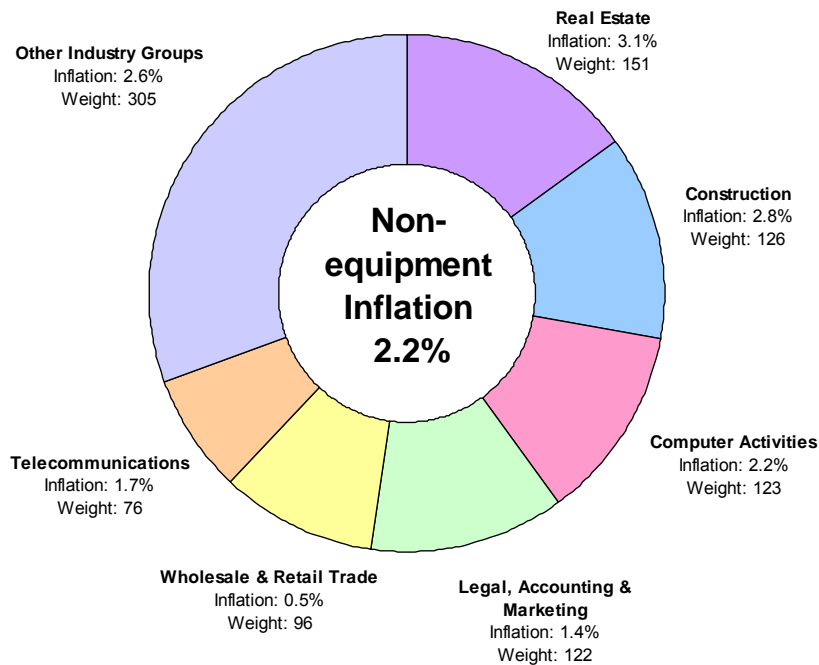
Non-equipment contracts had an inflation rate of 2.2% in 2012/13. Within non-equipment contracts, the real estate industry group accounted for the greatest proportion of expenditure in 2012/13 (15.1%) as well as having the highest inflation rate (3.4%).

Figure 6: Distribution of Expenditure on Equipment Contracts¹, by Industry Group



[1] This analysis is based on high value firm price, fixed price and low value commodities and service contracts. It excludes high value miscellaneous contracts and a small subset of low value contracts due to insufficient SIC information. Weights are based on expenditure relative to known equipment contracts.

Figure 7: Distribution of Expenditure on Non-equipment Contracts¹, by Industry Group



[1] This analysis is based on high value firm price, fixed price and low value commodities and service contracts. It excludes high value miscellaneous contracts and a small subset of low value contracts due to insufficient SIC information. Weights are based on expenditure relative to known equipment contracts.

3 Labour Costs

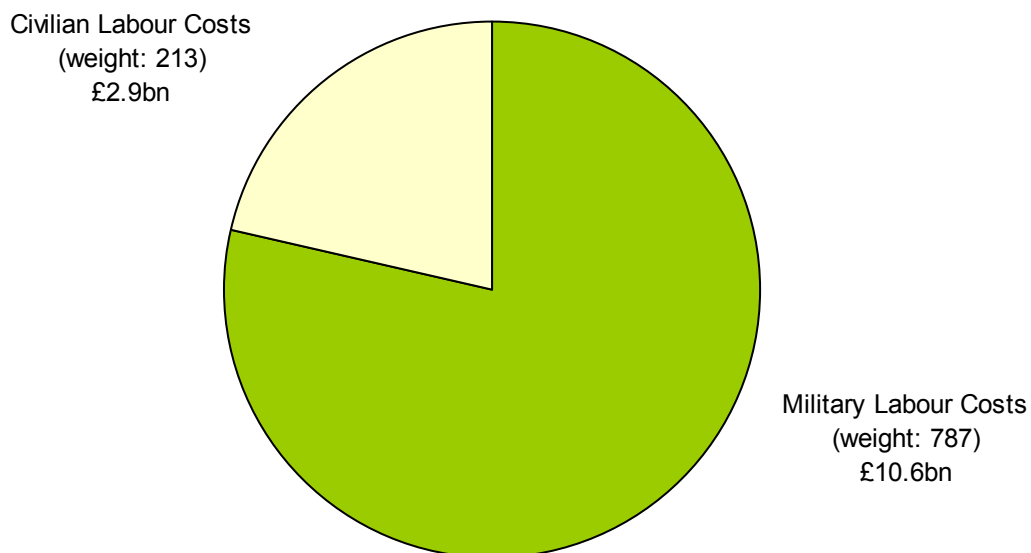
Key Findings

- Inflation in labour cost expenditure was 0.5% in 2012/13.
- Inflation in both civilian labour costs and military labour costs was 0.5% in 2012/13.
- Between 2005/06 and 2012/13 inflation within labour costs averaged 3.7% per year.

Expenditure and Weights

Expenditure on labour costs accounts for just over one third of the total expenditure captured within the 2012/13 defence inflation measure. For the 2012/13 estimates, 79% of this expenditure was on military labour costs and 21% was on civilian labour costs (**Figure 8**).

Figure 8: Labour Cost Inflation Expenditure by Personnel Type, 2011/12



For both military and civilian personnel, the inflation rate captures the growth in average labour costs, which includes gross pay, employer's National Insurance contributions (ERNIC), Travel and Subsistence (T&S) and pension contributions (SCAPE). It implicitly includes all paid sickness, paternity or maternity leave. The inclusion of all these costs captures the total inflationary impact of employing the Department's labour, over and above changes in their pay.

Labour Costs

Table 6 shows the overall defence labour cost inflation rate, and the separate inflation rates for military and civilian labour costs. The largest decrease over the last year was in military labour cost inflation, which was 0.5% in 2012/13 compared to 3.9% in 2011/12. Civilian labour cost inflation has also fallen, to 0.5% in 2012/13 compared to 1.3% in 2011/12.

Table 6: Defence Inflation – Labour Costs, 2005/06 to 2012/13

Personnel Type	Military Labour Costs		Civilian Labour Costs		Defence Labour Costs	
<i>Weights</i> ¹	787		213		1000	
Financial Year	Index and Growth Rate ²					
2004/05	100.0	-	100.0	-	100.0	-
2005/06	105.0	5.0%	107.4	7.4%	105.6	5.6%
2006/07	108.5	3.3%	111.6	3.9%	109.2	3.5%
2007/08	113.4	4.5%	115.5	3.5%	113.9	4.3%
2008/09	117.1	3.3%	120.7	4.5%	118.0	3.6%
2009/10	122.2	4.3%	124.0	2.7%	122.6	4.0%
2010/11 ³	128.2	4.9%	128.5	3.6%	128.3	4.7%
2011/12	133.2	3.9%	130.1	1.3%	132.6	3.4%
2012/13	133.8	0.5%	130.7	0.5%	133.3	0.5%

[1] These weights apply to the 2012/13 measure. Due to chain-linking, weights reflect the expenditure pattern within the base year not the reference year e.g. for the 2012/13 inflation measure weights reflect expenditure in 2011/12. Due to rounding the weights may not sum to 1000.

[2] Growth rates are year-on-year and calculated from unrounded data.

[3] From 2010/11, the methodology for estimating inflation in military labour costs was reviewed and improved following availability of new data sources. The change in methodology means it is not possible to compare military labour cost inflation rates from 2010/11 and 2011/12 with historical estimates. For further details refer to [Defence Inflation: Military Labour Costs – Statistical Bulletin No. 12](#).

Due to the different elements that make up military and civilian labour costs it is not expected that the two inflation rates should be equal. However, for the first time since the series began, the inflation rate was the same for both military and civilian labour costs, at 0.5%. This is predominantly driven by the low inflation in pay and allowances (0.3% for both military and civilian personnel).

The low inflation in military basic pay and civilian gross pay reflects the second of a two-year pay freeze for all military and civilian personnel, with the exception of a £250 uplift for those earning £21,000 or less.

Unlike civilian staff, military personnel have continued to experience progression up the pay scales in 2012/13, as before. However, following the recommendations in the Strategic Defence and Security Review (SDSR) to reduce non-front line Service personnel by 17,000 by 2015, there were increased numbers of leavers from each of the Services during the year. This reduction in the number of Service personnel slowed the rate of increase in average salaries in 2012/13, partially counterbalancing any inflation as a result of progression.

There was additional reduced spending on other specific elements of military and civilian labour costs (such as military committal and retention allowances and civilian non-consolidated pay awards), reflecting the SDSR recommendation to reduce spending on civilian and military personnel allowances by £300 million per year by 2014/15.

Military Labour Costs

Inflation in military pay and allowances are primarily driven by key recommendations made by the Armed Forces' Pay Review Body. For all aspects of military labour costs, inflation was lower in 2012/13 compared with 2011/12.

Inflation in military labour cost expenditure was 0.5% in 2012/13 (**Table 7**), 3.4 percentage points lower than the 2011/12 inflation rate of 3.9%, and the lowest in the series so far. The key drivers were the lower inflation in basic and specialist pay and low inflation in employer pension contributions. These elements have a combined weighting of 81%.

Table 7: Defence Inflation – Military Labour Costs, 2005/06 to 2012/13

Military Labour Costs	Weights ¹	Growth Rate ²							
		2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Basic Pay and Specialist Pay ^{3,4}	613	3.0%	3.1%	3.6%	3.7%	2.8%	2.8%	0.7%	0.2%
Non-Activity Allowance ⁵	22	-2.7%	9.2%	36.2%	-11.4%	12.1%	17.7%	-1.7%	-2.7%
Activity Allowance ³	26	5.0%	7.5%	14.2%	2.6%	1.8%	32.4%	8.7%	4.6%
Pay and Allowances³	660	2.9%	3.3%	4.9%	3.0%	3.1%	4.2%	0.9%	0.3%
Employer Pension Contributions ³	198	18.1%	3.1%	3.6%	3.8%	10.7%	9.4%	15.4%	0.2%
Employer National Insurance Contributions ³	52	2.6%	5.4%	4.0%	1.5%	2.5%	3.9%	4.3%	1.3%
Travel and Subsistence	90	2.4%	2.7%	3.2%	5.4%	3.7%	3.6%	4.3%	1.8%
Military Labour Costs³	1000	5.0%	3.3%	4.5%	3.3%	4.3%	4.9%	3.9%	0.5%

[1] These weights apply to the 2012/13 measure. Due to chain-linking, weights reflect the expenditure pattern within the base year not the reference year e.g. for the 2012/13 inflation measure weights reflect expenditure in 2011/12. Due to rounding the weights may not sum to 1000.

[2] Growth rates are year-on-year and calculated from unrounded data.

[3] From 2010/11, the methodology for estimating inflation in military labour costs was reviewed and improved following availability of new data sources. The change in methodology means it is not possible to compare military labour cost inflation rates from 2010/11 with historical estimates. For further details refer to [Defence Inflation: Military Labour Costs – Statistical Bulletin No. 12](#).

[4] Includes reservists and cadets pay.

[5] From 2012/13, the methodology for estimating inflation in education allowances was reviewed and improved following availability of new data. The change in methodology means it is not possible to compare 2012/13 inflation rates in non-activity allowances with historical estimates. For further details see Methodology section.

The key reasons for the changes in military labour cost inflation are described below:

Basic and specialist pay: Inflation was 0.2% in 2012/13, compared with 0.7% in 2011/12.

- The inflation in basic pay remained low in 2012/13, reflecting the second of a two-year pay freeze across the board for all military personnel, with the exception of a £250 uplift for those earning £21,000 or less
- Inflation due to progression was partly offset by the slower rate of increase in average salaries in 2012/13 as a result of the increased numbers of leavers during the year (in line with SDSR recommendations).
- There were significant reductions to the amounts paid for some specialist payments from 2012/13, resulting in overall deflation within specialist pay. This reduced the overall basic and specialist pay inflation rate even further.

Employer pension contributions: Inflation was 0.2% in 2012/13, compared with 15.4% in 2011/12.

There were no changes in 2012/13 from the previous year to the percentages of military employees' salaries paid by the MOD in pension contributions. However, there was still some inflation since pension contributions increase in line with any increase in basic pay.

The inflation rates for all other elements of military labour costs were also lower in 2012/13 than in 2011/12.

Non-activity allowances: Due to changes to the structure and payments within committal and retention schemes, the department experienced some deflation within committal and retention allowances, resulting in overall deflation (-2.7%) in non-activity allowances. The reduction in committal and retention allowance payments reflects the SDSR recommendation to reduce spending on military personnel allowances.

Activity allowances: Most of the activity allowances experienced no policy amendments in 2012/13, resulting in no inflation. The one exception was Longer Separation Allowance (LSA) which resulted in an overall inflation rate of 4.6%.

Employer National Insurance contributions (ERNIC): Inflation is driven by ERNIC rates set out by HM Revenue and Customs (HMRC). 2012/13 rates applied to military earnings resulted in lower inflation in ERNIC payments than in 2011/12. This is due to a combination of lower inflation in ERNIC rates and lower inflation in basic pay (from which ERNIC payments are calculated).

Travel and subsistence (T&S): UK expenditure is linked to specific ONS indices, most of which experienced lower inflation in 2012/13 than in 2011/12, in particular RPIX (attributed to 40% of UK expenditure) which reduced from 4.9% to 3.1% respectively. Overseas expenditure is linked to a combination of foreign exchange rates and consumer price indices (CPIs). Around 90% of overseas

expenditure was attributed to spending in Euros, against which there was deflation in 2012/13. Inflation in UK and overseas expenditure combined resulted in overall inflation of 1.8%.

Civilian Labour Costs

Inflation in civilian labour cost expenditure was 0.5% in 2012/13 (**Table 8**), 0.8 percentage points lower than the 2011/12 inflation rate of 1.3%, and the lowest in the series so far. The key driver was the low inflation in gross pay, which has a weighting of 69%.

Table 8: Defence Inflation – Civilian Labour Costs, 2005/06 to 2012/13

Civilian Labour Costs	Weights ¹	Growth Rate ²							2012/13
		2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	
Gross Pay ³	684	4.0%	3.3%	3.7%	4.0%	2.8%	3.9%	0.6%	0.0%
Locally Engaged Civilian Pay	88	5.3%	4.8%	4.3%	11.0%	7.8%	0.6%	4.5%	2.5%
Royal Fleet Auxiliary Gross Pay ⁴	28	2.5%	3.0%	2.6%	2.6%	3.2%	1.9%	1.0%	0.7%
Pay and Allowances	800	4.1%	3.5%	3.7%	4.8%	3.4%	3.4%	1.1%	0.3%
Employer Pension Contributions	110	43.4%	7.3%	3.6%	3.6%	-0.8%	3.8%	0.4%	0.5%
Employer National Insurance Contributions	49	3.6%	4.0%	0.7%	2.9%	-0.9%	5.6%	2.7%	1.3%
Travel & Subsistence	41	2.1%	2.7%	3.9%	5.0%	3.0%	4.6%	5.0%	2.7%
Civilian Labour Costs	1000	7.4%	3.9%	3.5%	4.5%	2.7%	3.6%	1.3%	0.5%

[1] These weights apply to the 2012/13 measure. Due to chain-linking, weights reflect the expenditure pattern within the base year not the reference year e.g. for the 2012/13 inflation measure weights reflect expenditure in 2011/12. Due to rounding weights may not sum to 1000.

[2] Growth rates are year-on-year and calculated from unrounded data.

[3] Gross pay includes overtime, allowances and non-consolidated performance related pay award inflation.

[4] Gross pay includes permanent allowances. From 2012/13, the methodology for estimating inflation in Royal Fleet Auxiliary (RFA) Pay was reviewed and improved following availability of new data. The change in methodology means it is not possible to compare 2012/13 inflation rates in RFA pay with historical estimates. For further details see Methodology section.

The key reasons for the changes in civilian labour cost inflation are described below:

Gross pay: Inflation was 0% in 2012/13, compared with 0.6% in 2011/12.

- As with military basic pay, 2012/13 was the second of a two-year pay freeze, except for civilian staff who received a £250 uplift if they earned £21,000 or less. Therefore inflation in gross pay remained low.
- Due to amendments in 2012/13 to the eligibility criteria of the non-consolidated performance related pay award system, the MOD paid out less during the year in pay awards, which resulted in deflation. This counterbalanced any inflation experienced in gross pay, resulting in 0% inflation overall.

The inflation rates for all other elements of civilian labour costs were also generally lower in 2012/13 than in 2011/12.

Locally Engaged Civilian (LEC) Pay: Inflation is driven by a combination of inflation in foreign exchange rates, overseas average earnings and CPIs. Principally, the lower inflation rate of 2.5% in 2012/13 is a result of two-thirds of LEC expenditure being attributed to spending in Euros, against which there was deflation in 2012/13.

Royal Fleet Auxiliary (RFA) Gross Pay: Inflation in 2012/13 is driven by the two-year pay freeze, except for personnel earning less than £21,000 who received a £250 uplift. Inflation was higher on average for RFAs than for other civilians, but this has a small weighting in the overall civilian labour cost figures.

Employer pension contributions: There were no changes in 2012/13 from the previous year to the percentages of civilian employees' salaries paid by the MOD in pension contributions. However, there was still some inflation since pension contributions increase in line with any increase in gross pay.

Employer National Insurance contributions: Inflation is driven by ERNIC rates set out by HMRC. 2012/13 rates applied to civilian earnings resulted in lower inflation in ERNIC payments than in 2011/12. This is due to a combination of lower inflation in ERNIC rates and lower inflation in gross pay (from which ERNIC payments are calculated).

Travel and subsistence: Inflation is predominantly driven by specific ONS indices attributed to spending in the UK. Nearly half of expenditure is linked to indices specific to food, travel and accommodation in the

UK. The weighted inflation rate for these indices reduced from 4.9% in 2011/12 to 2.7% in 2012/13. This was the key driver for the overall lower rate of inflation in T&S costs (2.7%) in 2012/13.

4 Cash Office Expenditure

Key findings

- Inflation in cash office expenditure was 1.2% in 2012/13.
- Between 2005/06 and 2012/13, inflation in cash office expenditure averaged 4.3% year-on-year growth, but has been volatile over this period.
- Inflation within cash offices for US Dollars was 2.8% and for Euros was -3.4% in 2012/13.

Cash Offices

Cash office expenditure accounts for just under 2 per cent of the total expenditure captured within the defence inflation measure in 2012/13. The inflation rates within cash offices capture both the inflation due to changes in currency exchange rates, and domestic inflation in the relevant country.

Table 9 presents inflation in cash office expenditure over the period 2005/06 to 2012/13. In 2012/13, inflation within cash office expenditure was 1.2%. Over the eight year period, inflation in cash offices averaged 4.3%, ranging from 0.9% in 2005/06 to 9.7% in 2010/11.

Broadly speaking, the rate of inflation for cash offices is driven by the inflation rates within countries where US Dollars and Euros are spent - the two currencies which contribute most to the total level of foreign currency spend - and movements in the exchange rates of these currencies against Sterling.

Exchange rates for US Dollars and Euros used to estimate defence inflation in cash offices are based upon the actual rates achieved by the MOD for currency deliveries through spot buys and the forward buy programmes. For all other currencies, exchange rates are based on spot prices only.

Table 9: Defence Inflation – Cash Office Expenditure, 2005/06 to 2012/13

Currency	Cash Offices - US Dollar ²		Cash Offices - Euro ²		Cash Offices - Other ²		Cash Offices ²	
<i>Weights¹</i>	618		274		108		1000	
Financial Year	Index and Growth Rate ³							
2004/05	100.0	-	100.0	-	100.0	-	100.0	-
2005/06	95.9	-4.1%	101.5	1.5%	105.5	5.5%	100.9	0.9%
2006/07	94.1	-1.9%	106.2	4.6%	106.8	1.2%	102.2	1.4%
2007/08	96.4	2.5%	107.4	1.0%	110.9	3.9%	104.7	2.4%
2008/09	102.8	6.7%	113.5	5.7%	133.4	20.3%	114.4	9.3%
2009/10	111.4	8.3%	121.2	6.8%	147.1	10.3%	123.8	8.2%
2010/11	121.7	9.2%	136.7	12.7%	158.0	7.4%	135.8	9.7%
2011/12	122.1	0.4%	142.6	4.3%	161.9	2.5%	138.2	1.7%
2012/13	125.5	2.8%	137.8	-3.4%	167.0	3.2%	139.8	1.2%

[1] These weights apply to the 2012/13 measure. Due to chain-linking, weights reflect the expenditure pattern within the base year not the reference year e.g. for the 2012/13 inflation measure weights reflect expenditure in 2011/12. Due to rounding the weights may not sum to 1000.

[2] For the definition of 'Cash Offices' used within the defence inflation measure, refer to the **Glossary**.

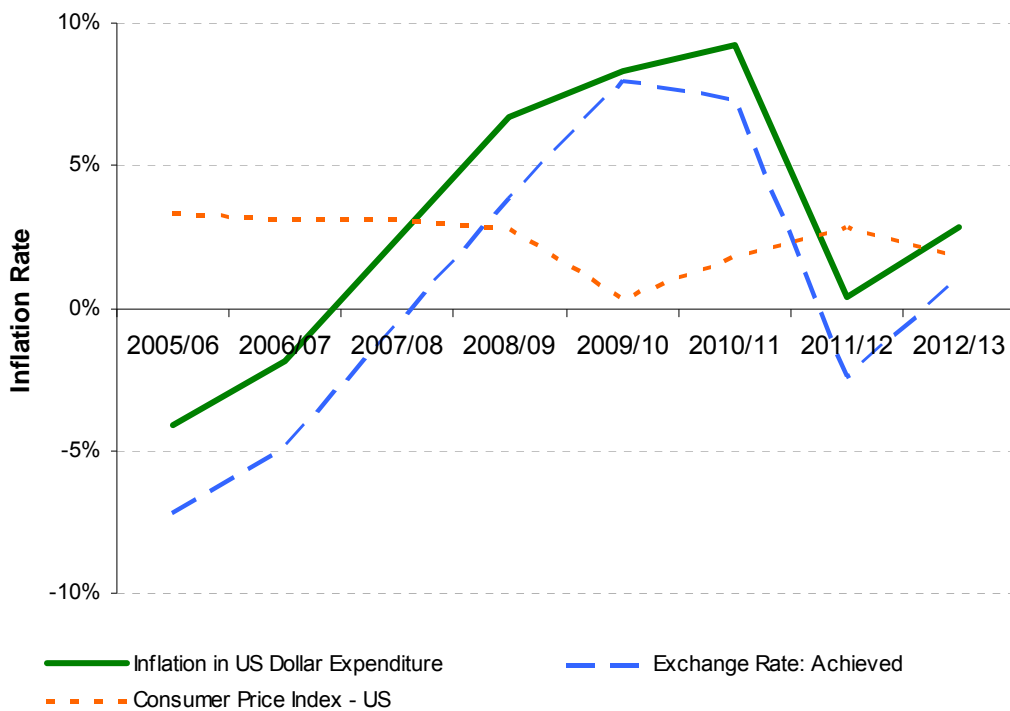
[3] Growth rates are year-on-year and calculated from unrounded data.

Cash Offices – US Dollars and Euros

In 2011/12 (the base year for the 2012/13 inflation measure) under a third of cash office expenditure was spent on Euros, which was less than in previous years. Almost two thirds was spent on US Dollars and approximately one tenth on other currencies. In 2012/13, the inflation rate for cash office expenditure on US Dollars and Euros was 2.8% and -3.4% respectively.

Figure 9 shows the relationship between the exchange rate for US Dollar (based on the Department’s spot purchases and forward buys), and the US Consumer Price Index (CPI). Between 2005/06 and 2008/09 there was a steady increase in US Dollar expenditure inflation. This increase then slowed, due to the fall in US CPI inflation between 2008/09 and 2009/10. It was further slowed in 2010/11 because of a slight fall in the US Dollar achieved exchange rate. There was a considerable decrease in US Dollar expenditure inflation in 2011/12, driven by the appreciation of sterling against the US Dollar. In 2012/13 US Dollar expenditure inflation increased again, to 2.8%.

Figure 9: Inflation in Cash Offices on US Dollars, 2005/06 to 2012/13



Source: Annual inflation rates for CPI US from the International Monetary Fund, sourced from Bureau of Labor Statistics.

5 Methodology

Summary

Defence inflation estimates were published for the first time in March 2010. These measure the average change in pay and prices of goods and services, making up the defence budget, with quality and quantity held constant.

The estimate of defence inflation is a chain-linked Laspeyres price index. For each pair of consecutive years pure price growth is estimated by holding the quality and quantity of goods, services and personnel constant, and either directly measuring their change in price or making reference to relevant price indices. The year-on-year price growths are multiplied together to produce the chain-linked Laspeyres index with the reference period being the financial year 2004/05.

Process

Each component (contract, labour cost and cash office expenditure) of defence inflation is estimated using a bespoke method reflecting the different data sources. These estimates are averaged, using the expenditures for individual components (from the Department's accounting data) as weights, to produce an overall measure of defence inflation. For a detailed overview of the methodology used to estimate defence inflation, refer to the [Defence Inflation Statistical Bulletin No. 10](#).

The components of defence inflation are listed below, with percentages indicating the average breakdown of MOD expenditure in the last seven years (rounded to nearest five per cent).

Expenditure on Contracts (60%)

1. Fixed price contracts with explicit indexation clauses (20%)
2. High value firm price contracts (20%)
3. High value miscellaneous payments (5%)
4. Low value contracts and miscellaneous payments (15%)

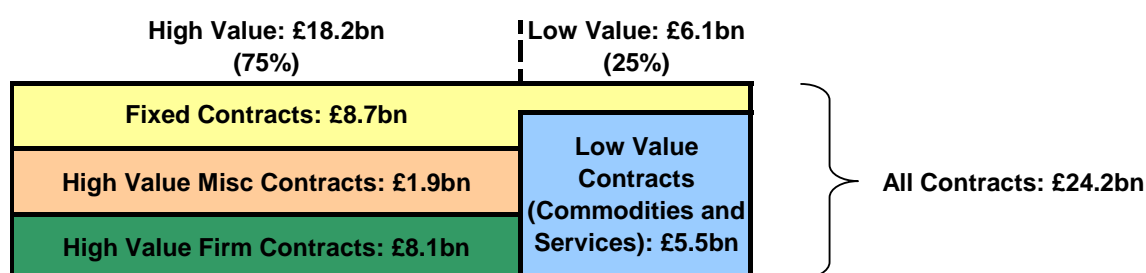
Expenditure on Labour (35%)

5. Military labour costs (30%)
6. Civilian labour costs (10%)

Cash Office Expenditure (5%)

Contracts

In 2011/12 the MOD had over 29,000 contracts with payments against them, accounting for £24.2bn (almost two thirds) of the Department's annual expenditure. The method developed for estimating inflation in contracts reflects the skewed distribution of payments. There are three categories of high value (ranked in the top 75% of annual expenditure) contracts each with a method of estimation tailored to their particular characteristics and one category for low value contracts with its own estimation method. **Figure 10** provides an indicative illustration of the split by contract type and high value / low value.

Figure 10: Contract Inflation Expenditure by Contract Type, 2012/13

The method of estimating inflation often relies upon the Standard Industrial Classification (SIC) assigned to the contract. Defence Economics places contracts into groups, based upon the SIC code which reflects the good or service being procured. These groups provide a useful tool for identifying relevant price indices for contracts.

There is insufficient data to facilitate mapping between contracts which have reached their conclusion, and their replacement. Moreover, most new contracts incorporate changes in both quality and quantity. Therefore, the method focuses on estimating inflation embedded within contracts, assuming any residual price change is driven by changes in specification. In this way, the inter-generational effect of moving to new platforms is excluded from the measure of defence inflation. For further details see the [Defence Inflation Statistical Bulletin No. 10](#).

Labour Costs

Expenditure on labour costs accounts for around one third of the Department's expenditure. For both military and civilian personnel, the inflation rate captures the growth in average labour costs, which includes gross pay, employer's National Insurance contributions, Travel and Subsistence and pension contributions. It implicitly includes all paid sickness, paternity or maternity leave.

The SCAPE rates are determined by the Government's Actuary Department, reflecting their expectations of future pension provision rather than changes to economic conditions. However, changes in SCAPE rates result in the Department experiencing a change in the cost of employing an individual without a change in output.

In 2012/13 the methodology for estimating inflation in RFA pay and allowances was reviewed and improved, following the availability of a new data source containing more accurate individual-level information, since this information is not held with the main civilian pay and allowance datasets. Therefore it is not possible to compare the 2012/13 inflation rate with historical estimates. However, the adjusted RFA pay and allowances inflation rate for 2012/13 had only a negligible effect on the overall civilian labour costs inflation.

In 2012/13 there was a policy change to remove tax and National Insurance contribution liabilities from education allowance payments. In order to appropriately 'weight' the 2012/13 education allowance inflation rate, the tax and National Insurance contributions were also removed from the 2010/11 expenditure. As a result of discussions with the key policy area, a new data source was also discovered and used to produce a more accurate inflation rate, based on aggregated 'cost per child' information. As a result of the use of new data, and calculations being performed on more accurate expenditure (minus tax and National Insurance liabilities), it is not possible to compare the 2012/13 non-activity allowance inflation rate with historical estimates. However, the low weighting of education allowances within the overall military inflation rate means that the impact of this change is very small, and does not render the overall 2012/13 military labour costs inflation rate non-comparable with the previous year's figures.

In 2010/11 a new methodology was developed for estimating inflation in military labour costs, and as such the estimates of inflation in civilian and military pay and labour costs are now directly comparable. For further information on the methodology for military labour cost inflation, see [Defence Inflation: Military Labour Costs – Statistical Bulletin No. 12](#).

Cash Office Expenditure

Foreign currencies are purchased by the Department for a range of purposes: to meet personnel expenditure requirements; to make payments on contracts denominated in foreign currencies; and to make payments through cash offices.

The Department's Cash and Banking Services (CaBS) records transfers of Euros and US Dollars from the forward and spot buy programme to cash offices around the World, and also purchase many other quoted and non-quoted currencies. Data on volumes and achieved rates for Euros and US Dollar deliveries are used to estimate the inflation in the actual achieved exchange rates by the Department in this category of expenditure. For all other currencies spot rates are used.

Expenditure on personnel is removed from the expenditure through cash offices, as the inflationary impact of overseas expenditure on personnel is captured within the labour costs element. An estimate of the inflation for cash office expenditure is then estimated as a product of local inflation, as measured by the change in the country's Consumer Price Index, and the average change in the exchange rates.

Contract Payments in Foreign Currencies

Exchange rate variation can have an inflationary impact on contracts in two ways: (i) the contract has a formal exchange rate variation clause that adjusts the price/cost, in pounds sterling, to reflect movements in exchange rates; or (ii) part, or all, of the contract is paid in a foreign currency.

Details of contracts with an exchange rate variation mechanism were collected as part of the work on fixed price contracts. Inflation due to foreign exchange movement is therefore captured explicitly for these contracts.

In 2011/12 the methodology for estimating the total contract expenditure for payments in US Dollars, Euros and other foreign currencies was reviewed, following the availability of a new data source which enables Defence Economics to determine annual total contract expenditure in each currency. In contrast, in previous years, total currency purchases were calculated indirectly from the Department's CaBS records for Euros and US Dollars.

The methodology development has enabled a more straightforward and comprehensive analysis of contract expenditure in foreign currencies. It has also highlighted far higher expenditure on contracts in foreign currencies for than was identified in previous years (**Table 10**).

The overall inflation rate for contract payments in foreign currencies is estimated using weighted inflation rates for US Dollars, Euros and local currencies. In 2011/12 expenditure in foreign currencies was much higher overall, with a lower proportion being spent in Euros than in previous years. **Table 10** presents total contract expenditure in foreign currencies since 2004/05, and the annual weightings of US Dollars, Euros and local currencies.

Table 10: Contract Expenditure in Foreign Currency and Currency Weights, 2004/05 to 2011/12

	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11 ¹	2011/12
Expenditure (£ million)	£1,439	£1,609	£1,887	£2,036	£2,600	£1,527	£4,044	£7,035
<i>Weights²</i>								
US Dollars	578	560	617	664	591	497	513	618
Euros	370	397	335	310	387	473	446	274
Local Currencies	52	43	49	26	23	30	42	108

[1] From 2011/12, the methodology for estimating the adjustment to contract inflation as a result of foreign exchange was reviewed and improved following availability of a new data source. The change in methodology means comparisons of contract inflation rates from 2010/11 with historical estimates are hindered.

[2] Due to rounding weights may not sum to 1000.

When adjusting the contract inflation rate, it is not possible to identify which contracts are paid in foreign currencies. Instead the value of contracts purchased in foreign currencies and the weighted inflation rate are used to estimate the overall inflationary pressure of paying some contracts in foreign currency; this is assumed to be spread equally across all contracts. The greater the proportion of contracts purchased in foreign currencies and the higher the weighted inflation rate, the higher the contract adjustment will be.

Table 11 provides the inflationary adjustments to contracts between 2005/06 and 2012/13 as a result of paying for some contracts in foreign currency; in 2012/13 this adjustment was -0.3 percentage points.

Table 11: Impact of Paying Contracts in Foreign Currencies, 2005/06 to 2012/13

Contract Adjustment	Percentage Points							
	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12 ¹	2012/13
	-0.4	-0.2	-0.1	0.4	0.8	0.5	-0.1	-0.3%

[1] From 2011/12, the methodology for estimating the adjustment to contract inflation as a result of foreign exchange was reviewed and improved following availability of a new data source. The change in methodology means comparisons of 2011/12 and 2012/13 contract inflation rates with historical estimates are hindered.

Revisions

Revisions will be made to the defence inflation measure to improve the usability and relevance when necessary. Reasons for revising figures include:

- (i) Acquiring new information relating to already published results;
- (ii) Improvements to methodology and selection of data sources;
- (iii) Identification of significant errors.

Throughout the publication, where revisions occur, they will be indicated by table footnotes.

Quality

A Background Quality Report providing an assessment of the defence inflation statistics has been published alongside these defence inflation estimates.

Glossary

Activity Related Allowances Allowances awarded to individuals being asked to perform activities different from their standard duties, such as operations or training.

Armed Forces' Pay Review Body is a non-departmental public body (and a Review Body) established to review and recommend the pay and terms and conditions of employment of the British armed forces.

Cash Offices Operate in British embassies and MOD bases around the world and are responsible for maintaining imprest accounts. Imprest accounts are used to make payments in local currency or Great British Pounds to personnel, which cannot be made by other means. These include payments to overseas units with non-sterling bank accounts, payments to operational units overseas and payments to HM Ships and RFAs afloat. Contractors should not normally be paid through imprest accounts.

Chain-Linked Price Index An index which relates the price of a basket of goods and services to the prices of a similar basket in a previous period, not a fixed base period. Chain-linking an index enables the basket of goods to be regularly updated without introducing a break in the series.

Commodities and Service Contracts Any **low value contract** which does not have an indexation arrangement (e.g. **fixed price**). Commodity and service contracts are therefore made up of low value **firm price** and low value **miscellaneous** contracts.

Defence Economics is part of the MOD Strategy Directorate. The defence inflation estimates are produced by the Economic Statistics and Equipment Support (ESES) Division within Defence Economics. ESES provides statistics and analysis to support MOD Head Office, particularly in relation to decision support, policy development and performance management, and publishes a wide range of economic, financial, commercial and industrial Official and National Statistics.

Defence Contracts All contracts have been grouped by **Defence Economics** into four categories: high value **firm price**; **fixed price**; high value **miscellaneous**; and low value **commodities and services**. See also: **high value contracts** and **low value contracts**.

Defence Inflation Defence inflation is the average rate of increase in pay, and prices of all goods and services, making up the Defence budget, after allowing for changes in quality and quantity.

Earnings Related National Insurance Contributions (ERNIC) National Insurance payments made by the Department to HM Revenue & Customs, on earnings paid to the employee. These payments (secondary contributions) are in addition to those National Insurance contributions made by the individual themselves.

ERNIC see **Earnings Related National Insurance Contribution**.

Firm Price Contracts Defence Economics defined sub-group of **defence contracts** which captures contracts with a non-variable inflation rate imbedded in the contract price.

Fixed Price Contracts Defence Economics defined sub-group of **defence contracts** which captures contracts which contain an indexation adjustment, typically a variation of price clause. The indexation component of a contract links the contract payments to changes in price indices, in order to reflect inflation in related industries.

GDP Deflator see **Gross Domestic Product Deflator**.

Gross Domestic Product Deflator This is an implicit price deflator for the Gross Domestic Product and is derived by dividing the estimate of GDP at current prices by the estimate of GDP at constant prices. The GDP Deflator can be viewed, and is commonly used, as a measure of inflation in the economy for the country to which it refers.

Gross Pay This represents an individual's total pay before deductions (such as tax and pension contributions) have been removed. Gross pay also includes allowances, overtime and non-consolidated performance related pay awards.

High Value Contracts Defence Contracts having an annual payment which fall in the top 75% of all ranked contract expenditure.

HMRC see **HM Revenue and Customs**

HM Revenue and Customs is a non-ministerial department of the UK Government responsible for the administration and collection of a wide range of taxes and National Insurances.

Labour Costs The total expenditure on labour for both military and civilian personnel. Labour costs capture expenditure on: pay, allowances, employer national insurance contributions (**ERNIC**), employer pension contributions (**SCAPE**), and travel and subsistence.

Laspeyres Price Index This is a measure of the change in the price of a basket of goods. The quantities of the items within the basket of goods are fixed to allow a measure of pure price change. Prices are aggregated in a Laspeyres index by using weights from the base period.

LEC Locally engaged civilian, see **Locally Engaged Personnel**.

Locally Engaged Personnel A civilian employee recruited overseas exclusively for employment in support of the UK Armed Forces deployed in a particular overseas theatre (or in support of the Sovereign Base Areas Administration in Cyprus) and on terms and conditions of service applicable only to that overseas theatre or Administration, including the dependents of UK military personnel or UK-based civilian staff employed in that overseas theatre (who are sometimes separately identified as UK Dependents). LECs are not civil servants.

Low Value Contracts Defence Contracts having an annual payment which fall in the bottom 25% of ranked contract expenditure.

Ministry of Defence The Ministry of Defence (MOD) is the United Kingdom government department responsible for implementation of government defence policy and is the headquarters of the British Armed Forces.

Miscellaneous Contracts The payment method employed by the MOD Financial Management Shared Service Centre (the MOD's primary bill paying authority) for running service items such as the provision of utilities. Such items are covered by "miscellaneous" transactions where no 'MOD HQ Contract' exists. These agreements for goods or services will have been set up locally between the MOD Branch and the Supplier and are legally binding.

MOD see **Ministry of Defence**.

MOD Accounts (Departmental Resource Accounts) The Department is required to prepare resource accounts for each financial year detailing the resources acquired, held, or disposed of during the year, and the way it has used them during the year.

Non-Activity Related Allowances are essentially benefits paid to individuals such as education allowances, and committal and retention allowances.

Office for National Statistics (ONS) A non-ministerial Department responsible for the production of a wide range of independent economic and social statistics. The ONS is the executive office of the UK Statistics Authority which reports directly to Parliament. The ONS is the UK Government's single largest statistical producer.

Officers Member of the Armed Forces holding the Queen's Commission. This includes ranks from Sub-Lt/2 and Lt/Pilot Officer up to Admiral of the Fleet/Field Marshal/Marshal of the Royal Air Force, but excludes Non-commissioned officers.

ONS see **Office for National Statistics**.

Other Ranks Members of the Royal Marines, Army and Royal Air Force who are not officers. The equivalent group in the Royal Navy is known as “Ratings”.

Retail Price Index excluding mortgage interest payments (RPIX) is a **chain-linked price index** which measures the price change in the goods and services consumed by a typical household (excluding the change in price of mortgage interest payments). RPIX is a well known and commonly used indicator of inflation in the UK general economy.

RFA see **Royal Fleet Auxiliary Service**.

Royal Fleet Auxiliary Service Constituted in 1905, this is a civilian manned fleet, owned by the Ministry of Defence. Its main task is to supply warships of the Royal Navy at sea with fuel, food, stores and ammunition which they need to remain operational while away from base. It also provides aviation support for the Royal Navy, together with amphibious support and secure sea transport for Army units and their equipment. Its employees are full-time civil servants, but who come under the Naval Discipline Act when deployed to sea under naval command.

RPIX see **Retail Price Index excluding mortgage interest payments**.

SCAPE see **Superannuation Contribution Adjusted for Past Experience**.

SIC see **Standard Industrial Classification**.

SIC Groups These are groups defined by Defence Economics, based upon the Standard Industrial Classification of economic activity, which is maintained by the Office for National Statistics. They are used to place defence contracts into homogeneous categories based upon the principle economic activity undertaken by a contract.

Specialist pay This is paid for undertaking specific activities related to an individual’s normal work such as flying, parachuting, or being in a submarine.

Standard Industrial Classification (SIC) SIC classifies business establishments and other statistical units by the type of economic activity in which they are engaged. The classification is maintained by the **ONS**.

Strategic Defence and Security Review A cross Government, Cabinet Office led, review on the future structure and priorities of the Armed Forces, published on 10 October 2010. A link to the review can be found in the Bibliography section of this report.

Superannuation Contribution Adjusted for Past Experience (SCAPE) The model, accepted by HM Treasury, to charge government departments for the provision of an unfunded pension scheme. Under SCAPE, both the employer and the employee make contributions to the scheme. SCAPE rates are determined by the Government’s Actuary Department to reflect their expectations of future pension provision.

Variation of Price is a pricing arrangement that can be negotiated into longer term contracts to help manage inflation risk. Fixed prices are set at a particular point in time (e.g. when the contract is placed) and are linked to a price index. The price paid over the duration of the contract is directly related to movements of that index.

VOP see **Variation of Price**

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