BANK OF ENGLAND

Speech

Why has Inflation Been So Low Since 1999?

Speech given by

Stephen Nickell, Bank of England Monetary Policy Committee and London School of Economics

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Summary

1. Inflation on the CPI measure has been below the present target level (2%, introduced at the beginning of 2004) since 1999, averaging 1.2% over this period.

2. Since mid-1999, while CPI service prices have been rising at over 3% per annum, CPI goods prices have been falling. It is this factor which has underpinned the low level of overall inflation. By contrast, goods price inflation in the Eurozone, using the same measure, has been around 2% per annum.

3. Consumer goods sold in the UK are either produced domestically or imported. Since 1999, there have been three distinct inflationary periods. From 1999 to early 2001 both domestic and imported goods prices were rising. Despite this, retail goods prices were falling during this period because of the fall in margins in the distribution sector.

4. From early 2001 to late 2002, both domestic and imported goods prices were falling and this deflation was passed on to retail goods prices. From late 2002 to the present, domestic goods price inflation has been rising but this has been more than offset by falling import prices and strong distribution sector productivity growth, which has kept retail goods prices falling.

5. So while falling margins in the distribution sector were important in the early part of the period, falling import prices have been a key factor more recently. Since 2000, the process of switching to cheaper sources of supply has, by itself, cut more than ½ percentage point per annum off import price inflation.

6. Looking to the future, there seems no reason why domestic goods price inflation will fall significantly below current levels and, very recently, it appears that imported goods prices have stopped falling. The continued strength of the world economy will imply further upward pressure on the world prices of traded goods which suggests that this recent turn round in import prices will not reverse and that import prices will start to rise. Overall, this indicates that we are entering a period when both domestic and imported goods prices are going to rise. So, unless there is a further squeeze on distribution margins, it seems likely that CPI goods price inflation will move into positive territory, settling down at a relatively low but positive level. This is consistent with CPI inflation moving close to target over the next couple of years.

7. There are, however, many uncertainties. On the up-side, the tightness of the labour market may drive up labour costs, and hence domestically produced goods prices, faster than we expect. On the other hand, more extensive switching towards cheaper suppliers in world markets may exert further downward pressure on imported goods prices keeping CPI goods price inflation in negative territory.

1. Introduction

Towards the end of last year, Richard Lambert gave a fascinating speech on low inflation in the UK (Lambert, 2004). This is a sequel.

Back in 2002, the MPC was criticised for undershooting the RPIX inflation target over the previous three years (see Figure 1) and it was suggested that it had a deflationary bias, setting interest rates unnecessarily high. In Nickell (2002), this accusation was analysed. The overall conclusion was that the undershooting had arisen, in the main, because the MPC, *along with all other forecasters*, had under predicted the sterling exchange rate over much of the period from the foundation of the MPC in 1997 to 2001 (see Figure 2 for the consensus forecasts of that era). This tended to generate an over prediction of import prices and therefore inflation over the same period and hence to interest rates being set marginally too high from an ex-post perspective. I concluded that it would be hard to convict the MPC of a deliberate deflationary bias simply on these grounds.

After late 2002, this issue went away as RPIX inflation moved above target (see Figure 1) where it remained until the target was changed to 2% on the CPI measure in December 2003. However, this question of deflationary bias looks as if it is starting to make a comeback (see, for example, para.48 in House of Lords, 2004[1]). In fact, the House of Lords Select Committee on Economic Affairs was referring back to the old question of the pre-2003 period. However given that CPI inflation has been well below 2% both since it assumed its target role and for many years previously (see Figure 1), the issue of inflation being persistently below target is very likely to come back on the agenda.

As is well known, CPI inflation is likely to be around 0.8 percentage points below RPIX inflation in the long run (see Nickell, 2003, for a detailed analysis of the switch in target). Much of this long-run difference (0.5 percentage points) is down to the different formulae used to aggregate the inflation rates of all the different goods. But the remaining 0.3 percentage points of the long-run difference is due to the exclusion of housing depreciation and Council Tax from CPI. While the long-run impact of this exclusion is relatively small, in the short run it can, and recently has had, a very substantial effect on the difference between CPI and RPIX inflation. Indeed, because of the fact that the housing depreciation element of RPIX is based on house price inflation, throughout 2003 RPIX inflation was significantly above target whereas CPI

inflation was below its subsequent target. During this period the difference between the two measures of inflation was well over 1 percentage point.

The interesting fact that comes out of all this and is worth looking at in more detail is that CPI inflation, that is general consumer price inflation excluding housing costs, has been very low for most of the time since the late 1990s. Indeed, its average rate since 1999 has been 1.2%. Trying to understand why this has happened is important, particularly as the MPC projection of the most likely path of CPI inflation moves above 2% by the end of 2006.

In what follows, we first split inflation into CPI goods and CPI services, concluding that low CPI inflation since 1999 is mainly accounted for by the fact that CPI goods prices have been falling over most of the period. This is particularly unusual in the sense that over the same period, using the same measure, average goods price inflation in the Eurozone has been close to 2%. This during a period when the sterling-euro exchange rate was much the same at the end of the period as it was at the beginning.

In Section 3 we analyse the factors driving the prices of domestically produced goods and in Section 4 we focus on imported goods prices. Having understood the determinants of goods prices at the factory gate and the port of entry, in Section 5 we investigate the retail distribution sector which turns goods at the port and factory gate into goods at retail outlets. These three sections give us an overview of the reasons why goods inflation has been so low. Then, in Section 6, we pursue things a little further by investigating which sectors have made the biggest contribution to falling goods prices. We conclude by asking which inflationary pressures now in the pipeline are consistent with an MPC central projection where CPI inflation moves above the 2% target in 2006?

2. CPI Inflation: Goods and Services

If we are to understand why CPI inflation has been so low in recent years, the first step is to divide CPI into goods and services. In Figure 3, we see the significant gap between CPI goods and service price inflation. Furthermore, it is clear that the low level of inflation since 1999 is being driven by the fact that throughout most of this period, CPI goods prices have been falling. It is this fact which we shall investigate further[2]. To do this we look at the various stages from the production or import of

goods to their appearance in consumer outlets. So we analyse successively, the prices of domestically produced goods at the factory gate, the prices of imported goods, and the operation of the distribution sector which buys goods from the factory gate or the port and sells them in retail outlets at prices which determine the CPI goods price index.

Starting with home produced and imported goods, a broad overview of inflation is provided in Figure 4. What we see is that home produced goods price inflation has been positive for the majority of the time since 1999. Furthermore, if we remove petroleum products, which add a lot of noise to the series as oil prices fluctuate, we see in Figure 4 that home produced goods inflation has been rising steadily since 2000, turning from negative to positive in 2001. In fact, we would have a very similar picture were we simply to look at home produced consumer goods. Imported goods price inflation, on the other hand, has been negative for much of the period, notably since mid-2001. So we can see from this that imported goods have made a significant contribution to the low level of CPI goods price inflation in recent years. The next step is to look at domestic and imported goods price inflation in more detail.

3. Domestic Goods Prices

Our purpose here is to analyse the forces driving domestic production costs and hence output prices. The overall picture is summarised in Figure 5. Since the late 1990s, domestic output price inflation has broadly followed cost inflation until 2003 since when it is clear that (domestic) margins have been gradually increasing. The biggest element of production costs is labour costs and in Figure 6, we see the broad stability of both manufacturing pay growth and pay settlements. This, despite the fact that the unemployment rate over the period from the late 1990s has been slowly falling to its lowest level for a generation. The factors underlying this rather favourable performance are discussed in Nickell and Quintini (2002) and include the following. First, the continuing decline in adversarial trade unionism in the private sector, where less than 20% of employees are now unionised. Second, increased product market competition in the manufacturing sector. Third, the increasing stability of inflation expectations, so that short-run fluctuations in the cost of living are less likely to be transmitted into pay settlements. Finally, in some sectors, notably agriculture and food processing, labour shortages are resolved by the selective use of immigrant labour rather then by increasing pay rates.

One further factor influencing recent pay awards is the question: which index of overall price inflation is used as the key measure of the cost of living increase when negotiating pay rises. Since the end of 2003, the CPI measure has been used by the MPC for its inflation target. So is there any evidence that private sector pay negotiators have switched to this significantly lower measure in 2004? The answer appears to be no. There is no indication that private sector pay settlements have declined over this period (see Figure 6). Furthermore, in the surveys reported in the IDS Pay Report 917 and in the IRS Pay and Benefits Bulletin 603 (both dated November 2004), the clear result is that private sector employers are sticking to the traditional RPI measure. (See Nickell, 2003 for a discussion of the labour market consequences of the switch in the MPC target measures of inflation in December 2003).

The impact of wage inflation on labour costs depends crucially on labour productivity growth which, in the manufacturing sector, has been relatively strong since 1999. In Figure 7, we see how this strong growth in labour productivity has ensured that, on average, unit labour cost growth has been negative since 1999 (average = -0.3% pa). The other main items in the costs of domestic goods production are materials and fuel and business services. In Figure 8, we see that annual business services inflation has been relatively stable, fluctuating between 0 and 4%. By contrast, the annual inflation rate of materials and fuels prices ranges from -10 to +8% and the surge in the cost of materials and fuels in the period from 1999 to 2001, on the back of the world boom, was one of the main reasons for the high levels of manufacturing cost inflation in the same period.

Overall, therefore, we see that the combination of stable wage inflation and relatively buoyant labour productivity growth have helped to hold down domestic goods price inflation. On the other hand, inflation in the cost of business services and rapidly rising inflation in the cost of materials and fuels have contributed to the burst in domestic goods price inflation in 1999 and 2000 as well as its steady rise since 2002. On top of this the increase in margins has had a significant impact over the last 18 months.

4. Imported Goods Prices

As we saw in Figure 4, imported goods prices have been falling for much of the time since 2001. In contrast to domestic goods prices, the sterling exchange rate plays a

direct role[3] in the determination of imported goods prices because the cost of producing these goods is incurred in foreign currency, so the sterling cost of production depends on the exchange rate. In Figure 9, we see that the sterling exchange rate appreciated dramatically in 1996-7 by over 20% after which it has remained relatively stable. The initial appreciation had a significant negative impact on import price inflation for a number of years and helps to explain why import prices continued to fall rapidly until 1999. Since that time, the direct effect of the fluctuations in the sterling exchange rate has been relatively modest, although the small surge in import price inflation in 2003 and the subsequent fall back in 2004 was probably driven, at least partially, by exchange rate shifts.

In order to understand what determines the price of imported goods, the starting point is the export prices of the various countries who provide UK imports. To construct an index of export prices appropriate to the UK, the standard strategy is to convert these export prices into sterling and then weight them by the share of imports from each country. So if p_{xi} is the log of the price of exports in sterling from country i and l_i is the share of UK imports from country i, then the (log) price index would be

$$p_x = \sum_i l_i p_{xi}$$

A sterling index of UK weighted world export price inflation, Δp_x, would be given by

$$\Delta p_x = \sum_i l_i \Delta p_{xi} + \sum_i (\Delta l_i) p_{xi} \qquad (1)$$

where Δp_{xi} is export price inflation from country i in sterling terms and Δl_i is the change in the weight attached to country i. The reason for going through this rather tedious algebra is to bring out the simple fact that UK weighted world export price inflation consists of two parts, the first term on the right-hand side of (1) which is the weighted average of the export price inflation rates of the different countries, and the second term which is the impact arising from shifts in import shares, generally towards countries which produce cheaper goods. This second term is potentially important. For example, between 1999 and 2002, imports to the UK from China and India increased their share by nearly 1.1 percentage points. This does not seem very much, but average prices in these countries are around one quarter of those from developed countries, for example. This apparent small shift in import shares is enough to reduce UK weighted world export price inflation by around 0.5% per annum during the three year period.

To see how this works in practice, we present in Figure 10, the series of UK weight world export price inflation based on the 27 main trading partners[4] and then in Figure 11, the contribution to this series made by the continuing process of switching to cheaper countries. The broad picture in Figure 10 is, not surprisingly, similar to the pattern of import price inflation shown in Figure 4. Even taking account of the fact that the former figure is based on annual data whereas the latter is based on monthly data, they are not identical because the average export prices of a particular country are not the same as the prices of imports into the UK from that country. This is first, because the composition of UK imports from a given country are not the same as the average composition of exports from that country and second because, even for identical goods, exports from a given country are often sold at different prices in different countries.

We see in Figure 11 that switching to cheaper countries has reduced UK weighted world export price inflation by an average of only 0.14 percentage points per annum in the second half of the 1990s. However, since 2000, this has risen to an average of 0.55 percentage points per annum which is a significant amount, suggesting that the process of sourcing manufactured goods from cheaper countries has intensified since the turn of the century[5].

So far, we have only considered overall goods import prices which include raw materials and oil, among other things. In order to look at a combination of goods somewhat closer to those relevant to consumption price indices, we present in Figure 12 the inflation rate of imported finished manufactures. Again, it exhibits the same broad pattern as the import price index in Figure 4, although the annual inflation rate for finished manufactures does not go positive in 2004. So what we see is that over the period from 1999 to 2001, import price inflation for finished manufactures was positive but since that time it has been falling at an average rate of over 2 percentage points per annum.

If we combine this with the inflation rate of domestically produced goods, we have the following picture of goods price inflation before they hit the retail distribution sector. From 1999 to early 2001, the annual inflation rate of both domestically produced and imported finished manufactures was positive. From early 2001 to mid-2002 both these inflation rates were generally negative. By contrast, from mid-2002 onwards, the inflation rate of domestically produced goods has been positive but this has been offset by the falling prices of imported finished manufactures. In the next

section we investigate how these prices have been translated into retail goods prices by the distribution sector.

5. Retail Prices and the Distribution Sector

Before we proceed, it is important to note that the goods prices we have been talking about so far, that is the price of domestically produced goods and imported finished manufactures, do not match precisely the goods included in retail goods price indices. The former include not only consumer goods but also intermediate goods and investment goods. Of course, ultimately even the intermediate and capital goods are used, either directly or indirectly in the production of consumer goods, so price inflation in these former goods will feed through into consumer price inflation. So, generally speaking, inflation rates in the price of some of the domestically produced and imported goods will be transmitted into inflation in the prices of inputs into the retail distribution sector with some delay.

The retail distribution sector can be thought of as taking goods from the factory gate and from ports, transporting them to retail outlets[6] and selling them to the general public. Inflation rates of goods going in differ from inflation rates of goods coming out if trend productivity growth in retail distribution changes or if margins in retail distribution are systematically squeezed or increased. The retail distribution sector consists of wholesale, retail and the motor trade. In terms of gross output, retail expanded from about 37% of the sector in the late 1990s to around 40% in 2002 and wholesale contracted from around 45% of the sector in the late 1990s to around 43% in 2002. During this same period, retail expanded its share of the total gross operating surplus in the sector from around 48% to 57% whereas wholesale's share of the total gross operating surplus fell from around 37% to 28%. So we have a picture here of a slowly expanding retail sector managing systematically to squeeze profits out of a slowly contracting wholesale sector. In Figure 13, we see how this translates into margins in the retail distribution sector, using two measures. Two facts stand out. First margins in the wholesale sector have been falling from the late 1990s onwards. Second, if we look at the margins in the entire retail distribution sector, we see that they fell from the late 1990s to 2000 after which they have been more or less flat, at least up to 2003.

What about productivity growth in the retail distribution sector? What we see in Figure 14 is that after 1999, average labour productivity growth in both wholesale and

retail rose by a little under 2 percentage points per annum and this is reflected in the similar rise in overall productivity growth in the distribution sector as a whole.

So how does this all tie in with the information on domestic and imported goods price inflation we discussed in previous sections and the fact that CPI goods prices have been falling from 1999 (see Figure 3)? In the previous section, we divided the period since 1999 into three sub-periods. From 1999 to early 2001, the prices of both domestically produced goods and imported goods were rising. The reason why this translated into falling CPI goods prices was the fall in the margins in the retail distribution sector (mainly in wholesale) along with the rise in labour productivity growth. In the period from early-2001 to mid-2002, domestic and imported goods prices were generally falling and this ensured that CPI goods prices continued to fall. Finally, in the period from mid-2002 onwards, domestically produced goods prices were rising, the prices of imported manufactures were falling at an average of around 2 percentage points per annum and margins in the retail distribution sector were relatively stable, at least up to the end of 2003. So the fact that CPI goods prices continued to fall must have been due to the dominant impact of falling imported goods prices supported by the continuation of high productivity growth in distribution. This, then, is the overall explanation of falling goods prices, and hence of very low inflation over the last five years. There remain two other issues to discuss. First, it is of some interest to see which goods have made a particular contribution to falling prices and why. Second, since the MPC expects CPI inflation to rise above 2% in 2006 for the first time this century, are there any straws in the wind we can point to now which reinforce this expectation?

6. Which Sectors Have Made the Biggest Contribution to Falling Goods Prices?

In Figure 15 we present a breakdown of the goods part of the retail price index (RPI). This is very similar to the goods part of the CPI, but since the latter data are not available for the early 1990s, we are forced to use the RPI. The basic difference between the two indices is the fact that the CPI goods inflation rate will be somewhat lower throughout because of the formula effect. The patterns over time, however, will be much the same.

The first point that emerges from Figure 15 is that overall goods price inflation was around 2 percentage points lower after 1999 than it was between 1993 and 1999. Looking at the individual sectors we see substantial differences in the fall in inflation

in different sectors. Whereas food price inflation fell by less than 1 percentage point on average, clothing and footwear inflation fell by over 3 percentage points, car price inflation by over 4 percentage points and the inflation rate of TVs (including home computers) fell by a staggering 8 percentage points, although this represents only 1.9% of total goods expenditure. Altogether, however, these last three sectors make up around one quarter of all goods expenditure.

While these categories cannot be matched precisely to domestic manufacturing sectors, we set out some roughly equivalent data for domestic output price inflation in Figure 16. The data that match up particularly well include the small fall in output price inflation in food products and the large falls in clothing and footwear (over 2 percentage points), motor vehicles (close to 4 percentage points) and TVs (close to 4 percentage points)[7]. By contrast, the large fall in alcohol and tobacco output price inflation does not match up to the small fall in retail price inflation in the same sector, presumably because retail prices in this sector are dominated by excise duties. Interestingly enough, from Figure 17, we see how the three sectors with large falls in inflation noted above are also sectors which have seen significant increases in average annual labour productivity growth, namely clothing and footwear (12 percentage points), motor vehicles (around 5 percentage points) and TVs (around 15 percentage points). However, the big increases in labour productivity growth in domestic appliances and furniture do not seem to be reflected in large falls in output price or retail price inflation.

Many of these sectors have high levels of import penetration, so we should also see if the patterns of import price inflation shed more light on the overall falls in retail goods price inflation. Again, in Figure 18, we see significant falls in import price inflation in clothing and footwear (around 2.5 percentage points), new cars (6 percentage points) and TVs (around 3 percentage points) which reinforce the falls we see in domestically produced goods in these sectors. Interestingly inflation in beverages and tobacco actually rises in the period after 1999 which helps explain why retail price inflation in this sector has fallen so little.

Overall, then, we have a picture where some sectors, notably clothing/footwear, cars and TVs, which cover around one quarter of goods expenditure, have seen large falls in both domestic and imported inflation and large rises in domestic productivity growth. These are also sectors which are very open to trade, and so are highly competitive, which helps to drive productivity growth. On top of this, prices in the

car market have fallen because of interventions by the UK and European competition authorities[8].

7. Looking into the Future

Over the last two years, import price deflation and high productivity growth in the distribution sector have been holding CPI goods price inflation below zero despite positive and rising domestic goods price inflation and relatively stable retail distribution margins (at least until the end of 2003). Looking forward, how long can this continue?

On the domestic front, there are few factors at the moment which seem likely to reduce domestic goods price inflation, which has been rising for some years. Underlying earnings growth in the private sector has been rising over 2004 (see Figure 19) and the labour market continues to be tight. While manufacturing productivity growth remains high, there seems no obvious reason why it should rise further. However, given the intensity of competition, it is quite probable that margins in manufacturing will stop rising.

Import prices are a key factor. In Figure 4, we see that overall import prices are no longer falling. However, annual inflation of the price of imported finished manufactures remains negative as we can see from Figure 12. On the other hand, in this same figure, we see that the three-month on three-month rate has recently been positive, indicating that these import prices are no longer falling.

Looking forward, the continued strength of the world economy implies upward pressure on the world prices of traded goods. This suggests that the recent turn round in import prices will not reverse and that import prices will continue rising. With the continuing rise in domestic goods prices, this indicates that we are about to enter a period when both domestic and imported goods prices are rising. The last time this happened (1999 to 2001), the inflationary pressure was offset by falling margins in the retail distribution sector, so it was not transmitted to CPI goods prices. Given the recent stability of distribution sector margins (see Figure 13), there seems no particular reason to expect a repeat of this via a further squeeze on distribution margins. So we can expect CPI goods price inflation to move into positive territory, settling down at a stable but relatively low level. This is consistent with the latest MPC central projection where inflation settles down close to the target.

Of course, there are many uncertainties. The tightness of the labour market may drive up labour costs and hence domestic goods prices faster than we expect. On the other hand, even when the world prices of traded goods are rising, more extensive switching towards cheaper suppliers can still generate falling import prices thereby continuing to keep CPI goods price inflation in negative territory. Nevertheless, for the reasons discussed above, a projection of CPI inflation moving up towards 2% in the next couple of years is not implausible despite its having been below this level for several years.

Footnotes

1. In fact, para.48 says, *"These data prompt some intriguing questions. If inflation was over-predicted until 2003, should interest rates have been lower? Moreover, did the over-prediction of growth over this period lead to higher interest rates than were necessary? And was this whole situation reversed from 2003 onwards? Interest rates were above 6.75% until 2001. With the fall in the growth of GDP interest rates were then reduced. Interest rates were then raised again during 2002 when both inflation and growth were being over-predicted."* The factual details here are a bit puzzling because interest rates peaked at 6% in 2000, having risen during 1999. Furthermore, they did not rise again until late 2003. So, contrary to the statement in para.48, they were not raised during 2002.

2. What we are, in fact, investigating is why goods prices have been falling relative to the general price level so much faster after 1999 than in previous years. It is rather casual to refer to this fact as the driving force behind the low level of CPI inflation. Ultimately inflation is the consequence of monetary policy and macroeconomic shocks. So here, we are not analysing the ultimate causal mechanisms but merely looking at why the relative price of goods has been falling so rapidly in recent years.

3. The sterling exchange rate has an indirect impact on the price of domestically produced goods because domestic firms are often directly competing with foreign firms in the domestic market. If sterling appreciates, the sterling cost of production for foreign firms falls and this enables them to compete more fiercely in the domestic market which may force domestic firms to cut their prices in order to maintain market share.

4. We omit Norway and Saudi Arabia to concentrate more on non-oil imports.

5. Computing the switching effect is not straightforward because a measure of the level of export prices is required for each country. In Figure 11 we use data from the Penn World Tables and the IMF to estimate the relative price levels.

6. These include mail order and internet outlets.

7. Here, the TV sector does not include personal computers.

8. The UK Competition Commission report on new cars was produced in March 2000 and highlighted "a complex monopoly situation resulting from suppliers practices in distributing new cars in the UK". The EC rules which allowed this to happen (the so-called Block Exemption) were adjusted in July 2002 but the UK car market had already changed significantly by then as a result of the investigations by the competition authorities and the consequent introduction in the UK of the Supply of New Cars Order 2000 in September.

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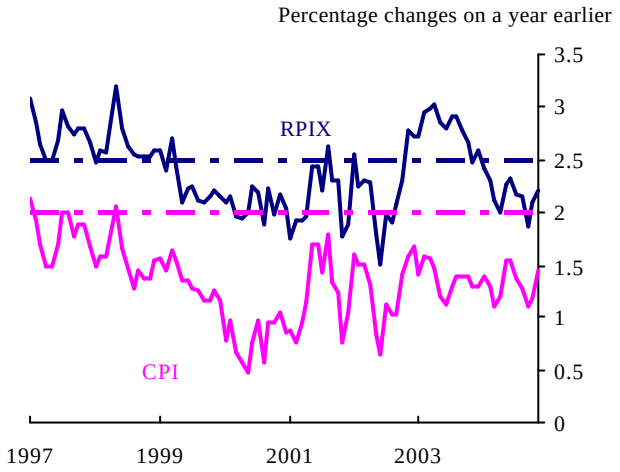
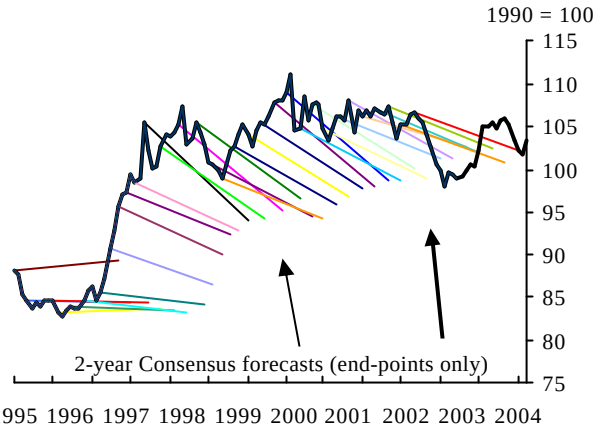
Figure 1: Year on year retail price inflation rates



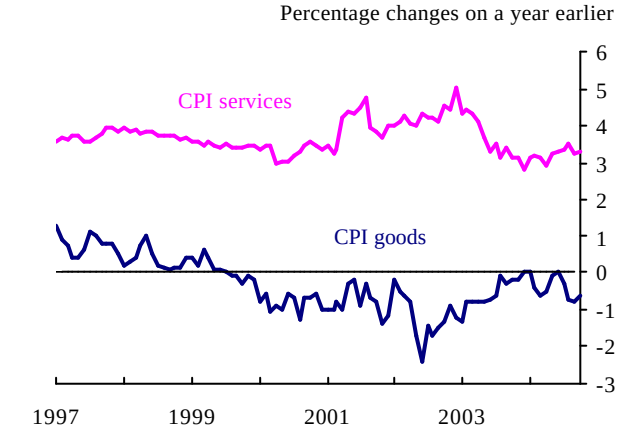
Source: ONS

Figure 2: Sterling ERI outturns vs. two -year Consensus sterling ERI forecasts



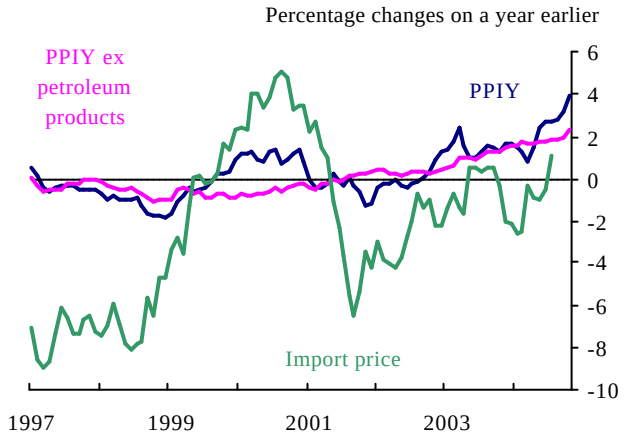
Source: Bank of England and Consensus Economics

Figure 3: CPI goods and services



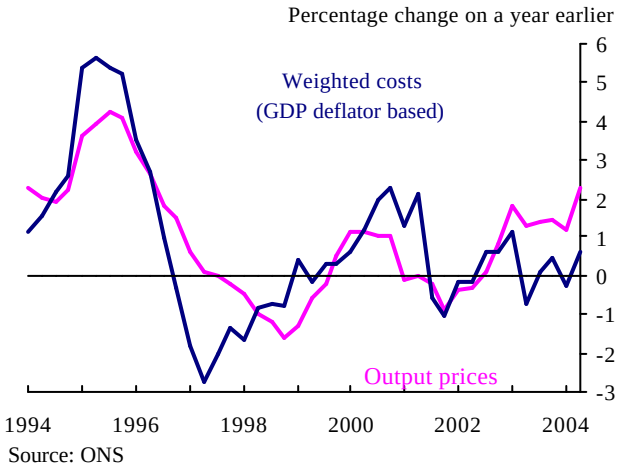
Source: ONS

Figure 4: UK domestic (PPIY) and imported goods prices



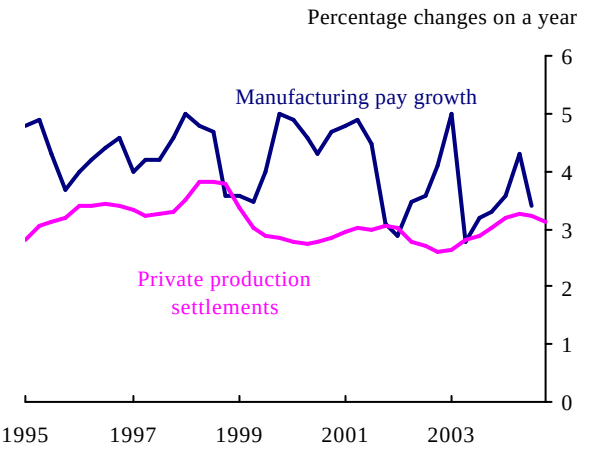
Source: ONS

Figure 5: Manufactures' weighted costs and prices (domestic)



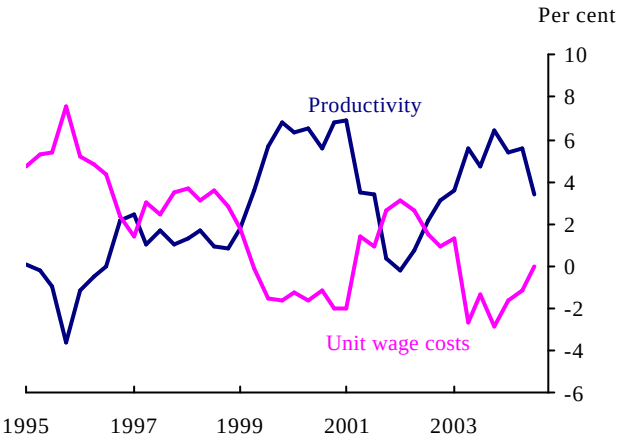
Source: ONS

Figure 6: Manufacturing pay growth and private production wage settlements



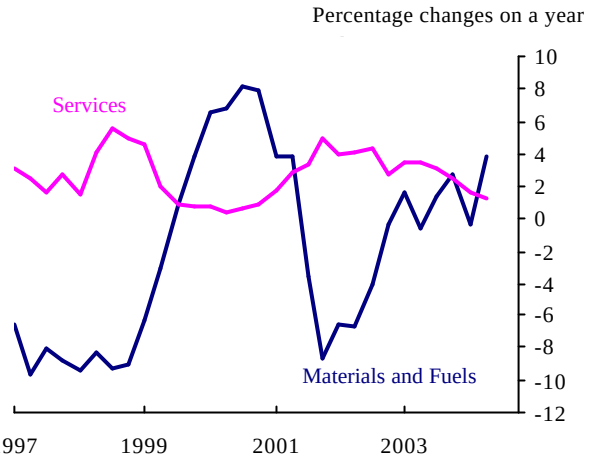
Source: Pay growth, ONS. Settlements, Bank of England settlements database.

Figure 7: Manufacturing productivity and unit labour costs



Note: Labour costs are 34.8% of gross output.
Source: ONS

Figure 8: Materials, fuels and services inflation

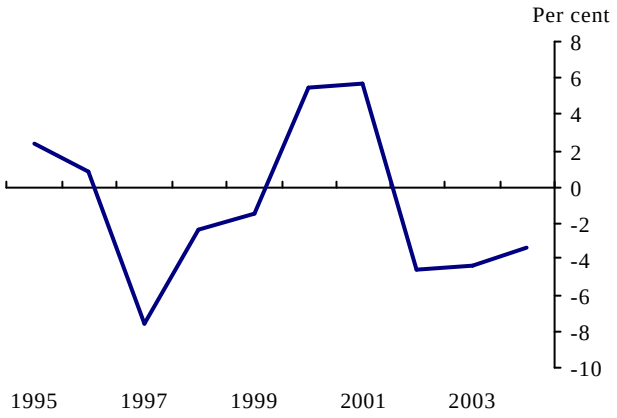


Note: Materials and fuels are 20.9% of gross output, business services are 15.6%.
Source: ONS

Figure 9: Exchange rate (ERI)

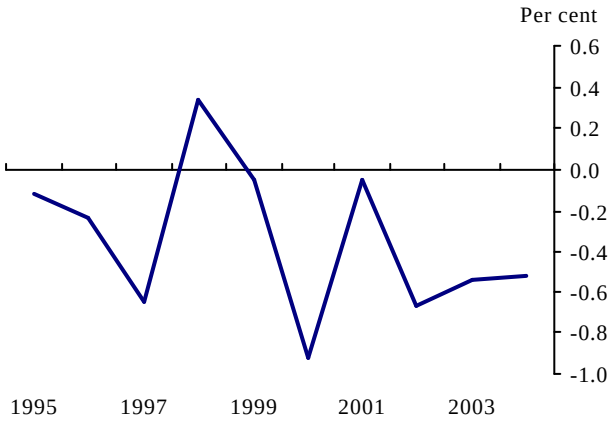
Source: Bank of England

Figure 10: Sterling world export price inflation



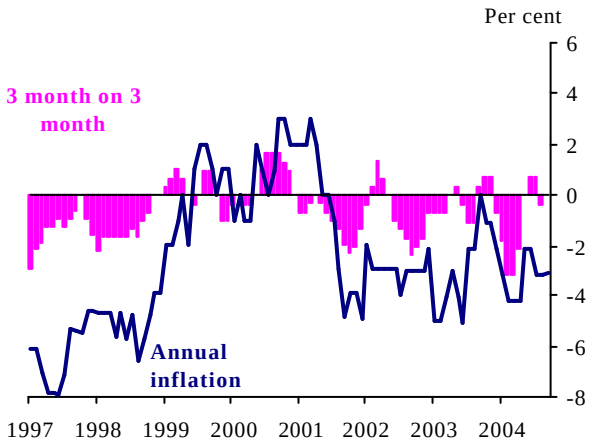
Source: Penn World Table version 6.1, Economist Intelligence Unit and International Financial Statistics produced by the IMF.

Figure 11: The contribution of 'switching' to sterling world export price inflation



Source: Penn World Table version 6.1, Economist Intelligence Unit and International Financial Statistics produced by the IMF.

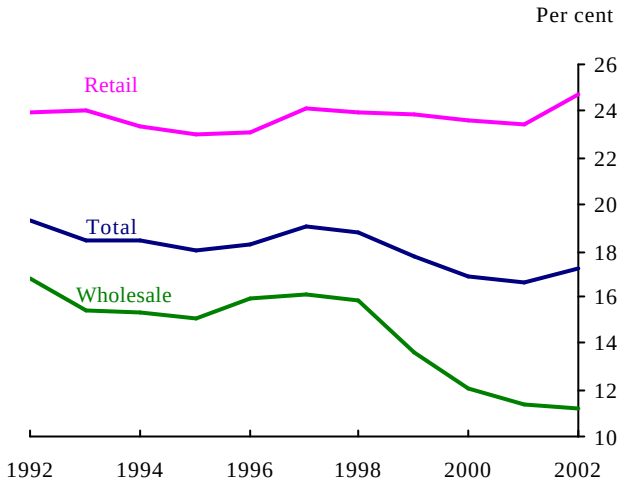
Figure 12: The inflation rate of imported finished manufactures



Source: ONS

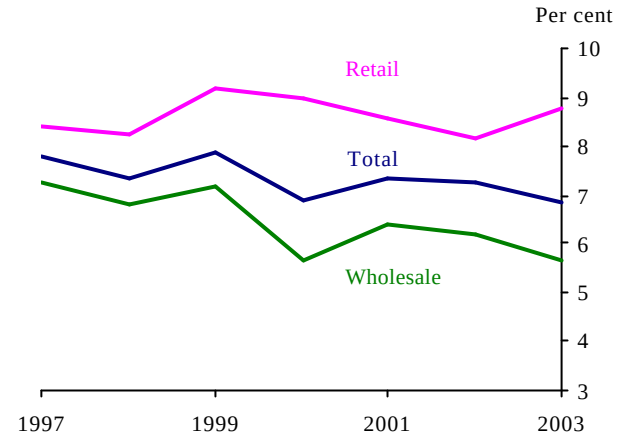
Figure 13: Margins in the distribution sector

Figure 13a



Source: ONS, Input-Output Supply and Use Tables.

Figure 13b



Source: ONS, Annual Business Inquiry.

Notes: (i) The distribution sector includes the Wholesale, Retail and Motor Trade industries. (ii) Margins in the Motor Trade industry have been relatively stable throughout (iii) Margins in 13a are defined by gross operating surplus divided by output at basic prices (iv) Margins in 13b are defined by gross operating surplus divided by gross output, where gross output = intermediate inputs + compensation of employees + taxes on production + gross operating surplus. The difference between output at basic prices and gross output is that in the former, goods which are not processed in any way within the distribution sector are subtracted out.

Figure 14: Distribution sector labour productivity growth

Figure 14a: Motor trade

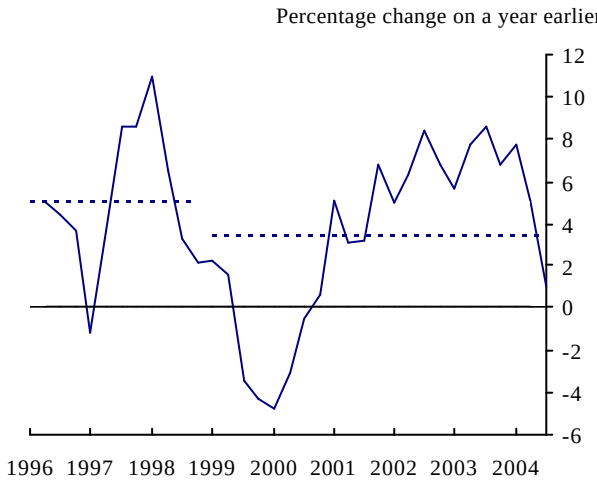


Figure 14b: Wholesale

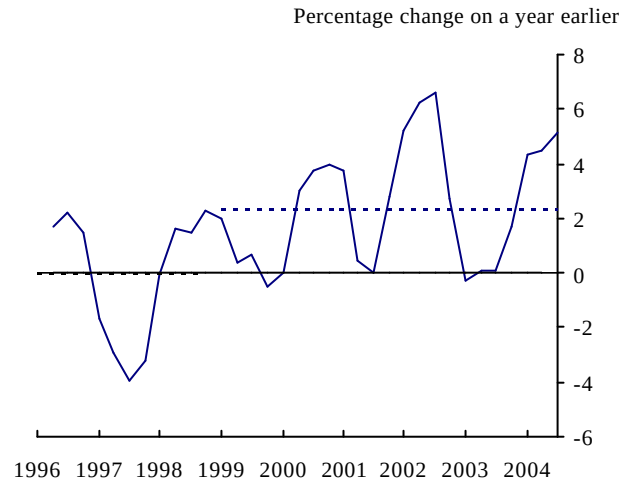


Figure 14c: Retail

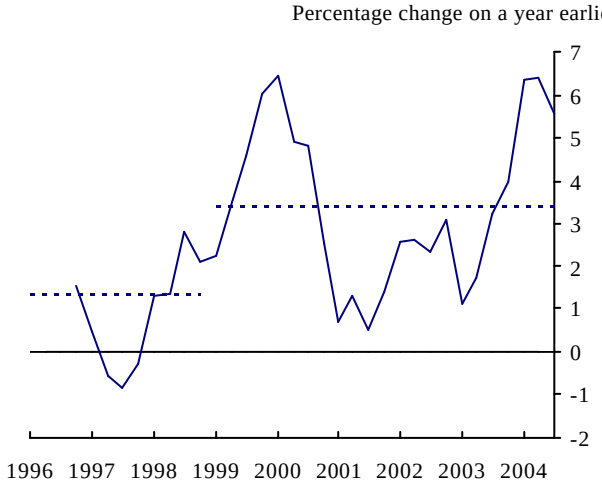
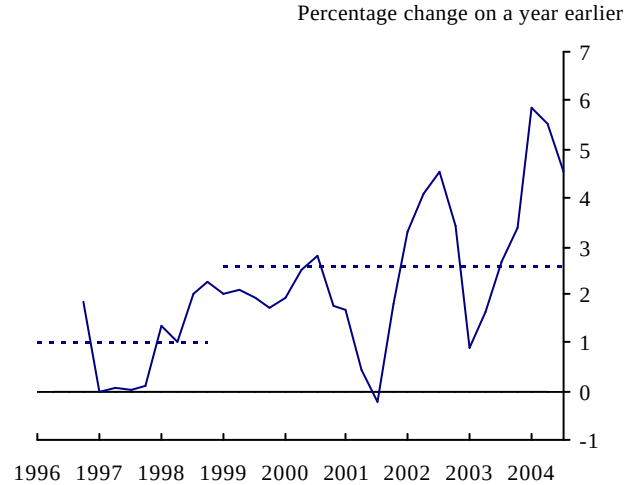


Figure 14d: Total distribution sector



Note: Labour productivity is defined as gross value added at basic prices divided by employment. Dashed lines show averages (1996 - 1998 and 1999 - 2004)

Source: ONS.

Figure 15: Retail goods price inflation by sector

Figure 15a: All goods (weight = 100%)

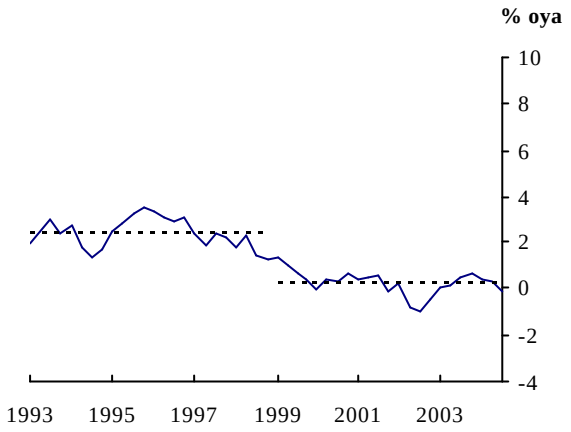


Figure 15b: New and old cars (weight =12.2%)

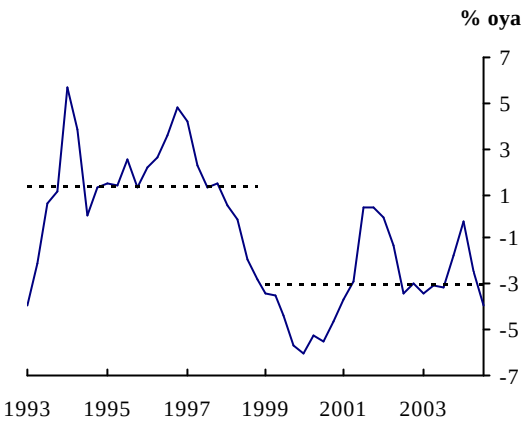


Figure 15c: Furniture (weight = 4.7%)

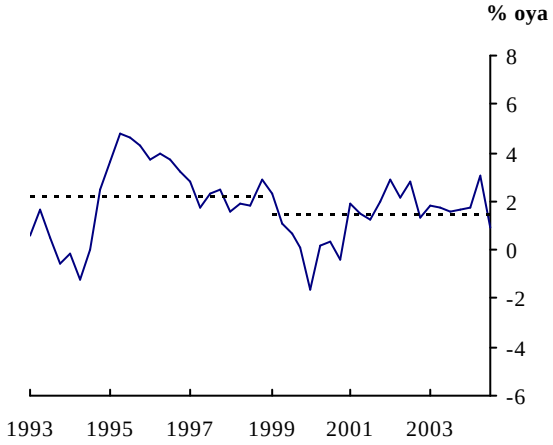


Figure 15d: TVs (weight = 1.9%)

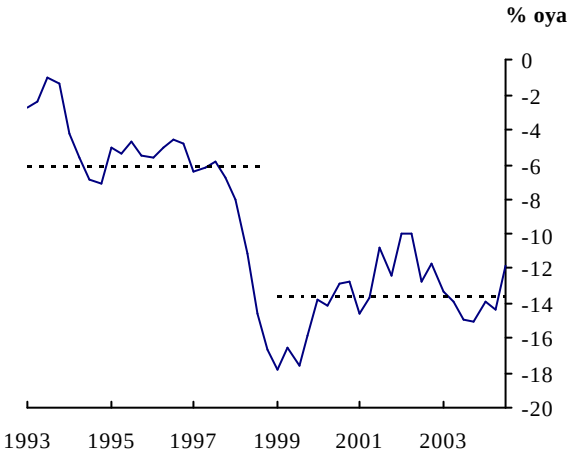


Figure 15e: Food (weight = 21.6%)

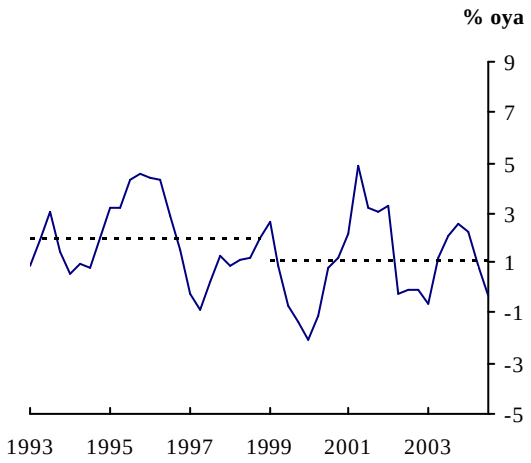


Figure 15f: Alcohol and Tobacco (weight = 8.8%)

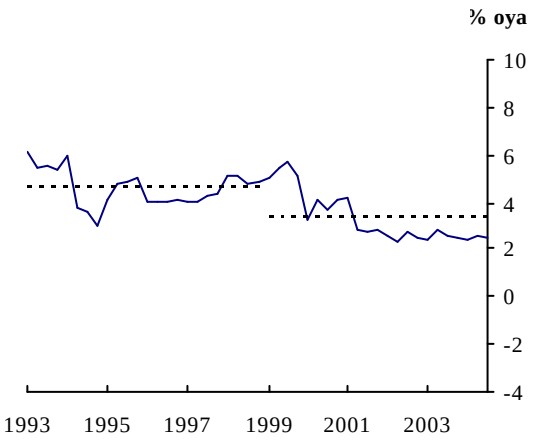


Figure 15 (cont'd): Retail goods price inflation by sector

Figure 15g: Clothing and footwear (weight = 9.9%)

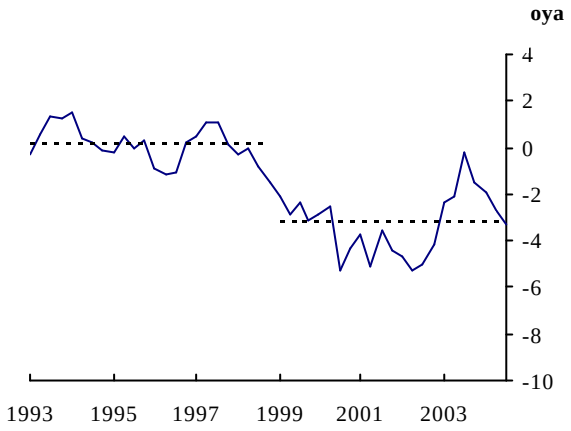


Figure 15h: Electrical appliances (weight =1.4%)

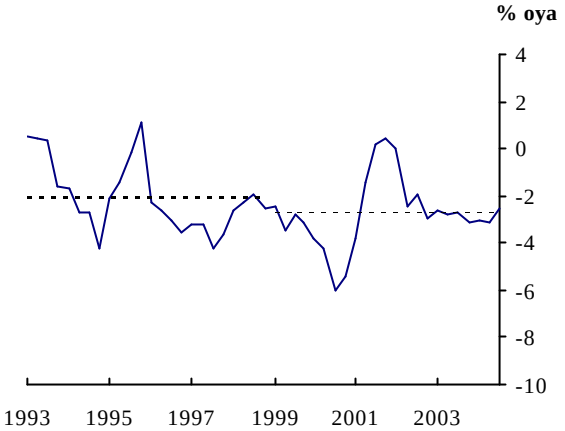
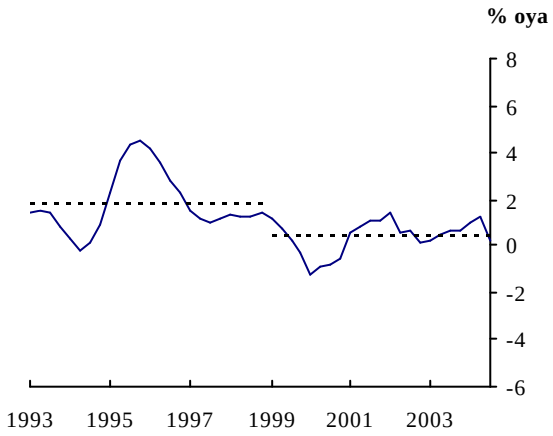


Figure 15i: Household goods (weight = 13.8%)



Note: TVs includes home computers after 1998, which explains the sudden fall. Dashed lines show averages (1996 - 1998 and 1999 - 2004)
Source: ONS.

Figure 16: Manufacturing output price inflation by sector

Figure 16a: All goods (weight = 100%) (excluding duties)

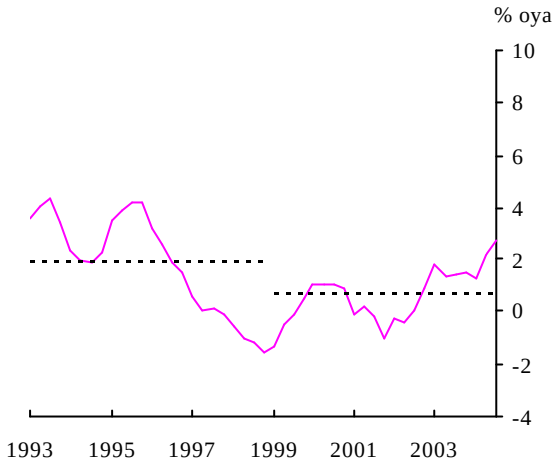


Figure 16b: Motor vehicles (weight = 7.3%)

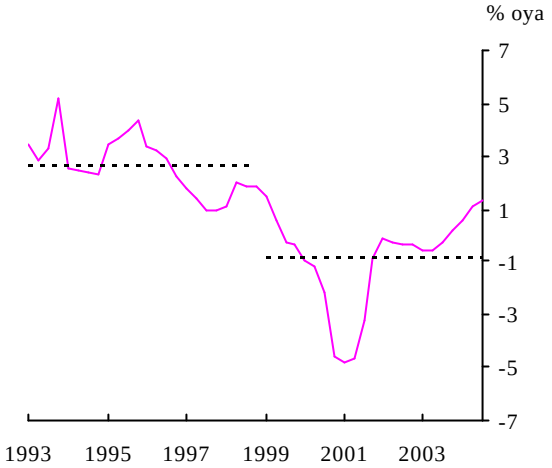


Figure 16c: Furniture (weight = 6.1%)

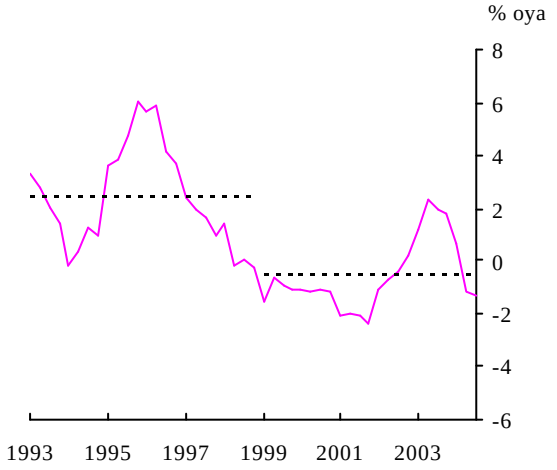


Figure 16d: TVs (weight = 2.0%)

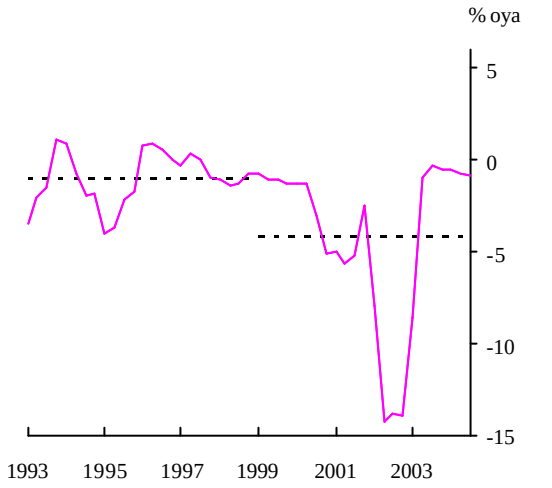


Figure 16e: Food products (weight = 16.9%)

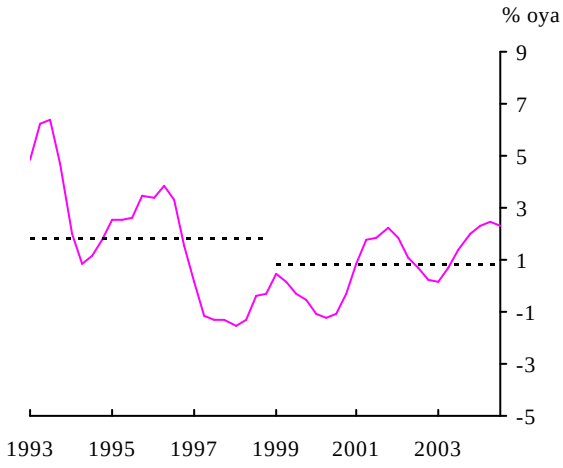


Figure 16f: Alcohol and Tobacco (weight = 9.1%)

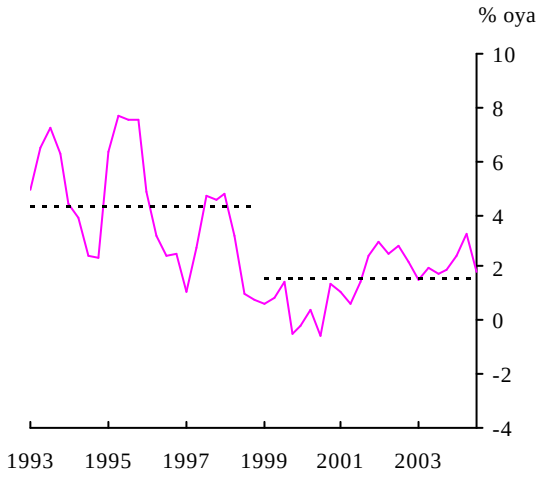


Figure 16 (cont'd): Manufacturing output price inflation by sector

Figure 16g: Clothing and footwear (weight = 6.5%)

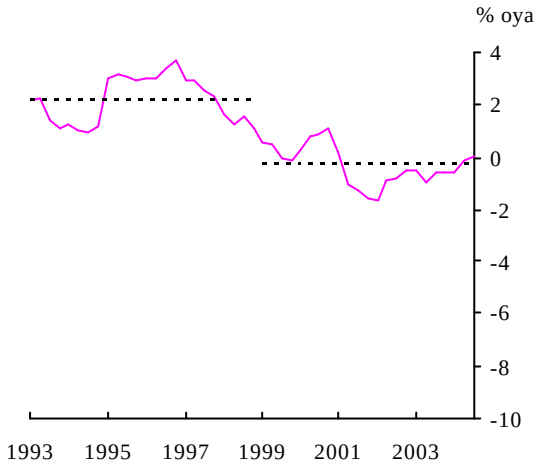
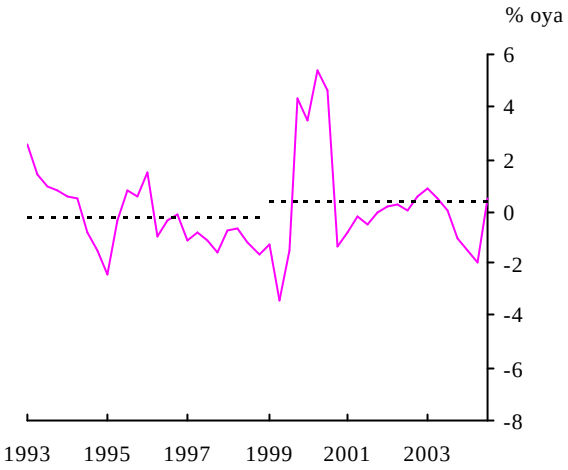


Figure 16h: Domestic appliances (weight = 0.4%)



Note:. Dashed lines show averages (1996 - 1998 and 1999 - 2004)
Source: ONS.

Figure 17: Manufacturing productivity growth by sector

Figure 17a: Motor vehicles

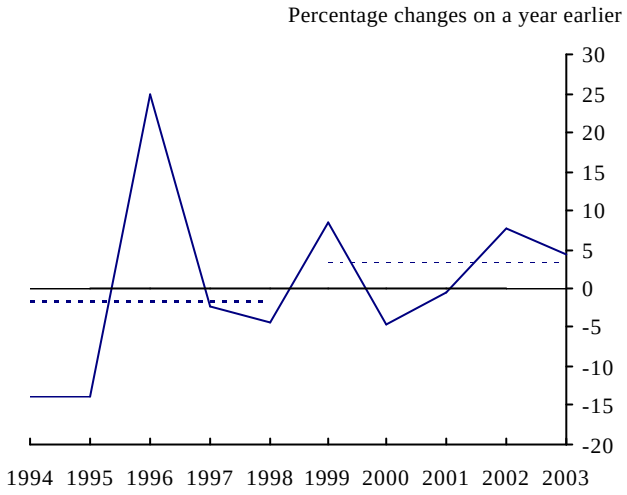


Figure 17b: Furniture

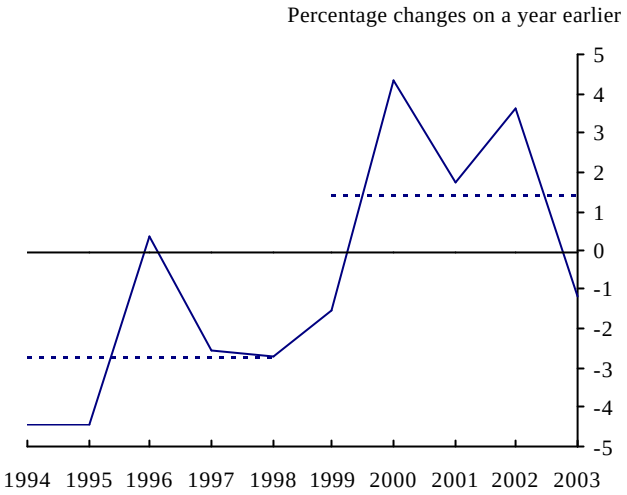


Figure 17c: TVs and radios

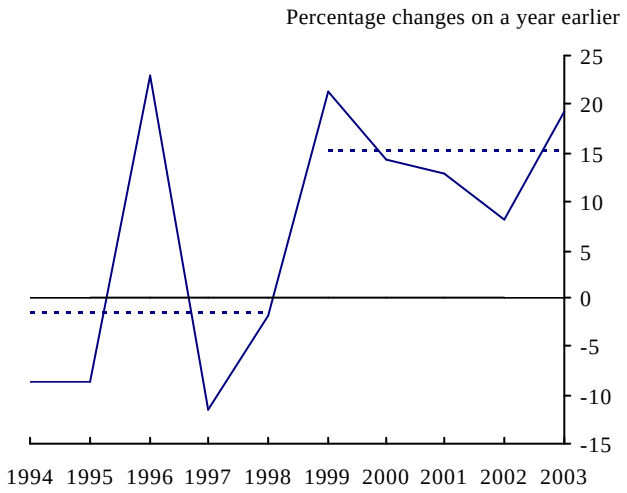


Figure 17d: Food

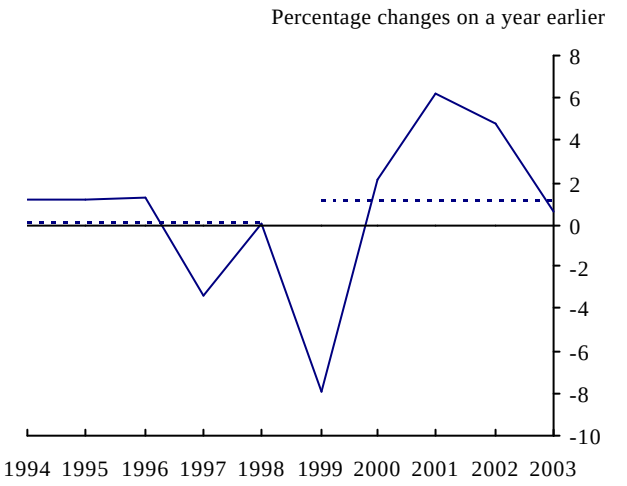


Figure 17e: Alcohol and Tobacco

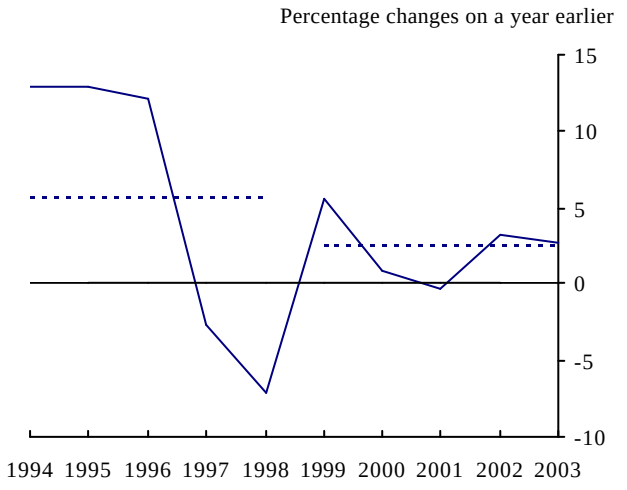


Figure 17f: Clothing and footwear

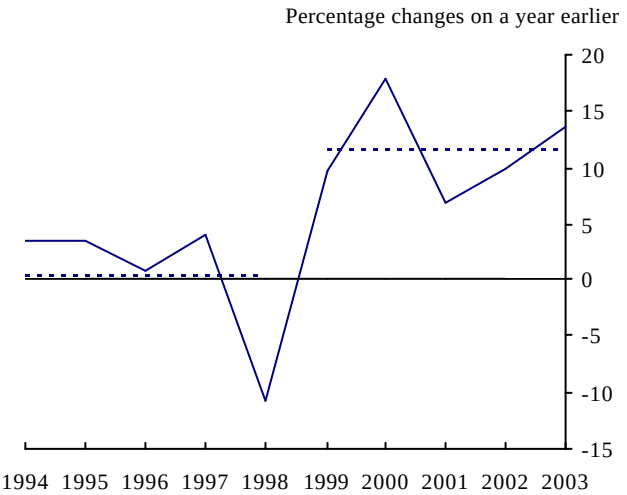
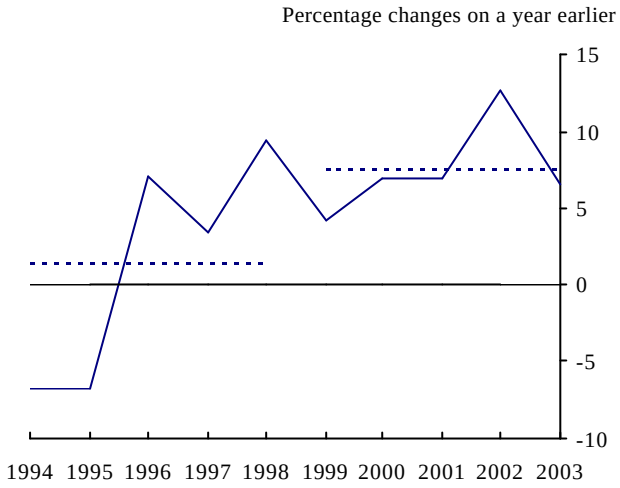


Figure 17 (cont'd): Manufacturing productivity growth by sector

Figure 17g: Domestic appliances



Note: Labour productivity is defined as gross value added at basic prices divided by employment. Dashed lines show averages (1996 - 1998 and 1999 - 2003)
Source: ONS.

Figure 18: Imported goods price inflation by sector

Figure 18a: All goods

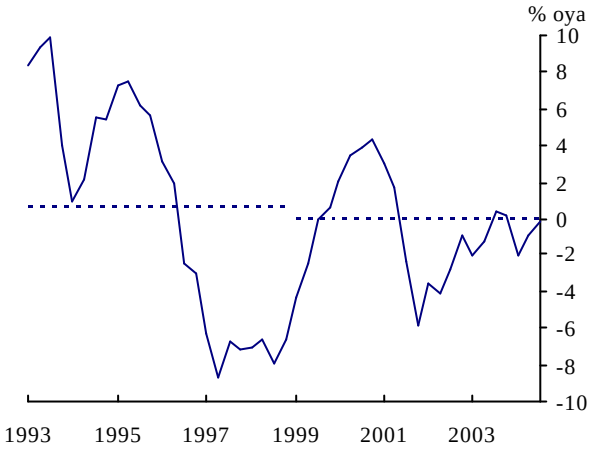


Figure 18b: Motor vehicles (import penetration = 37.9%)

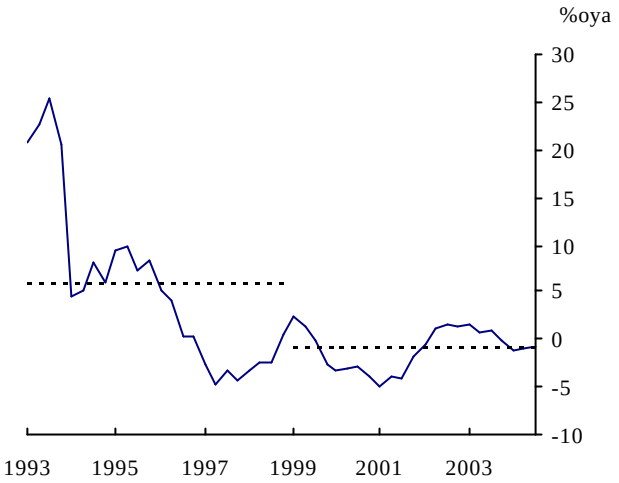


Figure 18c: Furniture (import penetration = 19.2%)

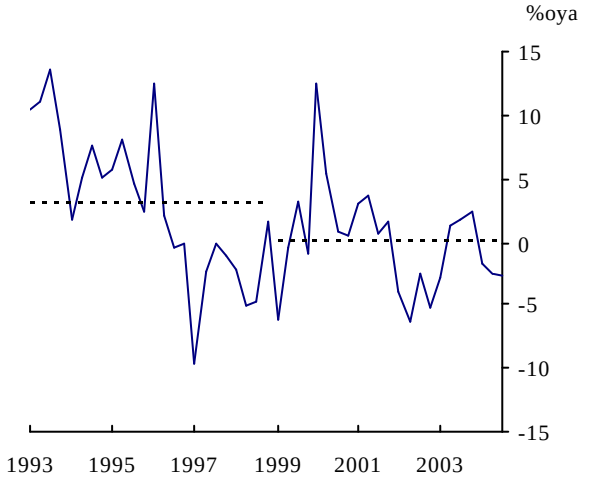


Figure 18d: TVs (import penetration = 33.0%)

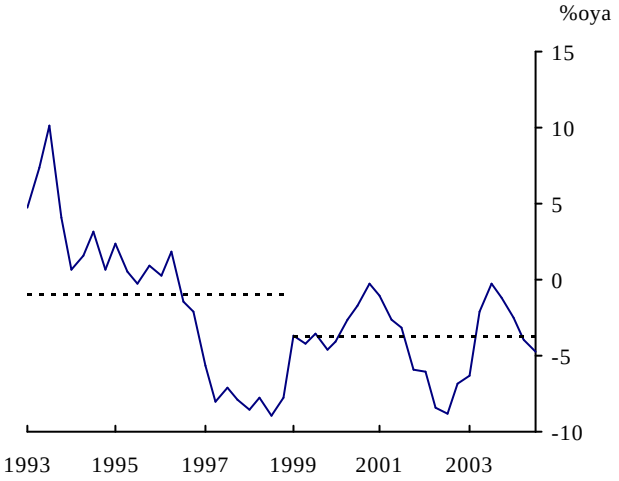


Figure 18e: Food products (import penetration = 12.3%)

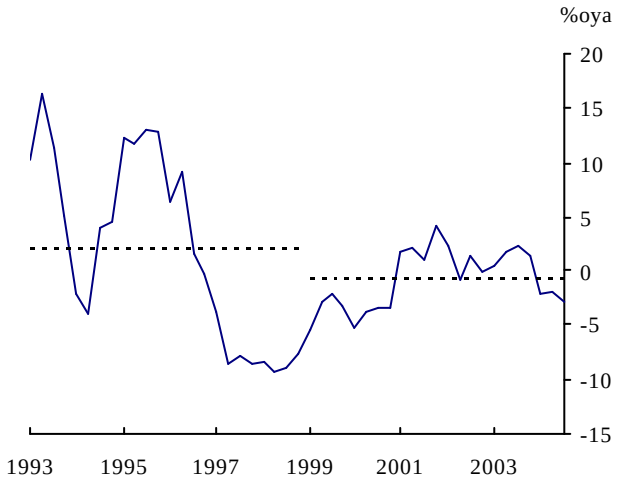


Figure 18f: Alcohol and Tobacco (import penetration = 14.1%)

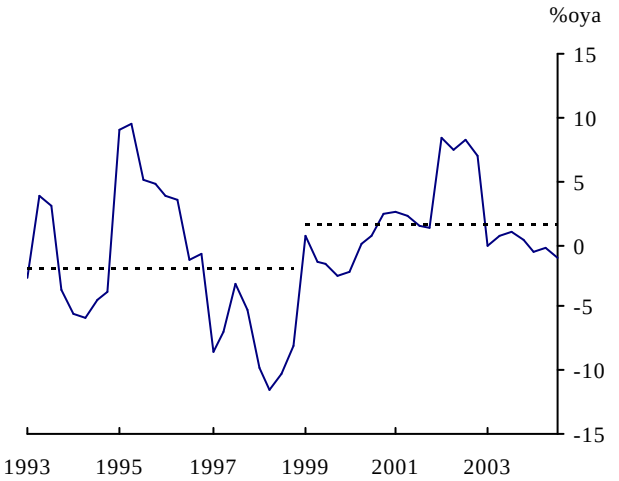


Figure 18 (cont'd): Imported goods price inflation by sector

Figure 18g: Clothing and footwear (import penetration = 29.1%)

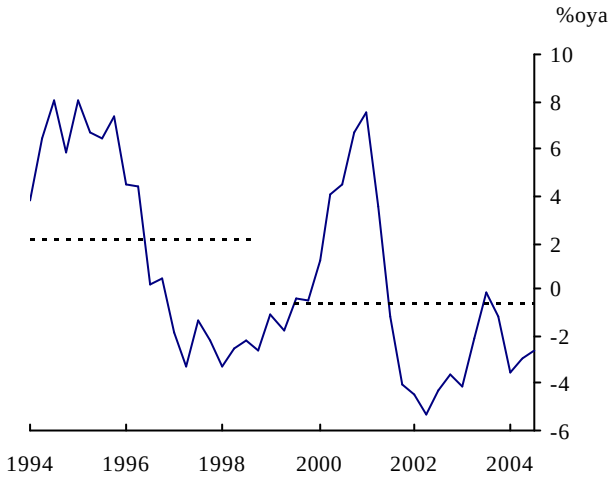
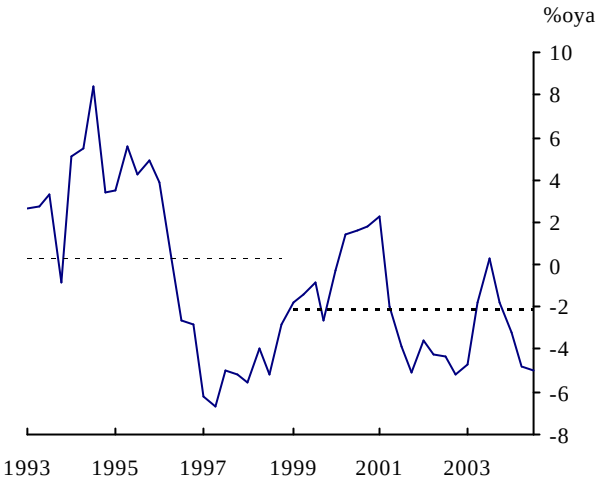
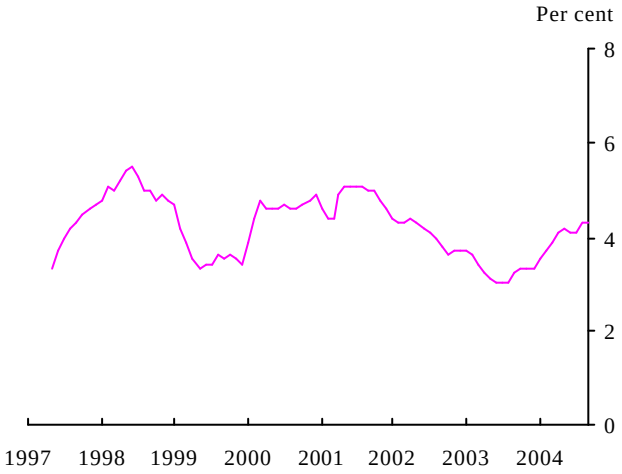


Figure 18h: Domestic appliances (import penetration = 27.4%)



Note: Import penetration defined as imports of goods divided by total demand for goods by sector in 2004. Dashed lines show averages (1996 - 1998 and 1999 - 2004)
Source: ONS.

Figure 19: Private sector three months earnings growth excluding bonuses[(a)]



(a) The data exclude bonuses and any arrears of pay.
Source: ONS