

## 4. The economic outlook

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### Summary

- Fiscal tightening is likely to be a major drag on growth over the next few years. The Office for Budget Responsibility's estimates of the effects of government cuts on national income are not unreasonable. However, we see a clear risk that the impact is larger than assumed.
- The consumer is key. Most households enter 2011 with their rates of pay failing to keep up with the cost of living. In addition, credit remains tight, house prices are falling and unemployment is starting to rise again. As a result, household consumption is likely to grow only marginally in real terms this year and accelerate only slowly in 2012 and 2013.
- The corporate sector is in much better shape than the household sector, enjoying strong profits growth and with healthy margins. Firms' balance sheets are in good shape too – leaving many cash-rich. Availability of finance is unlikely to constrain firms' investment plans. But we do not expect a strong investment-led recovery as many firms remain cautious about the demand outlook.
- Recent revisions to previous estimates have left the National Accounts looking as if there has been little in the way of rebalancing of the UK economy, with exports particularly disappointing, given the level of sterling and the strength of overseas demand. Models have over-predicted export growth in recent years. Although our forecast for exports is similar to that of the OBR – on the presumption that the models get back on track – the risks appear skewed to the downside.
- The labour market remains a puzzle, with productivity remaining very low relative to its pre-recession trend. We expect near-flat employment, subdued wage growth and unemployment to rise a little further this year. But the increase could be much larger if firms were to seek to regain the pre-recession productivity path. This is a major source of downside risk to household incomes and to consumption.
- All told, our single most likely forecast for GDP growth is very similar to the OBR's for 2011, but with the risks around this forecast skewed to the downside. We assess the chances of a double dip this year at about 20%. Much more likely is a year of sluggish growth. Further out, we judge the OBR projections to be optimistic, both in terms of the speed at which spare resources get used up and as regards the economy's potential growth rate. The cumulative gaps between our own and the OBR's five-year-out projections amount to some 1½% of GDP.
- We do not expect the Bank of England to respond to high inflation with near-term interest rate hikes. However, persistent above-target inflation is likely to constrain the Bank's ability to provide additional support for the economy. It may therefore make sense for the government to consider ways of reducing the pace of fiscal consolidation should demand conditions deteriorate significantly – enabling it to 'trim the sails' again in the same manner that it did so last November.

## 4.1 Introduction: the backdrop to 2011

Economic growth last year turned out fairly much in line with expectations, although the path travelled threw up some surprises, both in the form of much stronger-than-expected second-quarter growth and a much weaker-than-expected fourth quarter (of outright contraction). Real GDP in 2010 as a whole is likely to have expanded by about 1½% compared with its average level in 2009,<sup>1</sup> against a general expectation of 1.5% growth and our own Green Budget projection in February 2010 of 1.8%. Inflation, by contrast, turned out markedly higher than expected, with the 3.2% out-turn well above both the 2.1% that we had expected and the 2.4% consensus forecast.

Given that the recovery turned out broadly as expected, it is perhaps unsurprising that the consensus now deems it likely that growth will persist through 2011, with the average prediction being that GDP will increase by a slightly greater percentage this year than it did last. The Treasury conducts a regular survey of UK forecasts and, in its latest analysis, reports that only seven of the 38 economics teams covered by the survey have pencilled in a significant deceleration in GDP in 2011, while 21 expect an acceleration to occur.<sup>2</sup> Thus, one might well conclude that concern over whether the recovery will persist or not is no longer warranted – as most economists judge that it will. In this chapter, we examine whether it might be premature to draw such a conclusion, by examining some of the key growth drivers and considering factors that may surprise the general expectations (Section 4.2). We conclude that the downside risks to growth far outweigh the upside ones.

With inflation forecasts for the consumer price index (CPI) at the end of 2011 all over the place – ranging from as low as 2.5% to as high as 4.1% – we also look, in Section 4.3, at prospects for surprises to the general expectation (i.e. the median forecast) that inflation will, by the end of the year, be nearly half a percentage point lower than the current 3.7% rate, at 3.3% – which would be about half a percentage point higher than what the Office for Budget Responsibility is projecting (at 2.8%). Considering the potential for surprises to the consensus view, we judge that upside risks to inflation dominate, despite the downside skew to our modal growth forecast. In other words, we fear that the growth–inflation trade-off will turn out worse than what the OBR or the consensus expects.

Section 4.4 concludes by considering whether there is a rationale for the government to have an explicit ‘Plan B’.

## 4.2 Demand drivers

Starting with the outlook for demand, we judge there to be five key issues that warrant looking at when considering the robustness of the recovery, these being factors that may surprise the general expectation:

- **The impact of fiscal tightening.** The OBR assumed that the rise in the standard rate of VAT from 17.5% to 20% in January 2011 would reduce the level of GDP by around

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<sup>1</sup> Note that the full-year out-turn is based on a provisional estimate for the fourth quarter. This – and, indeed, its predecessors – stands a good chance of being revised.

<sup>2</sup> See HM Treasury, *Forecasts for the UK Economy: A Comparison of Independent Forecasts*, 2011 ([http://www.hm-treasury.gov.uk/data\\_forecasts\\_index.htm](http://www.hm-treasury.gov.uk/data_forecasts_index.htm)).

0.3% in 2011–12.<sup>3</sup> On the spending side of the government's accounts, it seemed comfortable using the range of fiscal multipliers used by its interim predecessor, which averaged a little over one-half. These, given the scale of planned cuts, seem to imply a hit to GDP from the expenditure reductions of around the same mark as the tax hikes. (Note that we write 'seem to imply' as the OBR was not explicit on this point.) Thus, fiscal contractions are probably being pencilled in as likely to lower GDP by less than 1%. But might the pass-through be higher than this, and perhaps a lot higher?

- **The vulnerability of households.** Consumer spending looks set to have staged a half-decent recovery in 2010 – expanding about 1% in real terms after the massive (3.2%) drop that occurred in 2009. It is generally presumed that 2011 will witness a repeat performance. But, with wages rising less fast than prices, house prices on the slide and credit availability still limited, might the combination of tax hikes, welfare cuts and job cuts in the public sector (detailed in Chapter 7) lead to weakening consumer demand?
- **The renaissance of British industry.** Here, the risks may be to the upside rather than to the downside. After all, investment has not just fallen a long way from where it was pre-crisis – much as typically happens after severe financial crises, as we highlighted in last year's Green Budget<sup>4</sup> – but it has fallen more sharply than most models suggest ought to have happened. But might that also mean that capital spending can spring back more forcefully than it usually does during the subsequent recovery? After all, corporate fundamentals are in great shape.
- **Rebalancing – and prospects for the UK regaining lost market share.** Here, too, the risk may not all be on one side. UK exporters have failed to grow their businesses as fast as overseas demand has expanded of late. So, on the one hand, there is a risk that this represents a structural, or secular, decline, which plays out in the form of continuing decline in the UK's share of global markets. On the other hand, there is a risk that the benefit of currency depreciation – i.e. improved competitiveness – is taking longer than usual to come through, perhaps because of the financial crisis. So, might it be that the next few years witnesses catch-up, with the UK regaining market share more forcefully than the models suggest it is reasonable to expect?
- **The labour market.** The UK's labour market looked quite a lot like Germany's during the crisis – with most workers staying on the books even though they produced a lot less than previously. The main difference between the two was that in Germany's case the outcome was thanks to the government offering firms subsidies to hang on to their employees. (So it made sense to wait and see if demand recovered.) In the UK's case, by contrast, there were no subsidies. So British firms paid for their decision to retain staff in the form of higher unit labour costs. Now, with the recovery in demand being fairly paltry, might they decide to start paring back on their workforces or might low pay growth continue?

The remainder of this section examines each of these issues in turn.

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<sup>3</sup> For details, see [http://budgetresponsibility.independent.gov.uk/d/vat\\_impact\\_on\\_real\\_gdp\\_171110.pdf](http://budgetresponsibility.independent.gov.uk/d/vat_impact_on_real_gdp_171110.pdf).

<sup>4</sup> See M. Dicks, 'The UK's productive capacity: surveying the damage', in R. Chote, C. Emmerson and J. Shaw (eds), *The IFS Green Budget: February 2010*, IFS Commentary 112, 2010 (<http://www.ifs.org.uk/budgets/gb2010/10chap1.pdf>).

## The impact of fiscal tightening

When it comes to fiscal tightening, the really important issue is the size of the fiscal multiplier – the amount that each percentage point of GDP's worth of tightening crimps growth. As we shall show in what follows, different studies and different considerations lead to different estimates. For a medium-sized economy such as the UK, a good rule of thumb will be a fiscal multiplier near unity, with some movement around this depending on actions by the central bank and conditions in other countries.

When considering this issue, a good place to start is with a recent overview of past academic studies, incorporating not just ad hoc, one-off examinations of the effects of changes in government spending and tax rates but also analyses of the large-scale macroeconomic models of the economy, such as those employed by the IMF and OECD when making their regular global economic projections.

The IMF published such a study in 2009.<sup>5</sup> It concluded that 'a [good] rule of thumb is a multiplier of 1 to 1½ for spending multipliers in large countries and ½ to 1 in medium sized countries (assuming a constant interest rate)'. In other words, for a medium-sized economy such as the UK – which is attempting to cut the volume of spending by around 2% per annum in both 2011 and 2012 – it would not be unreasonable to expect a 1% hit to GDP both this year and again next. But it could easily turn out to be a 2% hit.

When it comes to tax increases, the same study argued that a reasonable rule of thumb to use was 'about half of the above values' – so, about ¼ to ½ for a medium-sized economy. With the UK planning to increase taxes by about 1.2% of GDP this year and a further 0.4% of GDP in 2012, these consolidation efforts might be reasonably thought likely to depress the level of GDP by about 0.3% to 0.6% of GDP this year and perhaps something closer to 0.1% to 0.2% next. Clearly, combining these two sets of estimates hints that the overall hits to activity might be a great deal larger than what the OBR is assuming – i.e. perhaps as big as 2% of GDP this year rather than the 1% or so that the OBR's projections appear to be predicated on.

So, the first conclusion one might make from the 'meta' study approach is that the OBR might well be being overly optimistic about the economy's ability to ride through the coming fiscal tightening.

### *The mainstream macro models are not quite so gloomy ...*

Many of the academic analyses carried out refer to rather narrow aspects of fiscal tightening – being based on only a small number of countries or a small number of specific tightenings. Certainly, they have been criticised for being 'all over the map' when it comes to the size of the fiscal multiplier.<sup>6</sup> So, perhaps this 'meta' study approach exaggerates the size of fiscal multipliers. Instead, it might be better to focus on the properties of the large structural macroeconomic models – such as the IMF's 'Global Integrated Monetary and Fiscal Model' (GIMF); the OECD's 'New Global' and 'INTERLINK'

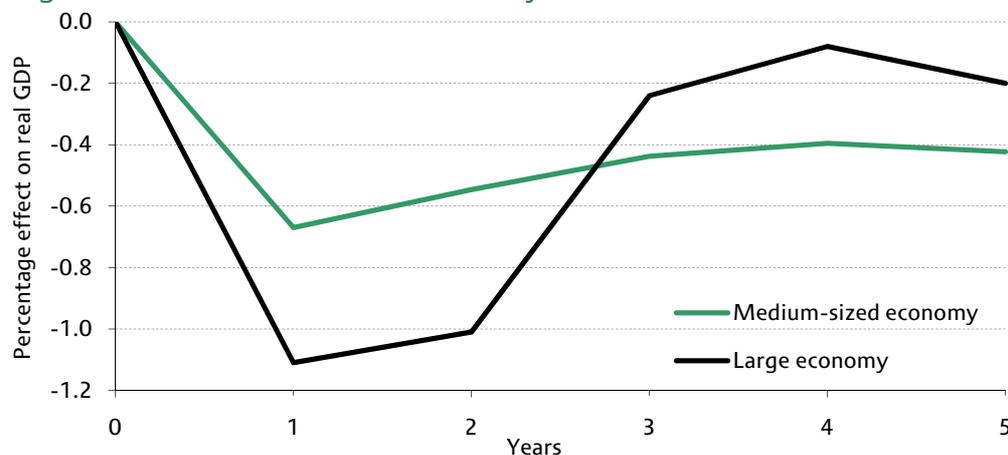
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<sup>5</sup> See A. Spilimbergo, S. Symansky and M. Schindler, 'Fiscal multipliers', IMF Staff Position Note 2009/11, 2009 (<http://www.imf.org/external/pubs/ft/spn/2009/spn0911.pdf>).

<sup>6</sup> This quote comes from E. Leeper, 'Monetary science, fiscal alchemy', National Bureau of Economic Research, Working Paper 16510, 2010 (<http://www.nber.org/papers/w16510>). Interestingly, Leeper's research helps explain why different researchers have come up with very different answers to the same question when it comes to estimating the size of fiscal multipliers. Much, he suggests, is because they do not all take into account both the reaction function of the monetary authorities and the means the public authorities have open to them to finance the public debt, although there are other important econometric and structural issues that are relevant too.

models; and the EU's 'QUEST' mode.<sup>7</sup> After all, these models are not only the workhorses of institutions for which macroeconomic forecasting is a central function, but also they are models designed to help answer policy questions. Because of that, the impacts of fiscal and monetary policy shifts on activity are studied extensively when the models are constructed.

**Figure 4.1. The effect on real GDP of a 1% of GDP fiscal tightening for a large and for a medium-sized economy**



Note: This graph shows the effect on real GDP of a 1% of GDP fiscal tightening in year 1 and a further 0.5% of GDP tightening in year 2.

Source: IMF's Global Integrated Monetary and Fiscal Model, as quoted in chapter 5 of IMF's *World Economic Outlook*, October 2008 and chapter 3 of IMF's *World Economic Outlook*, October 2010.

In fact, separating out the macro models' properties, in terms of fiscal multipliers, from the academic studies' findings does not lead to a massive shift away from the rules of thumb used above. For most of them have similar-sized multipliers, although some of those with a more forward-looking emphasis tend to suggest smaller impacts. Figure 4.1 illustrates, for both a 'large' and a 'medium-sized' economy, the simulated effect on GDP of a 1% of GDP fiscal tightening in year 1, followed by a further tightening of 0.5% of GDP in year 2, using the IMF's GIMF model for expenditure-driven fiscal tightening. It shows that the multiplier appears to be close to unity in the first year of the tightening for a large economy and around two-thirds for a medium-sized one. As the first may well be more appropriate for an economy such as the US and the second more relevant for the UK, for example, it does appear that the meta study's rule of thumb looks to be in the right ballpark.

### ... until likely central bank reactions are taken into account

There are, however, two big problems with the simulations illustrated above. First, they assume that the central bank is in effect 'riding to the rescue' – by cutting rates so as to stimulate activity.<sup>8</sup> Second, they assume that the country involved acts in isolation. So, the

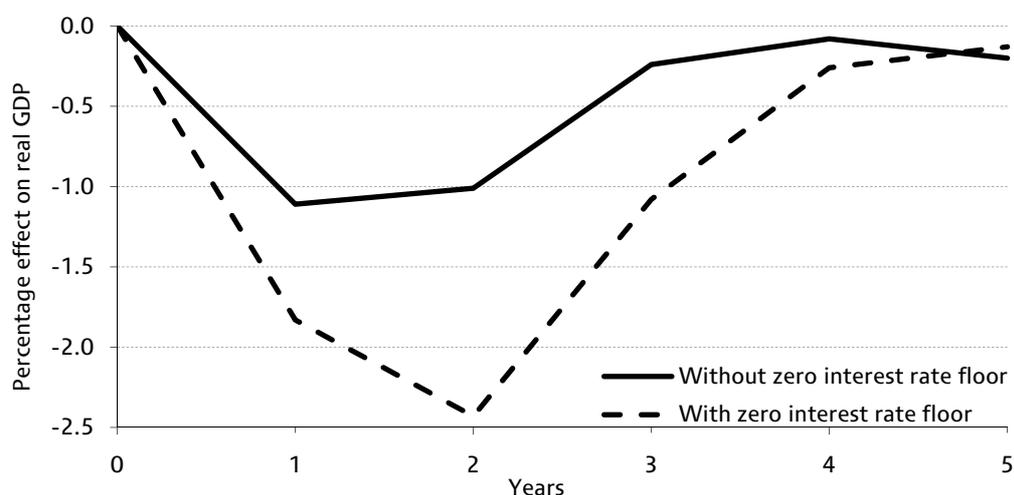
<sup>7</sup> Fortunately, the IMF has considered just such models – with detailed simulation results for seven different structural econometric models contained in G. Coenen, C. Resende, C. Erceg, C. Freedman, D. Furceri, J. in't Veld, M. Kumhof, R. Lalonde, D. Laxton, J. Linde, A. Mourougane, D. Muir, S. Mursula, J. Roberts, W. Roeger, S. Snudden and M. Trabandt, 'Effects of fiscal stimulus in structural models', IMF, Working Paper WP/10/73, 2010 (<http://www.imf.org/external/pubs/ft/wp/2010/wp1073.pdf>). The paper also provides references for each of the models for those interested in learning more about them.

<sup>8</sup> The models are predicated on the central bank following a Taylor rule, which means that rates are cut whenever GDP and inflation turn out lower than what is consistent with the central bank hitting its inflation target.

rest-of-the-world economy is hardly affected, especially in the case when it is a medium-sized economy that is attempting the fiscal contraction.

What if we look at IMF simulations under two different assumed monetary policy responses? In the first, interest rates are permitted to fall so as to offset some of the hit to activity, as before. In the second, by contrast, it is assumed that the central bank sits tight – either because it wants to adopt a wait-and-see attitude concerning the impact of the

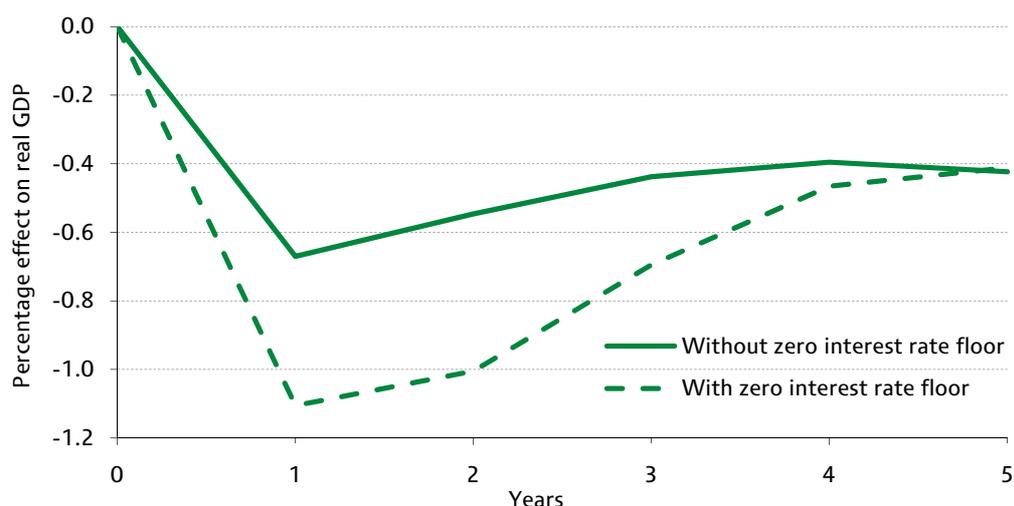
Figure 4.2. The effect on real GDP of a 1% of GDP fiscal tightening for a large economy, with and without the restriction of a zero interest rate floor



Note: This graph shows the effect on real GDP of a 1% of GDP fiscal tightening in year 1 and a further 0.5% of GDP tightening in year 2.

Source: IMF’s Global Integrated Monetary and Fiscal Model, as quoted in chapter 5 of IMF’s *World Economic Outlook*, October 2008.

Figure 4.3. The effect on real GDP of a 1% of GDP fiscal tightening for a medium-sized economy, with and without the restriction of a zero interest rate floor



Note: This graph shows the effect on real GDP of a 1% of GDP fiscal tightening in year 1 and a further 0.5% of GDP tightening in year 2.

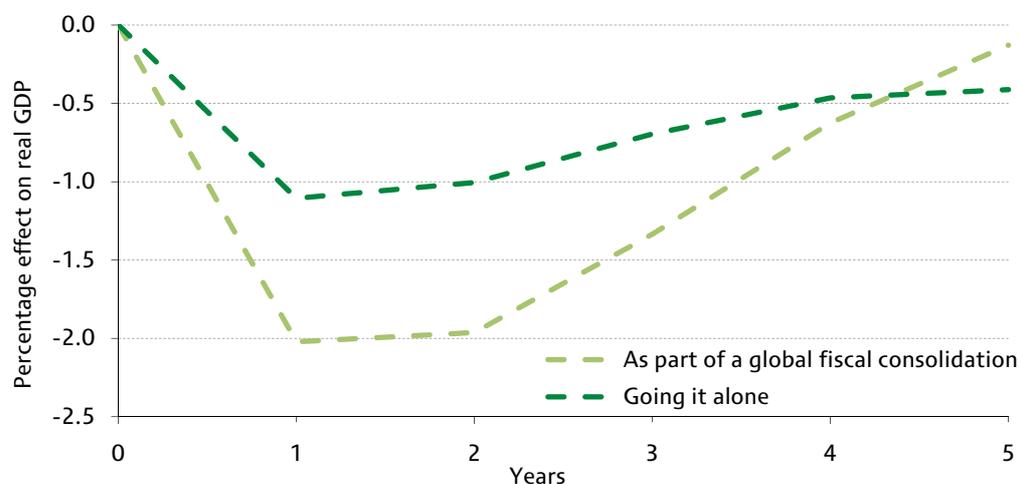
Source: IMF’s Global Integrated Monetary and Fiscal Model, as quoted in chapter 3 of IMF’s *World Economic Outlook*, October 2010.

fiscal shift or because it is constrained from moving, say, because it is at the zero interest rate floor and alternative monetary policy levers are not used or are ineffectual. Figures 4.2 and 4.3 show the consequences, again for both a 'large' and a 'medium-sized' economy.

The figures show that the multipliers are much larger when the zero interest rate bound bites. For a large economy, the first-year multiplier rises from close to 1 when the central bank does help provide an offset, to more than 2 when it cannot do so, or chooses not to. For the medium-sized economy, the respective estimates are around  $\frac{2}{3}$  and just over 1. So, in a situation where it is not feasible for the Bank of England to cut official rates further, it may well be that a near-unity rule of thumb is a good estimate to use. Only if one believed that a second dose of quantitative easing (QE) could provide as much stimulus as rate cuts might one assume that it is more appropriate to use the 'without zero interest rate floor' simulation results as a guide. The OBR does not appear to be assuming that further QE measures are around the corner. So the risks appear to be that it is being overly optimistic about the scale of the fiscal hit.

When it comes to the issue of 'going it alone' when tightening fiscal policy, or acting as part of a global effort to rein in red ink in the public finances, the IMF's simulation results are even more concerning. The first-year multiplier for a medium-sized country increases from a little above 1 to around 2 if other countries also tighten fiscal policy simultaneously, and by a similar amount (by 1% of GDP), as shown in Figure 4.4.<sup>9</sup>

Figure 4.4. The effect on real GDP of a 1% of GDP fiscal tightening for a medium-sized economy, going it alone and when others tighten simultaneously, with a zero interest rate floor



Note: This graph shows the effect on real GDP of a 1% of GDP fiscal tightening in year 1 and a further 0.5% of GDP tightening in year 2.

Source: IMF's Global Integrated Monetary and Fiscal Model, as quoted in chapter 3 of IMF's *World Economic Outlook*, October 2010.

<sup>9</sup> And there is nothing quirky about the IMF's model either in this respect or from the point of view of the importance of the zero bound. The OECD's 'INTERLINK' and 'New Global' models, for example, have similar features. For details, see T. Dalsgaard, C. André and P. Richardson, 'Standard shocks in the OECD's INTERLINK model', OECD Economics Department, Working Paper 306, 2001 ([http://www.oecd-ilibrary.org/economics/standard-shocks-in-the-oecd-interlink-model\\_000706200171](http://www.oecd-ilibrary.org/economics/standard-shocks-in-the-oecd-interlink-model_000706200171)) and K. Hervé, N. Pain, P. Richardson, F. Sédillot and P. Befy, 'The OECD's new global model', OECD Economics Department, Working Paper 768, 2010 ([http://www.oecd-ilibrary.org/economics/the-oecd-s-new-global-model\\_5kmftp85kr8p-en](http://www.oecd-ilibrary.org/economics/the-oecd-s-new-global-model_5kmftp85kr8p-en)).

The IMF estimates that the advanced economies will need to tighten fiscal policy by an average of 9% of GDP by 2020 if they are to stabilise the public debt to GDP ratio.<sup>10</sup> Given that most of the major developed economies are planning to make a start on that process soon – with a substantive fiscal effort over the next five years budgeted for, as shown by IMF assessments of expected future fiscal efforts – it seems reasonable to conclude that the risks to the meta-study rule of thumb, regarding the coming hit to GDP, are skewed to the downside. At best, it might be hoped that the UK benefits this year from the US postponing starting its (much-needed) multi-year fiscal tightening to 2012 at the earliest and instead opting for a last dose of fiscal easing this year. The reality may then turn out to be akin to a weighted average of the ‘going it alone’ and ‘as part of a global fiscal tightening’ simulation results, rather than being like the latter.<sup>11</sup> In other words, perhaps the multiplier will be around 1½ – or ‘big’ rather than ‘huge’.

### ***A recent robustness test is also worrying***

One last issue concerns whether or not traditional means of estimating fiscal multipliers might be the best way of gleaning information concerning how policy shifts impact on the economy. Disentangling the impacts of the business cycle on the fiscal stance from the impacts of shifts in the fiscal stance on the economy is tough, to put it mildly. Accordingly, some IMF researchers have argued that an event-study methodology works better.<sup>12</sup> Their recent attempt, based on such an approach, looked at 15 advanced countries’ experiences over the past three decades and found that a fiscal consolidation of 1% of GDP typically reduces GDP by about ½% within two years, but with domestic demand (i.e. consumption plus investment) typically dropping by around 1%. So, at first blush, what the IMF prefers to term an ‘action-based’ approach to gauging multipliers hints that they might be a little smaller than what the typical macro model or academic study suggests.

In fact, however, the IMF study also finds that, in a typical fiscal consolidation process, the authorities are rewarded by rate cuts from the central bank – which helps to soften the impact on demand and GDP. Also, what typically happens is that the country’s currency drops in value, helping to stimulate exports. When, by contrast, the central bank is unable, or unwilling, to cut rates, the event-study approach finds that the effects of fiscal tightening are markedly higher. Likewise when all countries cut together – so ensuring that no big currency realignments can occur and the potential gain from currency depreciation is lost. Indeed, the IMF study concluded that, when the benefit to net exports is absent, ‘the output cost of fiscal consolidation would be roughly twice as large, with output falling by 1 percent instead of 0.5 percent’.

So, a simple rule of thumb to use when considering the likely impact of how a contractionary fiscal policy might hurt growth is that each percentage point of fiscal tightening (in terms of percentage points of GDP) will lower GDP by about 1%, *ceteris*

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<sup>10</sup> These calculations are laid out in detail in IMF, ‘Fiscal exit: from strategy to implementation’, *Fiscal Monitor*, November 2010 (<http://www.imf.org/external/pubs/ft/fm/2010/fm1002.pdf>). Table 1 in the appendix to that document provides a good overview of the required adjustments, country by country.

<sup>11</sup> One recent OECD study highlights what it calls the ‘challenging budgetary prospects’ that the US authorities face, as well as the fact that the needed fiscal tightening measures have yet to be identified (by the US authorities). For details, see P. Lenain, R. Hagemann and D. Carey, ‘Restoring fiscal sustainability in the United States’, OECD Economics Department, Working Paper 806, 2010 ([http://www.oecd-ilibrary.org/economics/restoring-fiscal-sustainability-in-the-united-states\\_5km5zrsp9230-en](http://www.oecd-ilibrary.org/economics/restoring-fiscal-sustainability-in-the-united-states_5km5zrsp9230-en)).

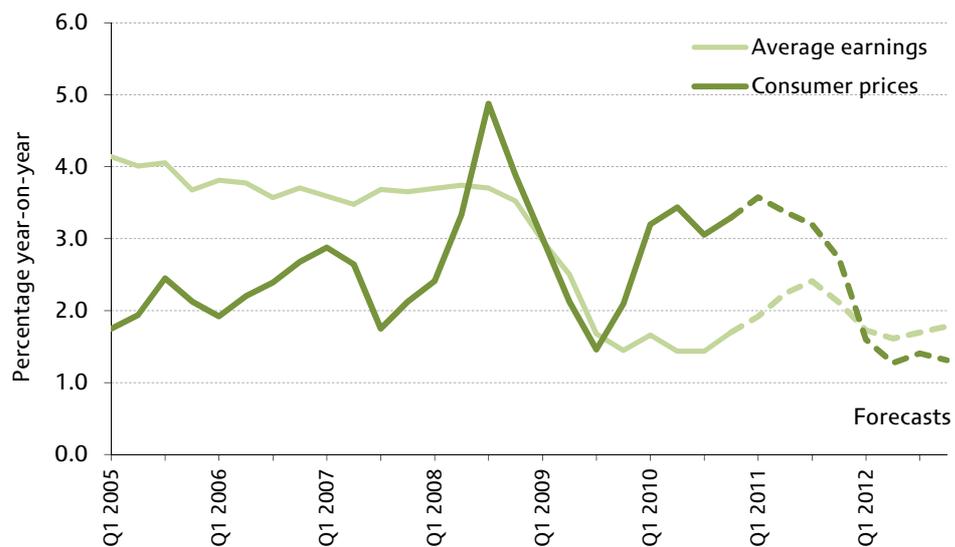
<sup>12</sup> See, for example, chapter 3 of the October 2010 edition of the IMF’s *World Economic Outlook* (<http://www.imf.org/external/pubs/ft/weo/2010/02/pdf/text.pdf>), entitled ‘Will it hurt? Macroeconomic effects of fiscal consolidation’, and especially appendix 3.3.

*paribus*. Of course, other things will not be equal. The fact that this year will witness such a marked tightening serves to emphasise that the things that will not be equal will have to be very positive – i.e. provide a great deal of support to the economy – if the OBR’s projection of a slight pickup in GDP growth is going to materialise this year. Before we turn to these other, potentially more positive forces, we consider an aspect of demand where we envisage there to be significant downside risks: personal consumption.

## The vulnerability of households

The majority of households ended 2010 with their wages rising more slowly than prices.<sup>13</sup> As a result, average earnings were also rising less fast than the CPI (Figure 4.5). In other words, their purchasing power was dropping in real terms even before the recent tax hikes took effect (discussed in Chapter 12). Thus, it may well be that those elements of fiscal tightening that hit households directly – such as the increase in the main rate of VAT from 17½% to 20% that came into force at the start of this year – have a greater-than-normal impact on them and their spending, as they come at a time when, psychologically speaking, most households are feeling vulnerable: many feel that they have yet to join in with the supposed economic recovery that they have read about in the papers.

Figure 4.5. Average earnings and consumer prices



Note: Figures after 2010Q3 are forecasts.

Sources: Office for National Statistics; Barclays Economics Research.

To test this proposition, we have experimented with using additional variables to augment our ‘consumption function’ – a model that links expenditure by households with a number of fundamental factors found to help explain past spending patterns. The basic idea was to see whether households react proportionately more to fiscal tightening when their incomes are weak (and the economy sluggish or in recession). But to do this effectively, it is important to make allowance for all other factors that might be driving spending patterns. We attempt to do this by using a model of consumer spending of what

<sup>13</sup> More than 80% of pay settlements have involved increases of less than 3%, according to Incomes Data Services. The median settlement (weighted by number of employees) was 2.2%. For further details, see <http://www.incomesdata.co.uk/news/press-releases/paysettlements1064.pdf>.

might be called the ‘Muellbauer’ variety – relying as it does on a wide variety of factors that have been found to be useful in explaining, in statistical terms, past variation in spending.<sup>14</sup> Importantly, these factors include not just real household disposable incomes and interest rates but also explicit gauges of credit availability, so-called ‘wealth’ terms (such as the ratio of net liquid and illiquid financial assets to income and the ratio of housing wealth to income) and proxies for expectations for future permanent income growth.

*Estimating the impact of VAT changes is tough ...*

In our preferred model of consumption, we have tried including explicit gauges of ‘animal spirits’ to measure feel-good, such as our market-based Risk Appetite Index (RAI).<sup>15</sup> Our consumption function does a good job, statistically speaking, in explaining past changes in consumption – *ex post*, we are able to explain more than 99% of the quarter-on-quarter variation in real personal consumption. Nevertheless, it can be improved upon (a little) by augmenting it with the RAI. When risk appetite is high, for example, it is not just that investors appear to be more willing to take on risk: on these occasions, consumers appear to have a higher propensity to consume too.<sup>16</sup> This evidence is not confined to the UK. In other work, we have found similar effects in the US and in the euro area.<sup>17</sup>

We have also experimented with incorporating additional variables to our consumption function so as to allow us to model the possible impact of past changes in VAT. We found no evidence of a permanent impact from VAT changes on the volume of households’ spending. However, we did find that the impact of changes in income is affected temporarily around the time of VAT shifts. In particular, in the quarter before a VAT hike takes place, it appears that consumers are a little less willing to make purchases than they typically are – perhaps because they feel more concerned about the economic situation. Once the hike is out of the way, however, households seem to regain their confidence again, and run down fairly quickly the ‘extra’ saving that they did before the hike. It should be emphasised, however, that, with so few VAT shifts having taken place during the past 35 years – the sample period available to us when undertaking this type of research – any findings have to be treated with a large pinch of salt.

*... with perhaps a temporary impact the most likely outcome*

We had less success interacting the RAI term with shifts in VAT rates – which is actually what we thought would be the most powerful effect. The new variable did slightly increase the precision of the estimated equation but was not significant at conventional

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<sup>14</sup> The most recent study of this type is J. Aron, J. Duca, J. Muellbauer, K. Murata and A. Murphy, ‘Credit, housing collateral and consumption: evidence from the UK, Japan and the US’, University of Oxford, Department of Economics, Discussion Paper 487, 2010 (<http://www.economics.ox.ac.uk/research/WP/pdf/paper487.pdf>). For those interested in seeing details of our version of such a model, please contact Michael Dicks.

<sup>15</sup> For details of how the RAI is constructed, see chapter 2 of the 2010 edition of the Equity Gilt Study, available at <http://www.barcap.com/egs/>.

<sup>16</sup> Ideally, we would use a measure of risk appetite based on households’ shifts in their portfolios or surveys of their attitudes to risk/saving. However, we know of no long run of such data that is rich enough to prove to be useful, from a statistical point of view. (Consumer confidence series, for example, do not seem to be very helpful.) Hence we use price-based data relating to the major financial markets. Of course, the assets involved are owned, ultimately, by households. But the fact that they are traded mainly by professionals risks there being (sometimes large) wedges between our investor-based risk appetite measure and true household-sector risk appetite.

<sup>17</sup> In the case of the US, for example, see M. Dicks, ‘Some thoughts regarding current financial market conditions and their implications for policymakers’, presented at the 2007 ECB Watchers’ conference ([https://www.ifk-cfs.de/fileadmin/downloads/events/ecbwatchers/20070907ecb\\_dicks\\_document.pdf](https://www.ifk-cfs.de/fileadmin/downloads/events/ecbwatchers/20070907ecb_dicks_document.pdf)).

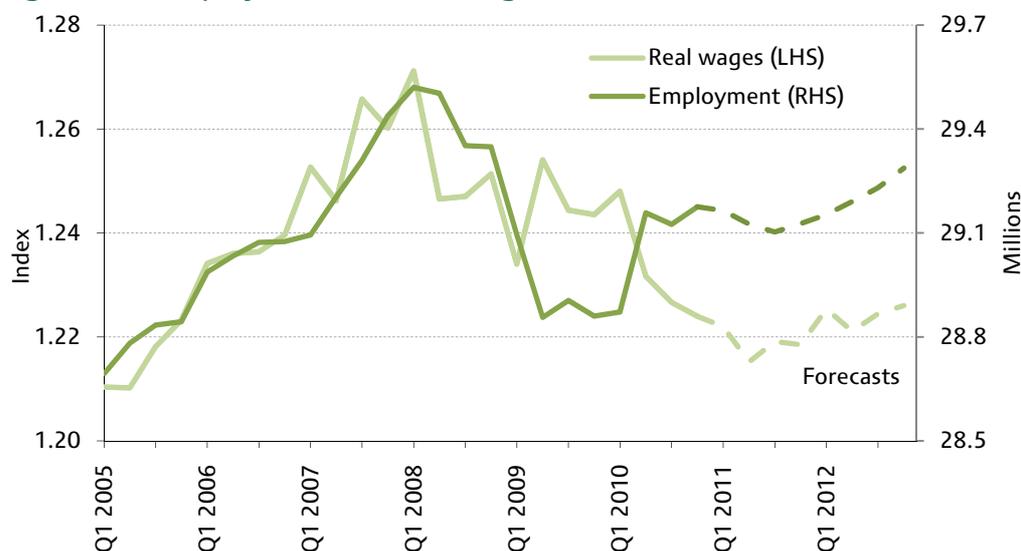
levels.<sup>18</sup> Again, that may simply reflect the scarcity of VAT shifts in our sample. Accordingly, we see the risks around our modal (single most likely) forecast as skewed to the downside – with there being a real possibility that the recent VAT hike has a more powerful impact than what most forecasters, including the OBR, expect. In other words, as most models do not allow for even an impact from risk appetite, let alone the possibility that the hit interacts with the effect of higher VAT, there is a real chance that the tax hikes do more damage than consensus forecasts expect.

**Prospects for household income growth look poor**

What about our modal forecast? What does that look like? Well, given the likelihood of still-weak fundamentals, we suspect that the first quarter of 2011 – i.e. the quarter when the 2½ percentage point hike in VAT will kick in – will witness very weak personal consumption. Stagnation looks to be the order of the day, although we would not be surprised if the start of this year were marked by a small contraction in the volume of spending. (The main argument against this happening, ironically, is that the fourth quarter turned out to have been so awful – thanks in part to the effects of the unusually bad weather in December. So the resumption of more normal weather may well lead to artificially high rates of growth in GDP and in consumption as their levels return to normal.)

What about prospects thereafter? On the one hand, the good news is that a strong corporate performance (to be discussed below) means that firms have the capacity to pay more for labour services, and may well desire to employ more people too. Moreover, real wages appear to be near a trough, while the number of adults in work is well above its bottom (Figure 4.6). On the other hand, we do not envisage average earnings rising faster

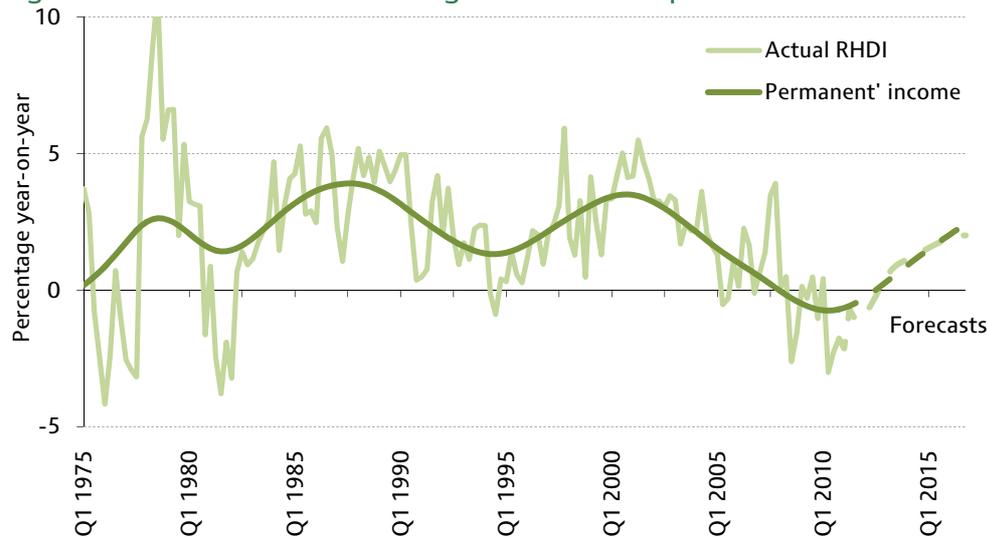
**Figure 4.6. Employment and real wages**



Note: Figures after 2010Q3 are forecasts.  
Sources: Office for National Statistics; Barclays Economics Research.

<sup>18</sup> The new variable had a t-value of just over unity – sufficient to lower the standard error of the equation a tiny amount, but not enough to pass the relevant statistical tests for significance of the effect at conventional levels of acceptance. What this means, in layman’s terms, is that you wouldn’t get your academic paper published if you retained such a variable in your model: people would not be convinced by the evidence. But, if you really believed strongly that that is how the world works, you might retain it anyway if you were a practical, professional forecaster.

Figure 4.7. Annual rates of change of RHDl and 'permanent' income



Note: Figures after 2010Q3 are forecasts.

Sources: Office for National Statistics; Barclays Economics Research.

than consumer prices until the fourth quarter of this year or early in 2012. And we doubt that employment growth will be anything much to write home about, as argued later in this chapter. At best, we suspect, the number of people in work will rise a fraction of one per cent this year.

Given the fairly feeble recovery forecast in wages and employment, we expect real household disposable income (RHDl) to be broadly stagnant for this year as a whole compared with last (Figure 4.7). Indeed, a small contraction in RHDl actually looks slightly more likely than a small expansion. Likewise, our proxy for permanent income expectations – which is a trend (moving-average) measure of actual income changes – looks set to increase in a meaningful fashion only from 2012 onwards. If this is the case, income growth will contribute little to consumption this year.<sup>19</sup> So, for consumption to surge, it will be necessary for the saving ratio to fall smartly.

### What might drive the saving ratio down?

In the sort of model that we use – and have used with some success for several decades<sup>20</sup> – the main drivers of potential drops in the saving ratio are the following:

- **Wealth.** When either net liquid assets or illiquid financial wealth (mainly pension fund assets) or tangible (housing) wealth increase relative to incomes, the saving ratio tends to decline. This is unlikely to be because UK households, as a group, are actually better off. (After all, they won't be, unless they sell houses to foreigners.) But it may be that, nevertheless, they feel so. Or it may be that, as housing acts as collateral, the extra wealth helps loosen otherwise binding credit constraints that

<sup>19</sup> Neither will shifts in the distribution of income – proxied in our model using changes in the unemployment rate – provide much support for consumption. For it appears likely that the unemployment rate will drift higher for a while, before stabilising: not enough of a shift to make much impact on spending patterns.

<sup>20</sup> Our latest model for UK consumption is not so different from the one we estimated back in the 1980s. See, for example, chapter 3 of S. Henry and K. Patterson (eds), *Economic Modelling at the Bank of England*, Chapman and Hall, London, 1990.

impinge on households' ability to raise their actual spending as fast as desired. Moreover, the rise may be associated with a higher (perceived) permanent income.<sup>21</sup>

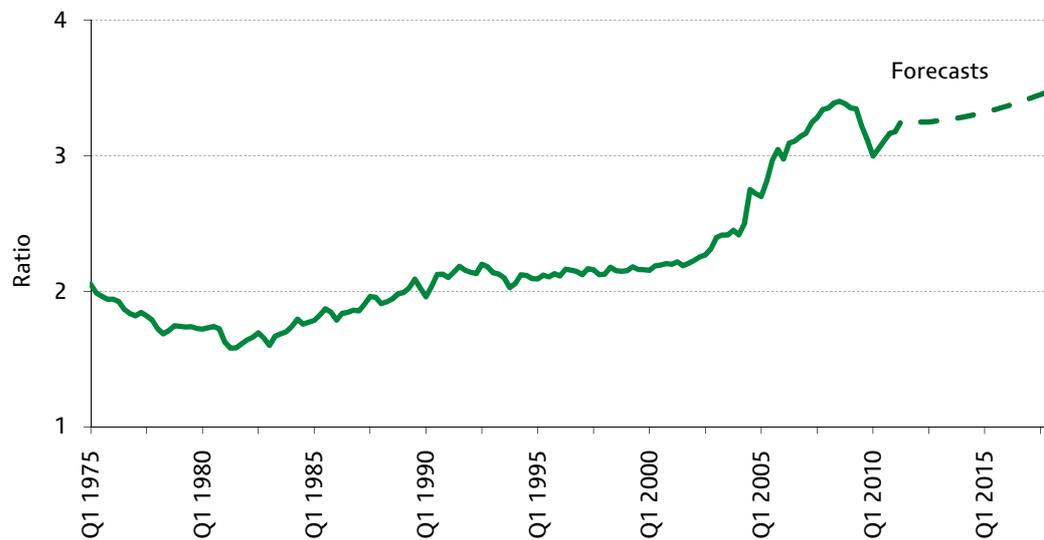
- **Credit conditions.** When lenders become more generous in the way that they provide credit to households, consumers tend to raise the proportion of their earnings devoted to current spending. This may, again, be because credit constraints limit their ability to translate current wealth or future income into current spending in the way that they may desire. It could also be that, when households buy properties in response to greater availability of credit, they also tend to buy

Figure 4.8. The loan-to-value ratio for first-time buyers



Note: Figures after 2010Q3 are forecasts.  
Sources: Council for Mortgage Lenders; Barclays Economics Research.

Figure 4.9. The loan-to-income multiple for first-time buyers



Note: Figures after 2010Q3 are forecasts.  
Sources: Council for Mortgage Lenders; Barclays Economics Research.

<sup>21</sup> One way of squaring the circle is to use a so-called 'Hicksian' definition of income, as opposed to a National Accounts one, as detailed in J. Hicks, *Value and Capital: An Inquiry into Some Fundamental Principles of Economic Theory*, Clarendon Press, Oxford, 1939.

complementary durable goods such as carpets, furniture and white goods. There have been a number of studies into how best to measure credit conditions.<sup>22</sup> We find that the loan-to-value ratio and loan-to-income multiple for first-time buyers, shown in Figures 4.8 and 4.9, do a good job. When, for example, financial liberalisation led to credit becoming more easily available during the 1980s, both ratios rose. By contrast, both dropped sharply during the financial crisis.

- **Interest rates.** When the real interest rate falls, the marginal propensity to consume tends to rise. Here, we find a simple, backward-looking measure of (actual) inflation works well as a gauge of future inflation expectations when constructing a 'real' rate, with the short-term Bank of England base rate working well as a gauge of the return that can be achieved on marginal savings.

Currently, wealth effects do not look to be especially supportive of a sharp drop in the saving ratio being around the corner, although the sustained recovery in the stock market has helped the ratio of illiquid financial assets (measured versus personal incomes) recoup most of the decline that it experienced during the financial crisis, and the housing equivalent has recovered about half of its fall. As for the ratio of net liquid assets to income, it has sustained its trend move higher: something that has been sustained since 2003. Figures 4.10–4.12 put these moves into a historical context.

The majority of economists now predict small falls in house prices this year and next – a view with which we concur. (Supply, being so inelastic, is largely irrelevant to house price determination over the next year or two – with most models for house prices being, in effect, inverted housing demand equations.) Thus, taken together, 'wealth' does not look set to help support consumption through a big drop in the saving ratio; more likely, it will act as a small drag. Only in the longer term does it look likely that wealth-to-income ratios will be appreciably higher again, perhaps helping to push the saving ratio back down to where it was pre-crisis.

Credit conditions appear to be a lot tighter than they were pre-crisis – with most first-time buyers now able to borrow only about three-quarters of the value of their properties (in 2007, ratios of close to 85% were the norm). Likewise, loan-to-income multiples for this group have made up only about half of the drop that took place between late 2008 and early 2010 (from about 3½ to about 3) during the past year. Existing borrowers who want to top up their borrowing are also finding that credit conditions are tighter than they were pre-crisis. Looking ahead, we expect a gradual increase in the supply of credit, as a mixture of pressure from the authorities and a return to profitability and accompanying risk appetite leads to slightly more generous terms of credit provision (with 'generous' defined from households' perspective). Banks and other providers of funds are assumed to repair their balance sheets only gradually. Hence, we assume a drift up in the loan-to-value and loan-to-income ratios.

Real interest rates are currently very low, despite high margins for lenders. With the typical annual rate charged to borrowers just under the 4% mark, but inflation generally expected to exceed 3% this year, the one-year real interest rate is very low. Even using medium-term inflation expectations of close to 2%, the real cost of funds is clearly low. And the return on savings is correspondingly poor too, by historical standards: the real base rate is a negative 2½%. This constellation of interest rates ought to encourage

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<sup>22</sup> See, for example, E. Fernandez-Corugedo and J. Muellbauer, 'Consumer credit conditions in the United Kingdom', Bank of England, Working Paper 314, 2006.

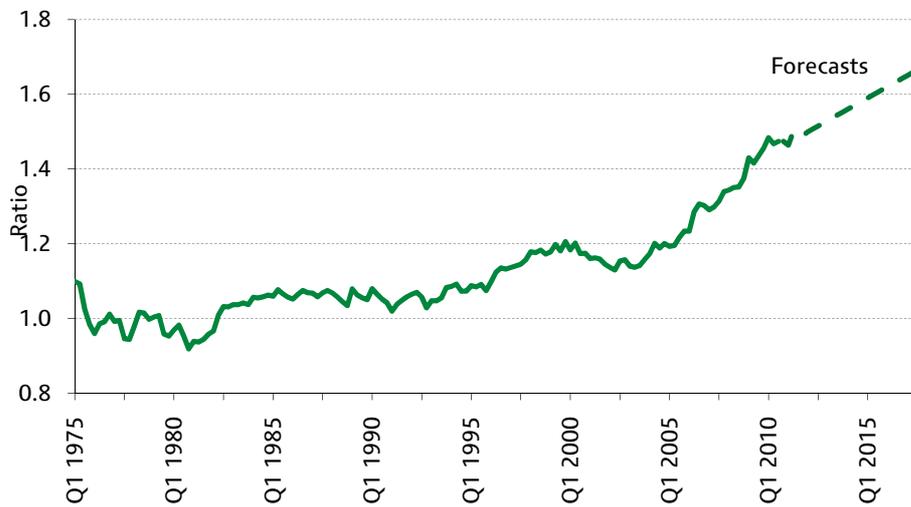
Figure 4.10. The ratio of illiquid financial assets to income



Note: Figures after 2010Q3 are forecasts.

Sources: Office for National Statistics; Barclays Economics Research.

Figure 4.11. The ratio of (net) liquid assets to income



Notes and Sources: See Figure 4.10.

Figure 4.12. The ratio of housing wealth to income



Notes and Sources: See Figure 4.10. Additional source: Department for Communities and Local Government.

borrowing and discourage saving, despite the backdrop of the pre-crisis excess debt build-up naturally leading to a period of deleveraging. Accordingly, the low real interest rate is one of the main causes of the fall in the saving ratio that we predict for the next year or two.

The bottom line is that we expect only a sluggish pickup in consumer spending. All told, we expect a real household disposable income contraction this year to give way to stabilisation in consumers' purchasing power in 2012 and a gradual acceleration thereafter. The further ahead we look, the more optimistic we are – presuming that a gradual return to more normal income generation and consumption patterns will take place. Thus we pencil in wages beginning to outstrip prices by a healthy margin by 2013, and employment expanding by a good  $\frac{3}{4}\%$  or more, at an annual rate, from around the same time.

We doubt that the pace of expansion of RHDI will reach a decent level (of 2%) before 2015. Such an outcome will, we suspect, lead to a real-terms expansion of consumption of only about 1% this year and again next, but a pickup in the growth rate to around 1½% in 2013 and to around 2% thereafter. Importantly, this saving-ratio-driven pickup in spending assumes that policymakers (and perhaps, too, market participants) are comfortable going back to the pre-crisis situation, in which households rely on asset price rises and debt to drive spending faster than if they were constrained to rely solely on disposable incomes. Or, to put it another way, it assumes that the consumption-to-income ratio – which is currently one-and-a-half standard deviations above its long-run average – rises further, rather than mean reverts (Figure 4.13; see its notes for a more detailed explanation). Accordingly, the risks around this forecast appear to be skewed rather to the downside.

Figure 4.13. The consumption-to-income ratio in z-score terms



Notes: A z-score measures a variable in terms of standard deviations from its long-run average. We have used this measure to emphasise that the ratio of consumption is not only already very high relative to income, compared with its long-run average, but set to rise still further. Figures after 2010Q3 are forecasts. Sources: Office for National Statistics; Barclays Economics Research.

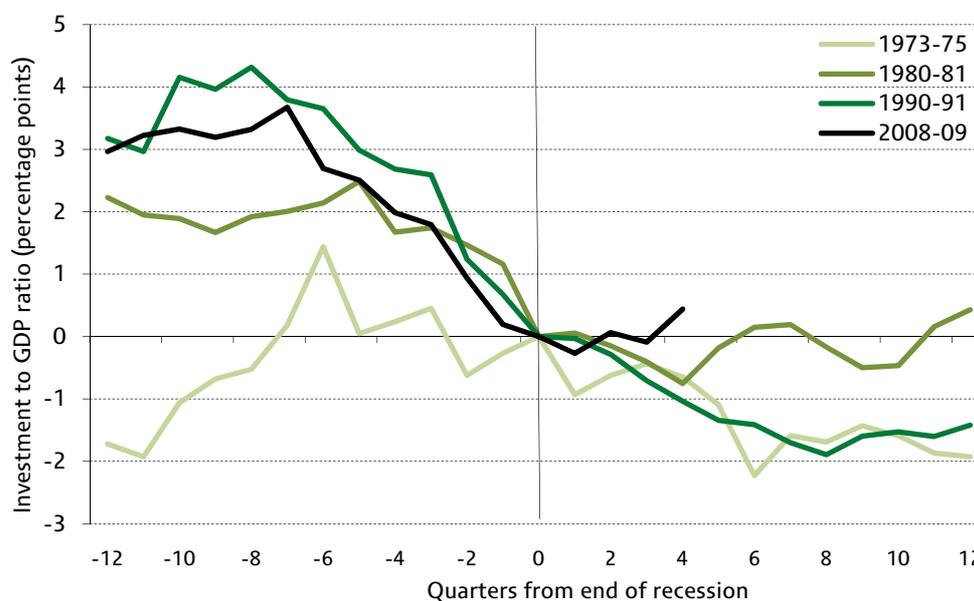
## The renaissance of British industry

While households are feeling the pinch from below-inflation pay settlements and labour market uncertainty, the same factors have contributed to robust profit performance and

healthy balance sheets for firms. As a result, businesses have increasing internal funds to channel into investment, easing the impact of credit constraints. Indeed, business investment increased in real terms by 9% year-on-year in the third quarter of 2010.

However, this strong performance largely reflected a process of normalisation after an unprecedented 19% collapse in fixed investment in 2009. Going forward, one cannot be too confident that this robust investment growth will continue into 2011. Recent surveys of business confidence suggest firms are concerned about the uncertainty over both consumption at home and export performance, in light of continued weakness in some of the UK's major export markets. Investment demand is generally volatile and hard to forecast with any great accuracy, but the central forecast must factor in likely prospects for consumption and export demand: firms will not invest if the outlook for domestic sales or exports is poor. Firms exporting to fast-growing, non-traditional export markets (for example, those in Asia) are therefore likely to channel internal and borrowed funds into investment. However, the bulk of firms, producing for the sluggish home market and still-weak major export markets (predominately other European countries and the US), seem likely to contribute only modestly to investment demand.

Figure 4.14. Is an investment boom a likely driver of recovery?



Note: Investment to GDP ratio is shown relative to the end of each recession.

Sources: Haver Analytics; Barclays Capital.

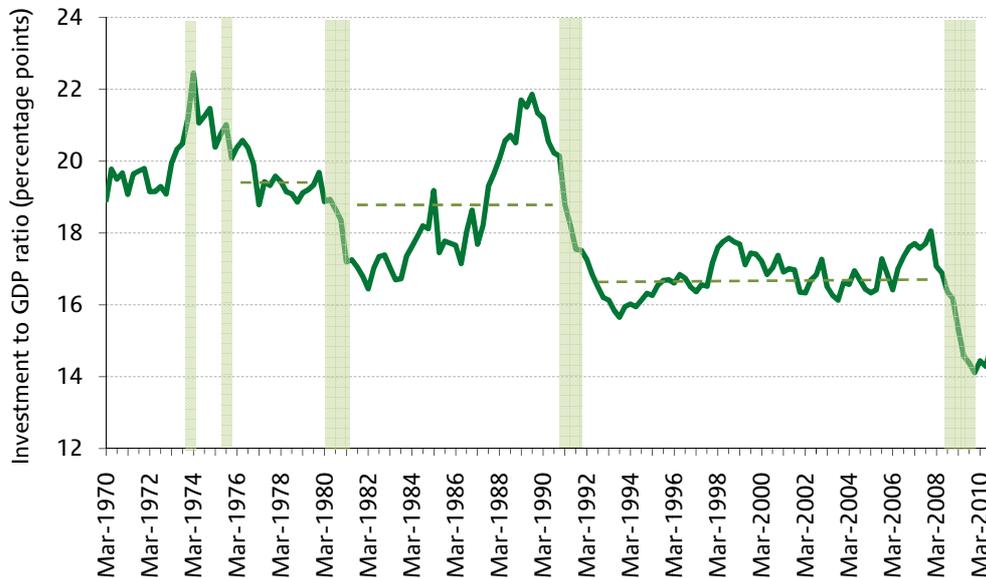
This analysis is strengthened by a review of past recovery episodes in the UK, where investment has typically responded with a lag to a pickup in general activity (supporting the accelerator view of investment) rather than acting as a leading independent driver of recovery. Figure 4.14 plots the investment to GDP ratio for the last four UK recessions, relative to the ratio in the last quarter of the recession.<sup>23</sup> All recessions, excluding that in 1973–75, show a secular decline in investment in relation to GDP in the run-up to and during the recession (in the case of the 1973–75 recession, investment to GDP was volatile but showed no discernible upwards or downwards trend during the recession itself). Crucially, investment is not a key driver of growth during the recovery phase: the

<sup>23</sup> The recessions are dated on the basis of two consecutive quarters of negative GDP growth (1973Q3–1974Q1 and 1975Q2–1975Q3 are considered as one continuous recession, including the intervening four quarters, which included one quarter of negative growth). The last quarter of the recession is therefore dated as 1975Q3, 1981Q1, 1991Q3 and 2009Q3, respectively.

investment to GDP ratio is typically constant or continues to decline during the subsequent three years. On the basis of 2010Q3 data in particular, investment appears to be staging a somewhat more robust recovery during the current episode, compared with earlier recoveries. However, previous episodes of robust post-recession investment growth (for example, in early 1976 or during 1982) have petered out, and we would want to see several quarters of robust investment growth, or some other convincing counter-argument, before viewing this recovery as likely to be substantially different.

One characteristic of the current episode is that there was no significant investment boom in the years preceding the recession and its immediate run-up. This contrasts strongly with the previous recession, in 1991, when the ratio of investment to GDP had increased by 5 percentage points in the seven or eight previous years (Figure 4.15). Since some of this likely turned out to be wasteful over-investment, this helps to account for the sharp fall in the investment rate in the year before the 1991 recession, which accelerated further during the recession and continued, albeit at a less dramatic rate, in the subsequent two years.

Figure 4.15. Investment: the historical performance



Note: Each dashed line shows the average ratio over the quarters between recessions.  
Sources: Haver Analytics; Barclays Capital.

With little evidence of a substantial boom in investment before the most recent recession (in fact, investment tracked upwards alongside GDP for around 15 years, producing a period of uncharacteristic stability in the investment/GDP ratio), and a substantial drop during the recession and the preceding couple of quarters, one could make the case for a more rapid up-tick in investment this time round, as firms seek to return to pre-crisis investment levels. However, comparing the recent experience to the 1980–81 recession is informative. The latter half of the 1970s saw a similar period of relative stability in the investment/GDP ratio (albeit less prolonged than the recent experience), with no pre-crisis investment boom. In this case, investment did increase slightly after the recession, but did not mount a sustained recovery until the end of 1983, some two-and-a-half years after output started to recover, and pre-recession levels of investment relative to GDP were not attained until the end of 1987. Thus, we do anticipate a gradual secular recovery in investment, but we would caution against expecting a rapid reversion to pre-recession

investment levels, and we do not expect the rapid growth in investment in 2010Q3 to be maintained in the short to medium term.

One final point comes out of this analysis: the trend ratio of investment to GDP declined in the wake of the last two recession episodes. That is, while there was a delayed up-tick in investment following a sharp decline during the recession, the average level was in each case lower than the average level before the recession. A similar pattern has been noted in other countries emerging from economic crises (for example, the countries impacted by the East Asian crisis). Again, this might lead us to take a relatively pessimistic view of the medium-term prospects for investment.

Thus, our central projection for investment sees a decline in the quarterly rate of growth in 2011, compared with 2010. Of course, if household consumption and/or export demand were to outperform our forecast significantly, then more robust investment growth could be expected, although, by the same token, further euro-area or US weakness and/or a more negative prospect for household incomes would likely contribute to even weaker investment growth. To this extent, investment will most likely act as an amplification mechanism for trends elsewhere in the economy, rather than robust investment demand acting to offset weak consumption growth (or vice versa).

## Rebalancing – and prospects for the UK regaining lost market share

Even before the financial crisis struck, investors had reassessed prospects for the UK and decided that they looked less attractive than for other major advanced economies, with the consequence that sterling fell sharply in value. Between the beginning of 2007 and the spring of 2008, the pound depreciated by about an eighth in trade-weighted terms – half of what is required to register as a crisis in its own right according to the definition of a currency crisis used by most academics (of 25%).

In last year's Green Budget, we focused on whether or not the step-down in the value of sterling was just the forerunner of an even greater depreciation – what might be called a 'real' crisis with big macroeconomic, and perhaps political, consequences – or, rather, an over-reaction by investors, in which case a gradual recovery in the currency's fortunes ought to be in store. We concluded that the latter, more positive, assessment made more sense, especially if after the 2010 general election more emphasis was placed by government on tackling the large budget deficit.<sup>24</sup>

A year on, and this assessment still feels about right. Thus it comes as little surprise to us to learn that the pound has, if not found its feet again, at least found a floor – up about 5% in trade-weighted terms from its trough, but trending sideways rather than up (Figure 4.16). Such a 'recovery', if that is the right word for it, is very tepid against the speed and scale of the decline that came before. Accordingly, the pound is still competitive: the real effective exchange rate ended last year more than 16% below its average for the decade prior to 2007.

Such a cheap currency ought to have left British firms in a strong position to start regaining market share in export markets. And it ought to have encouraged import substitution too, as UK producers should have benefited from the gain in competitiveness.

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<sup>24</sup> See S. Hayes, 'The public finances and sterling', in R. Chote, C. Emmerson and J. Shaw (eds), *The IFS Green Budget: February 2010*, IFS Commentary 112, 2010 (<http://www.ifs.org.uk/budgets/gb2010/10chap5.pdf>).

Taken together, the rise in exports and drop in imports should have resulted in a major rebalancing of UK growth, with net exports providing an increasing share of GDP, thus permitting the ‘over-consumption’ by households in the pre-crisis period to drop back, and perhaps too the ‘over-investment’ in non-productive assets such as housing.<sup>25</sup>

Figure 4.16. The value of sterling in trade-weighted terms



Note: Not seasonally adjusted.  
Source: Bank of England.

Although early attempts by the statisticians to gauge the drivers of growth hinted that net exports were beginning to enjoy something of a renaissance, revisions to those ‘preliminary’ figures have changed the story somewhat, with the latest set of National Accounts (available up to the third quarter of last year) revealing that export volume growth was outpaced by that of imports by several percentage points last year.<sup>26</sup> Exports rose, but did not soar. Imports surged.

When we re-estimated our export and import equations late in 2009, using data up to the end of 2007 so as to avoid over-fitting recent data, we discovered that the currency was a less powerful driver of trade volumes than in the past. Indeed, we started to grow concerned that the so-called Marshall-Lerner conditions might not hold. These focus on the size of the price elasticities of imports and exports, pointing out that only when the sum of the two is in excess of unity in absolute terms will a depreciation of the currency lead to an improvement in the (value of the) trade balance. When, by contrast, the elasticities are very small, a ‘big’ depreciation leads to the value of exports dropping and/or that of imports rising, with the new (sterling) prices of the two dominating the shifts in trade volumes in terms of the impact on the trade balance.<sup>27</sup>

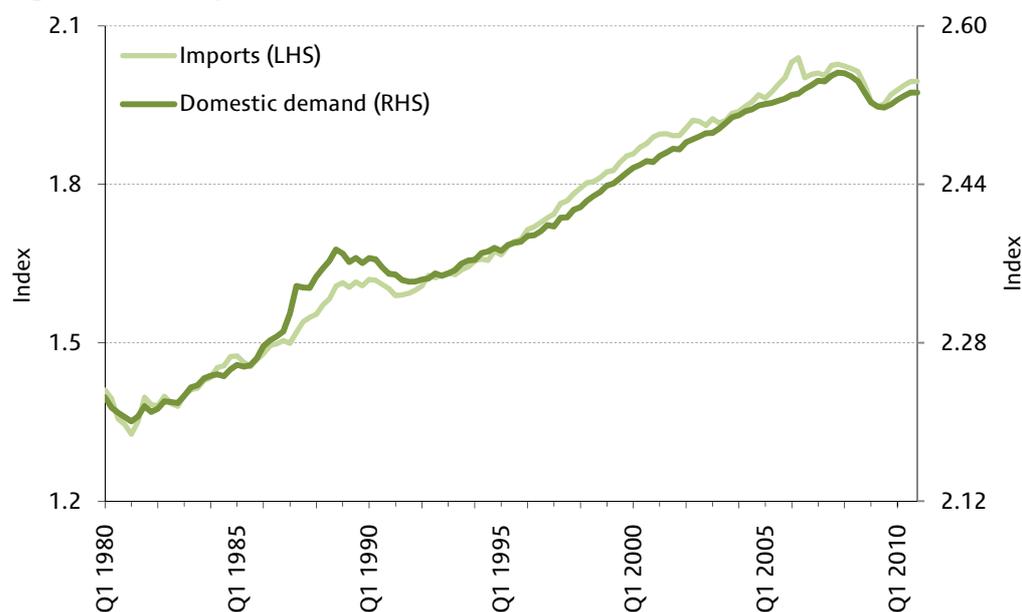
<sup>25</sup> Remember that  $GDP = C + I + G + (X - M)$ , where C is consumption, I is investment, G is government spending, X is exports and M imports. The total  $(X - M)$  is net exports. Note that both higher X and lower M help boost GDP.

<sup>26</sup> For details, see <http://www.statistics.gov.uk/pdffdir/qna1210.pdf>.

<sup>27</sup> In other words, a depreciation of sterling leads to a big drop in the price of exports (in foreign currency terms) but no significant increase in the volume of demand as the price elasticity of exports is low. So, in pounds, the value of exports is pretty much the same after the depreciation as it was before. (At best, it is up just a little.) But the large increase in the price of imports (in pounds) leads to an only small decrease in the volume of demand (again because the price elasticity of imports is low). So, in pounds, the value of imports rises markedly. Therefore the trade balance worsens.

The main reason for our concern was that the import price elasticity appeared to be quite close to zero – with a drop in the value of sterling apparently leading to little, if any, cutting of the amounts of imports coming into the country, despite their new raised sterling cost: the long-run price elasticity was just 0.18.<sup>28</sup> As a result, there is actually a tight correspondence between changes in import volumes and shifts in the volume of domestic demand (i.e. the sum of consumption, investment and stock-building), as shown by Figure 4.17. The only other significant driver of the long-run propensity to import (except for a competitiveness term with a price elasticity of just 0.18) came via a slow-moving trend variable, designed to capture the gradual loss of market share that UK producers have experienced in their home market. (This may be because the relative quality of their products is declining relative to those produced by overseas companies. Or it may be because of other relevant costs terms not included in the real effective exchange rate gauge of competitiveness that we employ in our modelling work.)

Figure 4.17. Import volumes and domestic demand



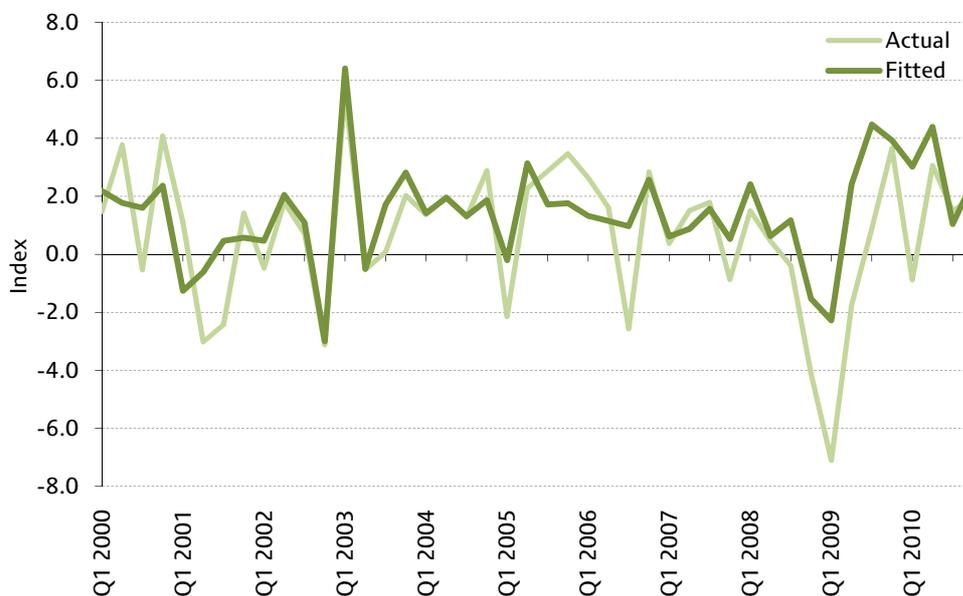
Sources: Office for National Statistics; Barclays Economics Research.

Whatever the theoretical justification for the model, its ability to fit the data was good in sample, but bad outside it. In other words, over the past several years, the apparent (past) relationship between the drivers of imports and actual import volumes appears to have broken down somewhat. In particular, during the crisis, import volumes fell precipitately – both in actual terms and relative to what the model predicted they would, given domestic demand, the real effective exchange rate and so on. Since the middle of 2009, however, the model has done a much better job, with an average residual that is close to zero. It seems reasonable to posit that there may have been some pay-back for the sharper-than-modelled drop in volumes in the form of a faster-than-expected recovery in the early part of the bounce-back. Now, however, it seems reasonable to trust the model again, which is precisely what we do when making our forecast. Of course, in doing so, we are implicitly assuming no further crises around the corner.

<sup>28</sup> To put this into perspective, our model had formerly had an elasticity that was more than three times larger – much like the Bank of England's model of similar vintage. (The Bank's had an elasticity of 0.62.) For details of the Bank's equation, see *Economic Models at the Bank of England*, Bank of England, 1999 (<http://www.bankofengland.co.uk/publications/other/beqm/modcobook.htm>).

When it comes to exports, the model specification that we came up with in 2009 had a big elasticity with respect to competitiveness – with a 1% depreciation in sterling in trade-weighted terms estimated to lead to a 0.9% rise in export volumes.<sup>29</sup> The model also tracked performance well too, as shown in Figure 4.18. Out of sample, however, it has done poorly, with again the volume of exports dropping like a stone during the crisis – and much more sharply than seemed reasonable to expect given overseas demand and the level of the currency. Unlike with the imports equation, however, the exports model has not come back on track during the last year or so of economic recovery. Indeed, there has been a near-three-year-long run of negative residuals (during which the model has over-predicted export volumes). Although there is tentative evidence to suggest that may have come to an end in the third quarter of last year, tentative is the operative word – not just because existing estimates of both UK exports and overseas imports are liable to significant revisions, but because, even if the data do not get revised, we have little faith in the model specification getting back on track. In other words, a one-quarter under-prediction might well prove to be a blip in the trend, not a trend reversal.

Figure 4.18. Export volumes



Sources: Office for National Statistics; Barclays Economics Research

The scale of the over-prediction is immense. In 2009, for example, the actual drop in exports was 12 percentage points greater than predicted. And in the first half of 2010, another gap of around 5 percentage points opened up between actual export volume growth and predicted changes. No doubt, some of the shortfall can be put down to temporary factors, such as the difficulty that British firms had in raising external sources of finance and the fact that much of overseas demand growth has taken place in markets where we have not traditionally been strong competitors. But the truth is that, with such a big forecasting error having occurred, there must be a good chance that something in the relationship has shifted. The most obvious thing would be a lowering of the price elasticity more in line with the longer-term historical norm. After all, using annual data

<sup>29</sup> Interestingly, this was not only similar to its predecessor but also very much like the Bank of England's specification, which had a long-run price elasticity of 0.80. For further details, see *Economic Models at the Bank of England*, Bank of England, 1999 (<http://www.bankofengland.co.uk/publications/other/beqm/modcobook.htm>).

stretching right back to 1870, we find that a regression in which export volumes are explained by world trade volumes and the real effective exchange rate does a fairly good job – as illustrated by Figure 4.19 – but on the basis that the price elasticity is just 0.48. Of course, if the elasticity has dropped back close to its historical norm, then the benefit of the big drop in sterling will turn out to be a lot lower than what our ‘old’ exports model (illustrated in Figure 4.18) predicted it would be.

**Figure 4.19. A model to explain long-run export performance**



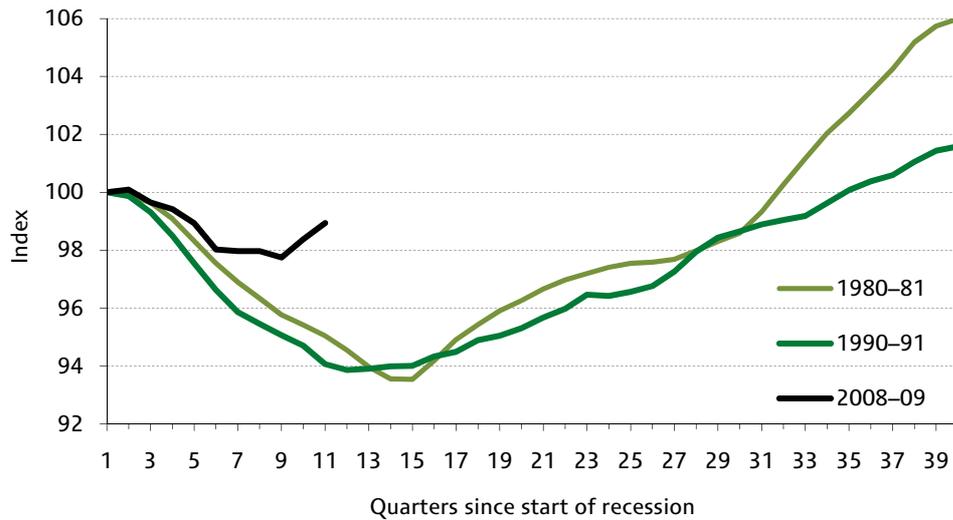
Sources: Bank of England; Barclays Economics Research.

The bottom line of all of this is that, although we use the existing quarterly model when making our modal forecast – and thereby end up with a profile for exports broadly in line with both consensus and OBR projections – all the risks seem to lie on something less vibrant actually coming about, or a story of continued loss of UK exporters’ market share. Were the true elasticity of exports to the real effective exchange rate to drop back to its long-run historical average, instead of turning out close to what it averaged in the 1990s and 2000s, then the scale of the ultimate shortfall in export volume expansion could be as much as 6%. In other words, export volume growth could easily fall shy of the OBR’s projection by 1 percentage point in each and every year of its 2010 to 2015 forecast.

## The labour market

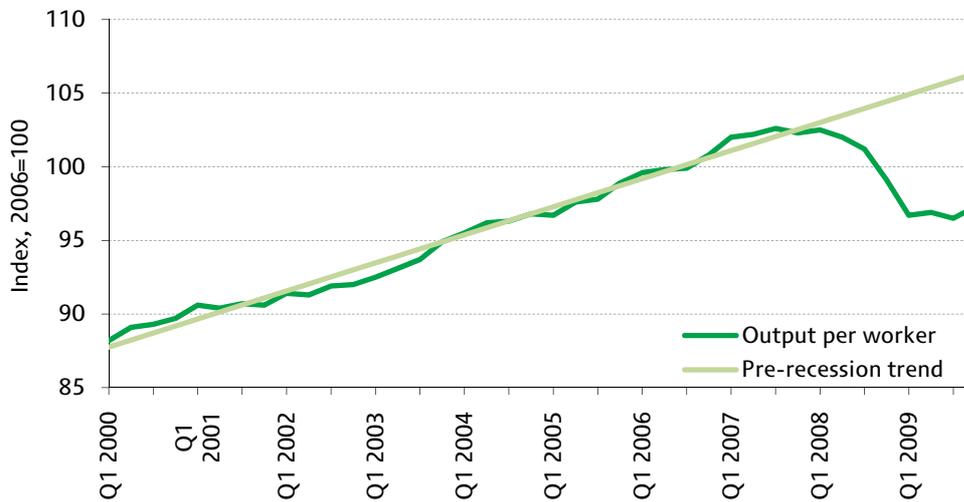
A prominent feature of the 2008–09 recession was firms’ apparent reluctance to fire workers – as evidenced by the number of people in work turning out higher than what a typical employment model suggested would happen. ‘High’ employment meant that labour productivity declined precipitously and has failed to recover since. This stands in contrast to the experience from previous recessions, as well as that from some other countries during the recent recession, such as the US (Figures 4.20–4.22). It therefore seemed reasonable to anticipate a ‘jobless recovery’ as economic activity picked up and firms sought to rebuild productivity. However, employment rose sharply during the middle of 2010, so that the recovery in productivity was relatively limited. In fact, productivity remains some 8% lower than the level implied by the pre-recession trend.

Figure 4.20. Employment following the start of a recession



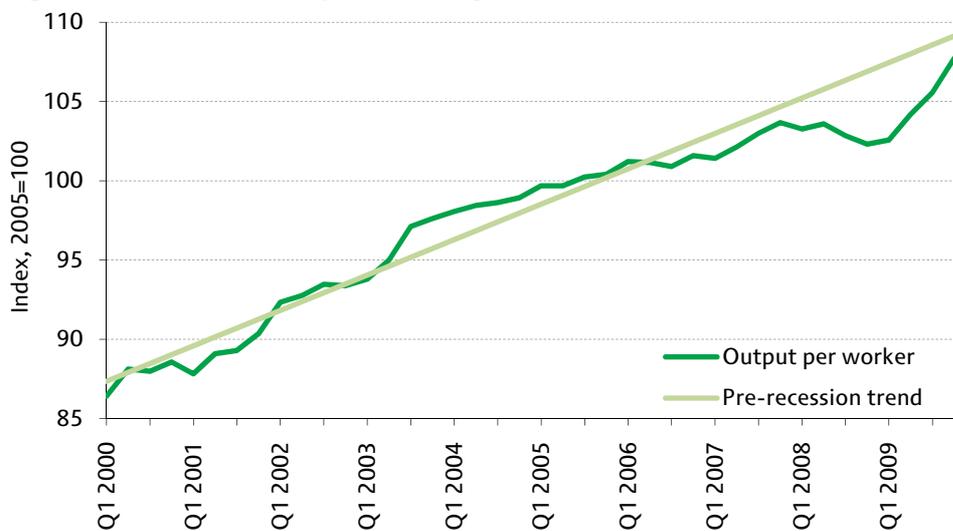
Note: The recessions shown in the figure started in 1980Q1, 1990Q3 and 2008Q2.  
Sources: Haver Analytics; Barclays Capital.

Figure 4.21. UK labour productivity



Sources: Haver Analytics; Barclays Capital.

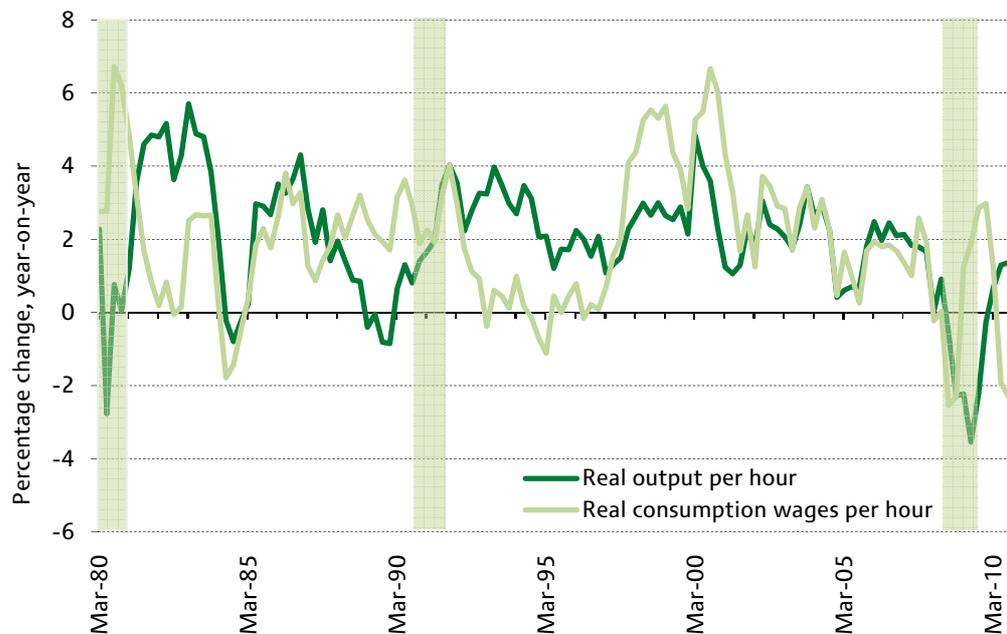
Figure 4.22. US labour productivity



Sources: Haver Analytics; Barclays Capital.

A sharp labour market correction, with firms shedding workers (US-style) to regain lost productivity, at the same time that the public sector workforce is trimmed, cannot be ruled out. In this case, unemployment could increase beyond 12%, which would be expected to have a significant negative impact on household demand, as well as potentially precipitating a sharp rise in household financial distress. Fortunately, this kind of dramatic correction seems unlikely. Recent employment growth has outstripped forecasts, as already discussed, while business surveys have not reported a worsening in employment intentions.

Figure 4.23. Growth in productivity and consumption wage



Sources: Haver Analytics; Barclays Capital.

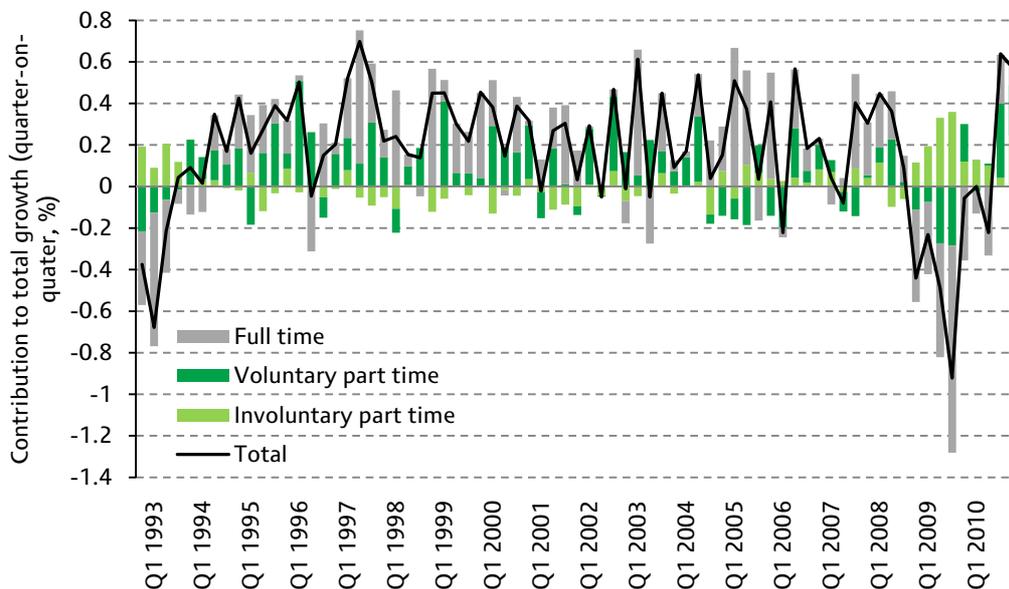
A more likely scenario is that firms' hiring intentions hold steady, with employers neither shedding workers at an accelerating rate nor expanding their hiring dramatically. As we have seen, productivity dipped sharply during the recession, and the subsequent pickup has been too anaemic to recover earlier losses. As Figure 4.23 illustrates, real output per hour worked fell sharply during the recession, similarly to the performance during the early 1980s. Compared to that earlier experience, though, the subsequent productivity recovery has been relatively modest, no doubt reflecting the fact that firms have been much less willing to shed labour this time around. With no sharp up-tick expected in unemployment, one might expect consumption growth to hold up reasonably well. However, we expect household labour income growth to maintain its very weak recent performance, as labour market weakness and relatively high inflation continue to squeeze incomes. Figure 4.23 also illustrates that growth in the real consumption wage (economy-wide wages and salaries per hour worked, deflated by the consumption deflator) is currently negative, and, based on the experience during previous recovery phases, we would expect this performance to continue. Since labour market income makes up the bulk of household income, we would therefore expect consumption growth to be correspondingly tepid.

Finally, in assessing recent employment trends – and understanding how the relatively robust headline employment performance might affect household consumption behaviour – it is informative to look at the contributions to the overall picture made by

full-time and part-time employment separately. It is also interesting to see how many part-time jobs are held by those who want to work part-time, and how many are held by employees who would have preferred a full-time job: the latter can be considered to be under-employed (or involuntarily employed part-time).

Two main messages arise from this analysis (Figure 4.24). First, a significant increase in under-employment helped to limit the extent of labour shedding during the recession. Hence, the headline employment performance may give a flattering picture of households' employment and income experience during the downturn: many employees were working fewer hours than they would have wanted, and presumably this affected their income. Second, the increase in employment during the middle of 2010 was driven predominantly by part-time employment (and, in the third quarter, involuntary part-time employment growth made up half of the contribution). Thus, the robust recent headline jobs growth will probably deliver less of a boost to household income and consumption in the near term than one might have expected.

Figure 4.24. Contributions to overall employment growth



Sources: Haver Analytics; Barclays Capital.

### The outlook for demand

Taking all these issues together, and attempting to forecast aggregate demand – i.e. actual GDP – we end up with a modal forecast that is not too different from the OBR's central scenario or from the average consensus forecast. (Our numbers are detailed in Table 4.1.) The recovery is projected to continue, albeit with only moderate growth over the next several years. In that sense, the business cycle is turning out like a 'deformed V' – with disappointingly weak growth during the recovery given how sharp the pace of decline was during the recession.

The hangover of high public and household debts is evident in both the paring-back of government expenditures and the relatively weak growth in personal consumption spending. The corporate sector's relatively strong position permits business fixed investment to bounce back quite strongly. But low and stagnant productivity means that firms will grant only limited increases in wages. Indeed, there looks to be a good chance that 2011 witnesses the third successive year in which households' labour income will

fall in real terms. If so, then that would be an even longer period of falling real earnings than occurred in the mid-1970s.

The main difference between our forecast and the OBR's comes about because we have assumed both a slower speed limit for the economy and a smaller output gap (as discussed in Chapter 1). As a result, our cumulative growth projection over the period from 2011 to 2015 is about one-and-a-half percentage points lower than the OBR's. This is not a huge difference, especially when compared with the gap between our forecasts and the Treasury's a year ago. But it is not negligible.

Table 4.1. Barclays 'central case' scenario

<i>% changes year on year except where noted</i>	2009	2010	2011	2012	2013	2014	2015	2016
<b>Aggregate demand</b>								
Real GDP	-4.9	1.4	1.8	2.1	2.2	2.3	2.5	2.4
Personal consumption	-3.2	1.2	1.1	1.3	1.6	1.9	2.2	2.1
Fixed investment	-14.5	3.5	2.7	4.4	6.2	6.7	6.0	5.9
Govt consumption	1.0	1.3	-0.2	-1.4	-1.8	-2.4	-1.7	-1.2
Exports	-10.1	5.2	6.5	8.0	8.4	8.6	8.0	7.4
Imports	-11.9	7.7	3.9	4.9	6.1	6.7	6.6	6.6
<b>Inflation drivers</b>								
Unemployment rate (%)	7.7	8.0	8.9	9.2	9.3	9.1	8.9	8.7
Employment	-1.7	0.4	-0.1	0.3	0.4	0.8	0.8	0.7
Wages	1.4	2.3	2.0	2.4	3.4	4.1	5.0	5.6
Consumer prices (CPI)	2.2	3.4	3.7	1.9	2.1	2.0	2.0	2.0
Consumer prices (RPI)	-0.5	4.8	5.6	3.8	4.5	4.6	4.6	4.6
<b>Financial markets</b>								
Official rates (%)	0.5	0.5	1.0	1.5	2.5	3.5	4.5	5.0
10-year bond yields (%)	3.7	3.3	4.0	4.5	5.0	5.5	6.0	6.3
<b>Aggregate supply</b>								
Potential GDP	-0.6	0.8	2.0	1.8	1.8	1.8	1.8	1.8
Output gap (% of GDP)	-3.0	-2.4	-2.6	-2.2	-1.8	-1.2	-0.6	0.0

Notes: Financial market variables are end-of-period values. All data and forecasts are for calendar years.

Source: Barclays Economics Research.

We see there being few upside risks to this forecast. Perhaps the output gap is a little bigger than what we estimate it to be – as the OBR is suggesting may be the case. Perhaps, too, the economy's potential GDP growth rate is a little higher than what we gauge it is – again as the OBR is reckoning. But this upside risk seems relatively limited. So our optimistic scenario, detailed in Table 4.2, does not look a lot different from our central one.

But there is a little more room for reasonable people to disagree about the state of the labour market. The surprisingly high employment, and surprisingly low unemployment, that have been a feature of the past year-and-a-half might reflect a more permanent shift in the relationship between growth and unemployment. (In other words, labour productivity, in terms of output per worker, might be lower.) What this means in terms of future wage deals and possible shifts in the labour share of national income is hard to say. But, in our optimistic scenario, we assume a more employment-friendly path for the economy, even though that might represent a less profit-friendly trajectory too.

We should highlight uncertainty regarding the growth–inflation trade-off. Given that it is tough providing a complete explanation for the inflation overshoot of recent times, it is always possible that the apparent deterioration in the growth–inflation trade-off turns out to be temporary. Indeed, in an optimistic scenario, it might be that 2012 – perhaps even 2011 – witnesses some payback for last year’s higher-than-expected price

Table 4.2. Barclays ‘optimistic’ scenario

<i>% changes year on year except where noted</i>	2009	2010	2011	2012	2013	2014	2015	2016
<b>Aggregate demand</b>								
Real GDP	–4.9	1.4	2.0	2.4	3.0	3.3	3.3	2.5
Personal consumption	–3.2	1.2	1.3	1.6	2.0	2.4	2.5	2.3
Fixed investment	–14.5	3.5	2.7	5.2	8.4	10.0	9.8	8.8
Govt consumption	1.0	1.3	–0.2	–1.4	–1.8	–2.4	–1.7	–1.2
Exports	–10.1	5.2	6.6	8.9	10.8	11.6	10.7	9.5
Imports	–11.9	7.7	4.2	5.9	7.9	9.5	9.7	10.5
<b>Inflation drivers</b>								
Unemployment rate (%)	7.7	8.0	8.5	8.9	9.0	9.0	8.8	8.6
Employment	–1.7	0.4	0.1	0.4	0.5	0.7	0.8	0.7
Wages	1.4	2.3	2.2	2.9	4.1	4.5	5.0	5.5
Consumer prices (CPI)	2.2	3.4	3.8	2.1	2.5	2.2	2.0	2.0
Consumer prices (RPI)	–0.5	4.8	5.6	4.3	5.0	4.8	4.7	4.7
<b>Financial markets</b>								
Official rates (%)	0.5	0.5	1.0	2.0	3.0	4.0	5.0	6.0
10-year bond yields (%)	3.7	3.3	4.5	5.2	6.0	6.7	7.3	8.0

Notes: Financial market variables are end-of-period values. All data and forecasts are for calendar years.

Source: Barclays Economics Research.

Table 4.3. Barclays ‘pessimistic’ scenario

<i>% changes year on year except where noted</i>	2009	2010	2011	2012	2013	2014	2015	2016
<b>Aggregate demand</b>								
Real GDP	–4.9	1.4	0.9	0.9	1.5	1.8	1.8	1.9
Personal consumption	–3.2	1.2	0.0	0.7	1.6	1.8	1.9	2.0
Fixed investment	–14.5	3.5	0.4	0.3	2.6	4.0	4.4	4.2
Govt consumption	1.0	1.3	–0.2	–1.4	–1.8	–2.4	–1.7	–1.2
Exports	–10.1	5.2	5.1	5.3	6.2	6.9	6.2	5.9
Imports	–11.9	7.7	2.6	2.9	4.4	5.2	5.3	5.3
<b>Inflation drivers</b>								
Unemployment rate (%)	7.7	8.0	9.1	10.1	10.7	11.0	11.3	11.5
Employment	–1.7	0.4	–0.4	–0.6	–0.3	0.1	0.1	0.1
Wages	1.4	2.2	1.0	0.5	1.0	2.0	3.1	3.7
Consumer prices (CPI)	2.2	3.4	3.4	1.5	1.7	1.8	2.0	2.0
Consumer prices (RPI)	–0.5	4.8	5.4	3.5	3.8	4.0	4.4	4.6
<b>Financial markets</b>								
Official rates (%)	0.5	0.5	0.5	0.75	1.25	2.0	3.0	4.0
10-year bond yields (%)	3.7	3.3	3.6	3.8	4.0	4.2	4.6	5.0

Notes: Financial market variables are end-of-period values. All data and forecasts are for calendar years.

Source: Barclays Economics Research.

pressures. All in all, though, our optimistic scenario retains the flavour of our central one: in time, the Bank will be back on the straight and narrow, with inflation close to target and likely to stay that way.

Last of all, we briefly consider a 'bad' outcome, in which the economy fails to gather much momentum at all – despite, perhaps, additional efforts from the authorities to help bolster demand. The value in any particular set of figures in this sort of scenario is limited, as it is possible to tell any number of stories not just about what goes wrong but about how they interact. In the worst of all possible worlds, the UK could end up in a scenario where the ratings agencies downgrade its debt and a further dose of fiscal tightening ends up pushing it into a mini-Greek-style 'double dip'. However, we put the chances of that happening as low. Rather more likely, we suspect, is a situation in which the economy just lacks energy and 'goes nowhere' for a while. Table 4.3 illustrates the sort of situation that we mean. The chances of a 'double dip', whether great or small, we assess to be small – perhaps about one in five. More important, we believe, is the fact that the much more likely outcome is a sluggish recovery. Such an out-turn could have serious implications for the public finances, as detailed in Chapter 5.

### 4.3 Inflation prospects

CPI inflation was 3% or higher throughout 2010 and has been above the government's 2% target in 52 of the past 66 months. At 3.7% in December 2010, it was still substantially lower than the 5.2% peak seen in September 2008. However, whereas in 2008 inflation was driven almost exclusively by rising energy and food prices, inflationary pressures at present are broadly based. For example, clothing and footwear inflation is at its highest level for nearly 20 years and inflation across a range of consumer services has risen.

The overshoots of the inflation target have not gone unnoticed. According to the Bank of England's own survey of the general public, inflation expectations have risen. The rise in inflation expectations has not just been at the one-year horizon, which, given the historical stickiness of inflation, might be expected to correlate closely to the prevailing inflation rate, but also at horizons of two and five years. In addition, so-called 'break-even' inflation rates from bond markets, which measure the implied rate of inflation that would cause the yield on inflation-protected bonds to equal that on an otherwise identical unprotected bond, have increased recently.

Rising inflation expectations are a concern because conventional economic analysis suggests that they can become self-fulfilling. For example, if households expect higher inflation, they will bargain harder for larger nominal pay increases to maintain their expected standard of living. Higher wages (themselves a price) will add to firms' costs and ultimately be passed through into final prices, potentially generating the dreaded 'wage-price spiral'.

The Bank of England has not, however, responded to these developments with tighter monetary policy. On the contrary, the Monetary Policy Committee (MPC) has held policy on an ultra-loose setting and has so far faced down critics who have questioned the Bank's commitment to the inflation target.

The Bank of England's contention is that the rise in inflation is temporary. The Bank believes that much of the recent increase can be attributed to the increase in the main rate of VAT from 17½% to 20% (which would add about 1.4% to the CPI if there were full

pass-through to prices) and the effects of one-off increases in import prices, the latter partly reflecting the fall in sterling since the onset of the financial crisis.<sup>30</sup> The Bank argues that underlying inflationary pressures are weak because the recession has left the economy with a large amount of spare capacity: even if households were to expect higher inflation, there is too much unemployment for high pay claims to be sustained and for a wage-price spiral to take hold. The Bank of England therefore predicts that when the temporary impulses drop out of the annual inflation rate, which should be around the end of this year, inflation is likely to fall below the 2% target.

We agree with the Bank of England's analysis in broad terms. We agree that much of the current high rate of inflation can be accounted for by one-off price-level shocks that are unlikely to persist, and that the subdued demand outlook means that inflation is unlikely to be a problem in the medium term. We are less convinced than the Bank of England that inflation will fall significantly below target next year, however, and we forecast an outcome that is close to the 2% target. The latter is likely to reflect two of our judgements: first, that the amount of spare capacity in the economy is less than the Bank of England supposes (although, as the Bank is not explicit about its estimate of the degree of spare capacity, we cannot be certain on this point); and, second, that there is some, albeit small, pass-through from higher inflation expectations to pay claims.

The key issue for our forecast is whether there is likely to be a shift in the Bank of England's policy stance. One question is whether the Bank would enact a 'tactical' one-off rate hike, designed to demonstrate that it is concerned about inflationary developments but without doing any great harm to the growth outlook. We think this is unlikely, as the Bank has in the past spoken out against such 'fine tuning'. Moreover, the Bank of England's credibility worries have two sides to them. A failure to respond to persistent overshoots of the inflation target may well be damaging to the Bank's credibility. However, a premature policy tightening that significantly dented growth prospects could be equally damaging to perceptions of the Bank's ability.

There is also the issue of which risk the Bank of England is better placed to respond to. If inflation were to confound the Bank's forecast and remain high, policy could be tightened rapidly. However, if inflation were to drop suddenly, with the policy rate at an all-time low of 0.5% and asset purchases already some 14% of annual national income, then it is not clear the Bank would have the scope to loosen policy much further. These considerations lead us to expect that the Bank will resist pressure for a near-term rate hike, and that policy tightening is more likely to begin in the latter part of the year, assuming the economy is demonstrably robust.

High inflation has one important implication, however, which is that it may constrain the Bank of England's ability to provide further support to the economy in the event of another adverse shock to aggregate demand. The government has insisted that if the economy were to slow, it would be monetary policy, and not fiscal policy, that would need to adjust. However, with the Bank of England's credibility already under scrutiny, there must be a question mark over the degree to which such support would be forthcoming. As a result, it may be wise for the government to have a contingency plan for 'trimming the

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<sup>30</sup> In fact, in its latest *Inflation Report*, the Bank seems to side with ONS evidence that suggests that only about half of the VAT-induced cost shifts are passed on to consumers. For details, see 'Costs and prices', chapter 4 of the November 2010 report (<http://www.bankofengland.co.uk/publications/inflationreport/irlatest.htm>).

sails', holding back on tax increases and/or delaying spending cuts to ensure that poor growth out-turns in the short run do not sink the longer-term fiscal consolidation plan.

## 4.4 Conclusion

Last year turned out to be a fairly positive one from a growth point of view, with the economic recovery having gained vigour, even if it turned out that growth was still pretty meagre compared with the sharp decline that occurred during the financial crisis and subsequent recession. (Usually, economies bounce back more energetically than the UK has done so on this occasion.)

More worryingly, however, this growth pickup came hand in hand with a significantly higher-than-expected inflation rate that was well above the Bank of England's 2% target. The fact that inflation has been higher than target, and higher than the Bank predicted it would be, for some time has meant that confidence in the MPC's ability to deliver the inflation target has been eroded slightly. As a result, one of the main policy actors has, in effect, been put out of action, or at least left in such a position that its reaction function has become asymmetric. A hike in interest rates is feasible if the economy roars and inflation soars, but, were the economy to hit a big bump in the road – say in the form of a second quarter of outright contraction – the Bank would find it tough to provide additional support, say through another dose of quantitative easing.

The chances of such a scenario developing are not insignificant. This chapter has tried to show that there are rather more downside risks to our 'central case' scenario – which looks quite a lot like most other people's, in as much as it posits that the recovery will continue – than there are upside ones. (Of the five issues we have examined in this chapter, only one – the possibility of a stronger-than-expected investment boom – seems to be skewed slightly towards more positive outcomes than in our main scenario.) So, all in all, it appears that the authorities ought to consider, if not a 'Plan B', then at least the possibility that they might need to nudge the economy towards a more favourable growth trajectory.

One potential means of doing this was demonstrated, though hardly noticed, last November, when the OBR produced its updated (November) forecasts. For, although the Treasury let it be known that this was not considered a 'fiscal event' – i.e. a significant enough adjustment to the OBR's forecasts that the government deemed it necessary to adjust its tax or spending policies – the OBR's new forecasts for real government consumption were in fact higher than its old ones (which were contained in its previous forecasts, as part of the Budget and laid out again in the Spending Review) and its forecasts for transfers lower. In effect, the decision had been taken to push out the coming consumption tightening a little, so that it came a bit later and gave the recovery greater time to gather momentum, and hopefully garner sufficient impetus to be able to ride through it. Were any of the downside risks that we have examined in detail to materialise during 2011, a further dose of postponement of the fiscal tightening might well be in order.