UPDATE OF PROSPECTS FOR THE UK BALANCE OF PAYMENTS[1]

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by

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Abstract
The paper discusses the enormous structural changes in trade and income flows that have occurred in Britain over the past sixty years. In 1950, Britain was a leading industrial power with a trade surplus in manufactured goods equal to 10% of GDP. There is now a trade deficit in manufactures of 4% of GDP. Over the same period, trade in services has moved into substantial surplus exceeding 4% of GDP. No other large industrialised country has experienced such a large shift in the structure of its trade. The paper uses a small model of the balance of payments to project the main components of the current account consisting of visible trade, invisibles (services), current transfers and net investment income. Various scenarios are considered. Under the most pessimistic scenario, there is a persistent current account deficit of around 5% of GDP. A deficit of this magnitude is not sustainable over the long-run.

Keywords: Balance of payments, visible trade, invisible trade, investment income, model simulation.

JEL Codes: F17, F32, F47

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Executive Summary

This paper is a companion piece to the paper on de-industrialisation of the UK Economy. It updates the authors' previous projections of the balance of payments and its components. The paper discusses the enormous structural changes in trade and income flows over the past sixty years. In 1950, Britain was a leading industrial power with a trade surplus in manufactured goods equal to 10% of GDP. There is now a trade deficit in manufactures of 4% of GDP. Over the same period, trade in services has moved into substantial surplus exceeding 4% of GDP. No other industrialised country has experienced such a large shift in the structure of its trade.

The paper reviews the authors' earlier projections of the current account balance for the period 1997-2007. The projection of a steady deterioration in the manufacturing trade deficit proved accurate, but the non-manufacturing balance performed better than projected, so that the current account deficit as a whole was only about 2.5% of GDP by the end of the period. Major changes in the non-manufacturing balance included financial services ("*The City*") where we projected a rising trend but could not foresee the bubble in net earnings prior to the financial crisis of 2008. Similarly, we failed to anticipate the scale of the increase in net investment income. An error in the other direction was that the energy balance worsened more than anticipated. While we anticipated a decline in North Sea production from the turn of the century, we did not anticipate the rise in energy prices. Our review of the projections illustrates the great uncertainty in trying to make ten-year projections of the current account and its components.

The paper uses a small model of the balance of payments to project the main components of the current account consisting of visible trade, invisibles (services), current transfers and net investment income. Visible trade is separated into: manufactures food, energy and other materials. The main invisible items are: transport, travel, government services, knowledge-intensive services, and financial and insurance services. The projections are conditional on plausible assumptions about the growth of world trade, the growth of domestic spending, oil and gas production, the real exchange rate and real interest rates.
Under this base scenario, the current account is projected to remain in deficit over the decade and to be about 3% of GDP by 2022. This is only a little larger than the average current account deficit of the UK over the past two decades. The paper discusses the detailed results. There is a growing deficit in oil and gas and in net investment income. Trade in services as a whole shows a substantial improvement. Trade in manufactures remains in deficit but shows a small improvement relative to GDP.

The paper illustrates the sensitivity of the projections to unforeseen shocks or variations in assumptions that would result in a worsening of the current account by 1% of GDP. Another way to illustrate the uncertainties is to make assumptions that

generate a more optimistic and a more pessimistic projection than assumed in the base scenario. Assuming that domestic spending increases more slowly and that net investment income is stronger than under the base projection, the current account deficit declines and is less than 1% of GDP by 2022. By contrast, if world trade increases each year by 5% compared with 6% under the base projection and the output of oil and gas declines by 7% a year compared with 5%, the current account deficit widens to over 5% of GDP and is on a worsening trend.

The paper concludes by discussing the range of uncertainties involved in projecting the balance of payments. It argues that if the current account deteriorates as in the pessimistic scenario to a persistent range of 4-5% of GDP, the sustainability of deficits of this size becomes problematic. In practice, there would either be market forces such as depreciation of the currency, or rises in interest rates that would ameliorate the problem, or policy action, such as restrictive fiscal and monetary policy to reduce the growth of domestic demand. The paper concludes by arguing that there is a case for industrial and other policies to boost UK trade performance in manufactures, knowledge-intensive services and to maintain the prominence of the UK’s trade in financial services.

1. Prospects for the UK balance of payments

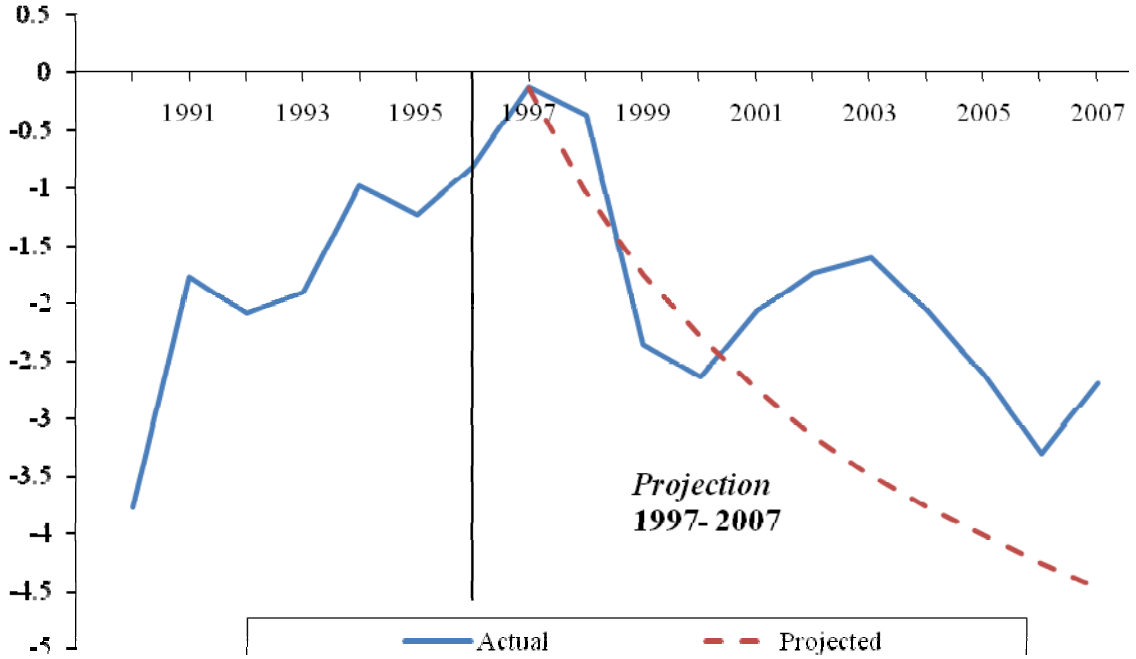
Over the past sixty years, the UK economy has undergone huge structural changes.[2] In 1950 this country was a great industrial power with more than a third of its labour force employed in the manufacturing sector and a further million in coal mining. There was a trade surplus in manufactured goods equal to 10% of GDP and the country was a net exporter of energy. Since then, employment in the manufacturing sector has shrunk dramatically and coal mining has almost disappeared. There is now a trade deficit in manufactured goods equal to 4% of GDP and, after an interlude following the discovery of North Sea oil, the UK is now a net importer of energy. The gap left by the decline of our traditional industries has been filled by a whole range of service activities, which now account for the bulk of employment and, collectively, earn a valuable trade surplus. Until recently, the country enjoyed significant net earnings in the form of interest, profits and dividends from international investment.

The costs and benefits of these changes, and what could or should have been done about them, were at one time hotly debated. However, such concerns were eventually buried under the euphoria of a prolonged economic boom and a bubble in house and share prices. They have now resurfaced following the credit crisis and ensuing recession. There is a widespread feeling that something has gone wrong, that the economy has become dangerously unbalanced, and we have put too much faith in finance at the expense of manufacturing and other activities. There are also new concerns about food and energy security in the face of rising world demand and limited supplies.

2. Previous projections

Some years ago a small group of us in Cambridge, under the aegis of the Centre for Business Research, set out to investigate the role of manufacturing in the UK economy.[3] The manufacturing sector had been shedding jobs for some decades and the pace of decline had been faster than in other countries. The official index of production indicated that the aggregate output of UK manufacturing had been stagnating for nearly twenty years, whereas many other countries had experienced considerable growth in production. Was this situation sustainable over the longer term? In particular, was it compatible with the sound balance of payments required for national solvency? Would manufacturing exports be sufficient in the future to pay for the imports we require? If not, what alternative sources of income would be available to bridge the gap?

Figure 2.1: Balance of Payments Current Account (% GDP) old base projection: 1997-2007



We began our investigations at a time when the UK balance of payments had been improving for some years. The current account balance as a whole was close to zero (Figure 2.1). There was a small deficit on manufacturing trade and a small surplus on the totality of other current items. Our objective was to investigate whether this satisfactory state of affairs would continue, and to see if there were underlying trends that might disrupt this equilibrium and give rise to serious payments difficulties in the future. Our starting point was the "base projection". This projection represented our best estimate of what would happen over a ten year horizon in the absence of policy changes or shocks. This is a much longer horizon than is usually attempted in macroeconomic forecasting. Under the base projection there was a steady deterioration in the overall current account culminating in a deficit equal to 4.5% of GDP in 2007. In the event, the current account did deteriorate but by less than projected.

In evaluating our projection, it is useful to consider manufactures and non-manufactured items separately. We projected that the trade balance in manufactures would get steadily worse, culminating in a deficit of around 4% of GDP in 2007. This turned out to be an accurate forecast, and our projection of the manufacturing balance tracked closely what actually happened.[4] We also projected a worsening situation on the non-manufacturing side of the account. This turned out to be wrong, which explains why the current account as a whole performed somewhat better than expected.

In recent years, the behaviour of the non-manufacturing side of the current account has been dominated by the following items, all of which have been subject to large changes that we did not foresee:

- *Finance ("The City"):* Net overseas earnings of the financial sector have been on an upward trend for a considerable time. Starting in 2005 there was also a spectacular bubble in which these earnings rose by 60% within the space of two years. Our projections got the upward trend, but not the bubble.
- *Investment income:* Net investment income has fluctuated widely over the years. During our projection period, net income was boosted by a wave of cross-border mergers and acquisitions through which UK firms trebled their highly profitable stock of overseas assets. Towards the end of the period, net income was also inflated by the huge and unexpected losses sustained by certain foreign banks operating in London.[5] Our projections underestimated the growth of net income because we failed to anticipate either of these developments.
- *Energy, food and basic materials:* For some time before and after our projections began in 1997, the UK had a modest deficit on trade in these items. Net earnings from trade in energy (oil, gas, coal and electricity) were outweighed by expenditure on imported food, minerals and the like, but the gap was quite small as a percentage of GDP. However, from the turn of the century onwards the situation become much worse under the impact of falling North Sea oil production and rising import prices. Our projections took into account the fall in oil production but not the large price increases.

The above errors illustrate some of the pitfalls involved in long-term forecasting and highlight the inherent uncertainty surrounding major items in the balance of payments. Without the unforeseen growth in overseas investment income and the bubble in City earnings, there would have been a much larger deficit in the current account at the end of the projection period in 2007. Conversely, without the unexpected rise in import prices for energy, food and materials, the current account would have been close to balance in 2007. With hindsight, these developments can be explained, but they were not widely foreseen at the time.

3. Looking to the Future

The fate of our original projections is now water under the bridge. What about the future? What are the prospects for the UK balance of payments? To what extent will national solvency in the future depend on the strength of the manufacturing sector? What is likely to be the performance of this sector in the absence of major new policy initiatives? If manufacturing performs badly, will other sectors be able to fill the gap and generate the income required to pay for our imports? These are the questions that the CBR group in Cambridge explored in our original projections. We revisited this topic in 2009 and in the current paper we present a further set of projections for the period 2012-2022.[6] These projections come with a health warning. As we have seen above, some of the main items in the balance of payments are subject to great uncertainty and any longer term projection, such as ours, is therefore subject to a large margin of error.

A projection is a conditional forecast. It does not say what will actually happen. It forecasts what would happen under certain assumptions about government policy and the behaviour of a number of economic variables, such as the price of oil or the growth of world trade. Different assumptions yield different forecasts. We start from the "base projection", which assumes no change in government policy and embodies a set of assumptions about broad economic trends that seem reasonable in the light of existing evidence. We then examine how varying some of the main assumptions would affect the projected outcomes. Such an exercise helps to identify potential sources of error and quantifies their relative importance. It also indicates the potential importance of various policy interventions to strengthen the balance of payments. A full description of the projections is given in an appendix and here we describe only their main features.

Table 3.1: Main Items in the UK Current Account Balance of Payments 2011 (£ millions)

	Credits	Debits	Balance	%GDP
Surplus Items				
Financial services & insurance	61,043	14,367	46,676	3.1
Other knowledge-intensive services	85,136	47,302	37,834	2.5
Investment income*	188,668	171,535	17,133	1.1
Deficit Items				
Manufactures	225,302	285,948	-60,646	-4.0
Energy (oil, coal, electricity & gas)	42,722	61,843	-19,121	-1.3
Food, beverages and tobacco	18,098	36,069	-17,971	-1.2
Basic materials	9,017	11,928	-2,911	-0.2
Transport and travel	45,008	51,781	-6,773	-0.4
Government services	2,472	3,829	-1,357	-0.1
Current transfers	17,290	39,506	-22,216	-1.5
Goods not elsewhere specified	3,848	3,542	306	0.0
Current Account	**698,604**	**727,650**	**-29,406**	**-1.9**

Source: *UK Balance of Payments Pink Book 20012.* ONS; tables 1.2, 2.1, 3.1.
*Includes earning of employees

Table 3.1 lists the main items in the current account. Most of the headings are self-explanatory. A separate category of "other knowledge-intensive" services is identified. This heading covers a huge variety of services such as communications, construction, computer & information services, royalties and license fees, consultancy, legal services, audio-visual services etc. It excludes financial services and insurance. These items are of increasing importance in the balance of payments.

Table 3.2: The Base Projection 2009-2020 - Main Assumptions (annual percentage growth rates)

	2013	*2014*	*2015-2022*
Real domestic expenditure	1%	2%	3%
World trade	4%	5%	6%
Relative domestic to world unit labour cost (real exchange rate)	1%	1%	0%
Nominal unit wage and salary growth	0%	3%	3%
Real price of oil and gas	1%	1%	1%
Volume of oil & gas production	-1%	-1%	-5%
Volume of UK consumption of oil & gas	0%	0%	0%
Real rate of return on finance & insurance assets*	-1.4%	0%	1.6%
Real rate of return on finance & insurance liabilities*	-1.5%	-0.1%	1.5%
Real rates of return on external assets and liabilities*	0. %	0.2%	0.5%

*income as a percentage of assets and liabilities

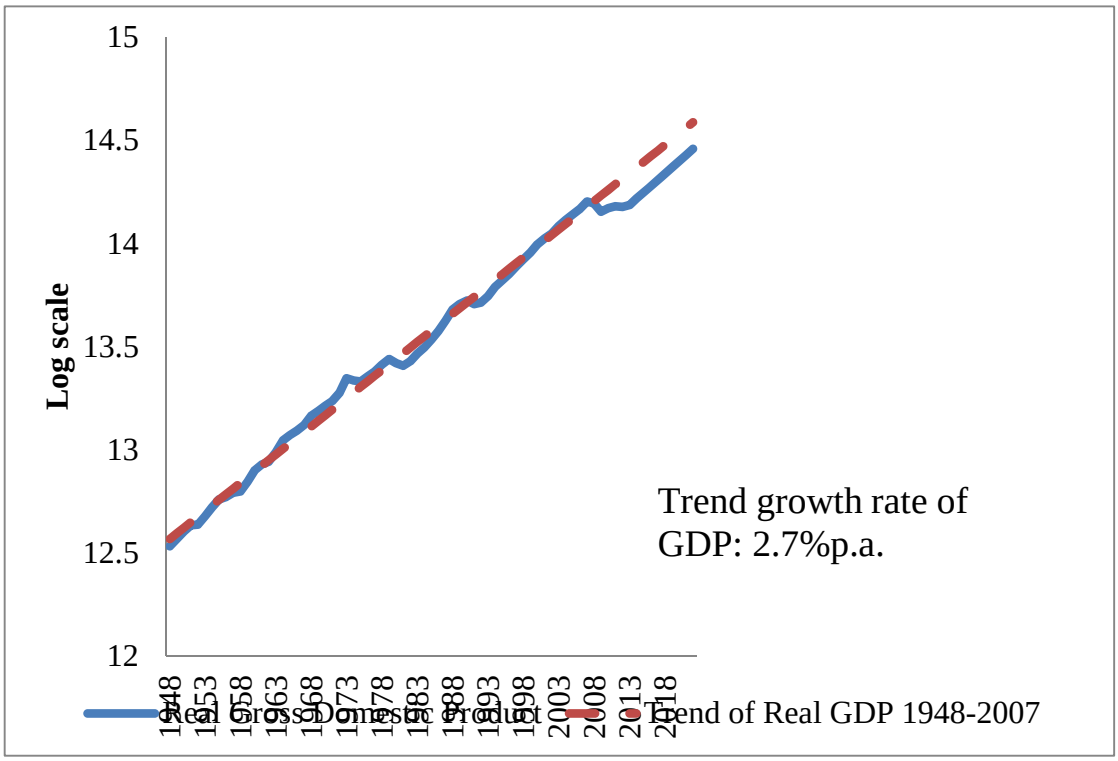
3.1 Base Projection: Assumptions

The main assumptions underlying the base projection are shown in Table 3.2. Further details are given in the appendix. In addition we assume that there is no change in government policy. The following are some points to note:

- *Domestic Spending and GDP*. Real domestic expenditure is exogenous. We assume that the economy starts to recover in 2013 and the growth rate of real domestic expenditure accelerates to 3% p.a. by 2015. Given the trade performance of the economy, this implies that GDP growth accelerates to 3.1% p.a. by the end of the period. This is somewhat faster than the historic trend and implies that some of the loss following the financial crisis is recouped (Figure 3.1). It must be stressed that the behaviour of domestic spending under the base projection is an illustrative assumption and not a forecast of what will actually happen. It may turn

out that the economy grows significantly slower than is implied by this assumption.

Figure 3.1: Historical GDP and Base Projection 1948-2022



- *Exchange Rate.* The exchange rate plays a role in the projections for trade in manufactures and also for certain other items such as trade in services and the valuation of overseas assets. We assume that the devaluation that took place in 2007-2008 is maintained throughout the projection period.
- *World Trade.* UK exports are closely linked to the behaviour of world trade. We assume that world trade growth accelerates to reach 6% p.a. from 2016 onwards. The historical average growth rate up to 2007 was 6.9%p.a. and the October 2012 IMF *World Economic Outlook* projects 6.3% p.a. up to 2017[7].
- *Financial services*. UK exports of financial services mushroomed in the early part of this century but then fell sharply during the ensuing crisis. They have now recovered in absolute terms, although the UK share of world exports of this type remains lower than it was at the peak. However, the UK is still a leading exporter and in 2011 accounted for 19.1 percent of world exports of financial services[8]. There are many threats to the City of London and the future is uncertain. Over the longer term the UK share of world financial exports is likely to fall as new competitors appear. However, world demand for financial services is growing rapidly and despite a falling share, UK net exports of this type should continue to increase in absolute terms. Our base projection assumes that net exports of financial services (including insurance) grow slightly faster than GDP over the projection period.

- *Other knowledge-intensive services.* This heading covers a wide diversity of activities. Apart from a temporary decline in their dollar value in 2008-09, UK exports in this category have been increasing, albeit more slowly than world exports[9]. There is no obvious reason to believe that this state of affairs will alter. The most likely prospect is that the UK share of world exports of other knowledge-intensive services will continue falling, but in absolute terms UK exports in this category should continue to increase quite strongly. Under our base projection net exports of other knowledge-intensive services grow faster than GDP over the projection period. This projection is derived from an equation estimated from past experience.
- *Travel and Transport.* Over the past decade UK trade performance in this area has improved. The ratio of tourist inflows to outflows has been rising, the UK-owned shipping fleet has expanded, and revenue from foreign airlines using UK airports has risen. In our base projection net exports from travel and tourism are projected separately using equations estimated from past experience.
- *Government Services*. This is a small item which is projected separately using an equation estimated from past experience.
- *Current Transfers.* The deficit on current transfers has been increasing rapidly mainly due to increasing payments to EU institutions. The future will depend on what happens to such payments and also on what happens to government aid to developing countries. This item is projected using an equation estimated from past experience.
- *Energy, food and basic materials*. There is considerable uncertainty about the future prices of these items. Over the longer term, world population growth plus rising incomes may lead a large and permanent increase in the world prices of energy, food and materials.[10] However, this is by no means certain. We assume that the real price of oil & gas rises by 1% p.a. We make a similar assumption for basic material prices. The behaviour of food prices is estimated. Our base projection for net exports of oil and gas is based on official projections for UK production and demand[11]. Production falls at 5% p.a. after 2016 and demand is flat. Net exports of food and basic materials are projected separately using equations estimated from past experience.
- *Investment income*. This is a highly volatile item and its future trajectory is very uncertain. UK net income from international investment was inflated in 2007-2008 by the huge losses of foreign banks operating in London. Net investment income has fallen sharply since then. Indeed, in the first half 2012 there was actually a deficit on this item. We assume there is some recovery in the second half of the year and that for 2012 as a whole net investment income is zero. Our base projection assumes, in line with past experience, that the rate of return on UK overseas assets is slightly higher than on UK liabilities. [12]

- *Manufactures.* Exports and imports are projected using equations estimated from past experience. The import equation allows for the fact that higher manufactured exports lead to higher imports of intermediate and capital goods. These projections take no account of the possible trade implications of government carbon emissions policy. If this policy leads to much higher energy prices than our competitors face, this will damage domestic production of energy-intensive manufactures and have a negative impact on the balance of trade.

3.2 Base Projection: Results

The main results for the base projection are as follows:

- *Balance of Payments Current Account*: the current account is in deficit throughout the projection period. In monetary terms, this deficit increases in the course of time, but relative to the economy as a whole it declines from 4% of GDP in 2012 to 3% by 2022 (Figure 3.2).
- *Manufactures*: the deficit on manufacturing trade increases in monetary terms from an estimated £67 billion in 2012 to £85 billion in 2022 (Figure 3.3). However, relative to the economy as a whole it declines from 4.4% of GDP in 2012 to 3.3% in 2022 (Figure 3.4).
- *Other goods*: There is a growing deficit in oil and gas due to falling North Sea production. The deficit in food and basic materials gets somewhat larger in money terms, but gradually declines as a share of GDP.
- *Services*: Taken as a whole, services enjoy a large and growing surplus. The recent improvement in "traditional" services (transport, travel and government) continues and, taken as a whole, this group is in approximate balance by 2022. Net earnings from other knowledge intensive-services increase as a share of GDP. By assumption, net earnings from finance (including insurance) increase a little as a fraction of GDP.
- *Current transfers*: The deficit on this item continues to widen as a fraction of GDP.
- *Investment income*: Net income from investment continues its downward trajectory and by 2012, the deficit on this item is around 1 percent of GDP.

Figure 3.2: Current Account Balance (% of GDP)

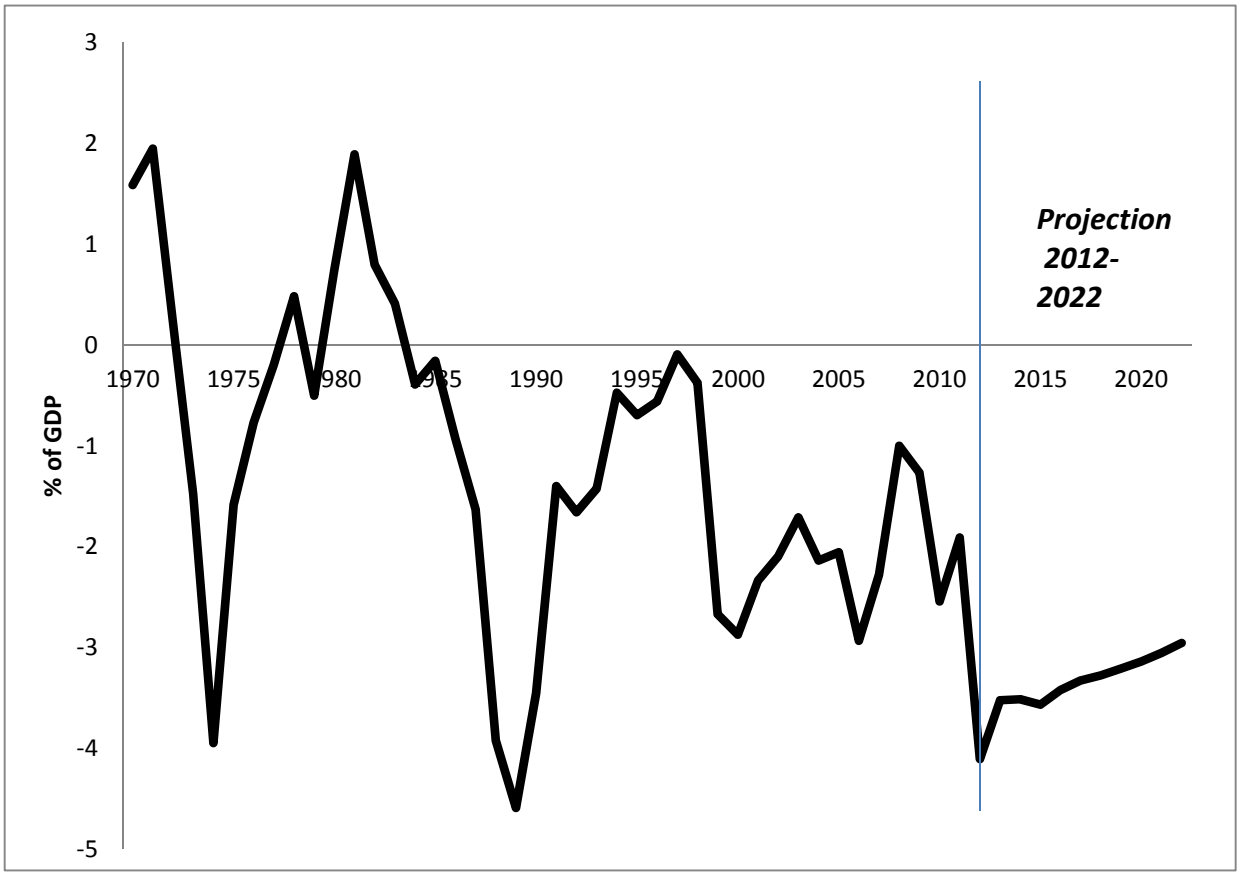


Figure 3.3: Balance of Trade in Manufactures (£ billion)

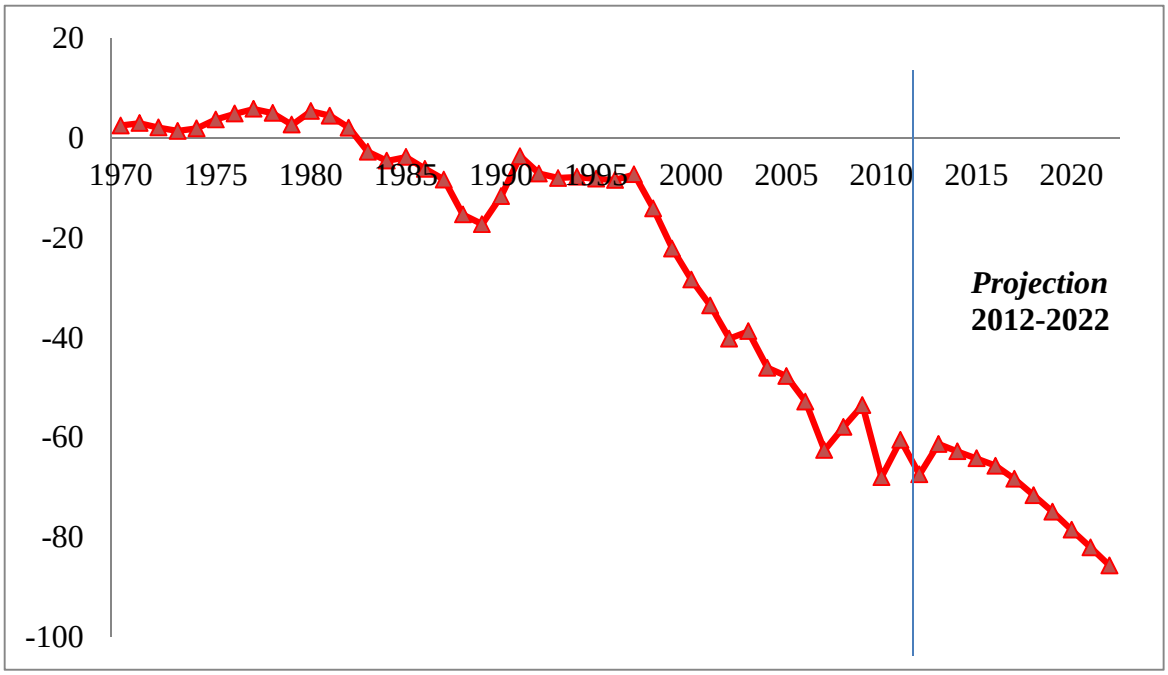


Figure 3.4: Balance of Trade in Goods (% GDP)

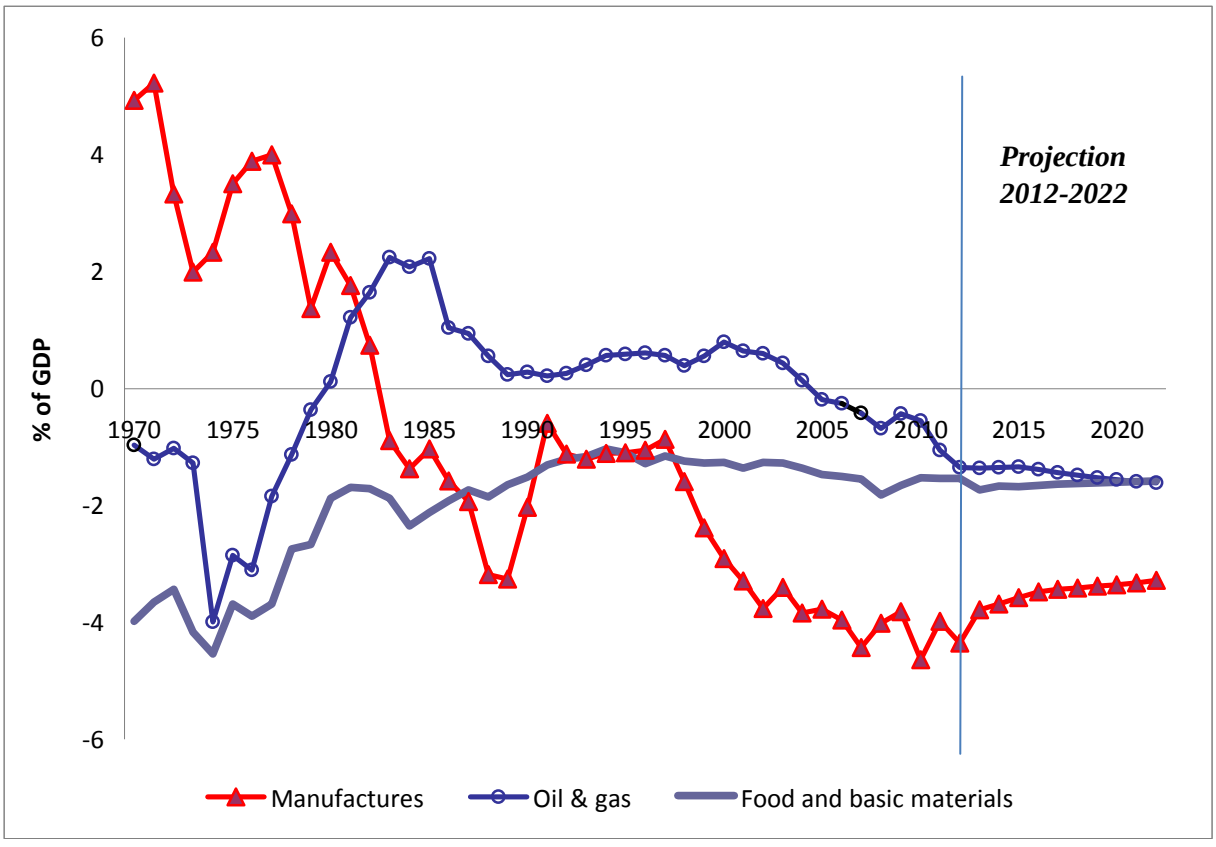


Figure 3.5: Balance of Trade in Services (% GDP)

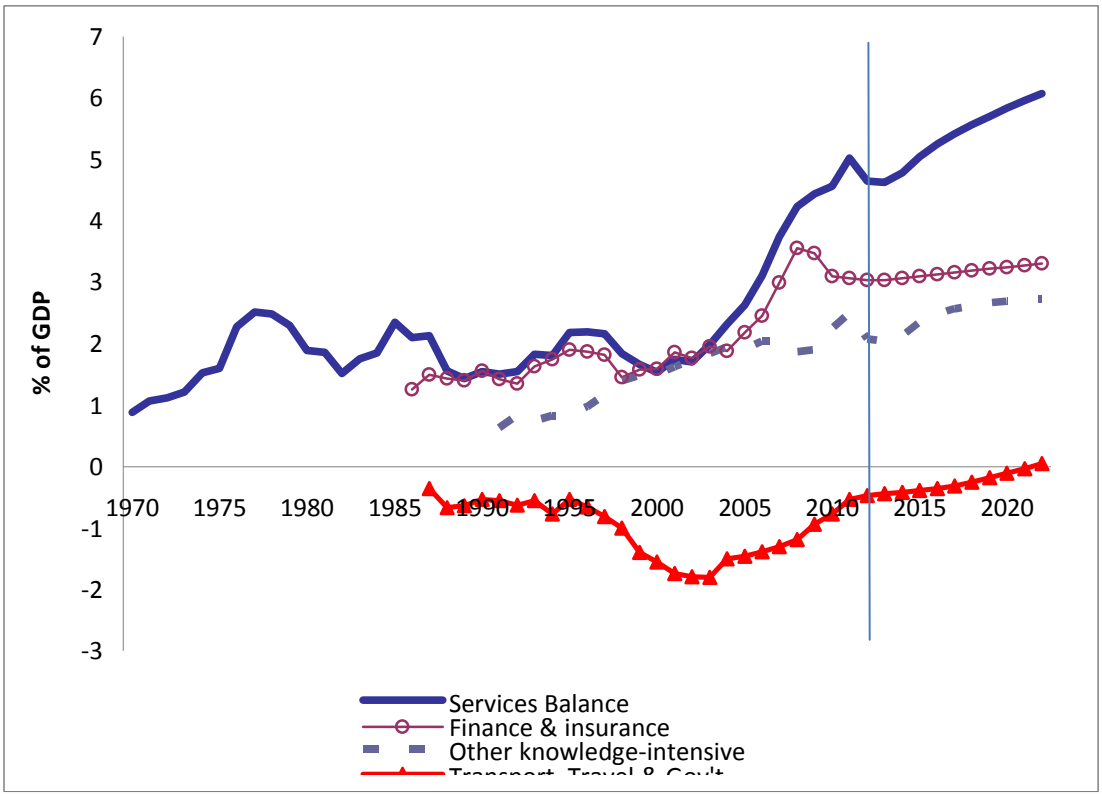
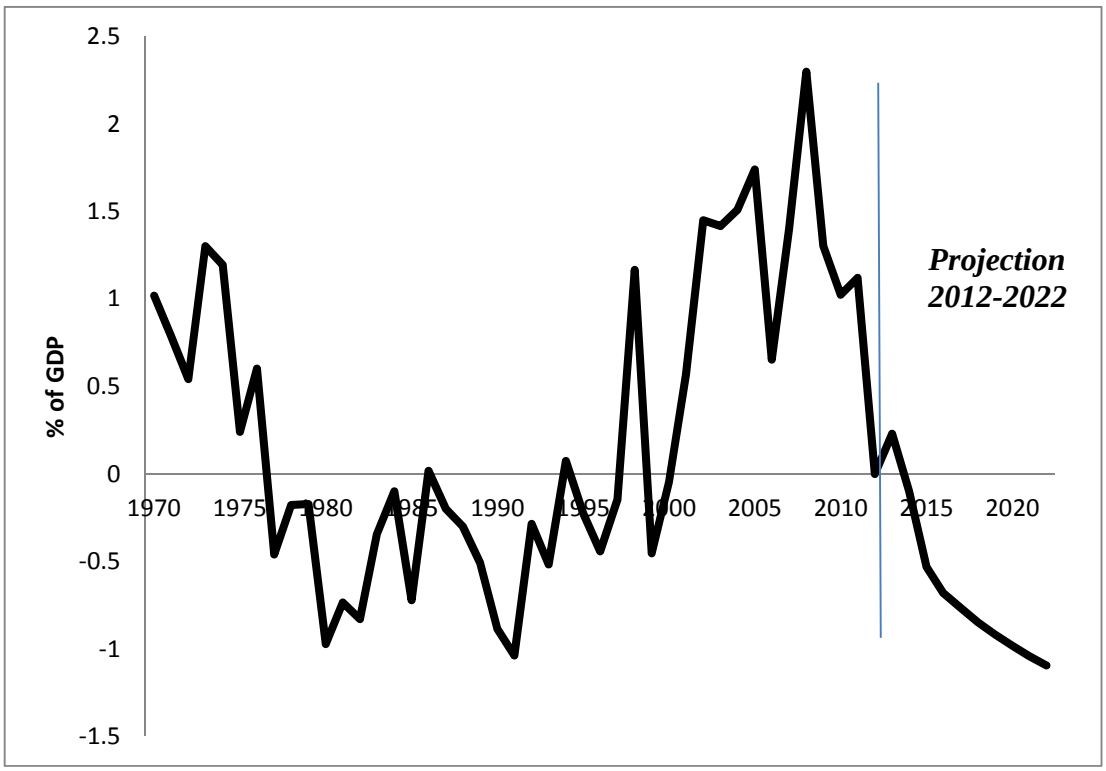


Figure 3.6: Net Investment Income (% GDP)



3.3 Base Projection: Sensitivity Analysis

The base projection can be summarized as follows. There is a growing deficit in oil & gas trade and in net income from international investment. There is also a substantial improvement in service trade. The trade deficit in manufactured goods increases in money terms, but gets smaller as a fraction of GDP. The current account deficit as a whole also increases in money term, but gets smaller relative to the economy as a whole. At the end of the projection period in 2022, the current account deficit is around 3% of GDP.

When projecting the future balance of payments, what matters is not just the growth rate of any particular item, but also its initial size. The two largest items by a long way are manufactured goods and income from overseas investment (Table 3.1). Despite all the changes that have occurred, manufactured exports are still almost three times as large as the total earnings from the export of financial services of the entire City of London and well over three times export earnings from the whole gamut of other knowledge-intensive services. The balance of trade in manufactures is the difference between two very large magnitudes. A given proportionate error in projecting either exports or imports may result in a much larger proportionate error in the trade balance in manufactures. An instant ten percent rise in manufactured exports combined with a similar fall in manufactured imports would generate a £51 billion improvement in the balance of payments, which is more than UK net earnings from financial services and insurance. An instant ten percent reduction in the amount of investment income we receive combined with a ten percent increase in what we pay out, would lead to a net loss of £36 billion. These are huge figures. They are similar in magnitude to what our imports of oil and gas would cost if North Sea oil and gas dried up overnight.

Table 3.3 provides further information on this issue. It shows how sensitive our overall balance of payments projection is to unforeseen shocks or variations in the assumptions underlying the base projection. It lists a number of changes that would individually cause the current account balance in 20202 to deteriorate by 1% of GDP. These are as follows:

- *World Trade*. The base projection assumes that world trade grows by 6% p.a. If it were to grow instead by 5.3% p.a., this would produce the required deterioration in the balance of payments.

Table 3.3: Individual changes that *worsen* the current account by 1% of GDP by 2020

	Base Projection	Alternative Assumption
Slower growth of world trade	6.0% p.a.	5.3% p.a.
Currency revaluation (increase in relative unit labour costs)	0% p.a.	20% p.a.
Faster growth of domestic spending	3.0% p.a.	3.36% p.a.
Real price increase of oil & gas	1% p.a.	9.0% p.a.
Faster decline in oil & gas production	-5% p.a.	-20% p.a.
Lower long term rate of return on UK investments	0.5%	0.2%
Slower growth in real exports of financial services	3.8% p.a.	0.5% p.a.
Slower growth in real exports of other knowledge-intensive services	5.8% p.a.	1.5% p.a.
Slower growth in real exports of manufactures	5.2% p.a.	4.2% p.a.

Note: Calculated by modifying the relevant assumption in the base projection. Each modification leads to a 1% of GDP deterioration in the balance of payments on current account by 2022. Real quantities are derived by deflating nominal quantities by the GDP deflator.

- *Revaluation*. The base projection assumes that the real exchange rate remains constant throughout the projection period. A permanent revaluation of 20% would eventually cause the balance of payments to deteriorate by 1% of GDP. This revaluation would reverse the large currency devaluations that occurred during 2007-08.
- *Domestic Demand.* The base projection assumes that domestic spending grows at 3.0% p.a. If spending were to grow at 3.36% p.a. instead, this would eventually increase the balance of payments deficit by 1% of GDP.
- *Real Oil & Gas Prices.* The base projection assumes that the real price of oil & gas increases at 1% p.a. over the period. To produce the required deterioration in the balance of payments would require the real price of oil & gas to *rise* by an average of 9.0% p.a. over the entire projection period. This is conceivable, but unlikely.
- *UK Oil & Gas Production.* The base projection assumes that UK oil & gas production will fall by 5% p.a. To generate the required worsening in the balance of payments would require oil & gas production to fall by 20% a year.

- *Return on Overseas Assets.* A reduction of 0.3 percentage points in the return on UK investments abroad would reduce net income in 2022 by 1% of GDP. This calculation assumes there is no change in the return that foreigners obtain on their investments in the UK. Such a negative shock cannot be ruled out, although neither can a shock in the opposite direction. The future behaviour of net investment income is highly uncertain.
- *Financial Services (including insurance).* A reduction of 28% in net export earnings from this sector by 2022 (as compared to the base projection) would be equivalent to 1% of GDP. To achieve this outcome would require real net earnings of this type to grow at 0.5% p.a. over the next decade as compared to 3.8%.
- *Other knowledge-intensive services*. A 34% fall in net earnings from other knowledge-intensive services by 2022 (as compared to the base projection) would be equivalent to 1% of GDP. To achieve this result would require real net earnings to grow at 1.5% a year as compared to 5.8% p.a.
- *Manufactured exports*. A reduction of 9% in manufactured exports (as compared to the base projection) would cause deterioration in the balance of payments equal to 1% of GDP by 2022. This calculation takes into account the fact that manufactured exports have high import content.
- If all or most of the above changes to the base projection were to occur simultaneously, then by 2022 the UK would have a very large current account deficit. Conversely, if similar changes were to occur simultaneously in the opposite direction, there would be a current account surplus. The above calculations illustrate the sensitivity of our projections to two particular items: investment income and manufacturing trade. As Table 3.1 indicates, these are very large items and relatively small proportionate errors in projecting their behaviour will have a substantial impact on the balance of payments. This is not the case for most of the other items in the balance of payments, which are mostly much smaller in magnitude.

3.4 Alternative Scenarios

Table 3.4 compares the base projection with some alternative scenarios. There is an optimistic scenario which modifies the assumptions of the base projection as follows:

- *Domestic demand.* This item increases more slowly than under the base projection. As a result, the long-run growth rate of GDP is 2.9% p.a. instead of 3.1%.
- *Net Investment Income*. UK income from overseas investment bounces back in 2013 and net income remains in surplus throughout the projection period.

Under this scenario, the current account deficit shrinks from 4.1% of GDP in 2012 to 0.7% in 2022. The above assumptions and the projected trajectory for the deficit are similar to forecasts made by the Office for Budget Responsibility in December 2012[13].

Table 3.4 also shows what happens if some of the assumptions of the base projection are modified in a more pessimistic direction. These modifications are as follows:

- *World Demand*. The annual growth rate of world trade is 5% instead of the 6% assumed under the base projection
- *Oil & Gas*. The output of oil & gas falls at annual rate of 7% instead of 5%.
- *Knowledge-intensive Services*. Real net exports of financial and insurance services grow at the same rate as under the base projection. Real net exports of other knowledge-intensive services grow at an annual rate of 4.5% instead of 5.8%. The latter is still an impressive performance. Under the more pessimistic scenario there is a current account deficit equal to 5.2% of GDP. This is much larger than under the base projection.[14]

Table 3.4: Projections Compared

	Estimated 2012	**Base Projection 2022**	**Optimistic Scenario 2022**	**Pessimistic Scenario 2022**
Real domestic expenditure (% p.a. long-run growth rate)		3.0	2.7	3.0
GDP (% p.a. long-run growth rate)		3.1	2.9	2.8
Current account (%GDP)	-4.1	-3.0	-0.7	-5.2
Balance of trade in manufactures (% GDP)	-4.4	-3.3	-2.7	-4.4
Balance of trade in other goods (% GDP)	-2.9	-3.2	-3.0	-3.6
Balance of trade in services (%GDP)	+4.6	+6.1	+6.3	+5.5
Investment income (%GDP)	0.0	-1.1	+0.2	-1.3

4. Discussion

The base projection presents an informed picture of what may happen over the next decade if present trends continue and a strong economic recovery is sustained. Under this projection there is a current account deficit equal to 3% of GDP by 2022. However, this projection is subject to a number of uncertainties. On the upside, earnings from overseas investments might recover or the City of London might perform better than our somewhat cautious assumptions imply. There are also a number of downside risks. Under the pessimistic scenario the current account deficit reaches 5.2 % of GDP by 2022. A deficit of this magnitude would be a cause for serious alarm.

Most economists agree that countries cannot run large current account deficits forever, because of the resulting growth of foreign debt; sooner or later some form of adjustment will be required. The question is how large is large and how painful will the eventual adjustment be? C. Fred Bergsten (2002) has argued that "research at both the Federal Reserve Board and the Institute for International Economics reveals that industrial countries, including the United States, enter a danger zone of current account unsustainability when their deficits reach 4–5 percent of GDP... At these levels, corrective forces tend to arise either spontaneously from market forces or by policy action." More recent research by Clarida *et al* (2007) reaches the same conclusion. In their econometric analysis of industrial countries, Freund and Warnock (2007) find that deficit adjustment typically involves a decrease in GDP growth and may involve currency depreciation. They also find that larger deficits take longer to adjust and are associated with significantly slower output growth (relative to trend) during the current account recovery than smaller deficits.

The relentless deterioration in the balance of payments that occurs under the pessimistic scenario would not be sustainable and sooner or later something would have to give. As the deficit built up, pressure on the exchange rate would mount, leading eventually to a large currency devaluation and domestic inflation; the government and central bank might also intervene by restraining demand so as to combat inflation and limit the growth of imports. This combination would bring down the deficit but only at the cost of lost output and unemployment.

Some of the factors that influence the balance of payments are beyond our control, but there are at least three areas where government policy can make an important difference. These are: the City of London, manufacturing and other knowledge-intensive services. As far as the City is concerned, future reform of the financial sector should be designed so as to preserve the export potential of this sector and attempts by the Eurozone bloc to undermine the City should be resisted. In the case of manufacturing and knowledge-intensive services, there is scope for what might be loosely called an "industrial policy". This is now coming back into fashion, although what it would mean in practice is at present rather vague and subject to debate.

Given the orders of magnitude involved, any policy for strengthening the balance of payments must assign a significant role to manufacturing. UK trade in manufactures (exports plus imports) is several times larger than exports of the City of London and other knowledge-intensive services put together. Safeguarding the City and increasing other knowledge-intensive exports are both important objectives, but it is unlikely that success in these areas would be sufficient to compensate for serious failings in the manufacturing sector.

The opposition between manufacturing and services is to some extent a false one. In a modern economy like ours, the dividing line between manufacturing and services is becoming increasingly blurred. Many manufacturing firms rely heavily on knowledge-intensive services provided by outside suppliers, whereas some manufacturing firms are also major service providers in their own right. It would be difficult to conceive of a viable industrial policy for manufacturing that did not also involve knowledge-intensive services. With a stronger manufacturing sector, there would be a larger internal market for manufacturing-related services, and access to this market would enable UK service providers to benefit from economies of scale and develop skills which can be exploited in export markets.

There is a precautionary motive for policies to strengthen the balance of payments. Our projections are surrounded by a great deal of uncertainty and, although things could turn out better than we envisage under the base projection, there is a fair chance they could turn out significantly worse. Simply on grounds of prudence there is a case for industrial and other policies designed boost UK trade performance.

Notes

1 This paper is an updated and revised version of Coutts and Rowthorn (2009). We should like to thank two anonymous referees for their comments.

2 See Rowthorn and Wells (1987).

3 The members of the group were Alan Hughes, Ken Coutts, Andy Cosh and Robert Rowthorn. Publications of the group include: Cosh, Hughes and Rowthorn (1993, 1994) and Cosh, Coutts and Hughes (1996).

4 For most of the period since 1971 the balance of trade in manufactures has steadily deteriorated. The two major exceptions, 1990-95 and 2007-2008 were both episodes where major recessions occurred combined with real devaluation of the exchange rate.

5 UK net investment income is income credits *minus* income debits. If foreign banks operating in London lose money, this counts as a negative debit and has the effect of increasing UK *net* income. Net investment income from *direct* investment is also difficult to interpret, because measurement conventions regarding the finance of direct investment affect what gets counted as income from direct investment. See Coutts, Glyn and Rowthorn (2007).

6 Coutts and Rowthorn (2009). The econometric work for the 2009 projections and for the projections presented here was done by Kenneth Coutts.

7 Link: http://www.imf.org/external/ns/cs.aspx?id=29

8 WTO database.

9 WTO database.

10 Kesler (2007) contains a useful survey of mineral prospects in the 21st century. IMF (2011) considers the future behaviour of oil prices.

11 DECC (2012)

12 The UK has a surplus on high paying direct investment and a deficit on other types of investment. The country gains by borrowing cheap and lending dear. For information on rates of return on different kinds of asset and liability see *UK Balance of Payments Pink Book 2012*. ONS figures 1.8 and 1.9.

13 OBR (2012). The OBR forecasts that GDP growth will accelerate to 2.8% p.a. by 2017 and the current account balance in 2017 will be -1.4% of GDP (Table 3.5). Under out optimistic scenario GDP growth in 2017 is 2.9% and the current account balance in 2017 is -1.8% of GDP.

14 The deficit under the pessimistic scenario is also larger than in a previous projection made by the authors (Coutts and Rowthorn, 2009), which projected a current account balance equal to -4.7% of GDP in 2020. The main reason for the difference is the behaviour of investment income. Since the previous projection was made UK net income from international investment has fallen sharply and this deterioration is taken into account in the pessimistic scenario presented here.

15 All econometric analysis and model solutions are done in Eviews 7.2, Quantitative Micro Software © 1994-2011.

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Appendix: Sources and Methods

Our model is a convenient information system for making alternative conditional projections of the balance of payments, its main components and some macroeconomic aggregates of the UK Economy.

Table A1: The Balance of Payments and its main components

		Current Account (Flows)
1.	Visible Trade	
		Food, beverages and tobacco
		Oil and gas
		Basic materials and other energy
		Manufactures
2.	Invisible Trade	
	(services)	Transport
		Travel
		Government services
		Knowledge-intensive services[1]
		Finance and insurance services[2]
3.	Income	
		Investment income (credits and debits)
		Net current transfers and remittances
		CAPITAL AND FINANCIAL ACCOUNT (FLOWS)
		Transactions in real and financial assets and liabilities[3]
		Net capital transfers
		INTERNATIONAL INVESTMENT POSITION
		Balance sheets: assets and liabilities

[1] Communications, construction computer and information technology, royalties and licence fees, other business, personal cultural and recreational, communications.
[2] Finance and insurance ("The City").
[3] Direct investment, portfolio investment and other financial securities.

Table A2. Model structure and properties[15]

ENDOGENOUS VARIABLES	81			
of which:				
	identities	64	inexact equations (statistically estimated)	17
EXOGENOUS VARIABLES	27			
TOTAL	108			

The model has 108 variables of historical time series up to latest estimates for 2012. There are 81 endogenous variables, i.e. variables whose value is determined by the model, given values of 27 exogenous variables, whose values are assumed and not explained by the model. A projection is a solution of the 81endogenous variables for each year of the projection period, conditional on assumptions about the exogenous variables (a time-path for each exogenous variable over the projection period).

Most of the structure of the model consists of accounting identities relating to the various components of the balance of payments. The inexact equations summarize behavioural relationships over the historic period from 1970-2011 and include a residual between the actual historical value of the endogenous variable and the value calculated from the equation. The coefficients of the equations are estimated by econometric methods from a sample of historic data and used in the projections from 2013 onwards. For the projection period we must make assumptions about the future value of the residual. A common assumption is to project the last observed residual in 2012 so that there is a smooth transition from the 2012 value of the variable to its projected value for 2013 and beyond (so-called “add factors” in the equations). Of the 17 inexact equations, there are 10 equations for which we can establish reasonably stable long-run relationships; they include trade volumes, trade prices and the domestic expenditure deflator. There are 7 equations for which we use add factors in the projections.

Exogenous variables

The principal exogenous variables in the conditional projections divide into six groups. They are: the volume of domestic expenditure; the index of wages and salaries per unit of output; the nominal exchange rate and relative unit labour costs in common currency (a measure of the “real” exchange rate); the price and volume of

oil; the world demand for manufactured goods; the real returns on external assets and liabilities. Our "base projection" assumptions are summarised in Table 3.2. The sensitivity analysis summarised in Table 3.3 is obtained by calculating alternative solutions of the model to vary the variables listed in the table by the amounts required to achieve a 1% of GDP improvement in the current account. For this exercise, the current account is "the target" and the exogenous variable is "the instrument".

Principal Behavioural Relationships

Export and import volumes of manufactures depend upon income and relative cost elasticities. Export volumes are related to an index of the volume of world demand for manufactures, weighted by the UK share in each market, which is derived from OECD series. Import volumes depend both upon the volume domestic expenditure and the volume of exports, so that faster export growth draws in more imports of manufactures. Exports and imports both depend on an index of relative unit labour costs expressed in common currency, published in IMF Financial Statistics. Changes in the real exchange rate (as measured by the IMF normalised relative unit labour cost index) gradually affect trade volumes, so that the full effect of devaluation on the volume of exports or imports takes up to four years to complete. Our recent estimates of the elasticities suggests that the relative cost response of export and import volumes is low. Trade prices depend upon the domestic price index and relative unit labour costs. Our measure of inflation is based on the domestic expenditure deflator, which depends on unit wage and salary costs and import prices. The equation has the long-run property that when unit wage costs and import prices are growing at the same rate, domestic inflation is also growing at this rate.
Investment income is projected on assumptions about real rates of return on assets and liabilities and on capital gains or losses on the stocks of assets and liabilities. The current account balance then determines changes in the net stock of external assets. This provides a feedback between the current account balance and the trajectory of net external assets by means of the income earned on these assets.

Statistical Sources

The primary sources are Office for National Statistics (ONS) data published on the ONS website. Balance of payments data comes from the Pink Book, supplemented by the latest monthly trade data. National accounts data is from the blue Book, supplemented by the latest quarterly national accounts. Other UK data sources include production and labour market series from the ONS and foreign exchange data from the Bank of England.
The principal international sources are the International Monetary fund (IMF) and the Organisation of Economic Cooperation and Development (OECD).

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