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Multilateral Surveillance of Monetary Policy in the United States and the United Kingdom

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I . Introduction

Debate remains unsettled on whether the conduct of monetary policy was a principal root cause of the global financial and economic crisis that began in mid-2007 by helping the emergence of the housing market bubble in the United States, the United Kingdom and elsewhere. It is also debated whether monetary policy is the right tool for coping directly with house and other asset price bubbles.[1] Beyond the debate on the role of monetary policy as a cause of house and other asset price instability, a growing number of studies have analyzed whether accommodative monetary policy induced banks to loosen lending standards and encouraged excessive risk-taking more generally.[2] In addition, there is a debate on the role of the global savings glut and external imbalances in compressing yield curve spreads, encouraging financial institutions' leverage and inducing investors' excessive risk taking.[3] How these financial market developments should have been addressed by monetary policy makers and regulators also remains a matter of debate.

This note does not directly deal with these issues which are discussed in Shigehara and Atkinson (2011) in the context of a broad review of surveillance by the three major international institutions --- the International Monetary Fund (IMF), the Organisation for Economic Co-operation and Development (OECD), and the Bank for International Settlements (BIS) --- on monetary, financial and prudential policies of the United States and the United Kingdom prior to the global financial and economic crisis. Rather, the note focuses on the

· The first version of this note prepared in July 2010 was used as a supporting material for Shigehara and Atkinson (2011). Helpful comments from Paul Atkinson and Nicholas Vanston are acknowledged, but the author alone is responsible for any factual or judgmental error in the note.

[1] See in particular Taylor (2007, 2009, 2010a and 2010b), Bernanke (2010) and Greenspan (2010).

[2] See Jiménez and others (2007).

[3] See Greenspan (2010) and King (2010). The latter argued that "the massive flows of capital from the new entrants into western financial markets pushed down interest rates and encouraged risk-taking on an extraordinary scale."

following issues:

> How did the international institutions assess underlying forces shaping inflation pressure and real economic activity in the United States and the United Kingdom over several years prior to the outbreak of the crisis? How were their macroeconomic forecasts reflected in their surveillance activities on monetary policy in the two countries? Did such forecasts help them make appropriate monetary policy recommendations in a timely manner to avoid or at least moderate the heightened financial and economic instability from mid-2007 onwards? If they failed in this exercise, what were main reasons for their failure?

After all, in monetary policy frameworks prevailing prior to the global financial and economic crisis, sustaining low and stable inflation was generally considered to reduce financial instability.[4] At the same time, in countries such as the United States, the central bank is explicitly mandated to target not only inflation but also output and employment. In some contrast, central banks in the United Kingdom and a number of other countries have an explicit mandate to achieve a numerically expressed target for inflation but not for output. However, overall price stability or low inflation has been considered as an important factor in helping to encourage economic growth and promote employment over the medium term.[5]

Among the three major international institutions, both the IMF and the OECD back up their verbal recommendations on the conduct of monetary policy with numerical projections of interest rates.

--- At the IMF, they are regularly presented in the half-yearly *World Economic Outlook (WEO)* for which the stance of monetary policy in individual countries is assumed as follows:

"Monetary policy assumptions are based on the established policy framework in each country. In most cases, this implies a nonaccommodative stance over the business cycle: official interest rates will therefore increase when economic indicators suggest that prospective inflation will rise above its acceptable rate or range, and they will decrease when indicators suggest that prospective inflation will not exceed the acceptable rate or range, that prospective output growth is below its potential rate, and that the margin of slack in the economy is significant."[6]

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[4] See Bernanke and B, Gertler M (2000).

[5] For example, the Bank of England notes that "(L)ow inflation is not an end in itself. It is however an important factor in helping to encourage long-term stability in the economy. Price stability is a precondition for achieving a wider economic goal of sustainable growth and employment. High inflation can be damaging to the functioning of the economy. Low inflation can help to foster sustainable long-term economic growth" (http://www.bankofengland.co.uk/monetarypolicy/index.htm#).

[6] See the *WEO* (September 2006), Box A.1 "Economic policy assumptions underlying the projections for selected advanced economies".

On this basis, the IMF presents projected annual figures of short-term money market interest rates for the current year and the next but only for the three major economies (the United States, Japan and the euro area).

--- At the OECD, it is the *Economic Outlook (EO)* published half-yearly by its Secretariat that provides monetary policy recommendations in the clearest manner: its verbal recommendations are presented in the context of macroeconomic forecasts which include numerical projections of both short- and long-term market interest rates for all member countries. The interest rates projections are derived as follows:

"In the Secretariat's procedure, policy-controlled interest rates are taken to be set in line with the stated objectives of the monetary policy in question. These rates in turn feed into the determination of market interest rates, the ones more relevant for economic activity and published in the Economic Outlook. More specifically, taking objectives as given, short-term interest rates are projected jointly and consistently with other elements of the projection, notably the gap between actual inflation and the target (in the case where there is no explicit target, objectives are inferred from official statements or previous actions), and the gap between actual and potential output."[7]

In addition to projections of short- and long-term market interest rates on an annual basis for all member countries for two years ahead, the *EO* provides short-term interest rate projections on a quarterly basis for the three major economies (the Unites States, Japan and the euro area)[8], adding further information on the timing and the extent of monetary policy changes recommended by the OECD.

On the other hand, the BIS does not present numerical forecasts of key macroeconomic and financial variables such as interest rates and inflation as well as output to back up monetary policy recommendations and to assess risks attached to policy objective(s). Its verbal recommendations are of less operational value than those supported by forecasts that provide information not only on the desirable direction (tightening or easing) but also on the timing and extent of monetary policy changes needed to achieve and sustain its final objective(s).

The following second section of this note reviews main features of projections of inflation and some other key macroeconomic variables as well as interest rates which were prepared by the OECD and the IMF to support multilateral surveillance of the conduct of monetary policy in the United States and published in their flagship publications, *EO* and *WEO*. Ex-post examination of such projections can be useful for assessing the relevance of their policy recommendations with the benefit of hindsight. However, as public information

[7] Detailed information is available at: http://www.oecd.org/dataoecd/29/34/38202275.pdf

[8] Until the June 2003 issue of the *EO*, interest rate projections used to be published on a half-yearly rather than quarterly basis.

on IMF forecasts of macroeconomic variables is more limited than those made available by the OECD, the IMF surveillance of US monetary policy is not assessed with the same rigour as done for the OECD surveillance in this section. A caveat to be recognized therefore is that the results of this ex-post examination may look unduly critical of the OECD relative to the IMF and the BIS.

The third section looks back at the multilateral surveillance of monetary policy in the United Kingdom which, like the United States, experienced a domestic housing bubble prior to the global financial and economic crisis. A review in this section focuses on the OECD surveillance, with some brief comments on the IMF surveillance for which some key statistical data such as numerical interest rate projections are not published in the *WEO*. The caveat noted above is relevant also to this section, all the more so as the IMF does not generally publish specific recommendations on UK monetary policy in the *WEO* as the OECD does in the *EO*.

Main observations which emerge from these reviews are:

--- The OECD recommendations on US monetary policy made in the December 2003 and subsequent half-yearly *EO* issues were on the whole not helpful in stabilizing the US economy in the following years. Ex-post examination reveals that they were based on the *EO* projections which were featured by the systematic underprediction of US inflation from 2004 onward despite the systematic overprediction of output growth. This combination of forecasting errors, which may look odd at first glance, resulted basically from the systematic overestimation of potential output growth from around 2005 onwards that in turn led to benign views on the margin of slack in the economy.

--- A basically similar observation can be made about the validity of IMF recommendations on US monetary policy and interest rate assumptions contained in the *WEO* issues of September 2003 onwards where the IMF also underpredicted US inflation.

--- As regards the United Kingdom, the OECD *EO* inflation forecasts for 2005 onwards proved to be systematically lower than the outturns, as a result of the underestimation of underlying demand pressure. With hindsight, mainly because of this, the OECD recommendations on UK monetary policy made in the June 2005 and subsequent half-yearly *EO* issues proved to be unhelpful. The OECD's forecasting errors on the supply side of the UK economy were very small.

--- Broadly similar comments can be offered about the IMF surveillance

on UK monetary policy from 2005 onwards.

Some general observations on multilateral surveillance of monetary policy are made in the final, fourth section.

Ⅱ. The United States

Inflation in the United States started to edge up in 2003 from a low level of 2002 and the annual increase in the consumer price index exceeded the threshold rate of 3 per cent in 2005 (Table 1). The private consumption deflator, the Fed's preferred inflation measure, also rose sharply in that year (Table 2). Inflation by both measures maintained its momentum in the subsequent years to reach the highest rate in 2008. Both measures thereafter collapsed.

(OECD surveillance)

A striking feature of the OECD projections during this period was the systematic underprediction of US inflation rates for years 2004–2008. In fact, both in terms of consumer price index and the private consumption deflator, inflation outturns for all of these years were higher than the rates the OECD projected a year earlier or more, that is to say those published in the *EO* issues from June 2003 to December 2007 (Tables 1 and 2).

Another feature of the OECD projections was the systematic overprediction of real GDP growth for years 2005–2008 (Table 3). The initial projections of annual output growth published two years ahead of the current years, starting with the December 2003 *EO* which published its output projection for 2005 for the first time, were revised downwards in the subsequent half-yearly *EO* issues, but even the mid-year projections of output for the current years proved to be higher than the outturns for those years except 2007 for which the mid-year projection proved to be correct.[9]

A third feature was the systematic overestimation of potential output growth from 2005 onwards (Table 4). This was reflected in the OECD's forecasts of the output gap which pointed to stronger deflationary or weaker inflationary pressures for 2002-2007 than its final outturn estimates suggest (Table 5).[10] Its optimistic forecasts of potential output growth and benign views on economic slack were associated with its projections of labour productivity growth in the total economy from 2005 onwards which

[9] The OECD's initial projection of output for 2004 published in the December 2002 *EO* was exact, with that for 2003 virtually the same as the outturn.

[10] On the impact of output gap uncertainty on inflation forecasting, see Box 3.3, p.220 in OECD (2008).

turned out to be higher than the outturns (Table 6).

After this quick review of the OECD macroeconomic projections in relation to outturns, let us now turn to the ex-post examination of OECD projections of policy-related market interest rates (Tables 7 and 8).

An important consideration to be noted in such exercise is that, to be timely, monetary policy recommendations and interest rate projections supporting them need to be presented sufficiently in advance of actual developments in economic activity and inflation, given lags in the effects of monetary policy actions on them.

--- An implication of this consideration is that as for interest rate projections published in the middle of each year (say in mid-2003), the annual average interest rate level projected for the current year (2003) should be reviewed in relation to the projected inflation rate and the outturn for the following year (2004) more closely than to those for the current year, a half of which had already been passed by the time of publication of the projections. On the other hand, the validity of the interest rate projections published at the end of each year for the following two years (for example, published at end-2003 for 2004 and 2005) can be assessed in association with inflation projections and the outturns for both years (2004 and 2005 in the example above) equally usefully to evaluate the appropriateness of monetary policy recommendations.

--- Another implication is that interest projections on a half-yearly or quarterly basis are more useful than those on an annual basis for supporting verbal recommendation on the orientation of monetary policy with fuller information about the time profile of policy actions or non-action.[11]

It would be interesting to review the OECD's interest rate projections and monetary policy recommendations for the US, bearing these implications in mind and in the light of Taylor's (2009) argument:

"Monetary excesses were the main cause of the boom. The Fed held its target interest rate, especially in 2003-2005, well below known monetary guidelines that say what good policy should be based on historical experience.

In fact, the OECD argued in the June 2003 *EO* that *" ··· as the recovery strengthens in 2004, it will be desirable to start moving the policy rate back towards neutrality."* In line with this verbal recommendation, the representative short-term market interest rate measured by 3-month eurodollar deposit rate was projected by the OECD to rise from 1.4 per cent in the second half of 2003 to 2.6 per cent in the first half of 2004 and 3.5 per cent by the second half of that year (Table 8). However, in the December 2003 *EO* where the OECD argued that the Fed *"should keep its rate low for quite some time"*, it projected 3-month

[11] See footnote 8 above.

eurodollar deposit rate to remain at a low level of 1.9 per cent in the 4th quarter of 2004. The OECD argument for maintaining very easy monetary conditions was reversed in the *EO* of June 2004 where it stated that *"(o)n most measures, including by standards of a Taylor rule and the current shape of the yield curve, the fed funds rate would need to rise 300 basis points or more in order to return to neutrality"*. In that report, however, the representative short-term money market rate was projected to rise only gradually from the 3rd quarter of 2004 to a fairly low level of 2.8 per cent even as late as in the 2nd quarter of 2005. In the December 2004 *EO*, the level projected for that quarter was 2.7 per cent, virtually the same as predicted 6 months earlier, about a half percentage point lower than the outturn (Table 8), and the annual average level projected for 2005 was far below the outturn (Table 7).

In his paper presented at the 2007 Jackson Hole conference, Taylor reported the results from counterfactual model simulations under two assumptions: (1) the federal fund rate follows its actual path and (2) the federal fund rate follows a Taylor rule. His conclusion was that a higher federal fund following the rule would have avoided much of the housing boom. Given the main theme of the conference "Housing, Housing Finance, Monetary Policy" and its timing (summer of 2007), however, Taylor's paper did not address the issue of whether monetary policy following a Taylor rule could have avoided a sharp economic downturn which occurred after the conference.

As the interest rate levels projected by the OECD for 2004 and 2005 in all of the three issues of *EO* from December 2003 to December 2004 were far lower than the path under Taylor's second assumption, a counterfactual simulation with his model under the assumption that the Fed had closely followed the OECD's monetary policy recommendations made in these *EO* issues would not have produced a significantly different pattern of macroeconomic developments from the outturns. It was unfortunate that the June 2003 *EO* recommendation for raising interest rates in 2004 to a level more than the double of the 2003 level was subsequently reversed and lost its validity. With the benefit of hindsight, the reversal of the June 2003 *EO* recommendations appears to have been unhelpful in achieving sustained price stability and economic growth.[12]

One point to be born in mind in the ex-post evaluation of the OECD's interest rate projections and associated monetary policy recommendations is that an important technical assumption underlying its projections is no change in exchange rates from a specifically chosen

[12] In addition to the issue of policy interest levels conducive to its final objectives, one would need to ask if the "measured" pace of monetary policy tightening actually observed during 2004-06 was appropriate. In this vein, Turner(2010) and Axilrod (2011) both argue that a pattern of tightening during those years corresponding more closely to the irregular movements of macroeconomic developments might have encouraged more cautious lending standards and less leverage, even given the late start to tightening. This in turn might have moderated the US housing boom and the overall economic upswing and subsequent downturn.

date immediately before their compilation. Thus, large divergence of actual developments in exchange rates from the assumed levels for the forecasting period can be a source of significant errors in inflation, demand and output forecasts. In fact, the actual levels of the US dollar in effective terms during the three-year period of 2003-2005 tended to be lower than those assumed in the *EO* projections (Table 9). The dollar depreciation tended to increase inflation above the projections based on the assumption of no change in exchange rates. Had the dollar effective exchange rate been assumed in the *EO* projections to depreciate exactly as it actually did, the level of policy-related interest rates the OECD should have considered "*to be set in line with the stated objectives of the monetary policy in question*" (see page 3) would have been somewhat higher than those projected in the *EO* issues covering those years as the forecast period.

(IMF surveillance)

The IMF *WEO* projections of US inflation published in the autumn of 2003 for 2004 were similar to those in the OECD *EO* projections published at end-2003: consumer price inflation was predicted to remain unchanged in 2004 at the same rate of 2.3 per sent as in the previous year. This rather optimistic outlook for US inflation was subsequently revised upward, but on the whole the *WEO* projections of US inflation for 2004 – 2007 were behind the curve (Table 1).

A notable feature of IMF projections of US output is optimistic forecasts in the April 2005 *WEO* issues onwards (Table 3). While the IMF does not publish its projections of US potential output growth as does the OECD (Table 4), its projections of the output gap for 2004 and 2005 were widened in the September 2004 and April 2005 *WEO* issues successively (Table 5). It may also be noted that the IMF projections of US labour productivity growth in manufacturing were revised upwards successively in three half-yearly *WEO* issues starting with the April 2005 publication (Table 6).

The IMF forecasts of US inflation and economic slack were naturally reflected in its assumptions for US interest rates (Table 7).[13] Its assumption for US money-market interest rate (measured by 6-month eurodollar deposit rate) for 2004 was reduced significantly in the September 2003 *WEO* with a further downward revision in the April 2004 issue. While it was assumed to rise in 2005 in the same *WEO* issue, the level was below that predicted for 2004 in the *WEO* of a year earlier. Subsequently, the IMF interest rate assumptions for the year ahead published in the *WEO* issues from September 2004 to April 2006 proved to be lower than the levels actually realized by the Fed.

[13] The IMF does not publish half-yearly or quarterly interest rate projections in the *WEO* as the OECD does in the *EO*.

The *WEO* forecasts are based not only on the IMF's assumptions of US money-market interest rates reviewed above but also on its assumption that "(R)eal effective exchange rates for the advanced economies are assumed to remain constant at their average levels" during the forecast period.[14] Thus, the implications of exchange rate assumptions for the *WEO* forecasts and the IMF recommendations on the course of policy-related interest rates in the US appear to be broadly similar to those indicated in the review of the OECD surveillance above.

On the whole, with the benefit of hindsight, it can be said that the IMF likewise did not offer timely recommendations on US monetary policy in the *WEO* issues of September 2003 onwards[15] which were featured by its benign views on inflation prospects and economic slack.

Ⅲ. The United Kingdom

In contrast to the Fed, the Bank of England formally employs a numerical inflation target. Inflation rose to the official target level of 2 per cent in 2005, went above it in 2006 and 2007 and accelerated further in 2008.

(OECD surveillance)

The OECD's projections of UK inflation published near year-ends for the following year proved to be somewhat lower than the outturns for 2005-2007 and far below the actual level for 2008 (Table 10).[16] Another notable feature of its inflation forecasts is that its initial projections for 2007 and 2008 were successively revised upwards in the subsequent half-yearly *EO* issues. While the mid-year forecast for the current year proved to be virtually correct for 2007, it was still far below the outturn for 2008.

Turning to output growth, while major revisions to UK national accounts data in the summer of 2005 complicate a review of OECD projections in comparison with the outturns (Table 11), it can be noted that its output forecasts for 2005 and 2006 published in the three half-yearly *EO* issues of December 2005 to December 2006 were low relative to the outturns.

As for potential output growth, on the other hand, differences between the OECD's initial projections and outturn estimates for the UK were

[14] See a section "assumptions" in the statistical appendix of the *WEO*.

[15] See Shigehara and Atkinson (2011), p.9 and Atkinson, Shigehara and Vanston (2010).

[16] Comparison between OECD's inflation projections and outturns before 2004 is not easy because of a shift in the measure of inflation from the retail price index to the consumer price index from the June 2004 *EO*.

relatively small (Table 12), in some contrast to the US for which its forecasts were featured by systematic overpredictions for 2005 onwards.

With only minor corrections in the forecasts of potential output growth, changes in the OECD's output projections tended to be fairly directly reflected in its projections of the output gap. Thus, its underpredictions of output growth in 2005 and 2006 were associated with its forecasts for a continued widening of economic slack into 2006 (Table 13). As late as in the June 2007 *EO* the OECD predicted a slack to remain in the economy up to 2008 (the year for which the OECD inflation forecasts published in the December 2006 *EO* onwards were all quite low relative to the outturn), though the negative gaps were smaller than those estimated and projected for 2005-2008 in the previous three half-yearly *EO* issues. In passing, one should note that the OECD predicted fairly good labour productivity growth in the total economy from 2004 onwards (Table 14).

With the benefit of hindsight, a crucial year for monetary policy decision appears to have been 2005. A relatively benign view of the immediate inflation prospects for the UK expressed in the two *EO* issues of that year was reflected in a bias against tightening. In the June *EO*, the OECD noted "a marked slowdown in household spending due to the cooling housing market" and argued that "(D)espite the recent pick-up in inflation, weakening growth prospects suggest that monetary tightening will not be required to maintain inflation close to the target".[17] Following the cut in the Bank of England's policy rate in August in response to a slowdown in output growth despite the rise in consumer price inflation above 2 per cent target, the OECD argued in the December 2005 *EO* that the Bank "can afford to wait, while monitoring future output and inflation developments", stopping short of recommending policy tightening.[18] A year later in the December 2006 *EO*, the OECD argued that "*(F)ollowing recent monetary policy tightening, the case for further increases in interest rates is not compelling*".[19]

In fact, the levels of three-month money market rate the OECD projected in the June 2005 *EO* for both 2005 and 2006 were 4.8 per cent, substantially lower than those predicted in the December 2004 *EO* (5.5 per cent and 5.8 per cent respectively for the two years) and more or less the same as the outturns (Table 15). In 2006, the OECD was taken aback and endorsed, with a delay, the tightening action that had already been taken by the Bank of England. The OECD remained behind the curve in recommending monetary policy tightening in 2007. The interest rate level the OECD projected for 2007 was

[17] OECD *EO* 77, June 2005, p.65.

[18] OECD *EO* 78, December 2005, p.65 (see also p.63).

[19] OECD *EO* 80, December 2006, p.65.

4.5 per cent in the December 2005, 4.6 per cent in the June 2006 and 5 per cent in the December 2006 *EO* issues respectively. These numbers were far lower than the outturn (6.0 per cent).

To summarise, OECD's recommendations on UK monetary policy in 2005 onwards and its interest rate projections supporting them were based on the underestimation of inflation pressure. This resulted from the underprediction of the underlying strength of output growth, rather than from significant forecasting errors on potential output growth which are noticeable for the US economy.[20]

Finally, with respect to the implications of exchange rate assumptions for the OECD's projections of policy-related interest rates in the UK, the divergences between the actual levels of the UK pound from those assumed in the EO proved to be very small until the outbreak of the financial crisis in 2007 (Table 16). Thus, they do not appear to have been an important source of forecasting errors for inflation, demand and output in the UK prior to the crisis.

(IMF surveillance)

The IMF's projections of UK inflation for 2005 – 2008 published in successive issues of *WEO* were, like the OECD forecasts, generally optimistic and proved to be lower than the outturns (Table 10).

Output projections for 2005 and 2006 were revised downwards in the September 2005 *WEO* after major revisions to UK national accounts data in the summer (Table 11). While the IMF forecast a strengthening of output growth for 2006 and 2007 in the April and September 2006 *WEO* issues, some slack in the economy was projected to remain until 2007 (Table 13)[21], with labour productivity growth reaccelerating in 2006 and 2007 (Table 14).

The IMF does not publish interest rate projections for the UK in the *WEO* as does the OECD in the *EO*. Nor does it make specific recommendations on UK monetary policy in the *WEO* as it does for the US. However, the UK Article IV Reports by the IMF staff for the years 2005 and 2006 contain its recommendations on UK monetary policy which

[20] It should be that the OECD projections of labour productivity growth in the total economy, which were made available in the June 2006 *EO* for the first time, turned out to be close the outcomes up to 2007 (Table 13).

[21] The IMF projections and estimates of potential growth in the UK are not published in the *WEO*, nor were projections of the The IMF does not publish half-yearly or quarterly interest rate projections in the *WEO* as the OECD does in the *EO* output gap for 2008 made available in the *WEO* issues of 2007-2008 (Table 13).

stopped short of arguing for earlier tightening than actually occurred.[22] The views expressed on UK monetary policy in the two staff reports are consistent with the relatively optimistic forecasts of some key variables in the real economy and benign inflation prospects published in the *WEO* issues reviewed above.

IV. Concluding Remarks

Multilateral surveillance reports by the three major international institutions have not made specific recommendations on basic frameworks for the conduct of monetary policy in the US. However, in the Article IV consultation papers prepared by the IMF staff as well as in the OECD Economic and Development Review Committee (EDRC) reports, the Fed was repeatedly recommended to adopt an inflation target. In this context, an implication of the UK experience with inflation targeting reviewed above is that such targeting alone will not result in better macroeconomic management unless the central bank has the capacity to accurately assess likely changes in potential output and output gap as well as the evolution of aggregate demand pressure and other forces shaping inflation and make policy changes in a timely manner, taking into account a long time lag involved in the effects of monetary policy.

As to the international institutions' recommendations made within the existing frameworks for the conduct of monetary policy in the US and the UK, the review in this note has revealed that they were compromised by errors in macroeconomic forecasts supporting their recommendations.[23] In this context, it is to be noted that there are no reasons for the international institutions to excel national authorities in forecasting work, except that they have a perspective, overview and global consistency that most national authorities lack and which is part of their raison d' être.[24]

That said, it must be added that the results of ex-post examination of economic forecasts by the IMF and the OECD in this note should not be seen as evidence

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[22] See IMF *UK Article IV Staff Report*, 2006 (p. 15) and IMF *UK Article IV Staff Report*, 2007(p. 16) as well as Shigehara and Atkinson (2011), p.9 and Atkinson, Shigehara and Vanston (2010). Note that IMF *Article IV Staff Reports* do not publish interest rate projections. For example, the *UK Article IV Staff Report* published in March 2006 for the year 2005 contains IMF staff projections of output and some other real economic as well as public finance indicators for 2006 and 2007, but interest rate projections are not shown (see Table 1, page 30).

[23] As for surveillance by the IMF and the OECD during 1987-1989 when Japan's bubbles developed, the IMF (2010) noted that that "both the authorities and the IMF staff expressed little concern about the potential adverse effects of new bubbles." In some contrast, the OECD warned about the risks involved in excessive monetary easing and asset price hikes from the mid-1987 onwards and systematically recommended a tighter stance of monetary policy than actually adopted by the Bank of Japan during that period, see sections on Japan in OECD *EO* issues of 1987-1989 and Shigehara (2011).

[24] Timmermann (2006) made several specific recommendations to improve the IMF's forecasting process in the light of his analysis of the performance of the *WEO* forecasts from 1990 to 2003.

that the OECD forecasting exercise is the least useful among the three international institutions engaged in multilateral surveillance, though this wrong impression may at first glance appear from the statistical information which is most abundantly made available by the OECD relative to the other two institutions. On the contrary, what needs to be emphasized is that the limitation of statistical data provided by the international institutions would prevent national policy makers and outside observers from fully evaluating the institutions' economic forecasts and policy recommendations to be made in internationally consistent statistical and analytical frameworks which they can have an advantage of exploiting and which national authorities are not adequately equipped with. More ample dissemination of data provided in such frameworks can allow users of their multilateral surveillance reports to numerically assess their policy recommendations and various risks surrounding central projections supporting the recommendations. Partly due to the global membership of the IMF and perhaps also due to volume constraints in *WEO* publications, statistical information on key economies with large influences on the global economy that is currently contained in them are more limited than that made available by the OECD in the *EO*. The IMF should be encouraged to disclose a fuller set of statistical data underlying the *WEO* forecasts through internet and some other costless information dissemination facilities that can be used freely by the public. At the OECD, the general public' s free access to the full text and statistical data and other information in the *EO* and other publications are restricted by its publication policy to secure revenues from publication sales for the OECD budget. It should be encouraged to review such policy for more widely disseminating international public goods it produces.[25]

While this note has not assessed how the international institutions' monitoring and analysis of financial market developments and risks was reflected in their monetary policy recommendations, a lesson from the global financial and economic crisis is that monetary policy frameworks need to take greater account of macro-financial linkages. International institutions should not only benefit from work aimed at better integrating macro-financial linkages in the macroeconomic analysis and forecasting models at the national level but they need to improve their own analytical tools to better understand macro-financial linkages in the global framework for more effective multilateral surveillance of monetary policy.

[25] See Part 4 of Shigehara and Atkinson (2011) for a fuller set of recommendations for enhancing multilateral surveillance by the three international institutions.

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List of Annex Tables

Table 1 United States Inflation: Consumer price index									
Pecencatge change from previous year									
Year	2002	2003	2004	2005	2006	2007	2008	2009	2010
Actual	1.6	2.3	2.7	3.4	3.2	2.9	3.8	−0.3	
OECD projections (IMF projections)									
03 Jun (Apr)	1.6 (1.6)	2.4 (2.3)	1.7 (2.3)						
03 Dec (Sep)	1.6 (1.6)	2.3 (2.3)	2.3 (2.3)	1.8					
04 Jun (Apr)	1.6 (1.6)	2.3 (2.3)	2.6 (2.3)	2.0 (2.2)					
04 Dec (Sep)	1.6 (1.6)	2.3 (2.3)	2.7 (3.0)	2.4 (3.0)	2.1				
05 Jun (Apr)	1.6 (1.6)	2.3 (2.3)	2.7 (2.7)	2.8 (2.7)	2.6 (2.4)				
05 Dec (Sep)		2.3 (2.3)	2.7 (2.7)	3.4 (3.1)	2.8 (2.8)	2.5			
06 Jun (Apr)		2.3 (2.3)	2.7 (2.7)	3.4 (3.4)	3.3 (3.2)	2.4 (2.5)			
06 Dec (Sep)			2.7 (2.7)	3.4 (3.4)	3.3 (3.6)	2.3 (2.9)	2.3		
07 Jun (Apr)			2.7 (2.7)	3.4 (3.4)	3.3 (3.2)	2.6 (1.9)	2.6 (2.5)		
07 Dec (Oct)				3.4 (3.4)	3.3 (3.2)	2.8 (2.7)	2.7 (2.3)		
08 Jun (Apr)				3.4 (3.4)	3.3 (3.2)	2.9 (2.9)	3.9 (3.0)	2.2 (2.2)	
08 Dec (Oct)					3.3 (3.2)	2.9 (2.9)	4.3 (4.2)	1.6 (1.8)	1.5
09 Jun (Apr)							3.8 (3.8)	−0.6 (−0.9)	0.9 (−0.1)
09 Nov (Oct)								−0.4 (−0.4)	1.7 (1.7)
OECD Economic Outlook									
IMF World Economic Outlook									

Table 2 United States inflation									
Private consumption deflator									
Pecencatge change from previous year									
Year	2002	2003	2004	2005	2006	2007	2008	2009	2010
Actual	1.4	2	2.6	3	2.7	2.7	3.3	0.2	
OECD projections									
Jun-03	1.4	2	1.2						
Dec-03	1.6	1.9	1.3	1.2					
Jun-04	1.4	1.8	1.9	1.4					
Dec-04	1.4	1.9	2.1	1.8	1.6				
Jun-05	1.4	1.9	2.2	2.2	2.1				
Dec-05		1.9	2.6	2.8	2.4	2.1			
Jun-06		1.3	2.6	2.8	2.9	2.2			
Dec-06			2.6	2.9	2.8	2.2	2.2		
Jun-07			2	2.1	2.6	2.2	2.1		
Dec-07				2.2	2.2	2	1.8	1.9	
Jun-08				2.2	2.2	2.1	2.2	1.9	
Dec-08					2.8	2.6	3.6	1.2	1.3
Jun-09					2.8	2.6	3.3	0.2	0.8
Nov-09					2.7	2.7	3.3	0.2	1.4
Sourse: OECD Economic Outlook publications.									

Table 3 United States real GDP									
Pecencatge change from previous year									
Year	2002	2003	2004	2005	2006	2007	2008	2009	2010
Actual	1.8	2.5	3.6	3.1	2.7	2.1	0.4	-2.4	
OECD projections (IMF projections)									
02 Dec (Arp)	2.3 (3.2)	2.6 (2.6)	3.6						
03 Jun (Apr)	2.4 (2.4)	2.5 (2.2)	4.0 (3.6)						
03 Dec (Sep)	2.4 (2.4)	2.9 (2.6)	4.2 (3.9)	3.8					
04 Jun (Apr)	2.2 (2.2)	3.1 (3.1)	4.7 (4.6)	3.7 (3.0)					
04 Dec (Sep)	1.9 (1.9)	3.0 (3.0)	4.4 (4.3)	3.3 (3.5)	3.6				
05 Jun (Apr)	1.9 (1.9)	3.0 (3.0)	4.4 (4.4)	3.6 (3.6)	3.3 (3.6)				
05 Dec (Sep)		2.7 (2.7)	4.2 (4.2)	3.6 (3.5)	3.5 (3.3)	3.3			
06 Jun (Apr)		2.7 (2.7)	4.2 (4.2)	3.5 (3.5)	3.6 (3.4)	3.1 (3.3)			
06 Dec (Sep)			3.9 (3.9)	3.2 (3.2)	3.3 (3.4)	2.4 (2.9)	2.7		
07 Jun (Apr)			3.9 (3.9)	3.2 (3.2)	3.3 (3.3)	2.1 (2.2)	2.5 (2.8)		
07 Dec (Oct)				3.1 (3.1)	2.9 (2.9)	2.2 (1.9)	2.0 (1.9)	2.2	
08 Jun (Apr)				3.1 (3.1)	2.9 (2.9)	2.2 (2.2)	1.2 (0.6)	1.1 (0.6)	
08 Dec (Oct)					2.8 (2.8)	2.0 (2.0)	1.4 (1.6)	-0.9 (0.1)	1.6
09 Jun (Apr)					2.8 (2.8)	2.0 (2.0)	1.1 (1.1)	-2.8 (-2.8)	0.9 **(0.0)**
09 Nov (Oct)						2.1 (2.1)	0.4 (0.4)	-2.5 (-2.7)	2.5 (1.5)
OECD Economic Outlook									
IMF World Economic Outlook									

Table 4 United States potential GDP

Percentage change from previous year

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010
OECD projections									
Jun-03	2.9	3	3.1						
Dec-03	2.8	3	3	3.1					
Jun-04	2.9	3.2	2.9	3.2					
Dec-04		2.8	3	3.1	3.3				
Jun-05		2.8	3	3.1	3.2				
Dec-05			2.9	3.1	3.2	3.4			
Jun-06			2.9	2.9	3	3.2			
Dec-06				2.7	2.8	2.8	2.9		
Jun-07				2.8	2.7	2.7	2.7		
Dec-07					2.6	2.5	2.5	2.4	
Jun-08					2.6	2.5	2.5	2.4	
Dec-08						2.6	2.5	2.3	2.3
Jun-09							2.2	1.6	1.1
Nov-09							2.3	1.7	1.4

Note: The OECD method for estimating potential GDP evolved over the period under review.

For further information, see the Statistical Annex of each issue of the OECD Economic Outlook.

Table 5 United States Output Gap									
As a percent of potential GDP									
Year	2002	2003	2004	2005	2006	2007	2008	2009	2010
OECD (IMF) estimates & forecasts									
03 Jun (Apr)	−1.5 (−1.8)	−2.0 (−2.6)	−1.2 (−2.1)						
03 Dec (Sep)	−1.3 (−1.6)	−1.5 (−2.1)	−0.3 (−1.4)	0.4					
04 Jun (Apr)	−2.0 (−1.9)	−2.0 (−2.2)	−0.3 (−1.0)	0.2 (−0.5)					
04 Dec (Sep)	−2.1 (−2.0)	−1.9 (−2.3)	−0.6 (−1.3)	−0.3 (−1.0)	−0.1				
05 Jun (Apr)	−2.1 (−2.0)	−1.9 (−2.5)	−0.5 (−1.6)	0.0 (−1.3)	0.1 (−1.0)				
05 Dec (Sep)	−2.0 (−0.9)	−2.0 (−1.5)	−0.8 (−0.8)	0.2 (−0.6)	0.1 (−0.6)	−0.1			
06 Jun (Apr)	−1.8	−1.9 (−1.5)	−0.6 (−0.8)	0.0 (−0.6)	0.6 (−0.5)	0.5 (−0.4)			
06 Dec (Sep)	−1.5	−1.7 (−0.9)	−0.6 (−0.3)	−0.1 (−0.2)	0.4 (0.1)	−0.1 (−0.1)	−0.2		
07 Jun (Apr)	−1.3	−1.5	−0.4 (0.1)	0.1 (0.1)	0.7 (0.3)	0.1 (−0.6)	−0.1		
07 Dec (Oct)	−1	−1.1	−0.1 (0.0)	0.4 (0.2)	0.7 (0.3)	0.4 (−0.5)	−0.1	−0.4	
08 Jun (Apr)	−0.9 (−0.4)	−1.0 (−0.6)	0.0 (0.0)	0.5 (0.3)	0.7 (0.5)	0.4 (0.1)	−0.8	−2.2	
08 Dec (Oct)	−0.5 (0.4)	−0.5 (0.3)	0.6 (1.2)	1.0 (1.4)	1.2 (1.6)	0.7 (1.1)	−0.4	−3.6	−4.2
09 Jun (Apr)	−1.7	−1.4 (0.3)	0.1 (1.2)	0.7 (1.4)	1.2 (1.6)	0.9 (1.2)	−0.5 (0.2)	−4.9	−5.4
09 Dec (Oct)	−1.2	−1.1	0.2	0.8	1.1	1.0 (0.7)	−0.9 (−0.8)	−4.9 (−4.4)	−3.9 (−3.9)
10 May (Apr)	−0.8	−0.6	0.7	1.2	1.3	0.9	−1.2 (0.1)	−5.1 (−3.8)	−3.2 (−2.0)

Table 6 United States Labour Productivity									
	Percentage change from previous year								
	2002	2003	2004	2005	2006	2007	2008	2009	2010
Actual *	3	2.5	2.5	1.4	0.9	1.3	1	1.3	
OECD projections*									
IMF projections (Manufacturing)									
03 June (Apr)	3.9 (4.5)	2.0 (3.0)	2.3 (3.0)						
03 Dec (Sep)	4.2 (6.3)	3.1 (4.5)	2.9 (3.1)	1.6					
04 Jun (Apr)	3.9 (7.2)	3.4 (5.2)	4.1 (4.2)	2.1 (3.0)					
04 Dec (Sep)	3.7 (7.0)	3.4 (5.1)	3.7 (3.9)	2.0 (3.0)	2.2				
05 Jun (Apr)	3.7 (7.6)	3.3 (5.0)	3.6 (5.0)	1.9 (3.9)	1.8 (3.0)				
05 Dec (Sep)	3.3 (7.5)	2.9 (5.2)	3.4 (5.2)	2.1 (4.4)	2.2 (3.0)	2			
06 Jun (Apr)	2.8 (6.6)	2.7 (5.6)	3.1 (5.4)	2.1 (4.8)	2.4 (3.3)	2.3 (3.0)			
06 Dec (Seo)	2.8 (7.0)	2.5 (6.2)	2.8 (1.9)	1.8 (4.1)	2.1 (3.6)	1.8 (3.0)	2.5		
07 Jun (Apr)	2.8 (7.0)	2.5 (6.2)	2.8 (1.8)	1.6 (4.8)	2.9 (4.0)	3.5 (3.3)	2.4 (3.0)		
07 Dec (Oct)	2.8	2.5	2.5	1.5	1	1.2	3	1.5	
08 Jun (Apr)	2.8	2.5	2.6	1.5	1.1	1.4	1.4	1.1	
08 Dec (Oct)	2.8	2.5	2.6	1.3	1	1.1	1.6	0	0.1
09 Jun (Apr)	2.8	2.5	2.6	1.3	1	1.1	1.7	0.6	0.9
09 Nov (Oct)	3	2.5	2.5	1.4	0.9	1.3	1.7	0.6	0.9
* For the total economy except underlined figures which are for the business sector.									
Source: OECD Economic Outlook publicat	IMF World Economic Outlook								

Table 7 United States Interest Rates										
Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Actual										
Federal funds	6.24	3.88	1.67	1.13	1.35	3.22	4.97	5.02	1.92	0.16
Eurodollar 3-m (6-m)										
	6.5 (6.6)	3.7 (3.7)	1.7 (1.8)	1.1 (1.2)	1.6 (1.7)	3.5 (3.7)	5.2 (5.3)	5.3 (5.3)	3.3 (3.5)	1.0 (1.5)
OECD projections: 3-month										
(IMF projections: 6-month)										
00 Jun (May)	6.8 (5.6)	7.3 (5.5)								
00 Dec (Oct)	6.5 (6.8)	7.0 (7.4)	7							
01 Jun (May)	6.5 (6.7)	4.6 (4.5)	4.4 (4.3)							
01 Dec (Sep)	6.5 (6.6)	3.8 (4.1)	2.1 (3.7)	3.1						
02 Jun (Apr)	6.5 (6.6)	3.7 (3.7)	2.3 (2.8)	3.8 (4.5)						
02 Dec (Sep)	6.5 (6.6)	3.7 (3.7)	1.8 (2.1)	1.6 (3.2)	3.4					
03 Jun (Apr)		3.7 (3.7)	1.8 (1.9)	1.4 (1.7)	3 (3.5)					
03 Dec (Sep)		3.7 (3.7)	1.8 (1.9)	1.2 (1.3)	1.5 (2.0)	2.7				
04 Jun (Apr)				1.2 (1.2)	1.3 (1.8)	2.9 (3.3)				
04 Dec (Sep)				1.2 (1.2)	1.5 (1.8)	2.8 (3.6)	3.8 (4.5)			
05 Jun (Apr)				1.2 (1.2)	1.6 (1.8)	3.4 (3.3)	4.7 (4.1)			
05 Dec (Sep)				1.2 (1.2)	1.6 (1.8)	3.5 (3.6)	4.8 (4.5)	5.1		
06 Jun (Apr)				1.2 (1.2)	1.6 (1.8)	3.5 (3.8)	5.1 (5.0)	5.3 (5.1)		
06 Dec (Sep)					1.6 (1.8)	3.5 (3.8)	5.2 (5.4)	5.3 (5.5)	5	
07 Jun (Apr)					1.6 (1.8)	3.5 (3.8)	5.2 (5.3)	5.3 (5.3)	5.0 (5.1)	
07 Dec (Oct)						3.5 (3.8)	5.2 (5.3)	5.3 (5.2)	4.6 (4.4)	4.7
08 Jun (Apr)							5.2 (5.3)	5.3 (5.3)	2.7 (3.1)	3.1 (3.4)
08 Dec (Oct)							5.2 (5.3)	5.3 (5.3)	3.3 (3.2)	1.7 (3.1)
09 Jun (Apr)								5.3 (5.3)	3.2 (3.0)	1.0 (1.5)
09 Nov (Oct)								5.3 (5.3)	3.2 (3.0)	0.9 (1.1)
Source: FRB	OECD IMF									

Table 8 United States 3-month Eurodollar deposit rate								
Quarter	Q1:2003	Q2:2003	Q3:2003	Q4:2003	Q1::2004	Q2:2004	Q3:2004	Q4:2004
Actual		Y:2003	1.2			Y:2004	1.6	
OECD projections								
Jun-03	1st Hallf	1.3	2nd Half	1.4	1st Hallf	2.6	2nd Half	3.5
Dec-03	1st Half	1.2	2nd Half	1.1	1.1	1.4	1.6	1.9
Jun-04					1.2	1.2	1.4	1.6
Dec-04								2.1
Jun-05								2.3
Dec-05								
Jun-06								
	Q1::2005	Q2:2005	Q3:2005	Q4:2005	Q1:2006	Q2: 2006	Q3:2006	Q4:2006
Actual		Y:2005	3.5			Y:2006	5.2	
OECD projections								
Jun-04	2.1	2.8						
Dec-04	2.5	2.7	3	3.2	3.5	3.7		
Jun-05	2.8	3.2	3.6	4.2	4.4	4.6		
Dec-05				4.2	4.6	4.9	4.9	4.9
Jun-06						5	5.2	5.3
	Q1:2007	Q2:2007	Q3-2007	Q4:2007	Q1:2008	Q2:2008	Q3:2008	Q4:2008
Actual		Y:2007	5.3			Y:2008	3.2	
ECD projections								
Dec-05	4.9	4.9						
Jun-06	5.3	5.1	5.1	5				
Dec-06	5.3	5.3	5.3	5.2	5.1	5.1	5	4.9
Jun-07		5.3	5.3	5.2	5.1	5.1	5	4.9

Table 9 United States Dollar										
	Effective excahnge rate 2000=100									
	OECD calculations									
	(estimates & assuptions)									
Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Dec.01	100	−105.3	−106.2	−106.2						
Jun.02	100	105.3	−107.9	−108.2						
Dec.02	100	105.3	−105.7	−104.8	−104.9					
Jun.03	100	105.3	105.7	−103	−103.2					
Dec.03	100	105.3	105.7	−99.5	−97.9	−98				
Jun.04	100	105.3	105.7	99.2	−95.5	−96.1				
Dec.04	100	105.3	105.7	99.2	−94.7	−91.4	−91.4			
Jun.05	100	105.3	105.7	99.2	95.1	−91.8	−92			
Dec.05	100	105.3	105.7	99.2	95.1	−92.9	−94.9	−94.9		
Jun.06	100	105.3	105.7	99.2	95.1	92.7	−90.6	−89.7		
Dec.06	100	105.3	105.7	99.2	95.1	92.6	−91.1	−90.3	−90.4	
Jun.07	100	105.3	105.7	99.2	95.1	92.6	91	−88.6	−88	
Dec.07	100	105.3	105.7	99.2	95.1	92.6	91	−86.9	−82.5	−82.6
Jun.08	100	105.3	105.7	99.2	95.1	92.6	91	87	−81.4	−81.1
Dec.08	100	105.3	105.7	99.2	95.1	92.6	91	87	−84.6	−94.4
Jun.09	100	105.3	105.7	99.2	95.1	92.6	91	87	84.3	−90
Nov.09	100	105.3	105.7	99.2	95.1	92.6	91	87	84	−88.9
Current account balance										
percentage of GDP	−4.3	−3.8	−4.3	−4.7	−5.3	−5.9	−6	−5.1	−4.7	−2.7

Table 10 United Kinddom Inflation: Consumer price index									
Pecencatge change from previous year									
Projections for 2002 and 2003 are for retail prices									
Year	2002	2003	2004	2005	2006	2007	2008	2009	2010
Actual	1.3	1.4	1.3	2	2.3	2.3	3.6	2.2	
OECD projections (IMF projections)									
03 Jun (Apr)	2.2 (2.2)	3.1 (2.8)	2.8 (2.7)						
03 Dec (Sep)	2.2 (2.2)	2.8 (2.8)	2.6 (2.5)	2.7					
04 Jun (Apr)	1.3 (1.4)	1.4 (1.6)	1.4 (1.6)	1.9 (1.8)					
04 Dec (Sep)	1.3 (1.3)	1.4 (1.4)	1.3 (1.6)	1.7 (1.9)	2.1				
05 Jun (Apr)	1.3 (1.3)	1.4 (1.4)	1.3 (1.3)	2.0 (1.7)	2.1 (2.0)				
05 Dec (Sep)		1.4 (1.4)	1.3 (1.3)	2.1 (2.0)	2.1 (1.9)	1.6			
06 Jun (Apr)		1.4 (1.4)	1.3 (1.3)	2.0 (2.1)	2.2 (1.9)	1.7 (1.9)			
06 Dec (Sep)			1.3 (1.3)	2.0 (2.0)	2.2 (2.3)	2.1 (2.4)	1.9		
07 Jun (Apr)			1.3 (1.3)	2.0 (2.0)	2.2 (2.3)	2.4 (2.3)	2.0 (2.0)		
07 Dec (Oct)				2.0 (2.0)	2.3 (2.3)	2.3 (2.4)	2.2 (2.0)	2	
08 Jun (Apr)				2.0 (2.0)	2.3 (2.3)	2.3 (2.3)	3.0 (2.5)	2.5 (2.1)	
08 Dec (Oct)					2.3 (2.3)	2.3 (2.3)	3.7 (3.8)	2.7 (2.9)	1.9
09 Jun (Apr)							3.6 (3.6)	1.9 (1.5)	1.2 (0.8)
09 Nov (Oct)								2.1 (1.9)	1.7 (1.5)
OECD Economic Outlook									
IMF World Economic Outlook									

Table 11 United Kingdom real GDP									
Pecencatge change from previous year									
Year	2002	2003	2004	2005	2006	2007	2008	2009	2010
Actual	2.1	2.8	3	2.2	2.9	2.6	0.5	−4.9	
OECD projections (IMF projections)									
03 Jun (Apr)	1.8 (1.6)	2.1 (2.0)	2.6 (1.6)						
03 Dec (Sep)	1.7 (1.9)	1.9 (1.7)	2.7 (2.4)	2.9					
04 Jun (Apr)	1.6 (1.7)	2.2 (2.3)	3.1 (3.5)	2.7 (2.5)					
04 Dec (Sep)	1.8 (1.9)	2.2 (3.0)	3.2 (4.3)	2.6 (3.5)					
05 Jun (Apr)	1.8 (1.8)	2.2 (2.2)	3.1 (3.1)	2.4 (2.6)	2.4 (2.6)				
05 Dec (Sep)		2.5 (2.5)	3.2 (3.2)	1.7 (1.9)	2.4 (2.2)	2.7			
06 Jun (Apr)		2.5 (2.5)	3.1 (3.1)	1.8 (1.8)	2.4 (2.5)	2.9 (2.7)			
06 Dec (Sep)			3.3 (3.3)	1.9 (1.9)	2.6 (2.7)	2.6 (2.7)	2.8		
07 Jun (Apr)			3.3 (3.3)	1.9 (1.9)	2.8 (2.7)	2.7 (2.9)	2.5 (2.7)		
07 Dec (Oct)				1.8 (1.8)	2.8 (2.8)	3.1 (3.1)	2.0 (2.3)	2.4	
08 Jun (Apr)				1.8 (1.8)	2.9 (2.9)	3.0 (3.1)	1.8 (1.6)	1.4 (1.6)	
08 Dec (Oct)					2.8 (2.8)	3.0 (3.0)	0.8 (1.0)	−1.1 (−0.1)	0.9
09 Jun (Apr)					2.8 (2.8)	3.0 (3.0)	0.7 (0.7)	−4.3 (−4.1)	0.0 (−0.4)
09 Nov (Oct)						2.6 (2.6)	0.6 (−0.7)	−4.7 (−5.4)	1.2 (1.7)
OECD Economic Outlook									
IMF World Economic Outlook									

Table 12. United Kingdom potential GDP

Percentage change from previous year

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010
OECD projections									
Jun-03	2.7	2.5	2.4						
Dec-03	2.7	2.5	2.5	2.4					
Jun-04	2.7	2.5	2.5	2.4					
Dec-04		2.4	2.4	2.5	2.5				
Jun-05		2.5	2.4	2.5	2.5				
Dec-05			2.6	2.6	2.6	2.4			
Jun-06				2.9	2.7	2.5			
Dec-06				2.8	2.8	2.7	2.5		
Jun-07				2.7	2.8	2.7	2.5		
Dec-07					2.7	2.7	2.7	2.6	
Jun-08					2.8	2.6	2.5	2.5	
Dec-08						2.2	1.8	1.6	1.9
Jun-09						2.3	2.2	1.6	1.1
Nov-09							2.3	1.7	1.2

Note: The OECD method for estimating potential GDP evolved over the period under review.

For further information, see the Statistical Annex of each OECD Economic Outlook.

Table 13 United Kingdom Output Gap									
As a percent of potential GDP									
Year	2002	2003	2004	2005	2006	2007	2008	2009	2010
OECD (IMF) estimates & projectio									
03 Jun (Apr)	−1.0 (−0.9)	−1.4 (−1.5)	−1.2 (−1.5)						
03 Dec (Sep)	−0.5 (−0.4)	−1.1 (−1.1)	−0.9 (−1.2)	−0.4					
04 Jun (Apr)	−0.4 (−0.4)	−0.7 (−0.8)	−0.1 (−0.3)	0.2 (0.3)					
04 Dec (Sep)	−0.1 (−0.1)	−0.3 (−0.6)	0.4 (0.0)	0.5 (−0.0)	0.3				
05 Jun (Apr)	−0.3 (−0.2)	−0.6 (−0.7)	0.1 (−0.2)	0.0 (−0.0)	0.0 (−0.0)				
05 Dec (Sep)	−0.1 (−0.1)	−0.1 (−0.4)	0.5 (0.3)	−0.5 (−0.3)	−0.7 (−0.4)	−0.4			
06 Jun (Apr)	0.2	0.1 (−0.1)	0.6 (0.5)	−0.5 (−0.3)	−0.8 (−0.3)	−0.4 (−0.1)			
06 Dec (Sep)	−0.1	0.0 (0.0)	0.6 (0.7)	−0.3 (−0.2)	−0.5 (−0.2)	−0.6 (0.0)	−0.3		
07 Jun (Apr)	−0.1	0	0.6 (0.5)	−0.1 (−0.2)	−0.2 (−0.2)	−0.2 (0.0)	−0.2		
07 Dec (Oct)	0	0.1	0.7 (0.0)	−0.1 (0.2)	0.0 (0.3)	0.4 (−0.5)	−0.3	−0.5	
08 Jun (Apr)	0.2 (−0.1)	0.3 (−0.1)	0.9 (0.5)	−0.3 (−0.1)	−0.2 (−0.1)	0.2 (0.4)	−0.5	−1.5	
08 Dec (Oct)	0.1 (−0.1)	0.3 (−0.1)	0.5 (0.1)	0.0 (−0.4)	0.4 (−0.1)	1.3 (0.3)	0.3	−2.4	−3.3
09 Jun (Apr)	−0.3	0.1 (−0.1)	0.7 (0.1)	0.5 (−0.3)	1.1 (−0.1)	1.9 (0.4)	0.4 (−0.6)	−5.4	−6.4
09 Dec (Oct)	−0.2	0.3	1	0.9	1.5	1.8 (0.4)	0.0 (−0.1)	−6.2 (−4.9)	−6.2 (−4.7)
10 May (Apr)	−0.1	0.3	1	0.9	1.5	1.8	0.1 (−0.3)	−6.4 (−5.5)	−6.2 (−5.0)

Table 14 United Kingdom Labour Productivity									
	Percentage change from previous year								
	2002	2003	2004	2005	2006	2007	2008	2009	2010
Actual *	1.3	1.8	1.9	1.1	1.9	1.9	−0.2	−3.4	
OECD projections*									
IMF projections (Manufacturing)									
03 June (Apr)	1.1 (1.1)	2.1 (1.6)	2.4 (1.2)						
03 Dec (Sep)	1.0 (1.1)	1.2 (4.1)	2.5 (4.0)	2.6					
04 Jun (Apr)	0.9 (1.5)	1.5 (4.9)	2.5 (3.9)	2.2 (1.5)					
04 Dec (Sep)	1.1 (1.4)	1.7 (5.1)	2.7 (4.0)	2.4 (2.2)	2.5				
05 Jun (Apr)	1.2 (1.5)	1.6 (5.5)	3.6 (5.4)	1.9 (2.9)	1.8 (3.0)	2.5			
05 Dec (Sep)	1.3 (1.5)	1.9 (5.1)	2.7 (5.8)	1.1 (0.3)	2.4 (1.4)	2.7			
06 Jun (Apr)	1.2 (1.5)	1.6 (4.5)	2.1 (6.2)	0.8 (2.5)	2.0 (3.3)	2.1 (4.1)			
06 Dec (Sep)	1.3 (2.0)	1.7 (4.8)	2.2 (6.4)	0.9 (2.5)	1.7 (3.8)	1.5 (4.6)	1.6		
07 Jun (Apr)	1.3 (2.0)	1.7 (5.8)	2.2 (6.7)	1.0 (2.6)	1.9 (3.8)	1.5 (4.7)	1.3 (3.5)		
07 Dec (Oct)	1.3	1.8	2.2	0.8	1	1.1	1.5	1.3	
08 Jun (Apr)	1.3	1.8	2.2	0.8	2	2.4	1	1.3	
08 Dec (Oct)	1.3	1.9	1.7	1	1.9	2.3	0.1	0.7	0.7
09 Jun (Apr)	1.3	1.9	1.7	1	1.9	2.3	0	, −2.1	2.7
09 Nov (Sep)	1.3	1.8	1.9	1.1	1.9	1.9	−0.2	−2.6	3.6
* For the total economy except underlined figures which are for the business sector.									
Source: OECD economic Outlook									
IMF World Economic Outlook									

Table 15 United Kingdom Interest Rate										
3-month money market rate										
Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Actual	6.1	5	4	3.7	4.6	4.7	4.6	6	5.5	1.2
OECD projections										
01 Dec	6.1	5	3.8	4.6						
02 Jun	6.1	5	4.2	5.1						
02 Dec	6.1	5	4	4.2	5					
03 Jun		5	4	3.8	4.3					
03 Dec		5	4	3.6	4.4	5				
04 Jun			4	3.7	4.5	5.6				
04 Dec			4	3.7	4.6	5.5	5.8			
05 Jun				3.7	4.6	4.8	4.8			
05 Dec				3.7	4.6	4.7	4.5	4.5		
06 Jun				3.7	4.6	4.7	4.7	4.6		
06 Dec					4.6	4.7	4.8	5	4.8	
07 Jun					4.6	4.7	4.8	5.5	5.4	
07 Dec						4.7	4.8	5.9	5.2	5.1
08 Jun						4.7	4.8	6	5.6	4.4
08 Dec							4.8	6	5.6	2.8
09 Jun							4.8	6	5.5	1,4
09 Nov								6	5.5	1.2

Table 16 United Kingdom Pound										
	Effective excahnge rate 2000=100									
	OECD calculations									
	(estimates & assumptions)									
Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Dec.01	100	-99	-100.5	-100.5						
Jun.02	100	-99	-100.8	-101						
Dec.02	100	99	-100	-100.5	-100.8					
Jun.03	100	99	100	-97.5	-97.4					
Dec.03	100	99	100	-96.6	-97.9	-97.9				
Jun.04	100	99	100	96.6	-101.4	-100.1				
Dec.04	100	99	100	96.6	-101.1	-99.7	-99.7			
Jun.05	100	99	100	96.6	100.8	-100.4	-100.8			
Dec.05	100	99	100	96.6	100.8	-99.4	-99.2	-99.2		
Jun.06	100	99	100	96.6	100.8	99.3	-98.8	-99.4		
Dec.06	100	99	100	96.6	100.8	99.3	-99.7	-101.8	-101.8	
Jun.07	100	99	100	96.6	100.8	99.3	99.8	-102.2	-102.1	
Dec.07	100	99	100	96.6	100.8	99.3	99.8	-101.6	-99.4	-99.5
Jun.08	100	99	100	96.6	100.8	99.3	99.8	101.4	-90.8	-90
Dec.08	100	99	100	96.6	100.8	99.3	99.8	101.4	-89.4	-84.5
Jun.09	100	99	100	96.6	100.8	99.3	99.8	101.4	88.6	-79.5
Current account balance										
(percentage of GDP)	-2.6	-2.1	-1.7	-1.6	-2.1	-2.6	-3.4	-2.6	-1.6	-1.3