The Scottish economy

Forecasts of the Scottish economy

Economic background

The world economy weakened towards the end of 2002 and at the start of 2003. Geopolitical tensions and substantial falls in equity markets were the two main sources of concern. Economic performance for 2002 is significantly poorer than most economic commentators estimated. The situation in Iraq now appears to be more certain. While conflict is never a sought after outcome (if there is a short and clearly resolved conflict) then it will clear most of the uncertainty that has persisted in world markets. There are signs of recovery in the US and some emerging signs of recovery in the Euro Area. Germany is a drag on Euro Area growth in the short-run. Japan remains weak but at least it is improving. There also appears to be a firm commitment by the Japanese government to eliminating non-performing loans (NPLs). Global inflationary pressures are relatively muted. The outlook for world growth is promising. The recovery is likely to boost world trade and strengthens domestic demand.

The situation in Iraq makes forecasting the economy more problematic. We do not try to model world outcomes but have to take a view as to how any conflict in Iraq may unfold. We have followed the work of Cordesman (2003) who sets out three scenarios for a war in Iraq. The full set of assumptions of these scenarios and the outcome for oil prices (see Ebel, Franssen, Goldstein and Sieminski (2002)) is given in Appendix 1. Our main forecast assumes that the benign scenario of a rapid and decisive victory for the Allies prevails. This also entails no significant disruption to oil supplies, no use of weapons of mass destruction or increased escalation outside the theatre of operation and also assumes that there is no significant terrorism activity in the US or Europe. We have also taken into account any effects on the UK, as outlined by Barrell and Holland (2003). While assuming an outcome that has little effect on GDP it should be noted that the intermediate and worst scenarios have significant implications for the world, UK and Scottish economies and cannot be ignored. For this reason we have provided a forecast for each of these scenarios.

The UK economy remains one of the best performing countries in the OECD. Growth for 2002 was only 1.6 per cent but it is forecast to be 2.2 per cent in 2003 and 2.4 per cent in the following year. The labour market has remained relatively strong during this period despite some considerable job losses and contractions in output. Unemployment is low and is forecast to remain low. Inflationary pressures are modest with only strong house price inflation (which is expected to slow gradually) and oil prices (believed to be a temporary pressure due to the Iraq crisis) having

Vol.28 No.1, pp.15-21.

any significant effects. The MPC cut rates to 3.75 per cent in order to help manufacturers believing perhaps that inflationary pressures may not be as strong as some suggest. Consumption and government spending are significant drivers of real GDP growth and investment is forecast to pick up in the future.

In Scotland economic growth for 2002 is forecast to be particularly weak. Consumption and government spending are still the key drivers of domestic demand. Tourism activity is low especially the expenditure of foreign visitors. Exports both to the UK but more significantly to the rest of the world have fallen sharply. This has been a vital factor in the poor growth performance of the economy.

The outlook for the world, the UK and the Scottish economy remains promising despite 2002. Recovery is forecast for the latter half of 2003 and is expected to have a firm hold by 2004. Manufacturing is also likely to recover in 2004 with low interest rates, modest inflation and relative macroeconomic stability and significant stimuli to both domestic and external demand.

The forecast in detail

GDP

Table 1 presents our forecasts for the Scottish economy. There have been several revisions to the Scottish Executive index for GDP in the last quarter. We present our forecasts for GDP and broad sectoral output in Table 1 for the period 2002 to 2004. We have revised our forecast for GDP growth down significantly for 2002. The unanticipated events in the latter part of the year have had a more serious impact on economic growth than most forecasters believed possible. Consequently we are forecasting that the Scottish economy will contract by 0.2 per cent in 2002 and grow by 1.1 per cent in 2003. Growth is forecast to return close to trend by 2004. In the short-run the outlook for the Scottish economy is weak but in the medium-run it is more promising. The forecast for 2003 is down slightly on the previous quarter but we still believe that some of the economic activity from 2003 will be delayed into 2004 thus boosting growth in that year.

Table 1: Main forecasts of the Scottish economy, 2002-2004

	2002	*2003*	*2004*
GDP	-0.2%	1.1%	1.8%
Agriculture	-2.5%	-4.3%	-3.0%
Manufacturing	-13.2%	-1.7%	1.8%
Manufacturing (ex Electronics)	-6.0%	-3.0%	1.4%
Construction	-5.1%	2.0%	3.1%
Services	3.9%	2.0%	1.8%

Source: Fraser of Allander Institute, March 2003

Output

Agriculture is forecast to decline by 2.5 per cent in 2002 and by 4.3 per cent in 2003. In 2004 the decrease is forecast to be 3.0 per cent. A significant part of this is explained by the shrinking of the fishing fleet and the consequent knock-on effects for some of the on-shore jobs related to fishing. Agriculture itself is also forecast to face some difficult times ahead.

The manufacturing sector has remained weak in 2002 with further significant falls in output over the latest four quarters on the preceding four quarters principally from:

- electronics (-28.0 per cent);
- transport equipment (-24.5 per cent);
- textiles (-8.8 per cent) and
- paper, printing and publishing (-6.0 per cent).

Recovery in the sector is not forecast until 2004 with growth of 1.8 per cent. The sector is forecast to decline by 13.2 per cent in 2002 and by 1.7 per cent in 2003. The recovery in manufacturing is important to increase productivity and to stem the loss of skilled workers as manufacturing job losses have continued throughout 2002. As discussed in the UK economy, we are probably observing a shift in comparative advantage and displacement is not confined to Scotland. It is preferable to have a gradual, albeit painful adjustment rather than a sudden but severe collapse of a particular sector.

Services are forecast to grow by 3.9 per cent in 2002, by 2.0 per cent in 2003 and by 1.8 per cent in 2004. The annual change of the third quarter data from the Scottish Executive indicate that transport, storage and communications (9.6 per cent) and real estate and business services (9.8 per cent) are the main drivers of Scottish services at this point in time. Communications and banking have significantly stronger growth performances at 16.3 per cent and 15.0 per cent respectively. Tourism is not forecast to do well until 2004 and this is unchanged from our previous forecast.

Construction is now forecast to contract by 5.1% in 2002 compared to 1.1 per cent in the previous quarter. While house price inflation is quite strong 52 per cent of new UK lending is for re-mortgaging. Both commercial and industrial properties are likely to increase activity in 2003 and 2004. Growth is forecast to be 3.1 per cent in 2004.

Employment

We present our forecasts of employment in Table 2 with the net employment change figure in brackets. The employment figures are calibrated on the employers quarterly survey series as given in Table B.16 in Labour Market Trends, National Statistics. Our forecast for employment change in 2002 in the previous quarter was finely balanced and suggested a job gain of 1,000 for 2002. Following the significant adverse effects on output the employment forecast for 2002 is now 2,185,400 or a net decrease of 17,000 jobs. The forecast for change in manufacturing remains the same with a net loss of 16,500 jobs but it is the service sector that is forecast not to create as many jobs as we had forecast in the previous forecast. In the previous quarter we forecast a net job gain of 23,900 for services but this has been revised down considerably to 1,720,500 or a net job gain of only 4,400. For all employment we forecast that 19,200 jobs will be created in 2003 and a further 31,200 jobs in 2004. Both of these figures have been revised downwards from the forecast in the previous quarter reflecting the slowing of growth and a slow but steady recovery. Employment is forecast to be 2,235,800 in 2004.

Manufacturing employment is forecast to be 273,00 in 2002 falling to 268,900 in 2003 before increasing to 274,200 in 2004.Over 2002 and 2003 manufacturing is forecast to lose 20,600 jobs and only to have a net gain of 5,300 in 2004. Some of the worst hit sectors include electronics, textiles and transport equipment.

Employment in construction is forecast to contract by 4,300 in 2002 to 120,700. Employment is forecast to rise steadily in 2003 and 2004 to 126,600 in 2004. Agricultural employment is forecast to decline over the forecast period from 34,300 in 2002 to 32,000 in 2004. The job losses are mainly in fishing but a significant proportion are in agriculture itself.

Table 2: Forecasts of Scottish employment and net employment change, 2002-2004

	2002	*2003*	*2004*
Total Employment (000s)	**2,185.4**	**2,204.6**	**2,235.8**
	(-17,000)	**(19,200)**	
	(31,200)		
Agriculture	**34.3**	**32.9**	**32.0**
	(-200)	**(-1,400)**	**(-1,000)**
Manufacturing	**273.0**	**268.9**	**274.2**
	(-16,500)	**(-4,100)**	**(5,300)**
Construction	**120.7**	**122.8**	**126.6**
	(-4,300)	**(2,200)**	**(3,800)**
Services	**1,720.5**	**1,744.3**	**1,765.7**
	(4,400)	**(23,800)**	**(21,400)**

Source: Fraser of Allander Institute, March 2003

Unemployment

We present our forecasts of unemployment in Table 3. Both the ILO measure and claimant count measure are given. The preferred measure of unemployment however is ILO unemployment as given by the LFS. The forecast for ILO unemployment is 164,300 (6.3 per cent) in 2002 and 162,200 in 2003 (6.2 per cent). Claimant count continues to remain at low levels and is forecast to be 101,900 (4.0 per cent) in 2002, 95,400 (3.7 per cent) in 2003 and 96,300 (3.7 per cent) in 2004. The labour market has performed relatively well during the downturn and we expect this to continue.

Table 3: Forecasts of Scottish unemployment, 2002-2004

	2002	*2003*	*2004*
ILO Unemployment (levels	**164,300**	**162,200**	**157,200**
Rate	**6.3%**	**6.2%**	**5.9%**
Claimant Count (levels)	**101,900**	**95,400**	**96,300**
Rate	**4.0%**	**3.7%**	**3.7%**

Source: Fraser of Allander Institute, March 2003

The Scottish forecasts contained in Tables 1 to 3 above are in keeping with recent economic developments in the world, UK and Scottish economies and the model maintains consistency within the forecast. The forecasts suggest that the Scottish economy despite its poor economic performance in 2002 will slowly recover in the second part of 2003 and is likely to experience firm recovery in 2004 when manufacturing output is forecast to be positive. The reduction in economic activity in 2002 and the early part of 2003 does suggest that this activity will be postponed until later in the forecast period and not foregone. Recovery is likely to boost world trade and domestic demand, further strengthening production of goods and services. There are of course risks to the Scottish economy but they have been discussed in the world economy and the UK economy.

Alternative forecasts of the possible impacts of war in Iraq

The aim of this section is to assess some possible economic impacts on Scotland arising from conflict with Iraq. We assume that the UK is directly involved with the military action as the lead partner to a US led assault. The UK is also assumed to participate with the UN in Iraq following the cessation of hostilities in a humanitarian role. It is the former situation that most of the impacts are derived from. The economic impacts are assessed in terms of GDP, sectoral output, employment and unemployment. There is also a discussion of other relevant macroeconomic variables at the UK level.

The main channels of transmission of adverse effects from the situation in Iraq to the world economy include;

Æ oil prices (increases inflationary pressures);
Æ exchange rates;
Æ equity markets (affected by uncertainty and psychological effects)
Æ psychological effects (consumer and business sentiment, tourism, etc.) and
Æ global economic conditions (effects on domestic and external demand).

In determining our forecasts we have used three principle channels;

Æ consumption (reflecting psychological effects and global economic conditions);
Æ tourism (also reflecting psychological effects) and
Æ exports (representing oil price effects).

We have not included exchange rate effects or equity markets. Nordhaus (2002) and House Budget Democratic Staff (2002) demonstrate that using the costs of the 1991 Gulf War are a relatively good proxy for what the current conflict might cost. The Department of Culture Media and Sport used the 1991 Gulf War to estimate the economic impact of lost tourists and calculated a reduction of 22 per cent for US visitors to the UK. We use the decrease in visitor numbers as a proxy for how visitor numbers to Scotland may fall following this conflict. The data from VisitScotland demonstrates that the decrease in visitor numbers following the 1998 East Asian crisis was 7 per cent. This is close to the total loss.

For the intermediate scenario the vector of final demand is reduced by 7.0 per cent in 2003 and by half that in 2004 in order to simulate a drop in international visitor numbers. Exports are reduced by 0.4 per cent in 2003 and by 0.2 per cent in 2004 as oil prices return to normal following an increase that is sustained for a year. We have assumed that oil prices settle at $20-25 per barrel following 2004. Consumption is reduced by only 0.1 percentage point in both 2003 and 2004 in the intermediate scenario.

In the worst scenario tourism is reduced by 7.0 per cent in both 2003 and 2004 (this was the outcome following the East Asian Crisis). Exports are decreased by 0.8 percentage points in 2003 and by 1.6 percentage points in 2004 in order to try to stimulate the effect of a sustained high oil price over two years. In 2003 consumption is reduced by only 0.2 percentage points and by 0.4 percentage points in 2004, as consumers would contract spending significantly given these economic conditions.

We have set out our alternative forecasts for the Scottish economy in Table 4 using the intermediate and worst scenarios. I have not included a ‘no-war’ scenario as this is not now possible but prior to the conflict this scenario indicated that GDP would be slightly lower in 2003 when compared to the benign scenario.

Table 4: Alternative forecasts of the Scottish economy, 2003-2004

Benign Scenario	*2003*	*2004*
GDP	1.1%	1.8%
Manufacturing	-1.7%	1.7%
Services	2.0%	1.8%
Employment	19,200	31,200
Unemployment	6.2%	5.9%
Claimant Count	3.7%	3.7%
Intermediate Scenario	*2003*	*2004*
GDP	0.8%	1.6%
Manufacturing	-2.0%	2.1%
Services	1.7%	1.6%
Employment	16,900	19,400
Unemployment	6.3%	6.2%
Claimant Count	3.9%	3.8%
Worst Scenario	*2003*	*2004*
GDP	-0.2%	0.2%
Manufacturing	-2.0%	-5.8
Services	0.1%	1.6%
Employment	-8,000	-2,500
Unemployment	6.6%	6.9%
Claimant Count	4.0%	4.3%

Source: Fraser of Allander Institute, March 2003

We can see that following conflict in Iraq the economy in each of the scenarios takes some time to adjust and in particular moving from the benign to the intermediate scenario does not alter the forecasts significantly in 2003. In the intermediate scenario this is not the case in 2004 when it is clear that the main economic casualty is employment growth. Given that tourism demand has had a significant reduction this is not entirely surprising. Unemployment is forecast to fall slightly more slowly. The main channel of transmission here is psychological effects with exchange rates, oil prices and equity markets playing a secondary role.

The worst scenario does bring about clear changes immediately with GDP forecast to contract by 0.2 per cent and services output growth only marginal at 0.1 per cent. There are significant job losses in 2003 with unemployment forecast to rise to 6.6 per cent. In 2004 there are further job losses forecast with unemployment forecast to reach 6.9 per cent. Claimant count is forecast to be 4.3 per cent in 2004. Real GDP growth is forecast to be only 0.2 per cent. This scenario has substantial global impacts and would probably result in a global recession. The main problem for the world economy in this scenario is a high and sustained oil price and while other factors play a secondary role their impact will be much greater than in the intermediate scenario. This scenario would according to Meyer (2002 and 2003) lead to a global recession.

Comparisons with UK and world forecasts
We do not attempt to forecast the world or the UK economy but there are a number of reputable forecasts that indicate a similar impact on these economies. It is useful to examine these to assess the context of the Scottish forecasts. Table 5 present forecasts for the US and UK economies. The focus is on GDP.

Table 5: Forecasts of the US and UK Economies, 2003-2004

	Benign		*Intermediate*		*Worst*	
UK forecast	*03*	*04*	*03*	*04*	*03*	*04*
NIESR	2.2%	2.4%	n/a		n/a	
OEF	2.4%	3.2%	1.2%	3.3%	-0.4%	2.7%
RBS	2.4%	3.6%	2.2%	2.6%	-0.1%	1.6%
US forecast	*03*	*04*	*03*	*04*	*03*	*04*
NIESR	2.6%	3.1%	n/a		n/a	
OEF	2.7%	3.6%	1.3%	3.4%	-0.6%	2.0%
RBS	2.4%	3.5%	n/a		n/a	

Source: NIESR, Barrell and Holland (2003), OEF, Britton, E (2003) and RBS, O Carroll (2003)

The NIESR do not make forecasts for war scenarios simply because the possibilities are so many, the interactions complex and the almost endless possible outcomes are likely to have significant errors[1]. As the NIESR commentary indicates many of the adverse impacts have already taken place, specifically psychological effects, oil price effects, exchange rate effects and equity market effects. Why do others do this if this is the case? The value of these forecasts are that they are indicative of what might happen and should not be taken as quantitative outcomes with a given amount of certainty. The Bank of England (Bank of England (2003) pp48-49), does not undertake war scenario forecasts but gives clear indications about the implications for the economy of any adverse impacts. It was Keynes who said;

> "It is better to be vaguely right rather than precisely wrong."

The opportunity costs of war

Again the work of other respected institutions and commentators point towards the possible costs of war. War involves the use of scarce resources that could be put to alternative uses (see Hartley (2002)). Furthermore the direct costs of military action are not the only costs although the UK has only set aside £1 billion for the war against terror, H. M. Treasury (2002), p.3. There will be peacekeeping, humanitarian aid and re-building costs. This will entail increased government expenditure over a much longer time period than the duration of the conflict. Governments despite the experience of previous conflicts and timely high quality economic advice often either ignore or under-estimate the economic costs of war (see Nordhaus (2002)). The decision to engage in conflict is a political one and the economic consequences are secondary. It is outwith the scope of this article to investigate the costs of conflict but it necessary to indicate that given our previous experience the opportunity cost of war will be much higher than estimated and that these resources have an alternative use.

Conclusions

It is clear from the large body of work surrounding the conflict in Iraq that a rapid and decisive victory for the Allies is the best economic outcome. Indeed when compared to the no war scenario GDP actually rises in 2003. While there are significant unknown factors and an almost endless series of combinations of outcomes it is clear that a prolonged conflict with significant adverse outcomes is more likely to have a substantial negative impact on the world economy. The main factors that are significant causes for concern are psychological effects, oil prices, equity markets and exchange rates. We cannot emphasise enough that the danger of a global recession while having a small probability cannot be ignored. The long-term cost of the conflict is also likely to be high with considerable costs after the cessation of hostilities and that these resources have an alternative use.

Kenneth Low
21 March 2003

[1] Note: Some commentators suggest that forecasts of this kind may have errors of 50 per cent or more associated with them.

Appendix 1

Benign Scenario (40-60 per cent probability and conflict of 4 to 6 weeks)

Æ regime collapse;
Æ major urban conflict in only a few areas;
Æ limited civilian deaths and collateral damage;
Æ no significant use of weapons of mass destruction (WMD);
Æ no reduction in oil production or exports by OPEC;
Æ Saudi Arabia increases oil production to meet demand;
Æ no political obstruction from regional governments;
Æ no major acts of terrorism in the US or Europe;
Æ civil unrest is absent in post conflict Iraq and
Æ no significant damage to oil production facilities in Iraq or elsewhere.

Intermediate Scenario (30-40 per cent probability and conflict of 7 to 12 weeks)

Æ stiffer military resistance in Iraq;
Æ serious urban conflict in some areas;
Æ moderate civilian deaths but significant collateral damage associated with negative press coverage;
Æ limited or ineffective use of weapons of mass destruction (WMD);
Æ oil production and exports increase only slowly;
Æ Saudi Arabia only offers passive co-operation;
Æ Israeli intervention and increased political tension in the region;
Æ major act of terrorism attempted in the US or Europe but either ineffective or prevented;
Æ significant civil unrest after hostilities cease and
Æ limited but significant damage to oil production facilities in Iraq or elsewhere.

Worst Scenario (5-10 per cent probability and conflict of 13 to 26 weeks)

Æ protracted military resistance in Iraq;
Æ intense urban warfare in most areas;
Æ substantial civilian deaths and severe collateral damage;
Æ major US and UK casualties resulting in significant political problems for the US and the UK;
Æ US loses support at the UN;
Æ Iraq successively attacks Allied bases or cities in Turkey/ Kuwait or ships in the Gulf;
Æ successful use of WMD on either US/UK troops or Israel both triggering a major response with significant lethal effects;
Æ oil production and exports are not meeting demand;
Æ Saudi Arabia, Turkey or another key ally drops out of the coalition;
Æ serious Israeli intervention and at least the threat of use of WMD;
Æ massive political unrest in the region;
Æ major acts of terrorism attempted in the US and Europe or on US/UK interests in the region;
Æ significant civil unrest after hostilities cease which the US cannot control;
Æ US or UN humanitarian and peacekeeping efforts are inadequate or inefficient;
Æ Iraq attacks oil production facilities in the region with WMD and there is severe damage;
Æ serious lingering and environmental effects from the damage to oil production facilities, collateral damage and infrastructure;
Æ Iraqi people are openly hostile to the US/UK and
Æ the US and the UK face years of broader Arab hostility.

The factors in these scenarios are not exhaustive. Clearly the benign case appears to be ideal in terms of what would be best for the world economy. The allies would probably be pleased if this outcome was achieved. In the intermediate scenario not all of the factors need to be present but a combination of any of these factors would move the conflict into this scenario. Time is not the critical issue here. If the conflict were protracted in terms of time but most of the factors of the benign case held then this would still be the best outcome. There is very little chance that all of the factors in the worst scenario will come about but a combination of some of the more serious factors will lead to this outcome. For this reasons alone it cannot be discounted despite the low probability attached to it. Even once the conflict is over the uncertainties of what happens next will unfold and humanitarian, peacekeeping and re-building operations need to be considered.

Oil price paths for these scenarios

Benign scenario

Æ Iraq oil production is lost for three months;
Æ oil production resumes slowly in the second quarter and reaches 2 million barrels per day (mbpd);
Æ other OPEC countries make up for the lost output;
Æ US announces its intent to use the strategic petroleum reserve (SPR);
Æ no drawndown of the SPR is needed;
Æ there is only limited panic buying on the market;
Æ oil prices spike at the beginning of hostilities and
Æ continued high OPEC production and incremental non-OPEC production ease the oil price to the low $20s by the third quarter.

Intermediate scenario

Æ Iraq oil production is lost for six months;
Æ popular sentiment prevents Gulf Co-operation Council countries from increasing production;
Æ fears of oil shortages result in stock building;
Æ US releases 1 mbpd of the SPR;
Æ OECD allies do likewise;
Æ global oil stocks remain tight throughout 2003 and
Æ lower global growth and hence demand for oil, higher

OPEC production and some easing in Middle East oil production cause prices to fall to an average of $30 in 2004.

Worst scenario

Æ most oil wells in Iraq are set on fire;
Æ Iraqi oil is off the market for the whole of 2003;
Æ acts of sabotage reduce oil exports in other Middle East oil producing countries;
Æ there is a discussion of the use of sale of oil as a political weapon against the US;
Æ there is major disruption to oil supply of 5 to 6 mbpd;
Æ there is a quick release of 2 mbpd of the SPR and 1 mbpd from International Energy stocks;
Æ consumer hoarding further exacerbates the situation;
Æ oil prices spike to $80 per barrel in the first quarter and
Æ the oil supply-demand situation improves over time but only slowly with prices falling to an average of $40 in 2004.

These scenarios were delivered in November 2002 at a time when stocks were relatively tight although a significant amount of supply from OPEC over production was on its way to oil consuming countries. Without a war the oil panel agreed that prices would probably fall from around $25 (at the time of the scenario planning) to the low $20s during 2003.

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Vol.28 No.1, pp.15-21.