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The effect of the financial crisis on the UK's productive capacity: Surveying the damage

Michael Dicks
Chief Economist, Barclays Wealth

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A brief run through "Surveying the damage"

- Why do we care about "aggregate supply" or "potential GDP"?
- Has the Treasury got it right when reckoning that the long-term impact of the crisis will be to cut the *level* of potential GDP by 5%?
- Has the Treasury got it right in estimating that the financial crisis will have no impact at all on the *growth rate* of potential GDP?
- Once the effects of the crisis have worked their way out of the system, can the UK economy really grow 2¾% per annum thereafter without hitting the inflation buffers?
- We judge that the crisis has done more damage to the level of potential GDP than the Treasury estimates, and that the potential growth rate is lower than the 2009 Pre-Budget Report assumes.

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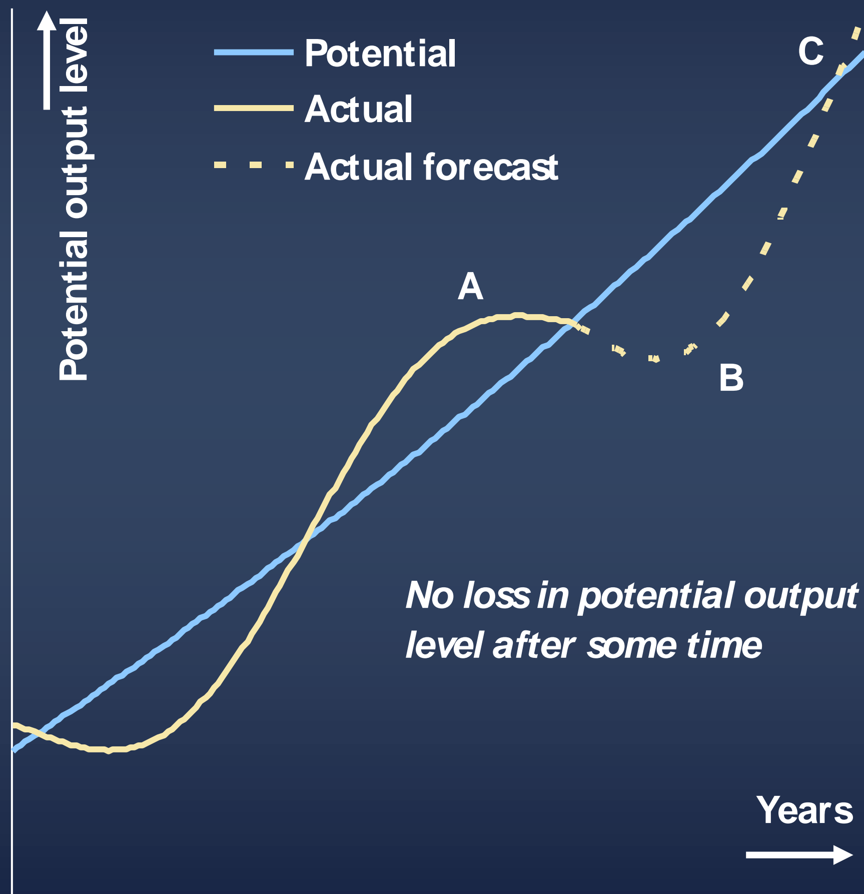
Figure 1 - Why do we care about potential GDP?

A stylised recession with *no* long-run structural costs



- A 'no-cost' or 'low-cost' recession may occur if demand has been permitted to rise above aggregate supply, and needs to be lowered again in order to avoid inflation rising above target.
- From the peak of the boom, at A, demand falls back – often temporarily below potential (or 'trend') GDP, to a point like B.
- Thereafter, recovery can lead to above-trend growth for a while, returning the economy to a sustainable position such as C. From then on, it should be able to expand at its old trend rate.

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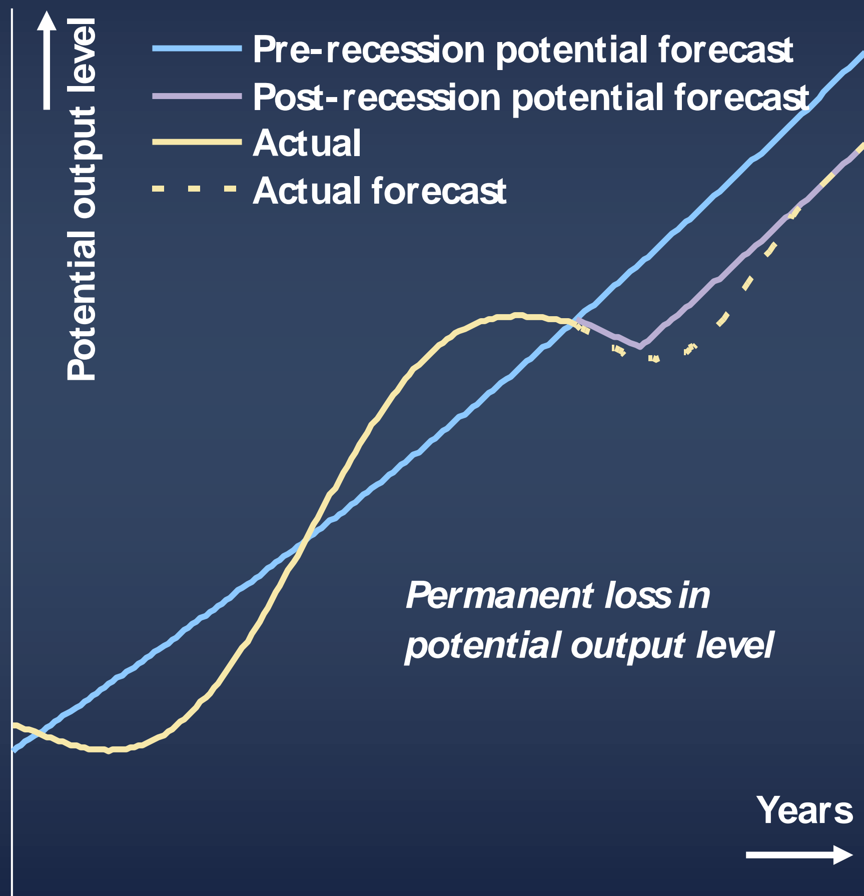
Source: Barclays Economics.

Figure 2 - Why do we care about potential GDP?

A stylised recession with *constant* long-run structural costs



- A second – more painful – possibility occurs when potential GDP also takes a leg down, say because capital gets scrapped.
- In an extreme form, potential may drop almost as much as actual GDP during the recession, as illustrated here.
- If that happens, the economy can resume growing at its old potential growth rate, but there is a long-term cost equal to the drop in the level of potential GDP.
- The Treasury assumes that this is what has happened recently, with a drop in aggregate supply of 5% from mid-2010 onwards.

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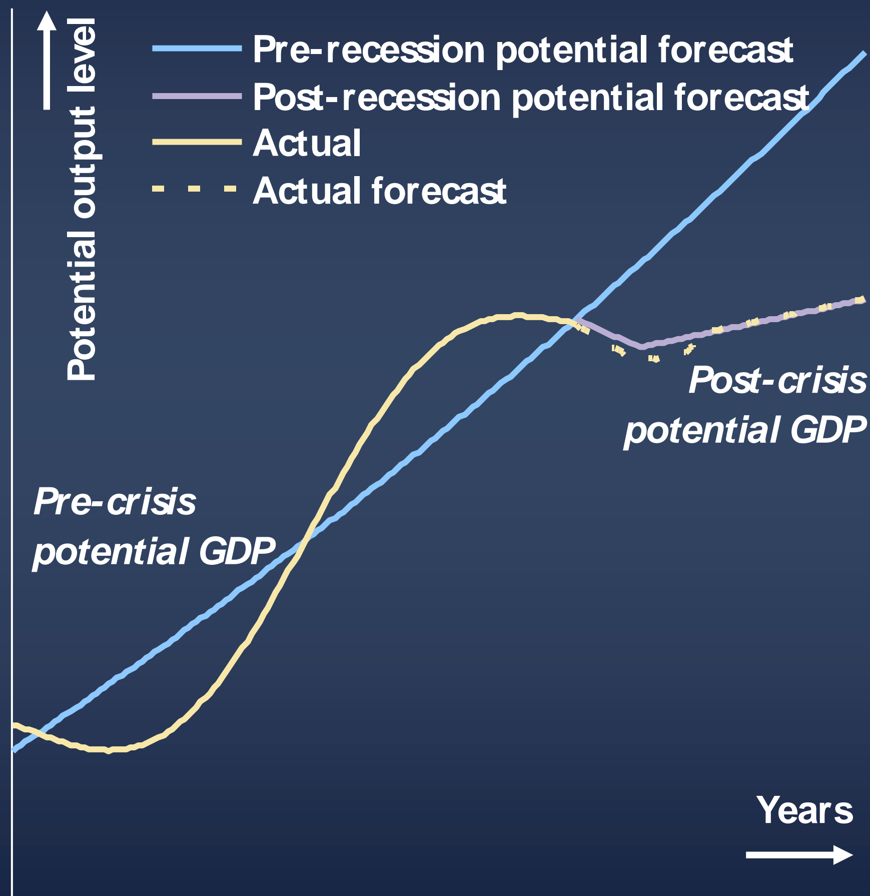
Source: Barclays Economics.

Figure 3 - Why do we care about potential GDP?

A stylised recession with *increasing* long-run structural costs



- The worst of all worlds is when both the level of potential *and* its growth rate decline.
- In such a situation, the amount of 'lost output' grows and grows. And the output gap is very small.
- The Treasury were optimistic about the rate of growth of UK potential before the crisis – reckoning it to be 2¾% per annum.
- They also surmise that that is what the economy will manage to achieve again from 2011 onwards.

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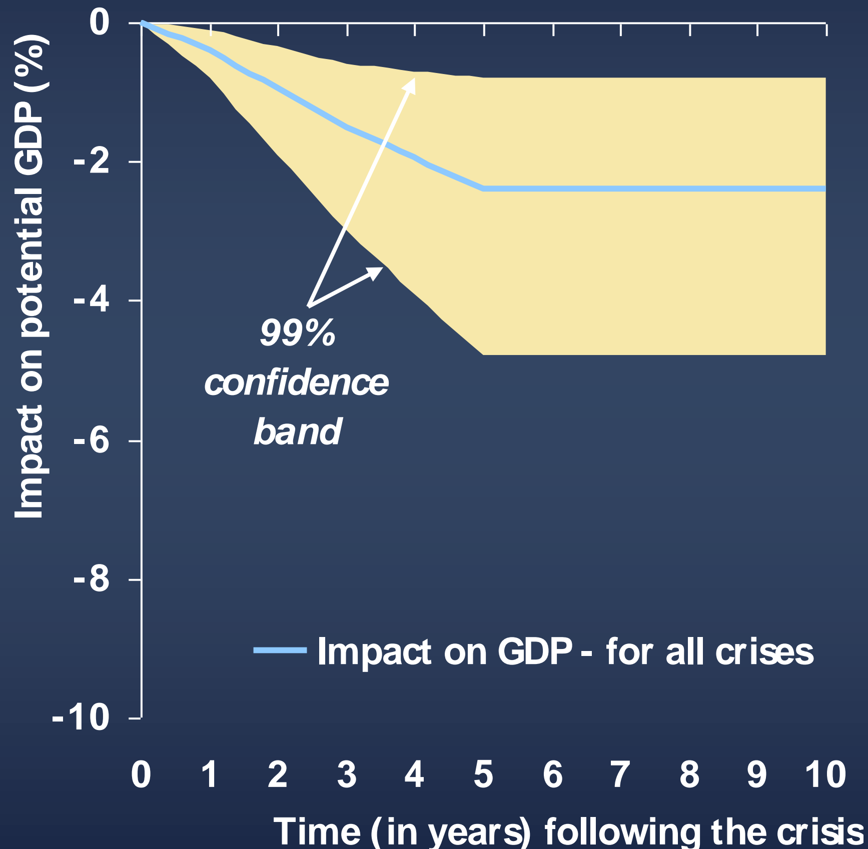
Source: Barclays Economics.

Figure 4 – What do others think the impact will be?

OECD estimates of the effects of a *typical* financial crisis



- The OECD have looked at how their own estimates of potential GDP have been affected by past financial crises – examining 30 countries for which they have estimates since 1960.
- For a typical crisis, the effect seems to be around 2½% of GDP, with the effect taking four or five years to work through.
- This is about half what the Treasury assume the impact has been of the recent crisis on UK potential.

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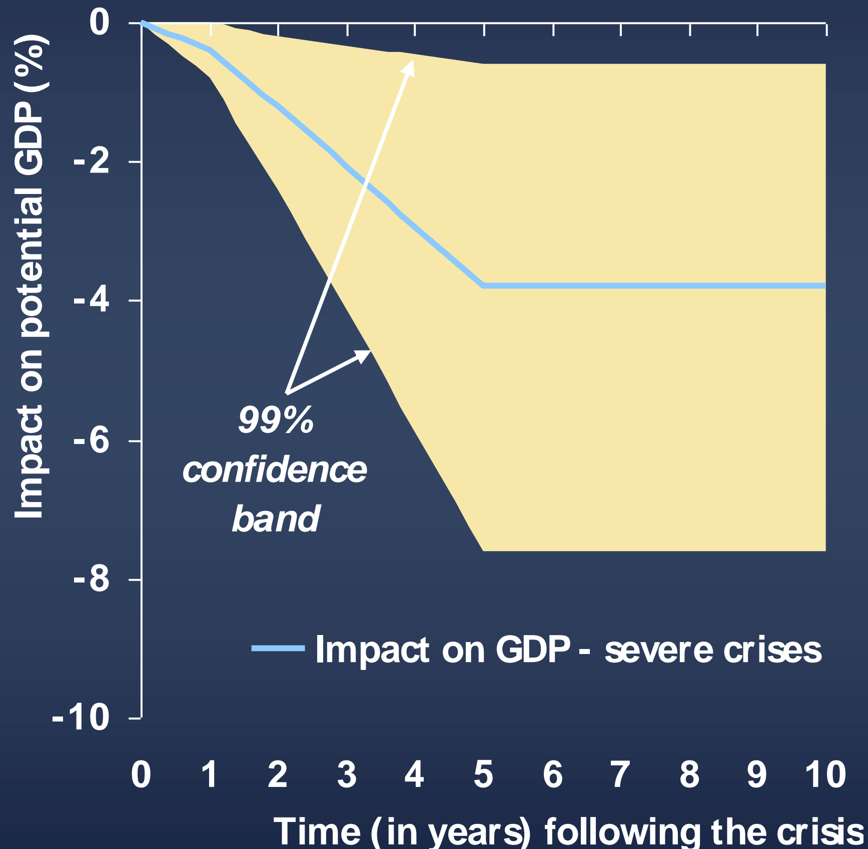
Source: D. Furceri and A. Mourougane, 'The effects of financial crises on potential output: new empirical evidence from OECD countries', OECD Economics Department working paper no. 699, May 2009.

Figure 5 – What do others think the impact will be?

OECD estimates of the effects of a *severe* financial crisis



- If focus is shifted to those financial crises that are deemed to be severe – like those which hit the Nordic economies in the early 1990s – the damage done is much greater.
- Typically, nearly 4% is wiped off of an economy's potential GDP by such an event.
- At first blush, this seems to suggest that the Treasury's estimates are in the right ball park.

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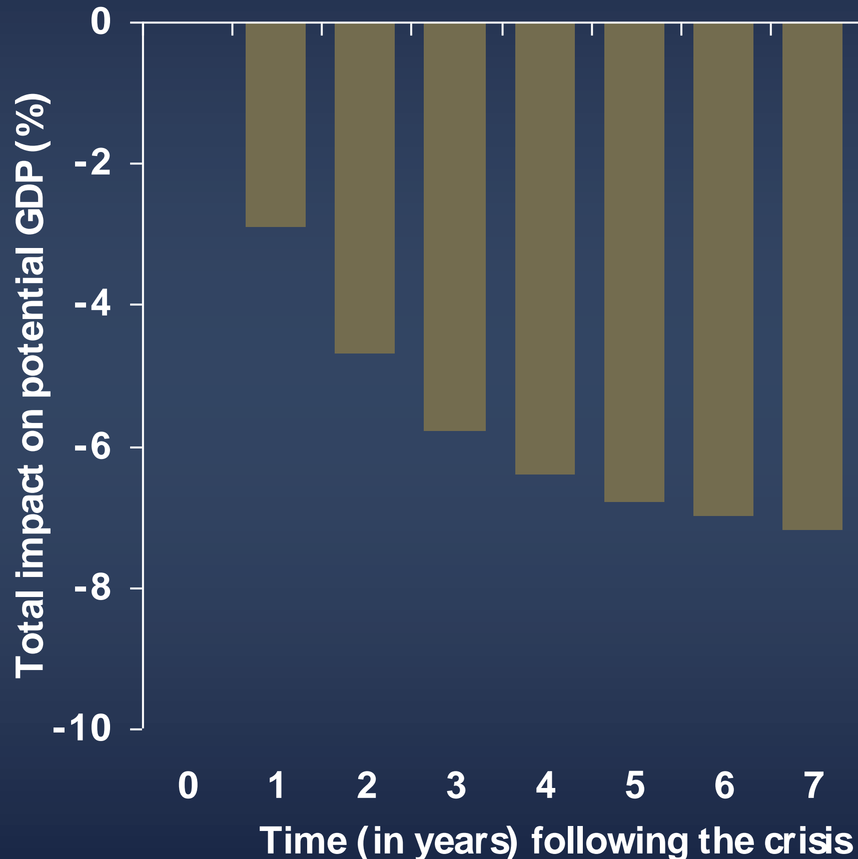
Source: D. Furceri and A. Mourougane, 'The effects of financial crises on potential output: new empirical evidence from OECD countries', OECD Economics Department working paper no. 699, May 2009.

Figure 6 – Extending the OECD analysis to the UK case

Barclays' estimates of the effects of a severe financial crisis on UK potential GDP



- We can extend the OECD analysis right back to 1870 if we accept that 'trend' measures of GDP are a reasonable proxy for 'potential'.
- This permits us to include the crises which struck in 1878, 1890 and 1929, as well as considering the effects of the two World Wars.
- Our analysis suggests a rather greater impact of a severe crisis than the Treasury assumes – of about 7½% of GDP.

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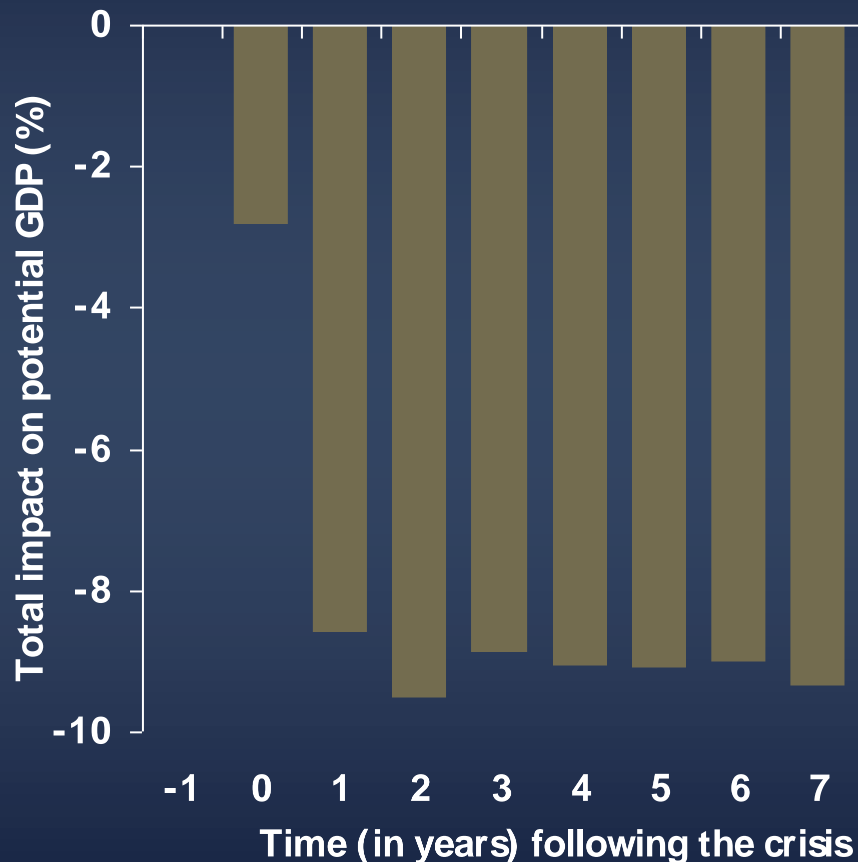
Source: Barclays Economics.

Figure 7 – What are the risks to this estimate?

IMF estimates of the effects of a typical financial crisis on potential GDP



- The IMF has carried out a much more extensive study into crises than the OECD was able to – based on 88 banking crises.
- Its analysis is more gloomy than the OECD's, reckoning on a typical permanent 'hit' from a crisis as being about 10% of potential GDP.
- They also analyse the drivers of potential GDP and how demand is impacted.

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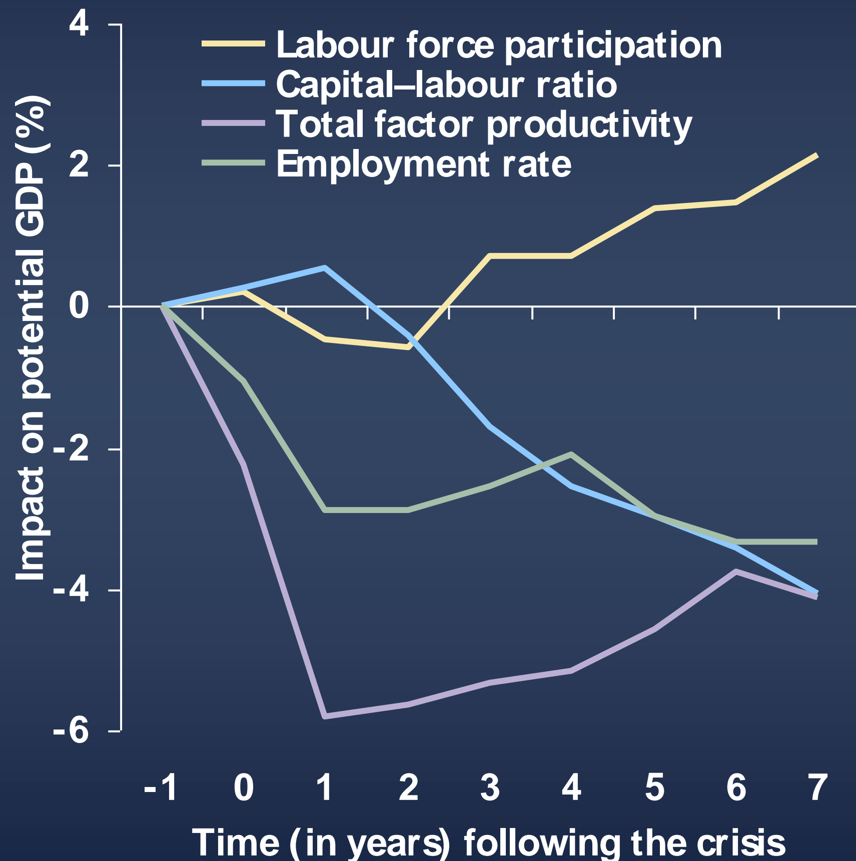
Source: R. Balakrishnan, P. Brooks, D. Leigh, I. Tytell and A. Abiad, 'What's the damage? Medium-term output dynamics after financial crises', chapter 4 of IMF, World Economic Outlook: Sustaining the Recovery, *October 2009.*

Figure 8 – Where is the damage done?

IMF estimates of factors responsible for effects on potential GDP



- Following a typical crisis, a bigger fraction of people work or attempt to do so – boosting potential GDP by about 2% after seven years.
- But, big hits – of about 4% *each* to potential – stem from falls in the capital stock; the number of workers in employment; and Total Factor Productivity (or 'TFP').
- Thus, 10% = [2 – (3 * 4)] %

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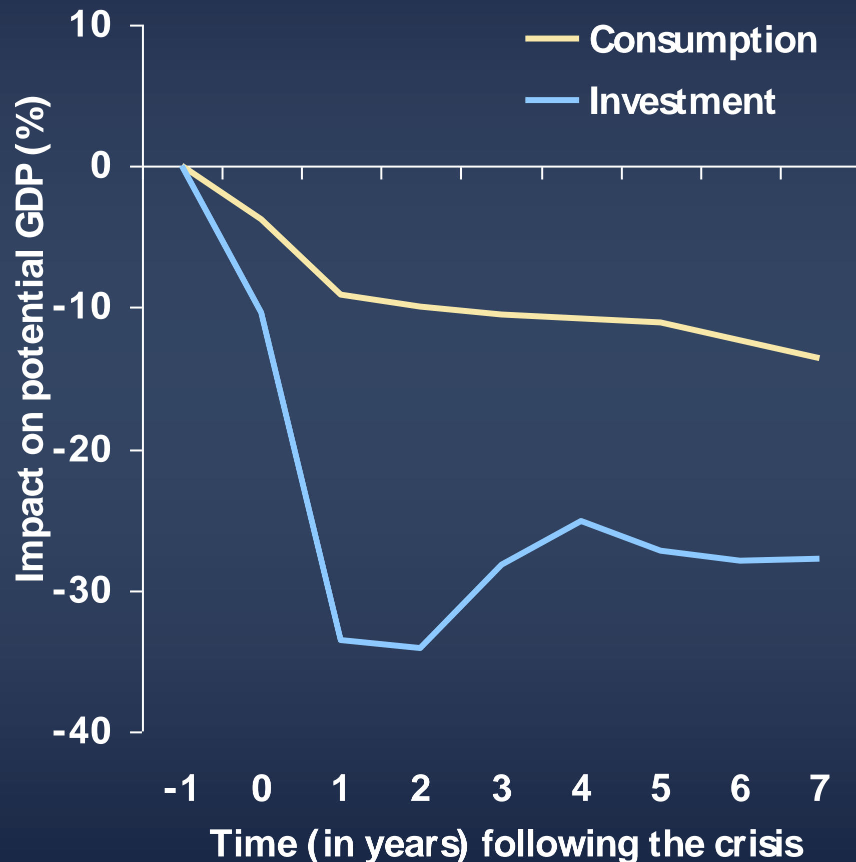
Source: R. Balakrishnan, P. Brooks, D. Leigh, I. Tytell and A. Abiad, 'What's the damage? Medium-term output dynamics after financial crises', chapter 4 of IMF, World Economic Outlook: Sustaining the Recovery, *October 2009.*

Figure 9 – How do consumers and firms react?

IMF estimates of effects of a typical financial crisis on consumption & investment



- After a typical crisis, investment gets slashed – dropping quickly, by close to a third in volume terms, and staying depressed for some time.
- Households usually embark on a much more gradual cutting back process – with the volume of spending dropping by ~2% per annum for seven years.
- So far, this time round, UK business fixed investment has fallen by nearly 25%, and residential by 40%. Consumption volumes have declined by a little over 4% so far.

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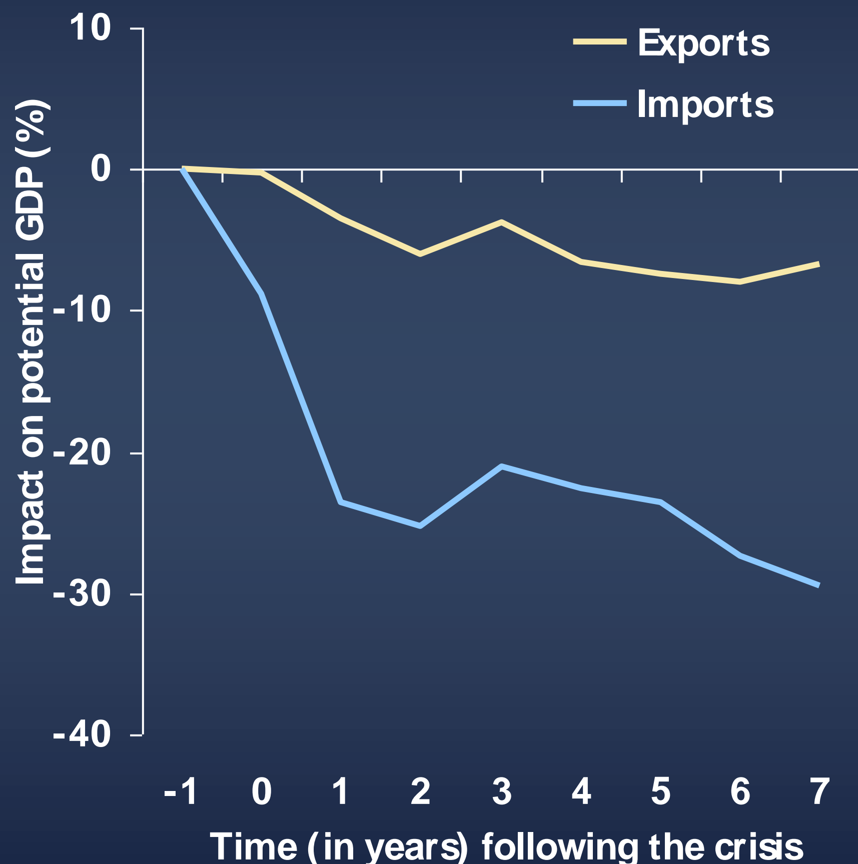
Source: R. Balakrishnan, P. Brooks, D. Leigh, I. Tytell and A. Abiad, 'What's the damage? Medium-term output dynamics after financial crises', chapter 4 of IMF, World Economic Outlook: Sustaining the Recovery, *October 2009.*

Figure 10 – The trade balance usually improves

IMF estimates of effects of a typical financial crisis on export & import volumes



- Typically, the post-crisis hit to imports far exceeds that on exports – partly because depreciation (or devaluation) is the norm.
- This time round may be unusual, as global trade collapsed during the crisis – although it is now recovering.
- So far, import volumes have fallen only a little more than those of exports – by 19% and 15% respectively.

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Source: R. Balakrishnan, P. Brooks, D. Leigh, I. Tytell and A. Abiad, 'What's the damage? Medium-term output dynamics after financial crises', chapter 4 of IMF, World Economic Outlook: Sustaining the Recovery, *October 2009.*

Table 11 – Adding it all up, to see how the UK will fare

A scorecard for the UK

Variable	Importance	Score
Pre-crisis output	2	0
First-year GDP growth	3	-3
Investment share	3	-3
Current account	1	0
Inflation	1	+1
Fiscal deficit	1	0
Monetary conditions	2	+2
Credit/GDP	2	-2
Currency crisis	2	-2
Financial openness	1	+1
External shock	2	-2
Total	-8	

- The IMF researchers have identified about a dozen variables that influence just how much damage gets done.
- Using their models, we have created a scorecard for the UK – based on how important each factor is and how well the UK scored coming into this crisis.
- A negative score means the UK will be hit harder than the 10% that typically happens after a crisis.
- Overall, the UK scores -8. So, if the IMF analysis is right, 10% is an under-estimate of the likely hit to the level of potential GDP that the UK will suffer.

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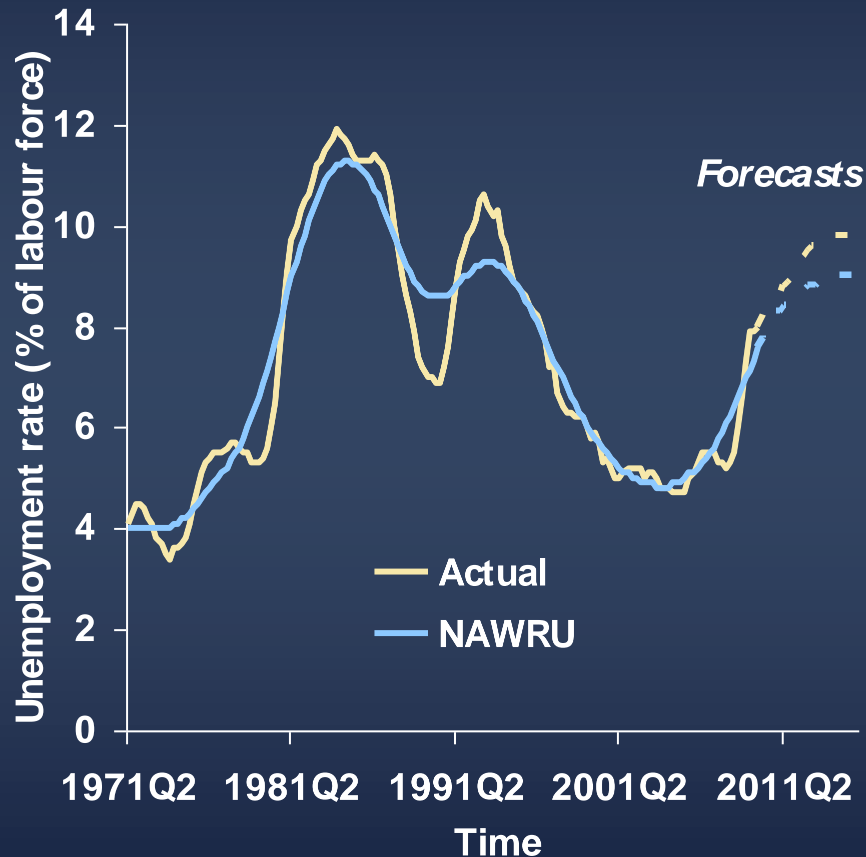
Source: Barclays Economics.

Figure 12 – What about the growth rate of potential GDP?

Actual unemployment rate versus the 'NAWRU' or 'natural rate'



- Although there will be small impacts from changes in participation rates, population growth and hours worked, the main labour market factor affecting potential is the 'natural rate' of unemployment or 'NAWRU'.
- This has risen markedly, and looks set to increase further – being sensitive to real long-term interest rates and the tax wedge, *inter alia*.
- All in all, this may drag the growth rate of potential down by ¼ pp or so during 2011-2015, compared with its impact over the last decade.

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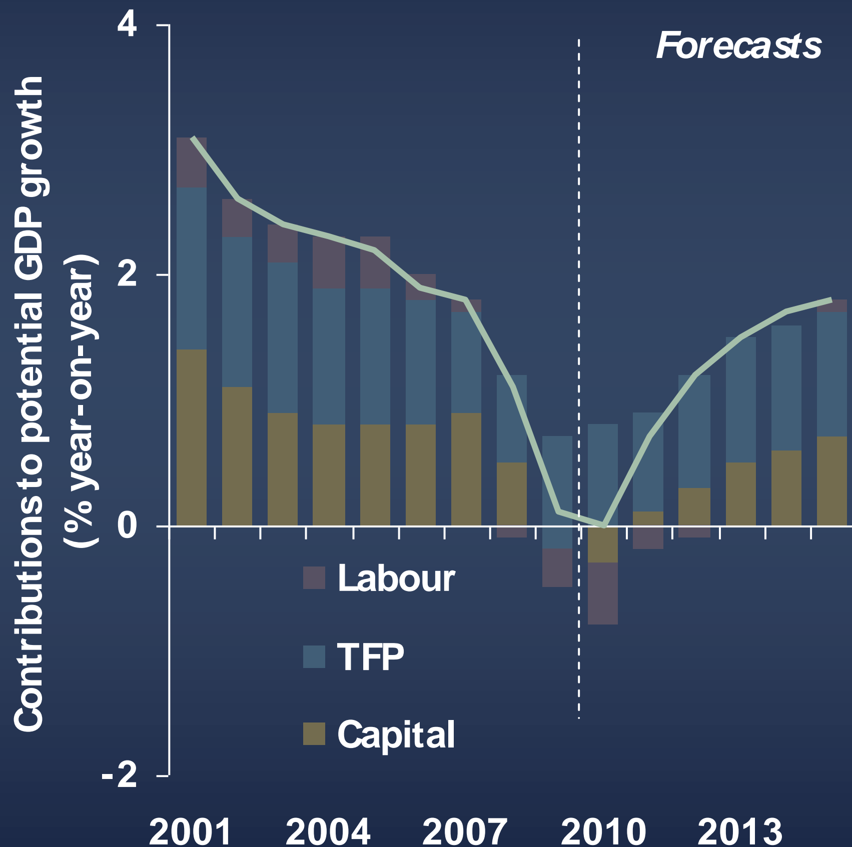
Source: Barclays Economics.

Figure 13 - Other factors driving potential GDP growth

The contributions of labour, capital and TFP to UK potential GDP growth



- The ‘crunch’ in fixed investment will constrict the amount of services that flow from capital.
- Gradually, though, these will resume, and the flow rise again.
- The efficiency with which capital and labour are combined – TFP – has been fairly resilient thus far.
- We expect TFP to add about 1pp to potential GDP growth again by 2015 – taking the total up to 1¾% p.a.

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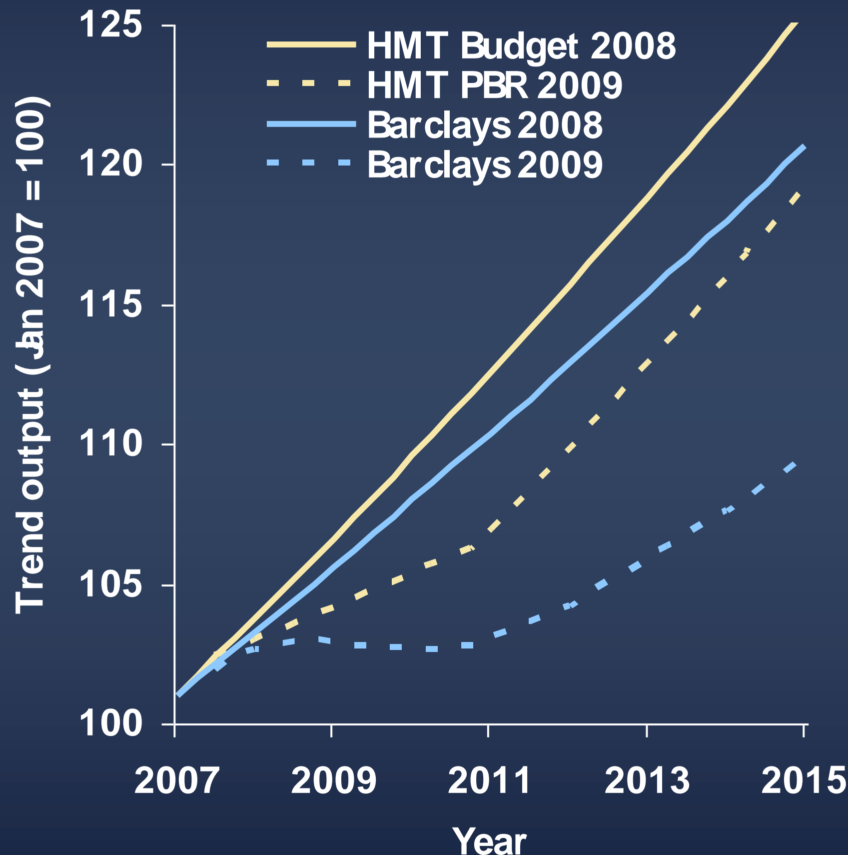
Source: Barclays Economics.

Figure 14 – The bottom line

Barclays versus Treasury estimates of the level of potential GDP



- Pre-crisis the Treasury reckoned on potential GDP rising steadily, at a rate of 2¾% per annum.
- Post-crisis, it assumed a phased in 5% hit to the level of potential GDP.
- Before the crisis, we suspected that the trend in potential was about ½pp lower than the Treasury did.
- We have factored in a bigger hit to the level of potential too – of 7½%. And we now expect potential growth to recover to only about 1¾% by 2015.

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Source: Barclays Economics and HM Treasury.

Conclusions

- The scale of damage done to "aggregate supply"/"potential GDP" is a much more important issue than the short-term pace of the recovery.
- The Treasury is probably too optimistic in thinking that the *level* of potential GDP has been hit by only 5%.
- The true impact is probably half as big again as the Treasury is assuming. It may even be twice as big.
- The Treasury is probably too optimistic in thinking that the *growth rate* of potential GDP will rise back to 2¾% per annum by 2011.
- More likely, we suspect, it will only recover to around the 1¾% mark, and not get to that rate until 2014 or 2015.
- If we are right, then the output gap is probably around 3½% of GDP currently, rather than the 6% level that the Treasury assumes.

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