ECONOMIC RESEARCH & CORPORATE DEVELOPMENT

Working Paper 128

May 26, 2009

MACROECONOMICS | FINANCIAL MARKETS | ECONOMIC POLICY | SECTORS

Dr. Rolf Schneider

Gross domestic product overstates recession

- Price adjustment disregards terms of trade gains -

Allianz

AUTHOR:

DR. ROLF SCHNEIDER
Tel.: +49.69.2 63-5 77 90
rolf.schneider@allianz.com

GROSS DOMESTIC PRODUCT OVERSTATES RECESSION

– Price adjustment disregards terms of trade gains –

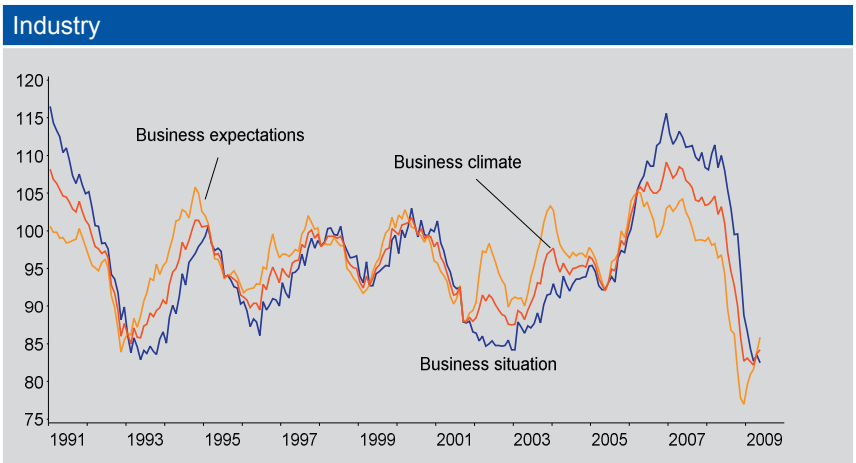
Never before in the 60-year history of the Federal Republic has Germany's real gross domestic product (GDP) suffered such a slump. From the first quarter of 2009 to the first quarter of 2009 it shrank (after working-day adjustment) by 6.9%. Roughly 5 ½ percentage points of this alone – that is to say about 80% – stem from the meltdown in net exports. In contrast, the most severe recession prior to this, from Q3 1974 to Q2 1975, shaved just 2.3% off GDP.

Recession patterns in Germany

			Contribution to GDP growth by components of demand in percentage points (decline in components of demand in %)						
Recession	Recession duration	GDP decline in %	Private consumption	Government spending	Machinery & equipment investment	Construction investment	Net exports	Exports	Imports
1974q3 - 1975q2	3 quarters	-2.33	1.3 (2.28)	0.7 (3.90)	-0.4 (2.11)	-1.2 (-9.25)	-2.1	- (-8.1)	- (-0.5)
1982q1 - 1982q3	2 quarters	-1.60	-1.3 (-2.30)	-0.4 (-2.33)	-0.3 (-1.74)	-0.1 (-0.91)	0.1	- (-3.3)	- (3.9)
1992q1 - 1993q1	4 quaters	-1.95	0.4 (0.54)	0.4 (2.30)	-1.4 (-14.28)	0 (0.41)	0.1	-2 (-8.18)	2.1 (-8.02)
2002q3 - 2003q2	3 quaters	-0.89	0 (0.09)	0.2 (0.41)	0.1 (1.22)	-0.1 (-0.41)	-1.5	-0.3 (-0.81)	-1.2 (3.66)
2008q1 - 2009q1	4 quarters	-6.9	0.0 (-0.1)	0.1 (0.8)	-1.7 (-19.7)	-0.8 (-7.3)	-5.6	-8.6 (-17.5)	3.0 (-7.3)

Business sentiment in Germany does not dovetail entirely with the extreme nosedive in gross domestic product. Although assessment of the business climate in the Ifo Test survey did drop exceptionally sharply from September 2008 to March 2009, the rating was only approximately as bad as at the nadir in economic activity in 1992/93 and 2002/03.

Ifo-Test Germany: Signs of stabilization

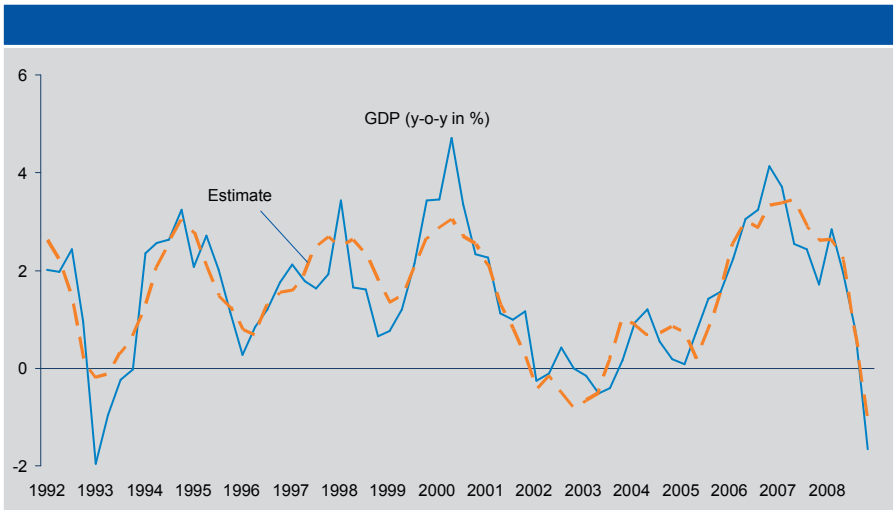


Yet the Ifo index correlates relatively closely with economic growth in Germany. A regression comparison of the Ifo business climate index and year-on-year GDP

growth can explain 76% of the fluctuations in GDP growth during the period 1992 to 2008.

Assuming that the business climate were to remain at the level of the first quarter (Index 82.6) throughout the whole of 2009, the contraction in gross domestic product this year would work out at 2.0%. That would represent far better performance than the current consensus forecast (-5.0 %) and our own prediction (-3.9 %). The Ifo business climate index does not therefore currently tally with the GDP decline expected.

German economic growth: Estimate based on Ifo business climate index



But why is it that business sentiment is not as negative as the collapse in gross domestic product would lead us to expect? A major factor is presumably that the prices of raw materials have eased substantially, boosting the purchasing power of incomes through marked reductions in the cost of imports. However, this strong improvement in the terms of trade (the ratio of export prices to import prices) is not taken into account in calculation of the real gross domestic product. In periods of improving terms of trade the increase in real incomes in an economy is greater than the growth in real gross domestic product.

It is a well-known statistical problem that gross domestic product does not reflect real income gains resulting from external trade. The German Council of Economic Experts drew attention to the issue as early as 1984 (Annual Report 1984/85, p. 139 ff.) – then in the context of real gross national product, which enjoyed greater prominence as a benchmark at that time. The Council suggested calculating a 'real term of the national product' that encapsulated changes in the terms of trade and placing this on a par with real gross national product. To calculate this real term, price adjustments are based on the development in prices for a basket of goods reflecting the structure of the goods that the income of the total economy is used to purchase. One such comprehensive indicator of the development in purchasing power is the deflator of final domestic uses, the Council reasoned. The Federal Statistics Office picked up on this suggestion and has for years published real terms for gross domestic product (nominal GDP divided by the deflator of final domestic uses) in Fachserie 18 Series 1 of the National Accounts.

The difference between the real term of GDP and real GDP can be considerable at times. For example, real GDP in 2000 rose by 3.2% but the real term of GDP by only 1.6%. That is, after all, a difference of 1.6 percentage points, caused by steep rises in raw materials and import prices. Sadly, real GDP adjusted for alterations in the terms of trade has so far led a shadowy existence in public debate.

As well as in German statistics, a measure that adds purchasing power gains/losses from external trade to real GDP is also applied internationally. The OECD defines it as follows: "Real gross domestic income (real GDI) measures the purchasing power of the total incomes generated by domestic production (including the impact on those incomes of changes in the terms of trade); it is equal to gross domestic product at constant prices plus the trading gain (or less the trading loss) resulting from changes in the terms of trade." Australia, as a country whose strong reliance on exports of raw materials makes it extremely susceptible to fluctuations in the terms of trade, bases its statistics heavily on real gross domestic income. For the fourth quarter of 2008 the Australian Bureau of Statistics notes: "In seasonally adjusted terms, during the December quarter, real gross domestic income decreased by 1.2 % while the volume measure of GDP decreased by 0.5 %, reflecting a decrease of 2.8 % in the terms of trade."

Unlike Australia, falling raw materials prices do not hurt Germany; on the contrary Germany's scarcity of raw materials works to its advantage here. As a result of the sharp downturn in prices for raw materials during the second half of 2008, German import prices at the beginning of 2009 were well below their year-earlier level. While the index of export prices in the first quarter of 2009 was 1.3% short of the level for the corresponding period of 2008, the drop in import prices was a hefty 6.3%. As far as Germany is concerned, the terms of trade with other countries have thus undergone a remarkable improvement. Given Germany's high export and import ratio, this is resulting in considerable purchasing power gains economy-wide. The national accounts put the terms of trade gain in Q1 2009 at 1.0 percentage points versus Q1 2008. This quite simply means that the development in real gross domestic income (the real term of GDP) was one percentage point less negative than in real GDP. In Q2 2009 the terms of trade gain is likely to be even greater, at 1 ½ percentage points. Households and businesses have thus suffered lower real income losses than suggested by the collapse in output.

But if real incomes have contracted less severely, the chances of an economic rebound are better because not so much purchasing power will have been skimmed off. Most importantly, the recession will not drag down consumer demand as sharply as would otherwise have been the case. It will not therefore take long for a revival in exports to work through to the gross domestic product. A 10% growth in exports – which would still make good barely half of the tumble in exports – should already trigger GDP growth of around 2½% (allowing for the additional imports of primary and intermediate products which this would bring in its wake). The German economy could thus gather steam surprisingly rapidly once world trade picks up significantly.

These assessments are, as always, subject to the disclaimer provided below

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

Certain of the statements contained herein may be statements of future expectations and other forward-looking statements that are based on management's current views and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance or events to differ materially from those expressed or implied in such statements. In addition to statements which are forward-looking by reason of context, the words 'may, will, should, expects, plans, intends, anticipates, believes, estimates, predicts, potential, or continue' and similar expressions identify forward-looking statements. Actual results, performance or events may differ materially from those in such statements due to, without limitation, (i) general economic conditions, including in particular economic conditions in the Allianz Group's core business and core markets, (ii) performance of financial markets, including emerging markets, (iii) the frequency and severity of insured loss events, (iv) mortality and morbidity levels and trends, (v) persistency levels, (vi) the extent of credit defaults (vii) interest rate levels, (viii) currency exchange rates including the Euro-U.S. dollar exchange rate, (ix) changing levels of competition, (x) changes in laws and regulations, including monetary convergence and the European Monetary Union, (xi) changes in the policies of central banks and/or foreign governments, (xii) the impact of acquisitions, including related integration issues, (xiii) reorganization measures and (xiv) general competitive factors, in each case on a local, regional, national and/or global basis. Many of these factors may be more likely to occur, or more pronounced, as a result of terrorist activities and their consequences. The matters discussed herein may also involve risks and uncertainties described from time to time in Allianz SE filings with the U.S. Securities and Exchange Commission. The company assumes no obligation to update any forward-looking statement.

NO DUTY TO UPDATE

The company assumes no obligation to update any information contained herein.