





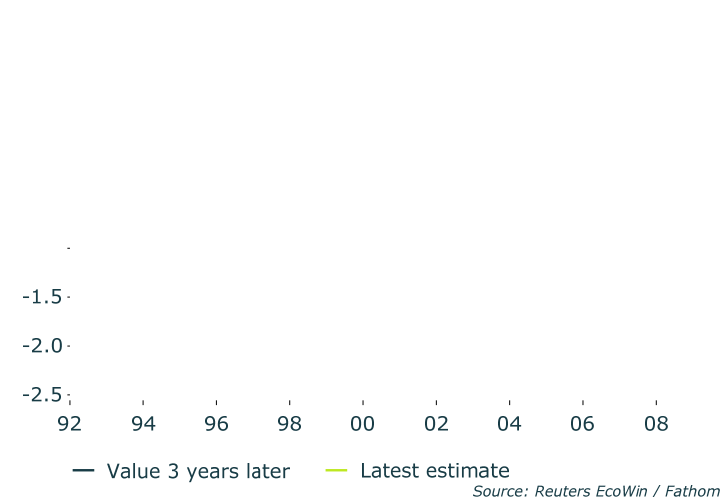
However, that does not mean that we share their conclusions. That is because they appear to have based their analysis on the wrong data. The ONS provides a number of vintages of GDP data starting from the M1 release which is output-based, to the M2 which includes expenditure and income measures and then the M3 which has the national accounts reconciliation. The data may then subsequently be revised for a number of reasons, but they broadly fall into two categories: new information; and methodological changes.

Our assertion is that the Goldman's analysis conflates the two sources of revision and hence in effect ends up comparing apples with pears. Our reasoning is simple. Goldman's analysis compares M1 estimates with the current estimate for a given quarter. But the current estimate includes sometimes significant methodological changes, like the introduction of chain-linking in 2003, or the introduction of the new European System of National Accounts (ESA 95). And the issue has become more acute recently, revisions made in Blue Book 2008 were more substantial than those made in the Blue Book 2007, owing to the reintroduction of balancing, benchmarking and methodological improvements. And revisions extended back to 1961, due to the introduction of a new methodology for estimating FISIM (financial intermediation services indirectly measured). More broadly over the past ten years or so, the service sector turnover data have progressively replaced poor indicators like VAT receipts and employment.

### Chart 1

#### UK GDP Revisions

Per cent



These changes are obviously not forecastable. But counting these improvements as errors or bias in the preliminary estimates is clearly wrong. It is therefore not remotely surprising nor, in our view, interesting, to discover that estimates of GDP growth in 1975 did not foresee how





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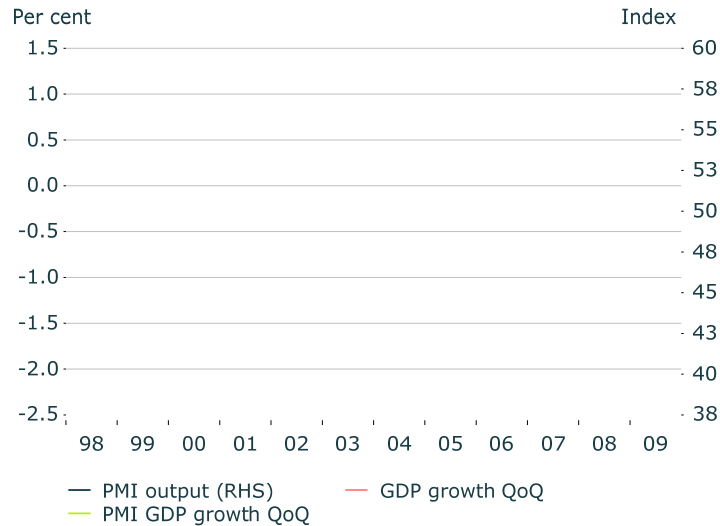
But there is no evidence that we can find of missing variables, including the PMI (see Table 3). If we include the PMI composite indicator in this



current recession. It's one or the other. Hence we find it hard to understand how such strong claims can be made of such a partial survey of the UK economy which has not even covered one whole business cycle.

## Chart 2

### UK PMI-Based GDP



Source: Reuters EcoWin / Fathom

But for the sake of argument, let's take the Goldman's analysis at face value. Using the PMI composite-based measure of UK GDP we find that the UK has experienced by far the mildest recession of all the major economies<sup>3</sup>. And indeed the UK is alone in currently enjoying positive annual growth (Chart 3).

That is possible, but not very probable in our view, nor would it seem in the view of the foreign-exchange market. In fact, it is noticeable that even using the official data, the UK suffered a relatively smaller contraction around the turn of the year – the problem is that is that it appears to be taking somewhat longer to recover than the City would like. And in fact the latest data look set to further increase the divergence between the increasingly optimistic PMI survey and the official data. Industrial production data were revised down in the third quarter, implying if anything that the pressure on the ONS is to revise the first estimate down, as it has in six of the past eight quarters. Moreover, initial indications for the fourth quarter look similarly divergent. It is possible, barring a sharp acceleration in November and December's data, that the final quarter of 2009 will register a seventh consecutive fall in output.

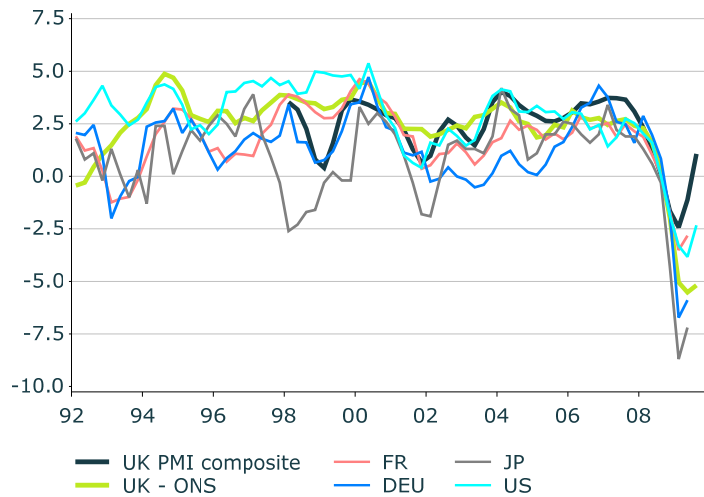
<sup>3</sup> We assume that Goldmans do not have issues with all the other countries' GDP data as well. And we note in passing that in contrast to its views on UK GDP, Goldman Sachs is one of the most vociferous advocates of China's official GDP data, which are compiled in 15 days and are rarely if ever revised. Lack of revision should not be confused with accuracy.



### Chart 3

#### International GDP Comparisons

Annual percentage change



Source: Reuters EcoWin / Fathom

#### Over the cycle

But the fundamental problem in running our horse race between the M1 and the PMI is that neither stretch back even one recession. As a result, our sample period has no cycle in it. The variance of GDP growth is very low during this period, and it is therefore difficult to capture the true explanatory power of either M1 or



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variance in M3, with a coefficient that is not significantly different from 1 (Table 4). In other words, it pretty much does what it says on the tin.

The composite PMI interacts with M1 in this equation too – but the coefficient on M1 remains strongly significant and unity cannot be rejected. The PMI is insignificant at the 5% level but significant at the 10% level (Table 5). Our inference is that we should certainly pay close attention to the PMI data, since it is possible they contain some information about forthcoming revisions to GDP growth. But it would be crazy to suggest that the PMI data should supplant M1: at best (and the evidence here is inconclusive) they provide supplementary information.

In conclusion, the preliminary ONS estimate ‘should’ have a unit coefficient in the final estimate of GDP, and the constant in that regression ‘should’ be zero – implying no bias. If there were clear evidence that either or both of those ‘shoulds’ were not the case, that would imply there was something systematically wrong with the way the ONS puts together its first estimate of GDP growth. There is no such evidence that we can discover in the data. The ‘evidence’ cited by most commentators is based on analysis that takes no account of methodological changes. It therefore compares apples with pears, and is unbelievable, literally.

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**Table 3**

Dependent Variable: Y3

Method: Least Squares

Date: 11/03/09 Time: 17:17

Sample (adjusted): 1998Q1 2006Q2

Included observations: 34 after adjustments

	Coefficient	Std. Error	t-Statistic	Prob.
C	0.291484	0.091361	3.190470	0.0032
M1	0.393071	0.223223	1.760893	0.0881
PML_COMP	0.200528	0.157997	1.269193	0.2138
R-squared	0.335800	Mean dependent var		0.614706
Adjusted R-squared	0.292949	S.D. dependent var		0.263004
S.E. of regression	0.221150	Akaike info criterion		-0.095849
Sum squared resid	1.516134	Schwarz criterion		0.038830
Log likelihood	4.629438	Hannan-Quinn criter.		-0.049920



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**Table 5**

Dependent Variable: M3

Method: Least Squares

Date: 11/03/09 Time: 18:09

Sample (adjusted): 1998Q1 2009Q2

Included observations: 46 after adjustments

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	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.070331	0.029270	-2.402802	0.0207

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