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Markit Economics Research

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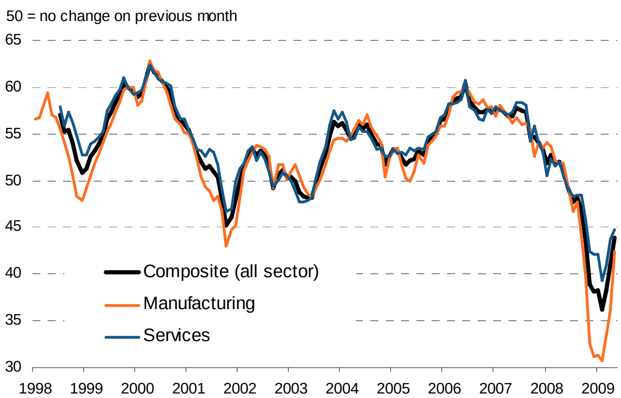
Eurozone economy

Comparing PMI and official economic growth data

The Eurozone Flash PMI rose to an eight-month high in May, signalling the smallest drop in output of the combined manufacturing and service sectors since last September. Services activity showed the smallest drop for seven months, while manufacturing posted the weakest decline for eight months.

Eurozone Flash PMI Output Index

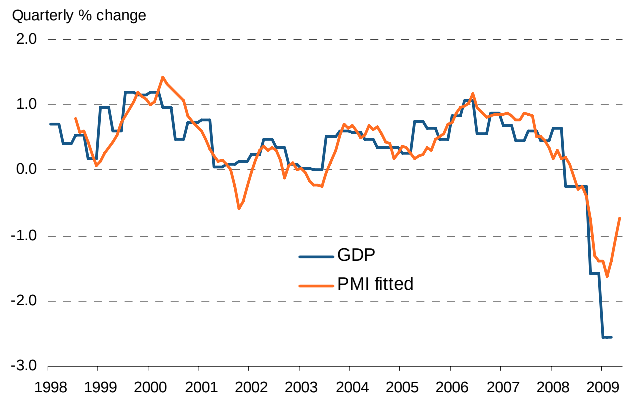


Prior to the final quarter of last year, the PMI data correlated closely with corresponding official data. However, official data have signalled a steeper rate of GDP contraction since the collapse of Lehmans than the PMI series. Although also evident in manufacturing, the discrepancy looks to be particularly acute in services, where official data are only available up to Q3 of last year and already showed a far steeper contraction than the PMI data.

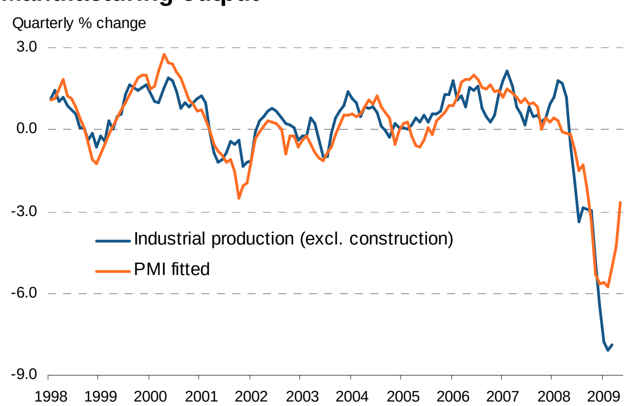
This divergence in the relationship between the PMIs and official data introduces a high degree of uncertainty in estimating the extent to which official measures of economic activity may have improved in Q2.

A simple regression analysis, which fits the PMI data to official measures of GDP, industrial production (excluding construction) and an equivalent definition of services output to match the PMI coverage of services, produce the PMI fitted data shown in the charts to the right.

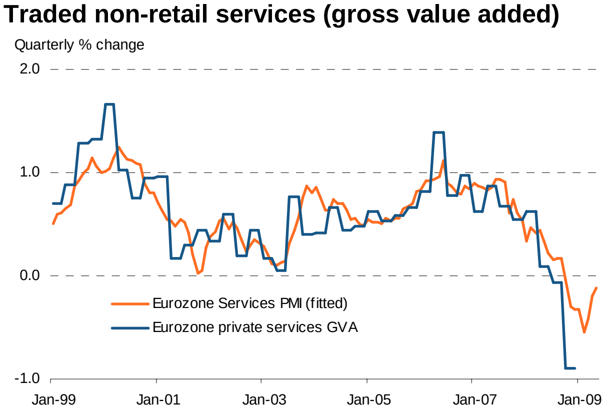
GDP



Manufacturing output



Traded non-retail services (gross value added)



These regressions suggest that the May levels of the PMI data are consistent with quarterly rates of decline of 0.7%, 2.7% and 0.1% for Eurozone GDP, industrial production and services output respectively. These rates of decline clearly represent substantial easings in the rates seen in Q4 and Q1.

Using regression analysis to fit PMIs to official data

Quarterly rates of change

		GDP		Industrial production		Service sector GVA	
		Actual	PMI-fitted	Actual	PMI-fitted	Actual	PMI-fitted
2008	J	0.6	0.2	1.2	0.4	0.6	0.3
	F	0.6	0.3	1.8	0.3	0.6	0.5
	M	0.6	0.2	1.7	-0.1	0.6	0.4
	A	-0.2	0.2	1.2	-0.2	0.1	0.4
	M	-0.2	0.1	-0.6	-0.2	0.1	0.3
	J	-0.2	-0.1	-1.9	-0.8	0.1	0.2
	J	-0.2	-0.3	-3.4	-1.5	-0.1	0.2
	S	-0.2	-0.2	-2.9	-1.3	-0.1	0.2
	S	-0.2	-0.4	-2.9	-2.2	-0.1	0.2
	O	-1.6	-0.8	-3.0	-3.4	-0.9	0.0
	N	-1.6	-1.3	-4.9	-5.3	-0.9	-0.3
	D	-1.6	-1.4	-6.4	-5.6	-0.9	-0.3
2009	J	-2.5	-1.4	-7.8	-5.6	n/a	-0.3
	F	-2.5	-1.6	-8.1	-5.8	n/a	-0.5
	M	-2.5	-1.4	-7.9	-5.1	n/a	-0.4
	A	n/a	-1.1	n/a	-4.3	n/a	-0.2
	M	n/a	-0.7	n/a	-2.7	n/a	-0.1

Many hypotheses have been put forward to try to explain the recent divergence between the PMI and official data, some of the most commonly touted of which are listed below:

(a) Survey questions which measure just the direction of change in variables (i.e. “has your production risen, fallen or stayed the same compared to last month?”) cannot capture particularly steep changes in official data. This is because a small fall in output at one company is given the same weight as a dramatic fall in another company in the survey results.

(b) Surveys do not capture the full effect of company closures in a recession.

(c) Official data have overstated the downturn.

As the world’s economies have experienced an unprecedented downturn, or more precisely a contraction of magnitude that has not been measured by economic data before, it is not easy to test the first two theories, although it should be noted that in recent periods of economic weakness, notably 9/11 and the Iraq War, the PMIs actually signalled *steeper downturns* than official data.

As the official data are still only early estimates, and it is common for these estimates to be revised, it is feasible that the official data have overstated the downturn to some degree. But perhaps most importantly, whatever the cause of the discrepancy, it holds true that the PMIs have acted as very timely and reliable indicators of turning points in economic growth, often displaying a smoother and more easily defined trend than official data, and in this respect the PMI data suggest that we are now most likely over the worst and Q2 GDP will show a weaker rate of decline than Q1.

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