

Economic Watch

US

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BBVA Research Monthly Activity Index Assessing underlying volatility in economic data

- Ten individual activity indices and an overall composite index were created in order to provide a general assessment of economic data
- Index trends suggest slightly slower economic activity compared to three and six months ago
- The MAI, which we use to forecast short-term GDP, points to 2.1% QoQ annualized growth for 2Q12

Recent economic data has been mixed, with much of the underlying data telling a different story than what is on the surface. In order to assess overall economic activity and the underlying volatility stemming from various aspects of the economy, we developed a monthly activity index (MAI) that encompasses nearly 100 macroeconomic variables. The overall MAI is a composite of ten individual indices representing housing, commercial real estate (CRE), employment, economic confidence, financial markets, spending, production, prices, international trade, and banking (Chart 1). All components are mutually exclusive in the sense that variables are not included in more than one individual index. The data are collected on a monthly basis, with historical series dating back to 1993. Each of the indices were developed using principal component and dynamic factor analysis to reveal the internal structure of the variables in a single index. Unfortunately, our index is limited to only the most available and up-to-date monthly data – some sector-related variables in which the data are lagged more than two months are not included in our analysis. For those variables that are lagged only slightly, we forecast ahead one or two periods in order to ensure that that data are current and balanced.

Chart 1 Monthly Activity Index Components

Housing	CRE	Employment	Economic Confidence	Financial
Housing Starts	Commercial Property Prices	Nonfarm Payrolls	ISM Manufacturing New Orders	Dow Jones
Building Permits	Office Construction Spending	Average Hourly Earnings	Consumer Confidence	S&P 500
New Home Sales	Commercial Construction Spending	Civilian Labor Force	Capital Expenditure Expectations	Russell 3000
Existing Home Sales	Multifamily Construction Spending	Total employment	Small Business Optimism	TED Spread
S&P Case-Shiller Home Prices		Total unemployment		AAA Spread
Mortgages Rates (15 and 30-year)		Employment to Population Ratio		BAA Spread
Housing Affordability		Participation Rate		Financial CP Spread
National Homebuilder Index		Unemployment Rate		Swap Spread
		Long-term Unemployed		Gold Price
		Initial Jobless Claims		\$/Euro
		Average Workweek Hours		Yen/\$
		Number of Hires		Yield Curve Slope
		Number of Job Openings		
		Manufacturing ISM Employment		
		Services ISM Employment		
Spending	Production	Prices	International Trade	Banking
Real PCE	Manufacturing Output	СРІ	Real Goods and Services Exports	C&I Lending
Retail Sales	Mining Output	PPI	Real Goods and Services Imports	Real Estate Lending
Real Personal Income	Utilities Output	PCE Prices	Nominal Trade-Weighted Exchange	Consumer Lending
Real Disposable Personal Income	Capacity Utilization	Import Prices		Cash Assets
Personal Savings Rate	Nondefense Capital Goods Orders	Commodity Prices		Large Time Deposits
	Durable Goods Orders and Shipments			
	Business Inventories			
	Sales/Inventory Ratio			

Source: BBVA Research

Using the most up-to-date economic data through April, our MAI suggests slightly slower economic activity compared to three and six months ago (Chart 2). Current levels of the individual indices are lower than in previous months, except for housing which has seen growing momentum in building permits and sales. Economic confidence slipped into negative territory for the first time in three months, mostly due to slowing new orders and growing uncertainties in the business outlook. The employment index is still positive but reflects the latest weakness in nonfarm payroll growth as well as the declining participation rate. As expected, the trade index has deteriorated on account of the ongoing crisis in Europe and slowdowns in emerging markets. Throughout the past year, the index points to volatility in various sectors of the economy, including CRE, economic confidence, consumer spending, and international trade.

Chart 2 Monthly Activity Index Trends

BBVA Index	Current	3 Months Ago	6 Months Ago	12 Months Ago	Long Run SD
Monthly Activity Index	0.65	1.68	0.98	0.59	1.57
Housing	1.31	0.19	0.25	-0.28	1.73
CRE	-O.14	0.90	-0.56	0.56	0.83
Employment	1.20	3.68	2.17	1.74	2.14
Economic Confidence	-O.18	0.04	-O.12	-O.14	2.15
Financial	0.39	0.93	1.34	0.94	1.62
Spending	-0.35	0.79	0.25	-0.08	0.76
Production	0.88	1.89	1.11	0.82	1.49
Prices	0.92	1.21	O.71	-O.41	1.68
Trade	-0.97	O.13	0.04	-0.97	0.80
Banking	-O.43	-1.20	-2.52	-2.13	3.10

Source: BBVA Research

In order to assess the ten individual activity indices and the composite MAI, we applied a risk level to the resulting trends based on the number of standard deviations away from the mean (zero). For example, index levels one standard deviation above or below zero are less risky, whereas the indices more than two standard deviations away from zero represent a greater risk. While indices below zero may be more suggestive of slowing economic activity, data significantly above zero may be indicative of a potential bubble and are thus important to monitor concurrently.

While we did not develop our index based on any other existing activity indices, the MAI does compare nicely to more commonly used indicators, including the Chicago Fed National Activity Index (Chart 3) and the Conference Board Leading Index (Chart 4). The trends are very similar and suggest that our estimates will be a reliable resource moving forward in our assessment of current data. We are comfortable that our index is adequate and will prove successful in capturing any changes in economic variables that may impact our outlook.

Chart 3
Monthly Activity Index and Chicago Fed NAI
(3MMA)



Source: Chicago Fed and BBVA Research

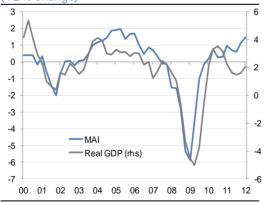
Chart 4
Monthly Activity Index and Leading Indicators
(3MMA)



Source: Conference Board and BBVA Research

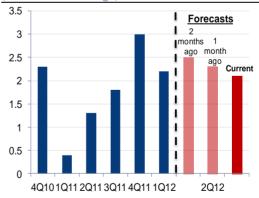
Not only does our MAI provide a unique outlook on current economic trends, but it also serves as a tool to forecast real GDP growth on a short-term basis (Chart 5). In general, the idea is that the index will be more telling of future growth trends as the data become more current, and our forecast for GDP will change on a monthly basis according to the underlying changes in the macroeconomic variables. For instance, throughout the past few months, our forecast for 2Q12 GDP has shifted down slightly in conjunction with modest deceleration for many short-term indicators, from 2.3% two months ago to our current projection of 2.1% QoQ annualized (Chart 6). Upcoming data will provide a clearer picture for the quarter, with great importance placed on consumption given the strong contribution in 1Q12. In particular, average real PCE growth near 0.3% in April, May, and June could push our GDP forecast for 2Q12 back up to 2.3%.

Chart 5 Monthly Activity Index and Real GDP (4Q % Change)



Source: Bureau of Economic Analysis and BBVA Research

Real GDP Growth
(SAAR QoQ % Change)



Source: Bureau of Economic Analysis and BBVA Research



Bottom line: Monthly Activity Index Helps Pinpoint Vulnerability in Economic Data

The monthly activity index was developed in order to gain a better understanding of underlying trends in macroeconomic variables, with specific focus on ten different aspects of the economy. Overall, our MAI acts as a useful tool to assess current trends in economic variables. Furthermore, the index provides an opportunity to monitor real GDP growth on a monthly basis in order to more closely support our baseline scenario for the upcoming quarters. Future analyses will present additional opportunities to use the composite MAI as well as the individual indices as an economic forecasting tool.