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The predictive ability of US consumer confidence indices

- The University of Michigan's Consumer Sentiment Index and the Conference Board's Consumer Confidence Index are the two most closely watched leading indicators for the US economy from the perspective of the consumer.
- Both consumer indices are a barometer of the public confidence in the US economy, gauging current consumer attitudes and expectations about future economic conditions.
- The present condition components of the two composite indices have a different cyclical behavior at turning points of economic activity, as the Conference Board's present situation component is more closely tied to labor market conditions.
- According to our research, the expectations components of each of the two composite indices have the strongest predictive ability for changes in real personal consumption and industrial production in the following month.
- Looking separately at turning points of real economic activity, the most important outcome of our research is that the Michigan's expectations index has stronger predictive ability for real personal consumption, whereas the Conference Board's expectations index has no predictive ability. Meanwhile, both expectations indices fail to predict personal consumption and industrial production growth in economic downturns.

The University of Michigan's Consumer Sentiment Index and the Conference Board's Consumer Confidence Index are the two most closely watched leading indicators for the US economy from the perspective of the consumer (Figure 1). Although business firms, financial institutions and federal agencies closely track both indices, most academic researchers use the Michigan index due to its longer time series. The University of Michigan Consumer Sentiment Index was constructed in the late 1940s by Professor George Katona at the University of Michigan. Even though it started as an annual survey, it was converted into a quarterly survey in 1952 and since 1978 it is published every month by the University of Michigan and Thomson Reuters based on

telephonic household interviews. The Conference Board began its consumer confidence index as a mail survey conducted every two months in 1967, and moved to monthly collection and publication in 1977.

Although both consumer indices are a barometer of the public confidence in the US economy, gauging current consumer attitudes and expectations about future economic conditions, they sometimes give conflicting signals at turning points of the economy. Looking at the behavior of the two indices at the current business cycle, the University of Michigan's consumer sentiment index rebounded first in September 2011 and continued increasing thereafter, while the Conference Board's consumer confidence index

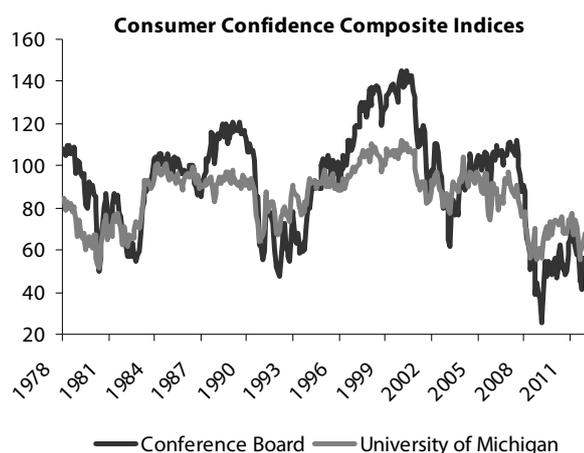
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kept declining until October 2011, and was followed by a sharp increase only in November 2011. Hence, the Michigan's index gave the right signal two months before the Conference Board's one, as incoming economic data for the US economy suggest acceleration of real economic activity. In the following study, we are trying to find what is behind the divergence between the two indices and assess their predictive ability for economic activity.

The composite indices of consumer confidence are based on five equally weighted questions, concerning consumers' perceptions of current economic conditions and expectations about future business conditions as well as their own financial situation (Table 1). On each survey, three of the five questions ask about consumers' expectations; the Conference Board survey asks about expected changes in business conditions, employment conditions and respondents' income over the next six months. The Michigan survey asks respondents about expected business conditions over the next year and over the next five years and about expected changes in their financial situation over the next year. The difference in the content or the time horizons of questions asked between the two surveys seems to have a minor effect on response patterns, as the expectations components in the above mentioned surveys are highly correlated with each other. As Figure 2 portrays, the trend between Michigan's and Conference Board's expectations components is fairly comparable even in the turning points of the economy, with a correlation of 82% for the whole period of 1978-2011 as well as during the economic rebounds.

Figure 1



Source: The Conference Board, Thomson Reuters/University of Michigan, Ecowin

Looking at the present conditions components of the two consumer indices, while they do have a high correlation with each other for the whole period of 1978-2011 (78%), they actually have a different cyclical behavior at turning points of economic activity. As is evident in Figure 3, the Michigan's present conditions component begins its upward trend in the early stages of economic recovery, when negative GDP growth rates

are followed by strong quarterly growth rates. On the contrary, the Conference Board's present situation component generally starts to increase in the later stages of economic expansion (on average, 3-4 months after the Michigan's index), when the labor market has improved and the level of economic activity is higher. Indeed, the correlation between the two present conditions components at turning points of the economy declines from 78% to about 50%.

Table 1: Component Questions of Consumer Confidence Indices

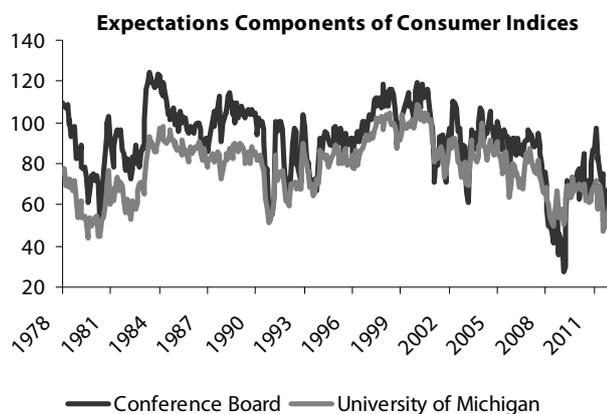
University of Michigan Survey	Conference Board Survey
<i>PRESENT CONDITIONS INDEX</i>	<i>PRESENT CONDITIONS INDEX</i>
1) Do you think now is a good or bad time for people to buy major household items? [good time to buy/uncertain, depends/bad time to buy]	1) How would you rate general business conditions in your area? [good/normal/bad]
2) Would you say that you (and your family living there) are better off or worse off financially that you were a year ago? [better/same/worse]	2) What would you say about available jobs in your area right now? [plentiful/not so many/hard to get]
<i>EXPECTATIONS INDEX</i>	<i>EXPECTATIONS INDEX</i>
3) Now turning to business conditions in the country as a whole, do you think that during the next 12 months, we'll have good times financially or bad times or what? [good times/uncertain/bad times]	3) 6 months from now, do you think business conditions in your area will be? [better/same/worse]
4) Looking ahead, which would you say is more likely, that in the country as a whole we'll have continuous good times during the next 5 years or so or that we'll have periods of widespread unemployment or depression, or what? [good times/uncertain/bad times]	4) 6 months from now, do you think there will be [more/same/fewer] jobs available in your area?
5) Now looking ahead, do you think that a year from now, you (and your family living there) will be better off financially, or worse off, or just about the same as now? [better/same/worse]	5) How would you guess your total family income to be 6 months from now? [higher/same/lower]

Source: The Conference Board, Thomson Reuters/University of Michigan

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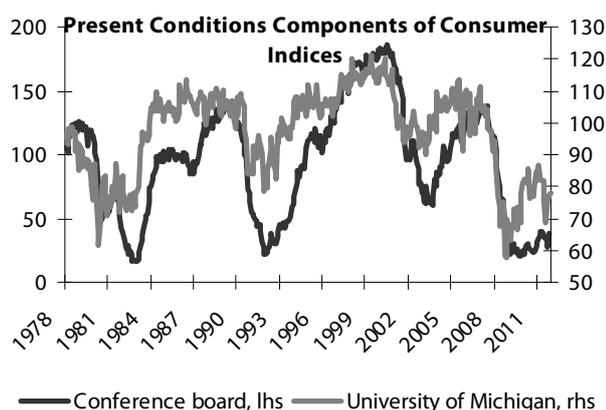
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Figure 2



Source: The Conference Board, Thomson Reuters/University of Michigan, Ecowin

Figure 3



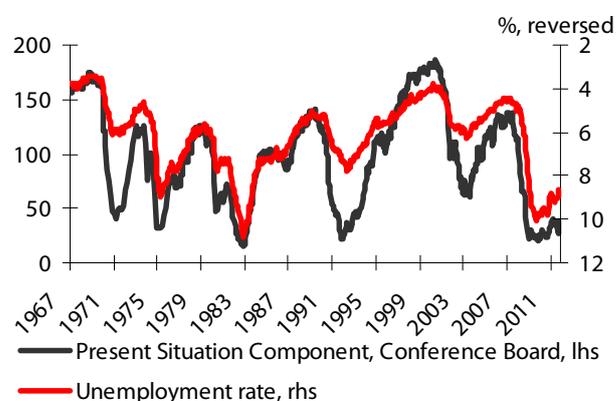
Source: The Conference Board, Thomson Reuters/University of Michigan, Ecowin

The different cyclical behavior between the two present conditions components is mainly attributed to the different questions asked for their construction. The Michigan survey for the Current Conditions Index asks respondents whether it is a good or bad time for expensive household purchases and to evaluate changes in their personal financial situation. In contrast to the University of Michigan's consumer survey, the Conference Board survey for the Present Situation Index asks not only about current business conditions, but also about changes in the employment outlook. Therefore, the Conference Board's present situation component closely tracks labor market conditions, asking specifically about job availability in the respondent's area. This is particularly evident in Figure 4, which portrays the strong negative correlation (-90%) between the rate of unemployment and the Conference Board's Present Situation Index. In contrast, the Michigan's Current Conditions Index is less closely tied to labor market developments, with a correlation with the unemployment rate of -70%.

Investigating the predictive ability of the two composite indices and their sub-indices for real personal consumption and

industrial production during 1978-2011, we find that the expectation components of each of the two composite indices have the strongest predictive ability for changes in real personal consumption and industrial production in the following month, compared to the composite indices and the present conditions ones. In addition, the predictive ability of each of the expectation sub-indices for monthly changes in industrial production is much stronger than the one for personal consumption (Table 2). Indeed, the correlation between both indices and personal consumption is just 20%, while the correlation between Michigan's and Conference Board's components and industrial production is 32% and 40%, respectively.

Figure 4



Source: The Conference Board, US Bureau of Labor Statistics, Ecowin

Looking separately at turning points of real economic activity, the most important outcome of our research is that the Michigan's expectations index has a way stronger predictive ability for real personal consumption (with an average correlation of about 30%, compared to an average correlation of 20% for the whole sample of 1978-2011), whereas the Conference Board's expectations index has no predictive ability for personal consumption at economic rebounds (Table 3). This evidence may reflect the fact that the Conference Board survey asks specifically about job availability over the next six months, while the Michigan survey asks respondents to assess the general economic situation during the next five years (good times or periods of widespread unemployment or depression, see Table 1).

As far as industrial production is concerned, we find mixed evidence, as the Michigan's expectations index has a stronger predictive ability at economic rebounds in the 1980s and the 2000s, while the Conference Board's index has a stronger predictive ability in the 1990s (Table 4). Last but not least, both expectations indices fail on average to predict real personal consumption and industrial production growth in economic downturns. This may be attributed to the fact that during expansionary periods consumers become overconfident for their own financial situation as well as general business and economic conditions, so they do not expect a worsening if economic conditions.

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We conclude that the University of Michigan's consumer expectations index is a better indicator for future consumption growth at turning points of the economy. This is also evident at the current economic rebound, where the Michigan's expectations index reached its trough in August 2011, and has increased by about 30% since then, while the Conference Board's expectations index -which is way more volatile- began increasing only in November 2011. Based on the clearly upward trend of Michigan's expectations index in the prior months, we expect an acceleration of real personal consumption growth in the final quarter of the year.

Table 2: Vector Autoregression Estimates

	DIP	DCONSUMPTION
CONF(-1)	0.02 [3.54]* R ² =0.216	0.01 [1.86]* R ² =0.093
CONF_EXP(-1)	0.01 [3.24]* R ² =0.222	0.01 [2.85]* R ² =0.138
CONF_PR(-1)	0.02 [4.26]* R ² =0.212	0.01 [1.22]* R ² =0.081
MICH(-1)	0.03 [4.38]* R ² =0.224	0.02 [3.26]* R ² =0.136
MICH_EXP(-1)	0.02 [3.77]* R ² =0.217	0.02 [3.44]* R ² =0.145
MICH_PR(-1)	0.03 [4.46]* R ² =0.207	0.01 [1.91]* R ² =0.106

Source: Eurobank EFG estimates

Notes: Table 2 reports the coefficients of the dependent variables Dip and DConsumption on the independent variables Conf(-1), Conf_exp(-1), Conf_pr(-1), Mich(-1), Mich_exp(-1), Mich_pr(-1). Numbers in parenthesis are the t-statistics of the coefficients. R² is the R-squared. In addition,

Conf= Conference Board's Consumer Confidence Index
Conf_exp= Conference Board's expectations component

Conf_pr= Conference Board's present situation component
Mich=University of Michigan's Consumer Sentiment Index
Mich_exp= Michigan's expectations component

Mich_pr= Michigan's current conditions component
Dip= % monthly change in industrial production index
DConsumption= % monthly change in real personal consumption expenditures
R²=R-squared
*Numbers in parenthesis are t-statistics.

Table 3:
Correlations between the Expectation Components of Consumer Confidence Indices and changes in Real Personal Consumption in the following month at economic rebounds (6-month period around each trough)

	Michigan	Conf Board
April '80	15%	-41%
March '82	31%	-6%
October '90	19%	-6%
July '93	20%	1%
October '98	52%	35%
March '03	26%	-7%
February '09	32%	32%
Average	28%	1%

Source: Eurobank EFG estimates

Table 4:
Correlations between the Expectation Components of Consumer Confidence Indices and changes in Industrial Production Index in the following month at economic rebounds (6-month period around each trough)

	Michigan	Conf Board
April '80	85%	67%
March '82	63%	23%
October '90	82%	71%
July '93	23%	41%
October '98	50%	60%
March '03	45%	72%
February '09	63%	32%
Average	59%	52%

Source: Eurobank EFG estimates

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