TD Bank Financial Group

TD Economics

Special Report

May 22, 2008

PREDICTING THE U.S. RECOVERY: SOME LEADING INDICATORS ARE BETTER THAN OTHERS

It is a widely held belief among market participants that the U.S. economy is either already in a recession or very near to one. It's really not a hard sell. In the past year, wealth has vanished from homeowners, financial assets have disappeared from corporate balance sheets and, more recently, jobs are leaving the economic landscape. Houdini would have been hard-pressed to match this disappearing act.

It no longer seems logical to remain fixated on whether the U.S. is mired in a recession or not, this is old news with plenty of substantiating evidence. GDP data indicated that the economy barely grew in the past six months (October 2007-March 2008). In the very best of cases, the U.S. will narrowly miss a recession. Should this occur, it would be an arithmetic outcome with indiscernible macro consequences relative to a shallow recession. In other words, there is only an optical difference between an economy that grows by 0.6% *annualized* in each of two quarters versus one that contracts by the same amount over the same period. A mild inventory swing is all it would take to produce one outcome over the other.

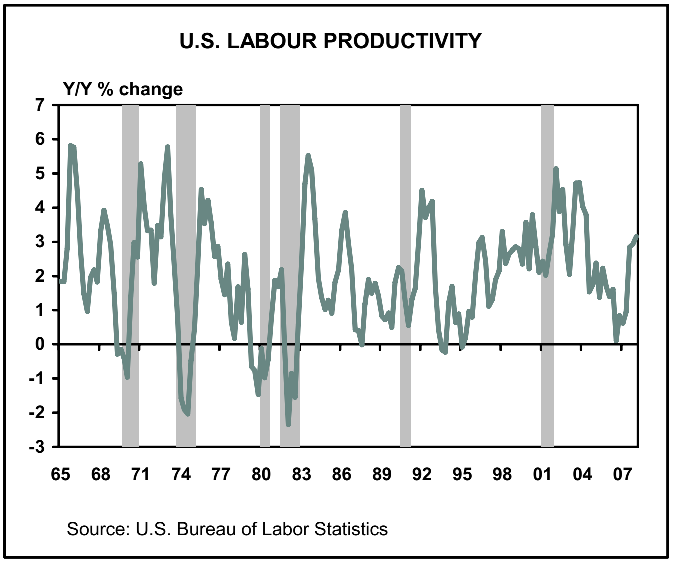
At this stage in the economic cycle, the next logical step is to try to gauge when the economic recovery will take hold. To do so, we combed through a number of leading economic and financial indicators to identify the best predictors. It was found that financial data tend to be superior to economic data, both in their timeliness and likelihood to provide fewer false signals of recoveries.

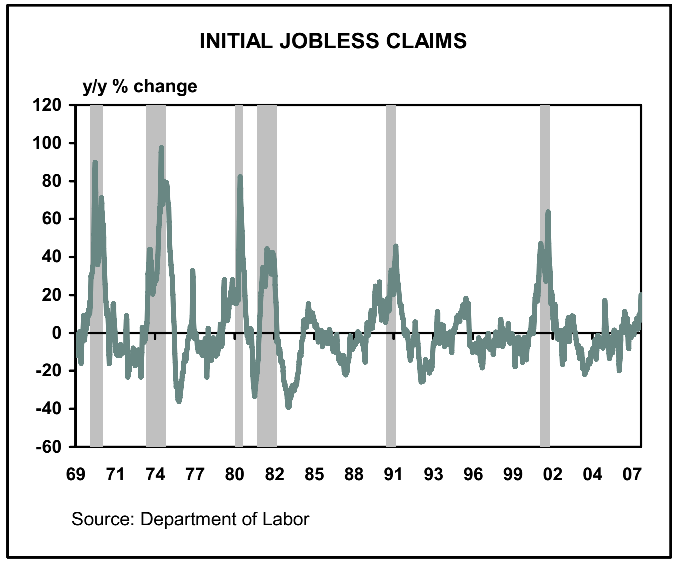
HIGHLIGHTS

- **With the U.S. economic downturn already underway, the next logical step is to gauge when the recovery will take hold.**
- **Leading economic indicators like residential permit issuances and new home sales tend to turn ahead of the broader economy, but the predictive lead time to an economic recovery varies across recessionary cycles and can be quite long.**
- **Financial indicators tend to be superior to economic data, both in their timeliness and likelihood to provide fewer false signals of recoveries.**
- **Financial indicators are signaling that an economic recovery could be underway by the third quarter.**

Don't look to the labour market for guidance

In TD Economics' special January report "The Five Finger Guide: Economic Data that Provide a Heads-up to a U.S. Recession", we identified the 6-month change in private sector employment as one of the best predictors of a recession. This economic indicator was six for six in calling a recession when the growth rate slowed to a 0.6% pace, it had sent no false signals over the four-decade period, and it had the added advantage of predicting a recession with a short lead time of 1-3 months. Unfortunately, we did not find an economic indicator with this type of consistency or timeliness in predicting an economic recovery. In fact, economic indicators that make good leads to a recession don't necessarily make good predictors of a recovery. Such was the case for the 6-month trend in private sector employment, which proved one-sided in its predictive power. When an economy begins to recover, employers tend to meet increased demand by getting more productivity out of the existing workers. Statistically, this phenomenon shows up in labor productivity, where growth





strengthens as an economy moves through the initial stages of recovery. It was found that the 6-month trend in private sector employment did not bottom until months after the official end of a recession. And, even subcomponents like manufacturing or service sector employment did not provide a discernable or convincing case.

Top three leading economic indicators for a recovery

Although trends in non-farm payrolls data offered no insight into the early stages of an economic recovery, a number of other economic indicators did. In particular, residential permit issuances, new home sales and initial jobless claims data all displayed turning points in advance of the official end to a recession. However, these indicators were like Dorothy's friends from the Wizard of Oz: each was missing one key element that would complete them as a truly reliable predictor of a recovery. As such, none of the indicators should be looked at in exclusion of the others.

To identify the turning points, it is not necessary that the rate of change within these indicators go from a state of contraction to one of growth. Rather, the necessary condition is only that a trough materializes and that the rate of change for the indicator begins to show improvement (i.e. a less negative trend).

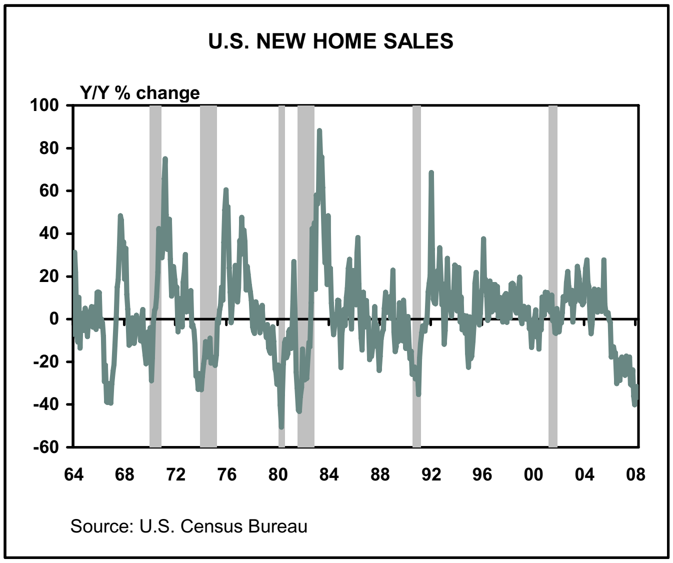
Initial Jobless Claims

The year-over-year growth rate in initial jobless claims tended to peak within 2-4 months of the end of a recession, providing a relatively short lead time to the recovery. With general consistency the growth rate would peak at levels in excess of 40%, and in some cases climbed to as high as 80%. However, the indicator has one major flaw: it sends false signals with high frequency. In four of the past six recessions, false signals occurred and largely took place within the first four months from the start of the recession.

In the current economic cycle, the annual growth rate in initial jobless claims hit a high of 20% at the end of March, and has since hovered within a tight 13-17% range. One might be inclined to perceive this as a preliminary sign that the economy will be in recovery-mode by early-summer. However, we believe the 20% 'peak' will prove false as time goes on for two reasons. First, the annual growth rate has not embarked upon a decisive downward movement, but rather seems stuck in a narrow growth range. And second, the 'peak' of 20% occurred very early in this recession cycle, which likely commenced sometime in the first quarter. This is within the time period when this indicator had false starts during past recessionary cycles.

Residential building permits & new home sales

Recessions are not created equal. Since the current economic downturn is rooted in a housing market crash, residential permit issuances and new home sales may be particularly helpful in predicting the turning point towards a recovery. For residential permits, we looked at the 6-month annualized change, while the year-over-year change was the focus for new homes sales. The growth rates for both have a decent track record in hitting a trough in advance of the official end to the recession. And, both indicators have the added advantage of not being highly prone



to false signals. The one disadvantage with both, however, is that the predictive lead time to an economic recovery varies widely across cycles and can be quite long for some, as much as 10-15 months in three of the recessions. So even once a trough in the growth rate is established, the timing of a recovery remains highly uncertain.

However, during the 2 periods when the U.S. economy experienced a sharp housing downturn – the early 1980s and early 1990s – the trough in the growth rate for both indicators did not have a false start and was reliable in predicting an end to the recession within 3-to-4 months. If history repeats, these indicators are worth keeping your eye one. The current data extends only to March, and so far it looks like the growth rate in both measures is still deteriorating.

Manufacturing ISM index cues expansion

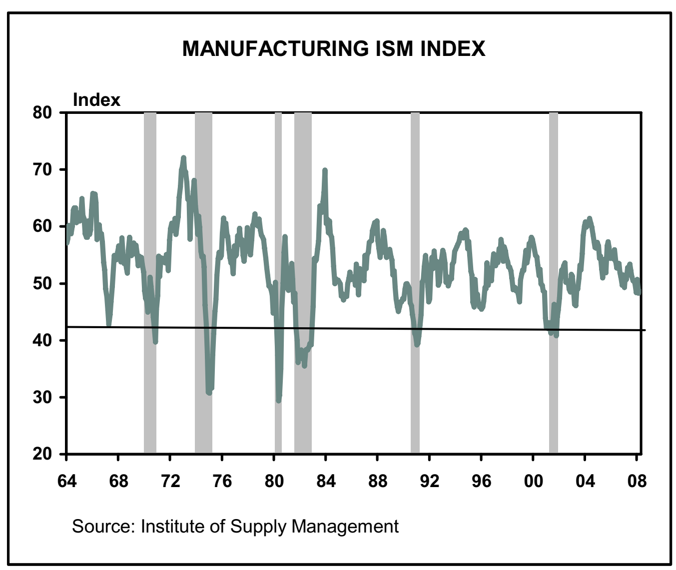
To our surprise, a closely-followed leading indicator – the manufacturing ISM index – did not provide a heads-up to the end of recessions. But, it does let markets know when an economy is in the preliminary stages of a recovery. This is particularly helpful because the NBER can take as long as 18 months to officially date a recession, so markets don't have a clear marker of when an economy is turning the corner until it's already well underway. And, the data during the early stages of a recovery can send mixed signals, with the message confused or challenged by deterioration in other well-watched market indicators, such as employment.

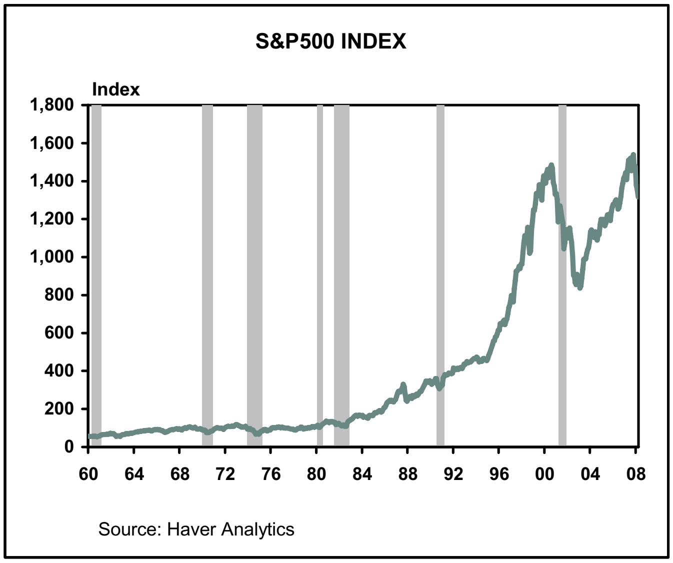
According to the Institute for Supply Management, an index in excess of 41.1, over a period of time, generally indicates an expansion of the overall economy. However, by the official end of all but one recession (2001), the ISM index was still sitting below that threshold. And in most cases, there was not a discernable pattern that the trough was already in the rear view mirror or that the index was improving. However, with remarkable consistency, just one month after the official close of a recession, the index pops above the 41.1 level and is sustained thereafter. The only exception was in 1975 when the index didn't break above the threshold until the second month from the close of the recession.

In this cycle, the ISM index has not yet hit 41.1, and unless it does, the behaviour of past recessions will not be of much value this time around. Rather, market participants may find greater insight by looking at the new orders index subcomponent, which closely mirrors the headline index. Although there is no stated break-even threshold for this subindex, the 46 level does seem to be an implicit threshold. With the exception of the 2001 recession, every time the subindex returns to the 46 level (or greater) and continues to trek higher, the economy is either in the first or second month of a recovery. Although the subindex is sitting at 46.5 in the current cycle, it has stalled at that level for two consecutive months and the direction has been towards deterioration not improvement, suggesting it may not yet have hit bottom and more weakness could be in the offing.

Financial indicators work best

Financial indictors are timelier than economic data, and also tend to be better predictors of a recovery due to more





consistent lead times. The stock market is viewed as one such forward-looking indicator for a number of reasons. Under traditional valuation models, stock prices reflect market participants' expectations of discounted future earnings (i.e. expectations about the future economy). In terms of more direct economic impacts, when stock wealth rises, so too does household wealth, and this trickles down through the real economy by lifting consumer confidence and spending. Rising stock prices could also prompt greater investment by firms, since it lowers the cost of raising funds, while also improving balance sheets.

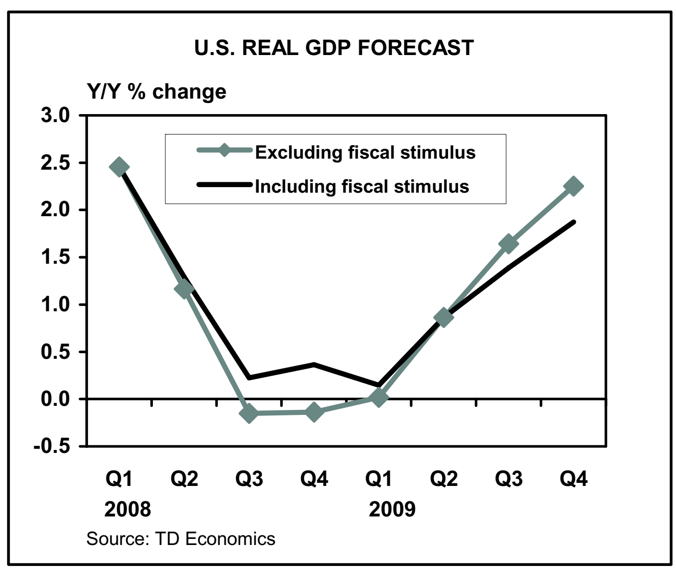
Rather than focusing on the rate of change, as we did with most of the economic data, the trough in the *level* of the S&P500 index is a better guide of a recovery. With consistency, the index has troughed 3-6 months in advance of the official end of each of the past six recessions. False signals were sent in the 1974/75 and 1981/82 episodes, but there may be some telling markers that can help us distinguish such occurrences. For instance, three months following the 'true' trough in the level of the S&P index, the average monthly values show considerable gains, no less than a 9% gain from the trough and as much as 25%. In the two false-trough periods, the index started to backtrack within 4-9 weeks and could only reach the lower-bound gain of 9% before doing so. In the current cycle, one of these markers of a false start has been surpassed. The S&P index hit a preliminary trough in mid-March following the Bear-Stearns incident. The index is currently in its 10th week of recovery, but is up by less than 9% so far.

It is important to bear in mind that the false-start markers are not hard-and-fast rules, but rather observations in a narrow sample. We would need to see at least a couple more weeks of gains in the S&P500 index to build confidence that the indicator is signaling the beginning of an economic recovery that would likely take hold by the fall of this year.

Should this occur, this outcome would be consistent with our view, although distortions are created in headline GDP growth due to the one-time fiscal stimulus injection. Although we believe sustained and convincing strength in the U.S. economy won't materialize until the second half of 2009, the third quarter of 2008 actually marks the trough in the economic cycle within our forecast. Without the fiscal stimulus effect, the annual growth rate in real GDP is forecasted to bottom at -0.2% in that quarter before gradually edging up to 2.3% by the end of 2009. However, since it is necessary to incorporate the stimulus impact, the annual growth rate is lifted slightly to +0.2% in the third quarter of 2008 due to greater consumer spending. Since the spending boost is only temporary, the unwinding of this impact along with adjustments to inventory and import demand cause GDP growth to stagnate at or slightly above that level for another two quarters before edging up 1.9% by year-end 2009. For further forecast details please see the TD Economics report "Quarterly Economic Forecast", March 2008.

10-year Treasuries - Fed funds spread

Historically, a return to a positively sloped yield curve has also been a good predictor of an impending economic recovery. The broad sweeping logic is that a negative or flat yield curve reflects soured market sentiment over the



long-term outlook. Dampened economic growth and inflation expectations cause investors to increasingly move assets into the safety of longer-term government bonds (i.e. flight to quality). The result: longer-dated bond prices rise and yields fall. As economic concerns begin to abate, income flows reverse, causing the yield curve to steepen. In turn, a steeper yield curve improves the profitability of lending institutions, thereby providing greater prospects for stronger credit growth to underpin business investment and consumer spending.

It is not sufficient to just have a positively sloped yield curve. The wider the positive spread (or the steeper the yield curve), the greater the odds that a recovery is close at hand. When the 10-year Treasury-Fed funds spread widens to 100 basis points, an economic recovery tends to follow within 3-7 months. This indicator has only sent one false signal among the past 6 recessions, making it a fairly reliable guide. The interest rate spread in the current cycle crossed the 100 basis points threshold in late March and has widened considerably since then. It is currently holding within a 180-190 basis points range, the level that tends to signal that an economic recovery is in the offing.

Conclusion

As we've noted above, a number of traditional economic indicators can provide a guiding light towards a recovery. However, due to the lagged nature of the data and often long or inconsistent lead times in which they signal an expansion, these indicators can make it difficult to time a recovery. The financial data do a better job in providing reasonably short lead times with consistency across recession cycles. Both financial indicators – S&P500 index and yield spreads – are signaling that a recovery is within grasps over the next six months, and we agree with that possibility. But before breaking out your dancing shoes, there are two important considerations to keep in mind. First, a signal of an economic recovery does not imply a quick return to economic strength. Rather, it merely implies a trough in growth. Beyond this point, the recovery can certainly be a gradual, sluggish process, as we expect will be the case in the current cycle. Second, because this economic downturn has the unusual markings of a severe and unprecedented credit crunch, we cannot dismiss the possibility that the financial market indicators will be more prone to false signals than in past recession episodes.

Beata Caranci
Director of Economic Forecasting
416-982-8067

LEAD TIMES: MONTHS IN ADVANCE OF END OF RECESSION

	1970	1974/75	1980	1981/82	1990/91	2001
Economic Indicators						
New orders ISM index (46 level)	6	no (2 mth after)	no (1 mth after)	no (1 mth after)	no (1 mth after)	7
Residential permits (6-mth ann)	11	8 (1 false)	4	14	3	3
New home sales (y/y %)	10	15 (1 false)	4	10 (1 false)	3	2
Initial jobless claims (peak y/y%)	7 (1 false)	16 (1 false)	9	13 (2 false)	1 (2 false)	6 (1 false)
Financial Indicators						
10-year Treasuries - fed funds rate (+100bps)	3	2	1	5 (1 false)	3	7
S&P 500 Index (trough)	6	4 (1 false)	4	5 (1 false)	6	3