

RESEARCH

EXECUTIVE SUMMARY

The United States economy has recovered from the significant downturn stemming from the collapse of the real estate market in 2008. In 2009, thanks to a number of aggressive actions by the federal government and sound responses to the crisis from the Federal Reserve, the U.S. economy is poised for a significant recovery.

Our analysis of leading economic indicator variables indicates that the U.S. economy will see a significant rebound and should experience a moderate to robust expansion in the first three quarters of 2010.

RESEARCH TEAM

Chiao-Feng Hung • Matthew Cedergren Linlin Yu • Pei-Yu Lu • Jianyun Feng

U.S. ECONOMY AT A GLANCE

2009 real GDP (est.) \$14.26 trillion 2009 real GDP growth -2.4% 2009 real GDP per capita \$46,400 2009 real GDP composition: Agriculture 1.2%

Industry 21.9% Services 76.9%

2009 unemployment rate 9.4%

2009 government budget:

Revenues \$1.914 trillion Expenditures \$3,615 trillion Surplus (deficit) \$1,701 deficit

2009 public debt 52.9% of GDP

2009 inflation -0.7%

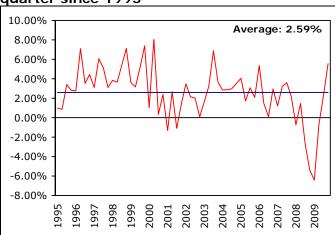
HISTORICAL GDP

Since 1995, annualized GDP growth in the United States has averaged approximately 2.59% per quarter. During this time, growth ranged from a low of -6.43% to a high of 8.03%.

Figure 1 below summarizes annualized real GDP growth in every quarter since 1995. The downturns which occurred after the crash of the technology bubble in 2000 and the crash of the housing bubble in 2008 are quite prominent.

Overall, the behavior of the U.S. economy demonstrates that it has grown at a pace not dissimilar from historical averages, though volatility has increased recently, with two major bubbles forming (and bursting) within the last fifteen years.

Figure 1 — Annualized GDP growth per guarter since 1995



GDP vs. Industrial Production

While real gross domestic product (GDP) is the standard measure of a nation's economic performance, we will use industrial production as a proxy for economic performance, for several reasons:

- Industrial production numbers are reported monthly, whereas GDP numbers are reported quarterly.
- Industrial production numbers are released more quickly than are GDP numbers.
- Industrial production numbers generally can be measured more accurately than GDP numbers can, and are thus subject to fewer future revisions.
- Though industrial production levels display slightly more volatility than GDP, they follow the up and down movements of GDP reasonably well.

ECONOMIC INDICATORS

In assessing near-term prospects for the U.S. economy, Barclays examines a number of "indicators," or variables, which we believe give clues as to future economic performance. In particular, we examine five indicators in close detail. These five indicators are then considered together to give an overall, balanced assessment of the economy.

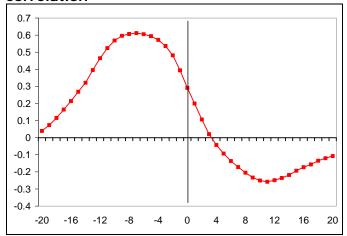
Additionally, these indicators have historically demonstrated to be "leading" indicators, that is, movements in these indicators tends take place ahead of economic changes. We describe these indicators below.

Consumer Confidence

Measurement To gauge consumer confidence, we examine the most popular measure of consumer confidence, with is the Consumer Sentiment Index published by the University of Michigan. The data are collected by the University of Michigan through telephone surveys of 500 random consumers after the end of each month. The index is standardized with a base year of 1964 and base value of 100.

Usefulness Consumer confidence has historically demonstrated to have strong predictive value of future economic performance. Intuitively, when consumers are more confident about the future economy and their own prospects, they tend to open their wallets, which spurs economic growth and business output in the future. Figure 2 below shows the strong cross-correlation between year-over-year growth in consumer confidence and year-over-year growth in industrial output. The cross correlation peaks at 0.612 for lags of 7 months prior. Additionally, consumer confidence has proven to be a stable measure. The index is computed through a standard formula and thus is not subject to future revision. Finally, since the surveys are done immediately after the end of each month, the data are timely.

Figure 2 — Consumer confidence crosscorrelation



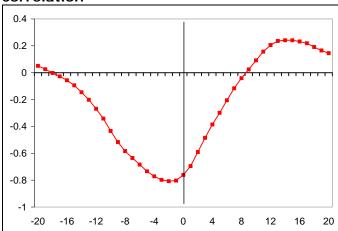
(Note: In this and all other cross-correlation plots, lag is on the x-axis while correlation is on the y-axis)

Unemployment / Jobless claims

Measurement To get a good sense of the unemployment picture, we examine new claims for unemployment insurance nationwide. New claims are reported by the US Department of Labor each Thursday based on the 4-week moving average of new jobless claims. Note that in our internal regression models, we use the weekly report closest to the 15th of each month to keep the data consistent.

Usefulness New claims for unemployment insurance (UI) are considered a good countercyclical leading indicator for several reasons. Cross correlation between US initial jobless claims and industrial production (Figure 3) shows that new claims exhibit the strongest level of negative correlation two months ahead of industrial production. Intuitively, we would expect that a decrease in new unemployment claims would signal business optimism in future economic prospects. The cross correlations computed confirm this belief. Additionally, the data are taken from the government's own records on unemployment claims, so the data are reliable and reported quickly by the Labor department.

Figure 3 — First-time jobless claims cross-correlation



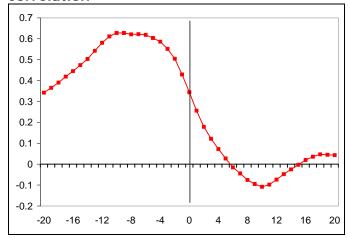
Building Permits

Measurement Data for issued building permits (along with data for new housing starts) are released by the US Census Bureau, Department of Commerce and Department of Housing & Urban Development during the third week of each month covering the previous month. The data are reported as thousands of permits for new housing units.

Usefulness We believe the number of issued building permits is a good economic indicator for several reasons. Real estate construction is a capital-intensive industry requiring long-term investment. Home builders must gauge demand several months ahead of time and adjust their inventory accordingly. Intuitively, then, changes in the number of new building permits issued in a given month give us insight into expected future economic performance. As we observe in the cross-correlation analysis in Figure 4, housing permits reflect anticipation for future housing demand. Hous-

ing permits are considered a good procyclical leading indicator for general health of the economy. The data exhibits strong positive correlation with industrial productions, peaking at over 0.6 between -6 and -12 months.

Figure 4 — Building permits crosscorrelation

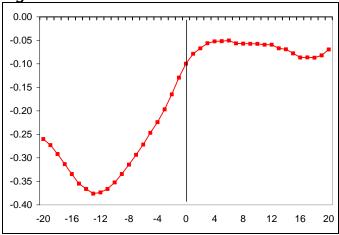


Inflation

Measurement Our data for inflation are the year-over-year changes in the Consumer Price Index, which is measured and published by the U.S. Department of Labor's Bureau of Labor Statistics. The CPI is one of the most closely followed economic statistics in the country—it is widely cited by both academic and professional economists.

Usefulness High inflation rates negatively affect domestic capital markets and financial transactions. The decline in purchasing power of money undermines investor confidence in the economy. As more assets are reallocated to hedge against such exposures, we see a corresponding decrease in investment, which typically leads to lower future output. The cross correlation chart below confirms this countercyclical relationship. We see a peak in correlation of -0.376 at a lag of 13 months prior.

Figure 5 — Inflation cross-correlation

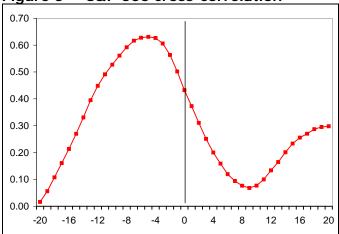


Equity Market Returns

Measurement To measure equity market returns, we use the Standard & Poor's 500 index, which is a widely known stock market index. The S&P 500 Index is a capitalization-weighted index which has been published since 1957. It is composed of 500 large cap, actively traded companies in United States.

Usefulness Stock market performance is widely viewed as exhibiting a strong positive correlation with the economy. When the economy is about to expand, aggregate demand increases, and investors will have more confidence in strong corporate earnings. In general, market returns tend to reflect the market's future expectations of corporate profits and economic performance. This is confirmed by Figure 6 below, which shows that the cross-correlation reaches a peak of 0.631 at a lag of 5 months prior.

Figure 6 — S&P 500 cross-correlation



ANALYSIS OF INDICATORS

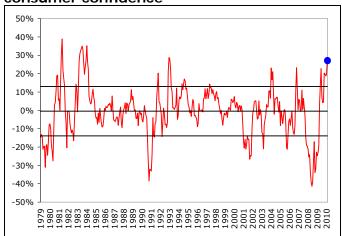
We have described the indicators used in our analysis and our rationale in using these particular indicators. In this section, we analyze recent performance of these indicators, and what each indicator (considered individually) potentially says about future macroeconomic performance in the U.S.

Consumer Confidence

Analysis Consumer confidence took a significant dive with the bursting of the housing bubble in 2008 and the subsequent downturn in the economy. However, the economic stimulus package passed by the U.S. Congress and signed into law by the President brought much needed economic relief to hard-hit areas of the country. It also did much to lift the spirits of American consumers, as the consumer sentiment index has been up in recent months.

Figure 7 below shows the trend in year-over-year growth of the consumer sentiment index. As we can see, the recent growth in consumer sentiment is well above the historical mean—over a standard deviation above. This could be considered as a sign of potential future strong economic performance.

Figure 7 — Year-over-year growth in consumer confidence

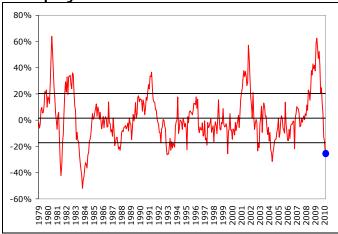


Note: In this and all subsequent time series plots of indicator variables, the three horizontal bars represent the mean value, and +1 and -1 standard deviation above the mean. The blue dot indicates the most recent data point (February 2010) which we use in our analysis of future economic performance.

Unemployment / Jobless claims

Analysis In Figure 8, we see that jobless claims increased sharply in the second half of 2007, then peaked in 2009 as the economy experienced one of the worst recessions in decades. The claims then dropped precipitously after 2009. The latest data released on February 25, 2010 indicate a 4-week moving average level of 453,750, which is considerably lower than the peaks in 2009 but is still higher than historic levels. We also note that the latest year-overyear growth is outside -1 standard deviation of historic movements, indicating that unemployment claims are decreasing. Additionally on the positive side, the sharp decrease of the number of new claims after mid 2009 could indicate that the economy is well underway to a solid recovery.

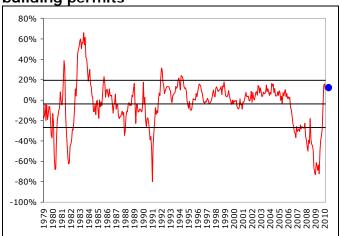
Figure 8 — Year-over-year growth in unemployment insurance claims



Building Permits

Analysis As shown in Figure 9, the year-over-year rate of growth in the number of issued housing permits has improved continuously since mid-2009, indicating a strong recovery for future demands and increased confidence for the real estate market. The latest data released on February 16, 2010 show 612,000 issued building permits and new housing starts of 575,000 over the previous month. Based on Figure 9, the latest data point for February 2010 indicates the number of housing permits is within +1 standard deviation of historic activities. This places building permits as a general positive indicator in terms of our outlook for the U.S. economy. Our findings coincide with the general belief that the demand and average price for residential real estate market have been steadily recovering since early 2009.

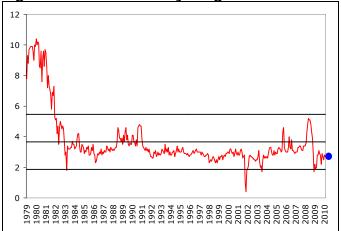
Figure 9 — Year-over-year growth in building permits



Inflation

Analysis Despite the massive expansions in the nation's monetary base and government debt to finance bank bailouts, stimulus programs, nationalized health care, wars and U.S. military occupations, there have not been significant increases in inflation, as measured by consumer prices in the CPI index. This reflects consumers' desire to hold on to their savings in uncertain times. However, given the increases in consumer confidence we observed earlier, this could signify greater willingness on the part of consumers to open their wallets and increase their discretionary consumption. This could unleash a wave of inflation, which the government and central bank will have to deal with later. For now, however, we observe that the most recent inflation rate is within one standard deviation below the historical mean, which could signal moderately positive prospects for economic growth in the near term.

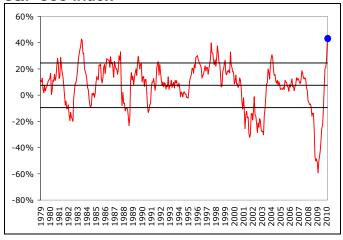
Figure 10 — Year-over-year growth in CPI



Equity market returns

Analysis After the stock market crashed in 2008, the market rebounded considerably in 2009. Part of this perhaps reflects rebounding after a reactionary sell-off in the heat of the crisis. Part of it, however, reflects genuine optimism in both consumers and businesses in future economic prospects. We note that the most recent year-over-year growth in the S&P 500 is above one standard deviation above the mean. This signifies strong prospects for the future U.S. economy.

Figure 11 — Year-over-year growth in the S&P 500 index



PUTTING IT ALL TOGETHER

We have discussed and analyzed each of the five indicator variables in isolation, and what each of them individually signifies for the near-term U.S. economy. We now consider all five of the variables together.

In the analysis of each of these variables, we noted where the most recent value was in terms of historical means and standard deviations. Each of these variables is categorized as "positive" or "negative" depending on what side of the mean the most recent data point was (i.e., indicating positive or negative future economic performance). If the variable was beyond one standard deviation, it is classified as "strong" and if it was within one standard deviation, it is classified as "weak."

The indicator variables are summarized in the "economic scoreboard" which we present in Table 1 below.

Table 1 — Economic scoreboard

Table 1 Es	Strong Negative	Weak Negative	Weak Positive	Strong Positive
Consumer confidence				х
Unemployment insurance				х
Building permits			х	
Inflation			X	
Stock market returns				х

OVERALL ASSESSMENT

The economic scorecard above indicates that all indicator variables are either "weak positive" or "strong positive." The variables considered together thus signify good near-term prospects for the U.S. economy. Based on our detailed regression analysis, we believe that U.S. industrial production year-over-year growth will average 2.97% over the next three quarters, and a 95% confidence interval for that forecast is 2.23% through 3.70%. Detailed results of our regression model are available upon request.

CONCLUDING REMARKS

In this analysis, we have observed that the U.S. economy has recovered nicely from the downturn of 2008 and related financial crisis which nearly took down the entire financial system and threatened mass panic among the general investing public. Through our extensive analysis of indicator variables, their correlations with overall economic output, and historical performance versus today, we determined that the U.S. economy is poised for significant growth in the first three quarters of 2010. To reiterate our main message from above:

Our analysis of leading economic indicator variables indicates that the U.S. economy will see a significant rebound and experience a moderate to robust expansion in the first three quarters of 2010.