

Economy Watch

How long will the US economy continue to accelerate?

Economic forecasters rely so heavily on extrapolation that there's a pronounced consensus among them — much more clustering than the actual unpredictability of the economy would suggest.¹ Trend following also helps explain why most forecasters are so late to catch turning points.

Another piece of common ground for forecasters is the “business cycle.” For investors who see it as a major force in asset allocation and sector rotation, much hangs on “recognizing the different phases of an economic cycle,” in the words of a recent Fidelity paper on stock-market sector investment.

The trouble is that a fixed opinion about which phase is underway at a given time can lead to overconfidence in recognizing which phase will arrive next. In late 2016, for example, Fidelity's model portrayed the US as “experiencing a mix of mid- and late-cycle dynamics.” The implications of that turned out to be at odds with the acceleration in GDP growth during 2017. It's during “the early phase of the business

The surge in US GDP growth in 2017 could have been foreseen by monitoring another aspect of the national income and product accounts: the volume of intermediate transactions.

cycle” that “growth is rising at an accelerating rate.”²

This mis-match is putting the business-cycle approach itself to a severe

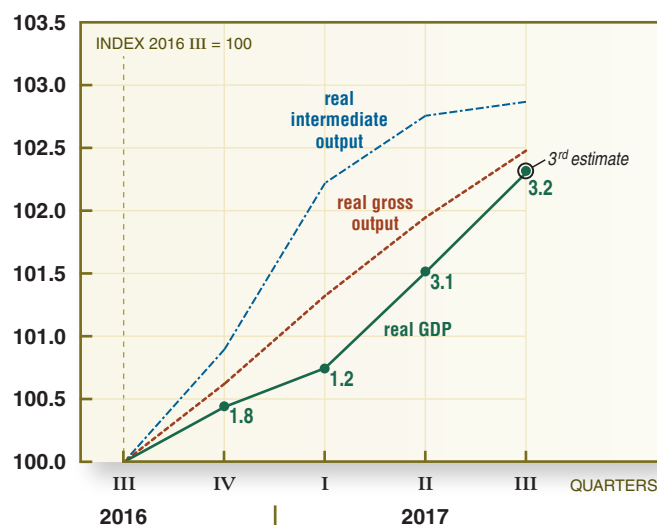
test. Was the 2017 acceleration in GDP a glitch? Or did the economy jump from late-cycle to early-cycle status without passing through the downturn phase? Have such jumps occurred in the past? Could it be that the occurrence of accelerations and decelerations in economic growth is largely random?³

The business cycle is a convenient and long-established teaching tool, but it's open to question whether its repeated sequence of phases represents reality or just theory. If stable growth can be interrupted by a downturn or upturn at any time. Then the sequence of “cyclical phases” would be unpre-

Figure One

Recent Growth of GDP Compared with Leading Indicators from Intermediate Transactions

from the third quarter of 2016



Data: Seasonally-adjusted quarterly chain-type quantity indices of gross domestic product, gross output, and intermediate inputs (Bureau of Economic Analysis).

1. “Consensus’ thinkers disagree about the economy, but they still think alike,” *The Capitalist Perspective*, HCWE & Co., January 23, 2007.
2. “Sector Investing Using the Business Cycle,” *Fidelity Viewpoints*, Fidelity Investments, March 29, 2017 at <https://www.fidelity.com/viewpoints/investing-ideas/sector-investing-business-cycle>.
3. That was the conclusion of the author's PhD dissertation at Booth many years ago. R. David Ranson, “The Random Character of Business Fluctuations,” University of Chicago Graduate School of Business, June 1974.

dictable, and the very idea of a “cycle” might be an illusion.

This report looks at the case for further acceleration in US growth into 2018. If we are on the right track, the great advance in risky-asset prices is a fore-runner of good economic news yet to come. We believe the impetus occurred, not with the 2016 election, but a year earlier than that.⁴

US growth in 2017. Quarter by quarter, GDP kept producing upside surprises last year, the latest estimate being 3.2% for the third quarter. Forecasters spent the year 2017 upping their forecasts, and even the official data source, the Bureau of Economic Analysis (BEA), had to revise its early estimates upward. The economic mainstream has been repeatedly wrongfooted, but still doubts the sustainability of this unexpected surge.

According to the *Economist* in mid-December, “few economists expect growth above 3% to carry on for long.” The article cites what it calls the “almost unanimous” opinion of “credible forecasters” that “the sustainable rate of growth, as America’s population greys, is closer to 2% than to 3%.”⁵

Actually, evidence that the “greying” of a population necessarily brings with it lower economic growth is weak; and in any case demography is far too slow-moving to contribute to intermediate-term forecasting.⁶ The “credible fore-

casters” have been wrong. Still, true to form, the consensus is taking its time to recognize the magnitude of the upturn.

On the empirical front, three separate groups of leading indicators suggest that US growth will accelerate further into 2018. The first two groups of indicators – sentiment, and the prices of risky assets – are closely watched already, and everyone has heard what a strong economic picture they portray.⁷

But the third piece of evidence is far less recognized: the volume of intermediate transactions in goods and services – “hard” data from the national income accounts themselves. We have called this “intermediate output” in past publications, but in government documents it appears under the heading of “intermediate inputs” (II). Transactions, of course, represent both inputs and outputs. In this report we will use both terms interchangeably to represent the volume of intermediate transactions, which we will express in real terms on a seasonally-adjusted basis.

As explained in earlier papers,⁸ intermediate output is that part of national transactions activity in goods and services which by convention is not included in gross domestic product. GDP includes only the transactions in which final users

purchase goods and services; it leaves out the whole prior chain of intermediate transactions stretching from unskilled labor and raw materials to output in its final form. The sum of GDP and this intermediate part of the economy is the total volume of economic activity, which official nomenclature inarticulately calls “gross output” or “GO.” It’s nearly double the size of GDP. Figure One compares the growth of gross output and intermediate output with the growth of GDP over the past year.

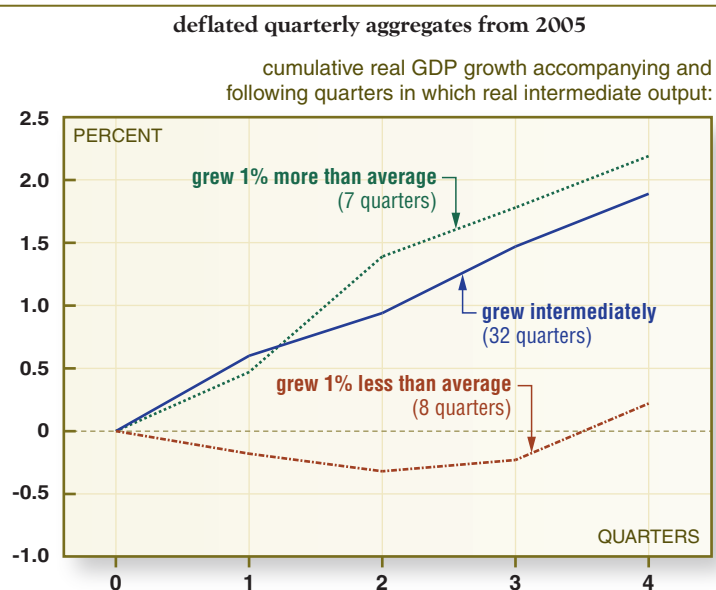
Prior to the third quarter of 2016, all three moved in close parallel, but then a substantial divergence opened up as GDP growth lagged behind the growth of intermediate output. However, just-released third-quarter figures for GO and II confirm that re-convergence has begun. This implies that GDP growth will stabilize in 2018 and perhaps then decelerate.

Intermediate output as a leading indicator.

In an earlier report, we used fiscal- and calendar-year GDP data covering the last 70 years to show that movements in gross output serve as a leading indicator of movements in GDP. And, since GO overlaps with GDP, intermediate output alone moves

4. “A double turning point in the asset-allocation picture,” *Tactical Asset Selector*, HCWE & Co., July 29, 2016.
 5. “Can the Trump boom last?” *The Economist*, December 16, 2017, p. 14.
 6. See Penny M. Russell, “Demography as divination,” *The Capitalist Perspective*, HCWE & Co., September 29, 2004.
 7. Earlier in 2017 the *Economist* was downplaying these indicators as “soft data” that are inferior to (and at that time in conflict with) “hard data” such as GDP. See “Eyes bigger than their wallets,” *The Economist*, April 8, 2017, pp. 23-24. The opposite argument was made in our report “Interest rates await the economy’s pickup,” *Interest-Rate Outlook*, HCWE & Co., May 26, 2017.
 8. See “Alternative data to track the economy and better explain capital-market prices,” *Economy Watch*, HCWE & Co., November 6, 2015.

Figure Two
Intermediate Output Growth as a Predictor of Growth in GDP



Data: Seasonally-adjusted chain-type quantity indices of gross domestic product and intermediate inputs (Bureau of Economic Analysis).

earlier still. In fact, we found II growth leads GDP growth by an average of about three months.⁹

Figure Two confirms and provides more detail for this time lag using quarterly data. Quarterly histories for GO and II are much shorter than annual histories, but long enough to produce a clear enough result. It evidently takes two quarters for GDP to fully “price” information from intermediate output. So the strong showing of II in the first half of 2017 implied a step up in GDP growth in the second half, a forecast-busting result, part of which has already been vindicated. This experience underlines the need for more expeditious publication of the data for II and GO.

To visualize the predictive power of intermediate output, there is no better testing ground than the onset of the 2008 recession. According to fully revised data, real GDP did not begin a sustained decline until the third quarter of that year, whereas intermediate output was already falling in real terms the quarter before, and at a 4 percent annual rate. Indeed, as Figure Three illustrates, intermediate output had been signaling trouble the year before. Its high was reached in the second quarter of 2007, two quarters before the high in GDP.

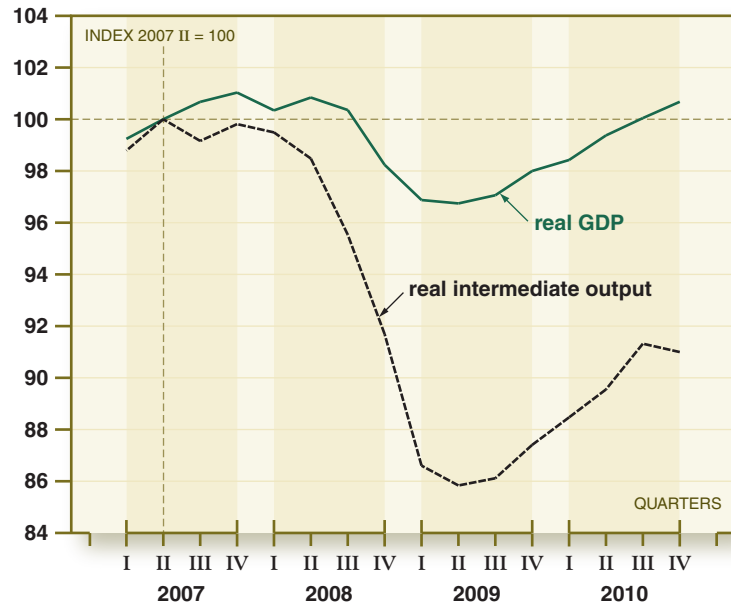
The data for the bottoming and recovery phase of the recession do not show the same predictive relationship as in the onset phase. As Figure Three shows, intermediate output and GDP both bottomed in the second quarter of 2009.

An asymmetrical relationship. A mismatch in the linkage between intermediate output growth and GDP growth was already visible in Figure Two, suggesting an unsymmetrical relationship in which the GDP implications of weakness in II growth are greater than the implications of strength. Experience therefore suggests that intermediate output would serve its most useful purpose as a lead-

9. See “Output growth data that the economy generates months earlier than GDP,” *Economy Watch*, HCWE & Co., July 24, 2017, Figure Four, p.3.

Figure Three

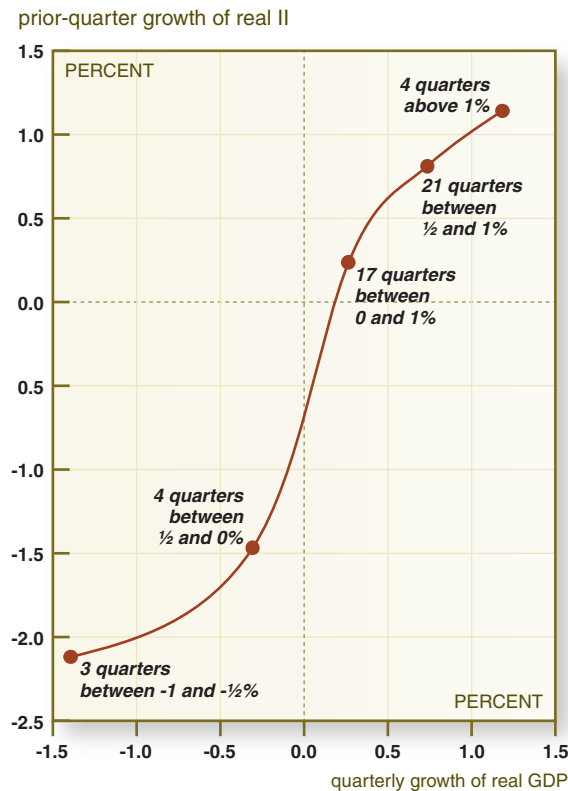
Intermediate Output as a Warning of Collapsing and Recovering GDP
deflated quarterly aggregates from the beginning of 2007



Data: As for Figure Two.

Figure Four

The Curvilinear Relationship between Real GDP and Prior-Quarter Real Intermediate Output
quarterly aggregates from 2005



Data: Quarterly rates of growth in chain quarterly indices of intermediate inputs and gross domestic product (Bureau of Economic Analysis).

ing indicator just prior to a recession, as in Figure Three. For the purpose of anticipating accelerations in economic growth it may not be as predictive as in anticipating set backs.

And the fact that the relationship is curvilinear rather than linear could be a problem. It would be hard to put together a least-squares forecasting equation without identifying with precision the shape of the curve. That is difficult and beyond the scope of this report. But we can suggest one method of visualizing the curvature. First, divide the history of quarterly real GDP growth into categories according to magnitude. Then, within each category, check out how II had behaved, on average, a quarter earlier. This is done in Figure Four.

This chart reveals an “S-curve” relationship in which large gains and de-

clines in II correspond to even larger gains and declines in subsequent GDP. The interpretation is not straightforward. It could be that unusual quarterly changes in intermediate output are disproportionately significant. But it is also consistent with the possibility that unusual GDP movements can occur without corresponding movements in intermediate output.

Investment conclusions. Investor satisfaction during the rest of 2018 is likely to center on US economic growth rather than capital asset prices, which enjoyed their big story in 2016 and 17. Foreign economies will accelerate too, but the US has begun to be labeled as the “locomotive” of the world once again.

The business cycle is not a reliable sequence of predictable phases in economic performance. It is much more

random than that. The 2017 acceleration in growth occurred at a time when the business cycle was already in “late-cycle” mode and supposedly heading toward its downturn or recession phase.

The upturn in US real GDP growth is confirmed by little-known statistics from the national income accounts. Growth in the volume of intermediate transactions (known officially as II) is closely correlated with GDP growth one or two quarters into the future. In opposition to “consensus” thinking, II successfully anticipated that the US economy would accelerate in 2017. Before growth stabilizes later this year, still stronger quarters may be yet to come.

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