In the middle of 2014, the current U.S. expansion passed its fifth birthday. This growth phase has already matched the average length of the 11 previous postwar cycles and easily exceeds the roughly three-year mean for expansions since the mid-1800s.

By long-run standards, then, the expansion looks aged, raising the question of whether a recession will soon occur. The rapid decline of the unemployment rate further increases the urgency of this debate. Given the dramatically different market outcomes observed during expansions and recessions, the likelihood of recession within the next few years represents a crucial issue for institutional investors.

An examination of business cycle history and a look at the specific characteristics of the current expansion, however, provide some reassurance. Expansions have lengthened in the

IN BRIEF

- The length of the U.S. economic expansion is raising concerns about a recession. But a closer look at past and present business cycles suggests that the U.S. economy remains in a mid-cycle stage. The UK and especially the euro area likely are even earlier in their economic expansions.
- Economic cycles have become longer, probably reflecting changes in the macroeconomic environment, such as better monetary policymaking, declines of the manufacturing and agricultural sectors, the increased size of the public sector and broader availability of consumer credit.
- While every business cycle is different, certain phenomena tend to repeat. With many indicators, such as interest-sensitive spending, credit growth, and price inflation, appearing low by long-term standards, the U.S. likely enjoys scope to grow before recession risk becomes elevated. Measures of labor market slack, however, are more uncertain and could play a major role in determining how the U.S. business cycle unfolds.
- Until a recession becomes imminent, financial markets are likely to perform reasonably well, with equities moving higher and credit spreads tightening further. Investors should tilt toward growth-sensitive assets while, to account for uncertainty, maintaining robust hedge buckets.
past few decades, probably reflecting changes in the macroeconomic environment (such as better monetary policymaking) that are likely to persist. Meanwhile, the current expansion, characterized thus far by fairly sluggish growth, does not yet show signs of accumulating the sorts of imbalances that have been associated with prior recessions. Assuming that the economy avoids recession, past relationships suggest that equities will move higher from current levels, with the bond yield curve flattening. Still, considerable uncertainty surrounds any such forecasts, as both business cycles in general and the causes of recessions in particular remain poorly understood. Hedge assets thus retain considerable importance in asset allocation.

Having suffered a second downturn in 2010–12 following the financial crisis recession, both the UK and the euro area find themselves much earlier in their current expansions than the U.S. In the former’s case, though, the rapid fall in joblessness suggests a dynamic closer to that of the U.S. than to continental Europe, where the expansion is just beginning and seems unlikely to run into capacity constraints for an extended period.

Useful understanding of business cycles and their relationship with financial markets begins with a definition of terms. In the U.S., most observers use the framework developed by the National Bureau of Economic Research (NBER), which maintains a committee that dates business cycles by identifying inflection points in economic activity. In its parlance, a recession entails “a significant decline in economic activity” that is widespread, not confined to just a few sectors, and “can last from a few months to more than a year.” Conversely, “during an expansion, economic activity rises substantially, spreads across the economy and usually lasts for several years.”

The NBER thus looks for persistent, large-scale co-movement in economic indicators, abstracting from temporary fluctuations in any one series. Troughs mark the beginning of expansions and peaks their end.

The NBER approach, which involves considerable discretion, differs from commonly used journalistic rules of thumb, the most prominent of which equates recessions with two consecutive quarters of negative gross domestic product (GDP) growth. Along with GDP (admittedly the most important barometer of activity), the NBER also looks at gross domestic income (or GDI, which is the counterpart to GDP that tracks income flows in the economy rather than output), as well as employment and other monthly indicators such as retail sales and industrial production. In this system, two back-to-back negative quarters for GDP might not constitute a recession. For example, a temporary collapse in one kind of activity (say, mining) could push GDP growth below zero for six months, while, at the same time, other parts of the economy are doing fine. On the other hand, not every recession will involve two consecutive down quarters. In the mild 2001 episode, for example, the NBER identified a recession between March and November. GDP fell in the first and third quarters of that year but rose in the second. With the help of higher-frequency indicators than GDP, the NBER dating system also picks specific months for peaks and troughs. Thus, the dating committee believes that the current expansion began in June 2009, with the previous one having ended in December 2007.

According to the NBER, since the mid-1950s (by which time the disruptions of World War II had passed), the U.S. economy has experienced 10 expansions. Exhibit 1 displays basic characteristics of these cycles.

U.S. postwar expansions have varied in length as well as magnitude

**EXHIBIT 1: U.S. EXPANSIONS SINCE 1954**

<table>
<thead>
<tr>
<th>Start</th>
<th>Finish</th>
<th>Duration (in months)</th>
<th>Average GDP growth rate (%)</th>
<th>Subsequent peak-to-trough decline (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>May ’54</td>
<td>Aug ’57</td>
<td>39</td>
<td>3.8</td>
<td>-3.6</td>
</tr>
<tr>
<td>Apr ’58</td>
<td>Apr ’60</td>
<td>24</td>
<td>6.1</td>
<td>-1.3</td>
</tr>
<tr>
<td>Feb ’61</td>
<td>Dec ’69</td>
<td>106</td>
<td>5.0</td>
<td>-0.6</td>
</tr>
<tr>
<td>Nov ’70</td>
<td>Nov ’73</td>
<td>36</td>
<td>5.1</td>
<td>-3.1</td>
</tr>
<tr>
<td>Mar ’75</td>
<td>Jan ’80</td>
<td>58</td>
<td>4.3</td>
<td>-2.2</td>
</tr>
<tr>
<td>Jul ’80</td>
<td>Jul ’81</td>
<td>12</td>
<td>4.4</td>
<td>-2.6</td>
</tr>
<tr>
<td>Nov ’82</td>
<td>Jul ’90</td>
<td>92</td>
<td>4.2</td>
<td>-1.3</td>
</tr>
<tr>
<td>Mar ’91</td>
<td>Mar ’01</td>
<td>120</td>
<td>3.8</td>
<td>-0.3</td>
</tr>
<tr>
<td>Nov ’01</td>
<td>Dec ’07</td>
<td>73</td>
<td>2.7</td>
<td>-4.3</td>
</tr>
<tr>
<td>Jun ’09</td>
<td>Jun ’14</td>
<td>60</td>
<td>2.3</td>
<td></td>
</tr>
</tbody>
</table>


After its postwar recovery, Western Europe’s business cycles have roughly coincided with those in the U.S.

**EXHIBIT 3A: BUSINESS CYCLES IN THE UK**

<table>
<thead>
<tr>
<th>Start</th>
<th>Finish</th>
<th>Duration (in months)</th>
<th>Average GDP growth rate (%)</th>
<th>Subsequent peak-to-trough decline (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug ’52</td>
<td>Sep ’74</td>
<td>265</td>
<td>3.3</td>
<td>-2.9</td>
</tr>
<tr>
<td>Aug ’75</td>
<td>Jun ’79</td>
<td>46</td>
<td>3.7</td>
<td>-5.9</td>
</tr>
<tr>
<td>May ’81</td>
<td>May ’90</td>
<td>108</td>
<td>3.7</td>
<td>-2.4</td>
</tr>
<tr>
<td>Mar ’92</td>
<td>May ’08</td>
<td>194</td>
<td>3.3</td>
<td>-7.2</td>
</tr>
<tr>
<td>Jan ’10</td>
<td>Aug ’10</td>
<td>7</td>
<td>1.7</td>
<td>-0.6</td>
</tr>
<tr>
<td>Feb ’12</td>
<td>Jun ’14</td>
<td>28</td>
<td>2.2</td>
<td></td>
</tr>
</tbody>
</table>

**EXHIBIT 3B: BUSINESS CYCLES IN GERMANY**

<table>
<thead>
<tr>
<th>Start</th>
<th>Finish</th>
<th>Duration (in months)</th>
<th>Average GDP growth rate (%)</th>
<th>Subsequent peak-to-trough decline (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>May ’67</td>
<td>Aug ’73</td>
<td>75</td>
<td>5.0</td>
<td>-2.4</td>
</tr>
<tr>
<td>Jul ’75</td>
<td>Jan ’80</td>
<td>54</td>
<td>3.8</td>
<td>-2.7</td>
</tr>
<tr>
<td>Oct ’82</td>
<td>Jan ’91</td>
<td>99</td>
<td>3.6</td>
<td>-1.6</td>
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<td>Apr ’94</td>
<td>Jan ’01</td>
<td>81</td>
<td>1.9</td>
<td>-0.8</td>
</tr>
<tr>
<td>Aug ’03</td>
<td>Apr ’08</td>
<td>56</td>
<td>2.3</td>
<td>-6.8</td>
</tr>
<tr>
<td>Jan ’09</td>
<td>Apr ’14</td>
<td>63</td>
<td>2.1</td>
<td></td>
</tr>
</tbody>
</table>

Source: Economic Cycle Research Institute; data as of July 2014.

Expansions have been generally longer than contractions

**EXHIBIT 2: U.S. EXPANSIONS AND CONTRACTIONS SINCE 1854 (MONTHS)**

The experience in Western Europe has broadly mirrored that of the U.S. in recent decades, with one significant difference. These economies suffered large-scale damage during World War II that set them back considerably relative to the U.S. Postwar reconstruction and renewed catch-up facilitated a period of essentially uninterrupted growth into the 1960s and 1970s. Since that time, business cycles in Western Europe have roughly coincided with their U.S. counterparts, with some exceptions (the UK dodged the 2001 recession and thus combined the U.S. expansions of the 1990s and early 2000s, while parts of the euro area and the UK suffered a recession in the 2010-12 period that interrupted the recovery from the global financial crisis). Exhibits 3A and 3B show recent business-cycle developments in the UK and Germany, as identified by the Economic Cycle Research Institute (ECRI), a research organization that follows a similar approach to the NBER and tracks various global economies. The ECRI’s business cycle dates for Japan, meanwhile, display that country’s unique pattern, which combines the postwar reconstruction and economic development megacycle experienced in Western Europe with frequent recessions in more recent years, when the economy has faced deflation and demographic headwinds.

The U.S. economy shows an unmistakable tendency toward longer business cycles over time, as well as briefer (though not necessarily less severe) recessions. Indeed, the most recent three expansions (excluding the unfinished current cycle) all stand among the five longest since 1854, joined by the 1960s cycle and the boom fueled by public spending during World War II. Between 1854 and 1938, the economy spent 55% of the time (measured in months) in expansions, and these episodes lasted 26 months on average. Those figures rose to 82% and 49 months, respectively, in the 1938-1982 period and have climbed further to 91% and 86 months since then. This final time span became known as the “Great Moderation” before the global financial crisis struck. Although the subsequent downturn proved particularly intense, many aspects of the previous low-volatility environment have since reasserted themselves.
What accounts for the lengthening of U.S. business cycles? No consensus exists on the causes, but at least four factors very likely have played a role: 3

• Monetary policy formation has become significantly more sophisticated in the past several decades (especially compared, obviously, with the 1800s, before the Federal Reserve existed) and likely has served to dampen the economy’s cyclical fluctuations. Heightened prudential regulation of the financial sector likely has allied with purer interest-rate and money-supply management to produce this effect.

• Manufacturing (where inventory cycles drive large swings in activity) and agriculture (subject to weather-related gyrations) have declined in importance relative to the less volatile services sector.

• The federal government has grown larger, and its spending typically follows a more stable path than private-sector expenditure, in part because of explicit countercyclical efforts (such as unemployment insurance and food stamps) that cushion downturns and fade during booms.

• Broader availability of consumer credit appears to have allowed households to smooth their own spending over life cycles, making consumption less volatile than when its path more closely tracked income (itself, in the past, often dependent on farm prices and other highly variable sources).

A more temporary circumstance—the rise of globalization—may also have helped extend recent business cycles by leaning against inflation and steadily boosting corporate profit margins in the past 30 years or so. These phenomena allowed the Federal Reserve to keep interest rates persistently low and prevented significant downturns in business investment spending (while perhaps also sowing the seeds of the virulent financial crisis). With the globalization process largely complete, this factor will likely play little or no role in future cycles, but the other developments appear structural in nature. Thus, longer business cycles likely represent a lasting phenomenon.

Stylized facts of business cycles

Business cycle patterns since the 1950s display a few persistent features that may help in understanding the current position of the economy. At the same time, other phenomena intuitively connected with cyclical fluctuations, like inflation, have in fact varied widely across cycles, making them unsatisfactory guides to present conditions. The following “stylized facts” of business cycles can serve as a guide for investors attempting to diagnose the economy’s cyclical condition. For data consistency reasons, the discussion focuses on the U.S., but the conclusions apply more broadly.

Cyclicality in business investment, housing and durable goods purchases

These three types of expenditure help to define business cycles, typically moving higher as expansions unfold and then falling sharply during recessions. 4 Exhibits 4–6 (next page) show the behavior of nonresidential fixed investment (essentially business capital spending), residential construction and consumption of durables, respectively, all measured as shares of GDP (so that a rise implies faster growth than for the economy as a whole). In the exhibits, each line represents one expansion, beginning in its first quarter (the trough) and continuing through its end (the peak). The legend identifies each expansion by its starting quarter.

Among the three categories, nonresidential fixed investment (or business investment spending) displays the clearest cyclical pattern. In nearly every expansion, it has risen almost uninterruptedly as a share of GDP until the very end of the expansion. Two exceptions stand out. In the 1980s, investment peaked less than halfway through the cycle and declined thereafter. Investment had begun that cycle at an unusually elevated point, however. In addition, information technology (IT) investment began assuming greater importance during that period, and prices for IT products fell in relative terms in this era. In the 1960s, investment also peaked well before the end of the cycle, although in that instance it did not significantly decline until recession hit.

Somewhat muddier pictures characterize the other two spending types. Residential construction has generally surged early in expansions but has often cooled well before their ends. The 2000s expansion represents the most obvious example of this kind of reversal, as the economy continued to grow for a while


Business investment spending claims a larger share of GDP in U.S. business expansions

EXHIBIT 4: U.S. NONRESIDENTIAL FIXED INVESTMENT BY CYCLE

Source: J.P. Morgan; data as of March 2014.

Falling unemployment

In every U.S. expansion since the 1950s, the unemployment rate has fallen after a spike (of varying size) during the previous recession (Exhibit 7). Joblessness has typically dropped steadily during expansions, so that the total reduction has depended on the length of the cycle. In all but two cases, recessions began with the unemployment rate at or below 5.5%, similar to the Federal Open Market Committee’s (FOMC) current estimate of the neutral rate. The recessions that began in January 1980 and July 1981 represent the exceptions. In the first of these, an oil shock and a very large shift in the Federal Reserve’s reaction function aimed at halting the lengthy rise in inflation helped end the expansion, which had begun with very high joblessness after the deep 1973-75 downturn, while the second also involved the Federal Reserve’s war against inflation and followed the briefest expansion of the postwar era.

Decline in U.S. unemployment depends on the length of economic cycles

EXHIBIT 7: U.S. UNEMPLOYMENT RATE

Source: J.P. Morgan; data as of June 2014. Shading denotes recessions.
Lack of inflation cyclicality

Whereas an abstract conception of a business cycle would likely involve rising inflation during the expansion, reality in recent decades has proven quite different. Since at least the 1970s, inflation has shown almost no cyclicality. Exhibit 8 shows monthly core consumer price inflation, pegged to each expansion, with starting months identified in the legend (overall inflation is used for the May 1954 expansion, as core data go back only to 1958). Strikingly, in each of the past six expansions, core inflation (measured in year-on-year terms and using a three-month average to smooth out temporary fluctuations) has stood at a lower level in the final month than in the starting month. In other words, inflation by itself appears to have played a very small role in driving business cycle fluctuations.

What accounts for this result? Essentially, rather than moving in lockstep with growth, inflation in the U.S.—and in most other developed economies—has gone through one large cycle in the postwar era, rising in the 1960s and 1970s and falling since. Changing central bank behavior and the resulting lengthy de-anchoring and then re-anchoring of inflation expectations drove much of that increase and decline (along with other phenomena, like the productivity growth slowdown of the 1970s and the globalization of the 1990s and 2000s). With central banks satisfied with their efforts at squeezing inflation out of the system and now, in many cases, attempting to push it up from undesirably low levels, inflation may reattach itself to the business cycle in coming years. Such a connection, though, would mark a break from the experience of the past 40 years.

Lack of credit and saving cyclicality

Bank lending and its cousin, the household saving rate, also have not displayed consistent cyclical patterns. While the saving rate fell during the course of the late 1970s, 1980s and 1990s expansions, in the broader context, those declines appear to form part of a more secular long-term downward trend (Exhibits 9 and 10). Credit, for its part, has grown a bit faster than GDP fairly consistently since the 1950s, without an obvious link to the business cycle (Exhibit 11, next page). The 2000s expansion represents an exception, with a strong credit boom that helped sow the seeds of the subsequent recession.

The saving rate fell during the late 1970s, 1980s and 1990s expansions

The saving rate declined secularly from 1973 onward, but jumped in recessions
Productivity up, down, then sometimes up again

The growth rate of (labor) productivity in the economy typically surges in the first year or so of an expansion before slowing again (Exhibit 12). This pattern likely reflects typical business behavior, as employers wait for some time after demand recovers to add workers and instead boost their output with existing workforces, thus raising productivity, before growing confident enough to expand staffing. In longer-lived expansions, productivity growth then appears to reaccelerate. This renewed pickup may reflect favorable technological shocks (as may have been the case in the 1990s expansion), demand shocks (for example, fiscal expansion related to the Vietnam War in the 1960s) or other phenomena, and may not be susceptible to a single explanation across cycles.

Labor productivity has surged in the first year of an expansion as industry takes advantage of unused capacity

EXHIBIT 12: U.S. PRODUCTIVITY BY CYCLE (NONFARM BUSINESS)

Source: J.P. Morgan; data as of March 2014.

Policy interest rates generally up

As is well known, policy interest rates tend to rise during expansions. As with most of the other phenomena previously discussed, however, no hard and fast rule has applied in this area. The Federal Reserve’s framework has changed over time, with the funds rate (as distinct from the money supply or, in an earlier period, the discount rate) playing an increasing role in defining the policy stance since the 1980s. The 1990s and 2000s cycles mirrored each other in featuring ongoing rate cuts in the early stage of the expansion and a round of rate hikes about three years into the cycle (Exhibit 13). In neither case did rates rise significantly further as the expansion matured. In several earlier cycles, Federal Reserve policy did tighten at the end of the cycle, pushing up short-term rates. More recently, however, the Federal Reserve does not appear to have systematically administered coups de grâce that pushed the economy into recession.

The Fed generally tightens, but rate hikes do not appear to have ended most expansions

EXHIBIT 13: U.S. FEDERAL FUNDS RATE BY CYCLE

Source: J.P. Morgan; data as of July 2014.

What ends business cycles?

Business cycle dynamics, particularly recession drivers, remain poorly understood. This section starts by examining the theoretical attempts to identify predictable patterns, while evaluating the current economic cycle for potential clues to forecasting the next downturn. The verdict: The preponderance of evidence so far suggests the U.S. expansion remains in the early-to-middle stage, while cycles in the UK and the euro area seem even less advanced.
As the discussion of stylized facts suggests, considerable variation has characterized even the fairly small number of expansions in the U.S. during the postwar era. Business cycles, thus, have not proven susceptible to simple or uniform explanation. In part, definitional ambiguities and data shortfalls complicate the task of testing hypotheses: “Business cycles involve numerous activities and are not adequately represented by specific cycles in any single variable...no comprehensive time series exist to cover their long and varied history.” Even beyond these statistical issues, limited commonality across expansions has frustrated attempts to hypothesize about their underlying drivers and, equally importantly, the causes of recessions.

In an attempt to identify predictable patterns that might assist in forecasting downturns, economists have conducted a great deal of statistical analysis in search of periodicity in business cycles. For example, the economy might follow a “limit cycle” with a floor and ceiling. Investment spending would typically serve as the main driver of the business cycle process in such a model, which could include random shocks to prevent strictly periodic outcomes. These approaches have not borne significant fruit, unsurprisingly, in light of the earlier description of business cycle history, with its widely varying outcomes and tendency toward longer expansions over time.

At the same time, statistical tests have also run into difficulty attempting to determine, on the one hand, whether expansions are random walks (so that the economy faces a basically constant probability of recession in any given time period) or, alternatively, whether the probability of recession rises gradually over time (so that expansions are killed simply by an aging process). The random walk hypothesis clashes with the fact that few business cycles end after very short intervals, as well as with various regularities that do exist across expansions, both in the U.S. and elsewhere. But the “old-age” view also comes up short, again in part because of the observed tendency toward longer expansions, which presumably reflects some change in genuine underlying drivers: “What matters primarily...is not the passage of calendar time but what happens over time in and to the economy in question....Knowledge of the current phase of the business cycle and its age can help but must not be used in isolation.”

A related statistical approach with a stronger theoretical overlay attributes business cycle periodicity to political events. In this framework, governments attempt to boost their survival chances by stimulating booms just ahead of elections, with payback in the form of recessions early in the next term (to get the downturn out of the way before voting time comes around again). This so-called political business cycle theory has lost academic adherents over time but still holds some sway, particularly among financial market analysts. Its foundations, though, also appear weak. Even in an earlier era of unified (or at least less polarized) government, the idea that policymakers could sufficiently fine-tune the economy so that its movements would synchronize perfectly with the electoral calendar strained credulity, as did the notion that the public would accept such persistent behavior. In any case, under today’s political circumstances, such an approach to policymaking seems impossible.

Using theoretical frameworks to explain business cycles

Models with stronger theoretical underpinnings, especially those that attempt to ground macroeconomic developments in microeconomic descriptions of behavior, tend to fall into two broad groups. The first, which ultimately derives from Keynesian thinking, explains recessions in part as periods of demand shortfall that reflect the failure of markets to clear, perhaps because of incomplete price adjustments. According to this line of argument, recessions reflect negative shocks either to consumption or investment or both. Investment cycles could owe to a variety of causes, including uncertainty, interest rates or other sudden increases in the cost of capital, with some role for a declining marginal efficiency of capital as expansions unfold. Consumption shocks might stem from foresight of declining income or from inter-temporal preference shifts (or, for that matter, panics).

The second group of models, which descends from neoclassical views of the economy, assumes that markets clear continuously, leaving no role for disequilibria between demand and supply. Instead, these “real business cycle” frameworks explain downturns primarily as the consequence of technology shocks (“technology” in this context should be understood as anything that affects total factor productivity, or the portion of fluctuations in economic output that do not stem purely from

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6 Zarnowitz (1992), pp. 251-264 for an extensive discussion of these approaches.
changes in labor and capital stock inputs). One limitation of this approach is its ambiguity about what exactly would constitute such a shock, as presumably the disappearance of existing technology lacks plausibility. One line of argument emphasizes regulatory change, while another leans on increases in uncertainty that might reflect concerns about policy or other structural aspects of the environment.10,11,12

A cycle-by-cycle look at expansions and their ensuing recessions underscores the multiplicity of drivers.13 The expansions that began in November 1970 and March 1975, for example, likely came to their ends largely because of spikes in the oil price, which otherwise appears to have played only a limited role (at least in starting or stopping expansions). The April 1958 and July 1980 expansions, on the other hand, seem to have ended because of shifts in the Federal Reserve’s approach to monetary policy (such that the downturn that began in July 1981 is often combined with the previous contraction into a single phenomenon known as the “Volcker Recession,” with the Federal Reserve significantly changing its approach in order to squeeze inflation out of the system). While interest rates have risen during the course of some other cycles (though not all), on those occasions tighter monetary policy appears to have served as an endogenous force—having responded to broader developments in the economy—and in that sense did not represent the cause of subsequent recessions. On two occasions—at the end of the May 1954 and the long February 1961 expansions—fiscal policy tightened significantly, partly because of a sharp scaling back of military spending. The November 2001 expansion, of course, ended with a financial crisis. The end of the November 1982 expansion lacks a compelling explanation, although the invasion of Kuwait and the resulting damage to consumer confidence (along with higher oil prices) may have played a significant part. Real business cycle theorists attribute the recession to a technology shock (but perhaps one related to the uncertainty generated by military conflict).

Research about the UK, where business cycles have perhaps been the most studied outside of the U.S., has turned up similar ambiguities. The smaller number of cycles in the UK during the postwar era complicates analysis by reducing sample size. Meanwhile, expansion end dates in the UK have broadly, if imperfectly, mirrored the U.S. experience, suggesting a similar array of causes, including oil and monetary policy shocks, along with the recent addition of the euro area crisis. Fluctuations in investment spending appear to lie at the heart of UK cycles, similar to the U.S., but whether or not monetary policy has played a significant role in driving either shocks to investment or other cyclical dynamics is a matter of controversy. One significant piece of research done partly at the Bank of England concluded that “a large component of GDP fluctuations are unpredictable and not Granger (i.e., statistically) caused by a standard list of macroeconomic variables.”14,15

**Evaluating the current cycle**

Given the large variation in historical business cycle experience and still-limited theoretical understanding of what drives expansions and recessions, any discussion of current conditions must start with an admission that no definitive statements are possible. Judgment will inevitably play a major role in evaluating business cycle conditions. At the moment, though, a preponderance of evidence suggests that the U.S. expansion remains in its early-to-middle stage. Cycles in the UK and especially in the euro area seem even less advanced. These economies thus appear to possess considerable “room to run” before recession risk becomes elevated.

**Expansion age does not seem a concern**

The U.S. expansion has just passed its fifth birthday, making it already reasonably old by long-term standards. But the most recent three expansions, including the November 2001 cycle that was cut short by the financial crisis, averaged 95 months in length, and the trend appears to point toward lengthening. Moreover, as discussed earlier, statistical tests point to only a weak relationship between an expansion’s duration and the likelihood of recession. Thus, the length of the current expansion in the U.S. does not appear inherently problematic. In the euro area, the region as a whole emerged from recession only last year, although Germany has been growing continuously since the start of 2009. The UK, for its part, began its expansion in early 2012. Thus, Europe finds itself in the early stages of the present cycle.

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Weak growth thus far
Relative to past postwar cycles, the current expansion stands out both for the sluggishness of growth and the depth of the preceding recession. As a result, the level of real GDP stands just 6% above its pre-recession peak (Exhibit 14). Only one recession since the 1950s has occurred with GDP so close to its previous high. That incident—the 1981-82 downturn—happened after just five quarters of growth and resulted from the structural shift in Federal Reserve policy that took place at that time (indeed, this dip is often regarded as the second half of the aforementioned “Volcker Recession,” the first leg of which occurred in the first half of 1980). This analysis (and the exhibit) does not take into account changes in the economy’s potential growth rate over time. Slower-trend growth today, compared with previous decades, means that the current expansion should not be held to earlier standards. Nonetheless, the level of GDP at the moment does not suggest a high risk of overheating.

A sluggish leverage cycle
A combination of regulatory change and chastened borrowers means that bank credit has barely expanded in the past few years. Total credit-related U.S. bank assets rose 2.1% year-over-year in the first quarter of 2014. By contrast, during the comparable quarter of the 2000s cycle, bank credit rose at nearly a double-digit clip, and even in the more restrained 1990s expansion, credit was climbing at a 7% pace by the five-year point. In the euro area, bank lending is still shrinking (Exhibit 15), while in the UK, credit to corporations is dropping steadily, while lending to households is rising at less than 2% year-over-year. Indeed, reduced ability to take leverage appears to mark a significant contrast between the current expansion and past cycles, limiting the ability of imbalances to form this time around.

Low interest-sensitive spending
Considering that the most consistent business-cycle regularity is a rise in big-ticket, credit-sensitive spending, the behavior of these items in the U.S. over the past few years provides reassurance about the sustainability of the current expansion. Business investment spending has broadly followed the pattern of previous expansions and does not appear to have reached a worrisomely high level. Meanwhile, both housing investment and consumption of durables—each of which reflects household decisions—are running at extremely low levels by long-term standards and have risen only modestly from their troughs.

A reasonable household saving rate
After jumping during the recession, the U.S. household saving rate has moved downward in the past few years. Still, thus far in 2014, it has averaged a full percentage point above its level during the corresponding period of the 2000s expansion. Moreover, it does not look low relative to the current condition of household balance sheets, with net worth as a share of disposable income near its all-time high. At this point, the likelihood of a sudden jump in the household saving rate (producing a period of significant weakness in consumer spending), motivated by a desire to rebuild household net worth, appears limited. Saving rates in the UK and Germany also look high enough to provide some cushion against unexpected shocks to household income in those countries.
Low wage and price inflation
At least since the 1980s, inflation has not moved distinctly in line with business cycles, and recessions have struck even with inflation moving lower. Still, with the long transition from high to low inflation now complete, growth and inflation may resume a more intuitive relationship, with price pressures serving as a signal of broader capacity constraints and imbalances facing the economy. On that front, the still-low levels of both wage and price inflation in the U.S. suggest ample slack. Although inflation may have bottomed out in early 2014, it is running below the Federal Reserve’s target, and expectations appear well-anchored. The FOMC thus seems likely to tolerate a fair degree of acceleration from current levels before feeling the need to tighten policy to such a degree that recession risk would rise significantly. The UK appears to find itself in a similar position, although the Bank of England probably enjoys less room for maneuver than the Federal Reserve because of its recent history of inflation overruns. By contrast, the European Central Bank (ECB) has become increasingly concerned about excessively low inflation, another factor suggesting that the euro area in particular finds itself in the very early stages of its expansion.

Labor market slack
Perhaps the most controversial and uncertain aspect of business cycle evaluation in the U.S. at the moment concerns labor market conditions. Joblessness has fallen rapidly and stands less than a percentage point above the Federal Reserve’s current estimate of a neutral long-term unemployment rate. Yet the employment-to-population ratio, a broader measure of labor market pressure, has risen only modestly from its recession trough (Exhibit 16). One measure suggests that the economy has already absorbed most of the slack created by the downturn, while the other implies that this process has barely begun. If the headline unemployment rate is sending the right message, then wage inflation might be expected to accelerate fairly soon, and the business cycle has likely reached a somewhat advanced stage. If, instead, the decline in joblessness overstates the degree of improvement in the labor market, then the economy likely can continue to grow for an extended period before hitting supply constraints.

Demographic drift, as more of the Baby Boomers reach retirement age, almost certainly explains some of the drop in the labor force participation rate (the share of the working-age population that is actively involved in the labor market), and this aging process will not reverse. In other words, many of the exits from the labor force observed in recent years are permanent. But population aging alone appears to account for only about half of the drop in participation since 2007, leaving open the possibility that much of the remainder has reflected more cyclical phenomena, with workers becoming discouraged (Exhibit 17). As the job market firms, some of these sidelined individuals will likely return, boosting the labor force growth rate. Satisfactory growth could thus coexist with a slower decline in the unemployment rate and with an ongoing moderate pace of wage and price inflation.

U.S. labor force participation lags even as unemployment has fallen

Source: J.P. Morgan; data as of June 2014.
MARKET INSIGHTS

Tracking the business cycle

The UK has not experienced the same discrepancy between the unemployment rate and labor force participation.

Exhibit 18: UK Unemployment and Labor Market Activity Rates

<table>
<thead>
<tr>
<th>Year</th>
<th>Unemployment Rate</th>
<th>Activity Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>6.8%</td>
<td>63.0%</td>
</tr>
<tr>
<td>1993</td>
<td>7.1%</td>
<td>62.5%</td>
</tr>
<tr>
<td>1996</td>
<td>7.3%</td>
<td>62.0%</td>
</tr>
<tr>
<td>1999</td>
<td>7.5%</td>
<td>61.5%</td>
</tr>
<tr>
<td>2002</td>
<td>7.7%</td>
<td>61.0%</td>
</tr>
<tr>
<td>2005</td>
<td>7.9%</td>
<td>60.5%</td>
</tr>
<tr>
<td>2008</td>
<td>8.1%</td>
<td>60.0%</td>
</tr>
<tr>
<td>2011</td>
<td>8.3%</td>
<td>59.5%</td>
</tr>
<tr>
<td>2014</td>
<td>8.5%</td>
<td>59.0%</td>
</tr>
</tbody>
</table>

Source: J.P. Morgan; data as of April 2014.

support, and the expansion will likely run for several more years. On the other hand, if labor market slack has been largely reabsorbed already, then the Federal Reserve will likely need to adopt a more vigilant stance soon, and the possibility of recession will rise. A downturn would not loom as an inevitability—with inflation expectations well-anchored, a "high pressure" economy need not necessarily generate rapid inflation, especially if productivity growth picks up as it did in the latter stages of the 1990s expansion—but markets would need to price in some risk of an end to the expansion. The path of the labor force participation rate, thus, will occupy center stage in U.S. business cycle analysis during the coming months and years.

On the labor market front, conditions differ between the euro area and the UK. In the single currency zone, the two punishing recessions of the past six years have created enormous slack in this area, with the headline unemployment rate nearly 12% and only marginally below its 2013 peak. Although the euro area has struggled with long-term unemployment in the past, the jobless rate averaged 8.7% between the euro’s inception (in 1999) and 2007, more than three percentage points below the current level. In terms of labor market spare capacity, the euro area stands convincingly in the early stages of its expansion. The UK jobless rate, by contrast, has behaved somewhat similarly to the U.S. unemployment rate, dropping by 1.6 percentage points since the end of 2011. In the UK’s case, though, this decline does not reflect falling labor supply, as the participation rate has risen during that same period (Exhibit 18). Instead, the sharp improvement owes to fairly strong economic growth and a disproportionately rapid pace of job gains relative to growth (i.e., sluggish productivity increases). At 6.8%, the unemployment rate currently stands only a bit above the Bank of England’s current 6.0-6.5% estimate of a medium-term equilibrium rate, although the Bank does believe that the neutral rate itself may fall over time. In this respect, at least, the UK economy appears modestly ahead of the U.S. in the current expansion, with the euro area trailing far behind both.

Little commodity stress

The oil price spikes of 1973 and the late 1970s, along with the 1990 jump, likely played significant roles in causing recessions at those times. At this point, such an “out-of-the-blue” end to the expansion appears unlikely for several reasons. First, the stable behavior of commodity prices during the past few years suggests very little stress in the system. Second, the wave of commodity investment since the mid-2000s, although now fading, appears to have flattened supply curves significantly. Third, developed economies have become significantly less commodity-intensive than was the case at the time of the oil shocks. U.S. petroleum consumption in 2013, for example, stood just 9% above that of 1973, despite real economic growth of 191% during the same interval.

Thus, current conditions do little to signal an elevated probability of recession in the near term. The low level of interest-sensitive spending, the most cyclical component of the economy, sends a particularly encouraging message on this front, as does the limited amount of leverage-taking that has occurred thus far. How long might the expansion run? No reliable forecast is possible, but the two expansions that preceded the November 2001 cycle (which ended prematurely thanks to the financial crisis) lasted an average of 106 months. Matching that experience would suggest roughly another four years before recession hits, although the unusually timid nature of the present cycle implies a significant possibility of a more stretched-out expansion that lasts longer.

A need for humility

The earlier discussions of business cycle history and theory illustrated the limits of current understanding in this area. Indeed, economists have generally not succeeded very well in predicting recessions. The financial crisis and subsequent turmoil in the euro area demonstrated this point. One study showed that forecasts collected by Consensus Economics in September 2007 did not anticipate any of the 62 recessions that occurred globally in 2008-09 (the vast majority of which, of course, were related to the financial meltdown, which few
expansions. Those experiences suggest little constraint on further equity gains as long as the economy avoids recession.

UK equities have followed a less consistent pattern. Although they, too, have tended to move higher during expansions, they have not done so uniformly (Exhibit 20). In 1987, for example, UK stocks plunged alongside their U.S. counterparts and only marginally topped their pre-crash peak in the remainder of the expansion, even though the economy continued to grow for nearly three additional years. Similarly, in the long postwar expansion, equities fell sharply in 1969-70 and did not recover until late 1971. An even more extended funk took place between 2000 and 2003, with stocks topping their 1999 level only in 2006. Expansions in the UK thus have not provided reliable insurance against equity slumps. This behavior likely reflects the lack of incentives for private-sector forecasters to predict recessions, the more likely culprits are unreliable and incomplete models, as well as shocks that are difficult to anticipate. This being the case, any evaluation of current conditions carries a wide confidence interval. Although an imminent recession appears unlikely, it is still a possibility.

Markets and cycles

While expansions themselves have displayed great variety over time, the connection between cycles and financial markets has shown several significant and fairly consistent patterns. The economy’s business cycle position has played a dominant role in driving capital market outcomes. Thus, as a core component of their asset allocation process, investors need to take views, however provisional, about where the economy stands in the cycle and the probability of near-term recession.

Equities rise throughout expansions

The strongest regularity between cycles and markets occurs in U.S. large-cap equities, which tend to move higher throughout expansions, peaking shortly before recession hits. Exhibit 19 illustrates this link. Significant corrections in the middle of expansions have occurred only rarely, with the 1987 stock market crash the major exception. Even in that instance, equities stabilized soon and eventually made new highs before the expansion ended. The 1990s equity bubble, for its part, ended only as recession approached, with the market peaking seven months before the expansion ended. In the current period, equities are broadly mirroring their previous cyclical behavior, with particular resemblance to the extended 1982 and 1991 expansions. Those experiences suggest little constraint on further equity gains as long as the economy avoids recession.

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long nature of UK business cycles, during which the economy has sometimes experienced significant headwinds that have not quite tipped it into recession; the relatively open nature of the economy and the large foreign operations of UK companies, which have exposed them to earnings shocks even when the local economy has not felt distress; and the dominance of the U.S. in global equity trading, such that other markets tend to follow developments in the S&P 500 (as in 1997).

Credit spreads fall during expansions, but can trough before recession hits

Reliable data for credit spreads do not go back very far, lending uncertainty to conclusions. The behavior of credit spreads in the past two cycles, though, tentatively suggests three patterns (Exhibits 21A and 21B). First, spreads tend to move lower during expansions. Second, most of their tightening occurs fairly early on in the expansion. Third, in contrast with equities, spreads can widen significantly while the expansion is under way. This last observation relates to the 1990s cycle, when spreads troughed nearly four years before recession hit and moved noticeably wider thereafter. This episode appears related to the Asian financial crisis and the subsequent failure of Long-Term Capital Management, both of which generated significant volatility that spurred a cutting back of risk-taking among broker-dealers and high-frequency traders. The over-the-counter nature of bond trading may make this asset class more vulnerable to financial shocks than is the case for exchange-traded equities. In the 2000s cycle, by contrast, credit spreads widened only when the recession was imminent (when the financial crisis began unfolding). Based on this rough template, the outlook for credit spreads, on the assumption that neither recession nor a financial shock is...
imminent, likely includes some additional tightening, although most of the move from their wide point during the recession has probably already taken place.

No consistent trend in Treasury yield levels, but a tendency toward flattening

Longer-term risk-free rates have not displayed an obvious cyclical pattern, especially in the past few decades. In nominal terms, 10-year U.S. Treasury yields have broadly reflected the postwar inflation cycle, generally rising through the course of cycles between the 1950s and the early 1980s and dropping during subsequent cycles (Exhibit 22A, previous page). In real terms, no particular regularity emerges (Exhibit 22B, previous page), although this conclusion is subject to the caveat that “real” (in this case) is measured using a backward-looking measure of inflation; ex-ante calculations might differ slightly. Given this backdrop, the famous bond market “conundrum” of the 2000s does not look exceptional. Treasury yields during that cycle followed a fairly typical sideways path in either nominal or real terms.

As discussed earlier, short-term interest rates do tend to rise as cycles proceed. As the Federal funds rate moves higher, two-year bond yields get carried along. As a result, the Treasury yield curve flattens during the course of the cycle. This pattern has played out fairly consistently since the shift in Federal Reserve behavior around 1980 and was particularly evident in the 1990s and 2000s cycles, when Federal Reserve rate hikes affected the short end of the curve much more than the 10-year sector (Exhibit 23).

Today’s Treasury yield curve is steeper than usual for this stage of the expansion

Relative to previous cycles, the current expansion stands out less for the behavior of the 10-year yield, which, while quite low, has not behaved oddly in directional terms, and more for the fact that short-term interest rates remain near zero five years after the recession. As a result, the Treasury yield curve is much steeper than usual for this stage of the expansion. While we continue to expect longer-term yields (which currently stand significantly below most estimates of U.S. potential growth) to move higher in coming years, eventual curve flattening seems even more likely.

Conclusions

Five main conclusions emerge from the preceding examination of business cycle history, theory and market relationships.

First, the age of the current expansion—five years in the U.S., less in the UK and euro area—in itself should not cause alarm. Business cycles have been getting longer over time and, in any case, do not appear to die merely of old age. Second, the current cycle does not seem particularly advanced, even in the U.S. and certainly not in Europe. Most importantly on this front, the level of interest-sensitive spending, especially on consumer durables, remains quite low by long-term standards. Moreover, credit growth has recovered only mildly from the financial crisis. Third, financial markets seem likely to perform reasonably well if the economy continues to avoid recession, with equities likely to drift higher and credit spreads perhaps tightening a bit further. Major, lasting reversals in these areas outside of recessions have not occurred frequently. A tilt toward growth-sensitive assets thus appears warranted, even as the current expansion ages. The bond market has maintained a more ambiguous relationship with the business cycle, although a flatter yield curve seems highly likely at some point. Fourth, all of these views should be regarded as provisional. Business cycle dynamics and, in particular, recession drivers remain poorly understood, and forecasters have struggled to predict even imminent recessions. Fifth, as a result, institutional investors need to maintain robust hedge buckets within their portfolios, even if they are optimistic about the likelihood of a long-lived expansion. Assets that will perform relatively well during a recession, such as government bonds and high-quality corporate credit, represent an integral component of investing for the long run, given the difficulty in predicting the timing of such downturns.
Tracking the business cycle

AUTHOR

Michael Hood is Global Markets Strategist within the institutional business at J.P. Morgan Asset Management (JPMAM). In this capacity, he provides analysis of and commentary on the economy and asset allocation to institutional investors of all types. He writes frequent “Global View” commentaries, as well as stand-alone publications on economic and market topics. He also maintains forecasts for global growth, inflation and policy interest rates, and contributes to the firm’s long-term capital markets assumptions process.

Mr. Hood came to JPMAM in October 2011 from Traxis Partners, a USD1bn+ macro hedge fund based in New York. There, he served as chief economist from 2007 to 2011, maintaining detailed forecasts for global variables. He produced a monthly global outlook publication and frequent stand-alone pieces on a range of developed and emerging market economic issues.

Previously, Mr. Hood worked as an economist and market strategist at Barclays (within the emerging markets research department) and at the J.P. Morgan investment bank (within the economic research department). At J.P. Morgan, he began, in 1994, as an economist for several Latin American countries. Later, he oversaw J.P. Morgan’s Latin American economic research effort and helped coordinate the department’s global views. He contributed to and helped edit many J.P. Morgan publications, including the weekly “Global Data Watch” and quarterly “World Financial Markets.” He also created and edited the quarterly “Latin American Economic Outlook” publication. At Barclays, where he worked from 2004 to 2007, Mr. Hood researched a combination of economic and market-strategy topics within emerging markets, again writing for and helping edit a variety of publications. While at J.P. Morgan and Barclays, he frequently traveled to Latin America and spoke to a wide range of clients, including institutional investors, corporations and private equity sponsors.

Mr. Hood began his career in the research department at the Federal Reserve Bank of New York, where he worked from 1992 to 1994 on a variety of international-finance and developing-country topics. In this capacity, he wrote many country-risk studies used by federal bank regulators.