Focus: G7 Economies to See More Frequent Recessions

Due to falling trend growth and higher volatility, shorter business cycle expansions may become the norm in most major developed economies.

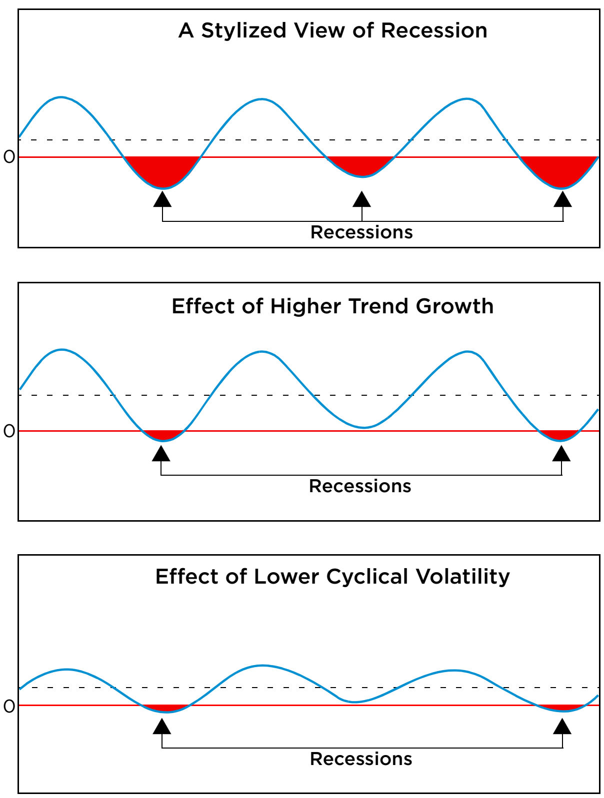
Recession Frequency With the Great Recession a fresh memory, the global economy is facing another downturn, with some countries already in recession. The perceived shortness of the recovery took most observers by surprise, demolishing expectations that a severe recession would be followed by a strong and prolonged recovery. However, as we showed more than three years ago, before the Lehman Brothers failure (*↗U.S. Cyclical Outlook, Vol. XIII, No. 8, August 2008*), trend growth had been getting lower and lower in successive economic expansions at least since the 1970s, pointing to very modest trend growth in the current expansion. To the surprise of many, that is precisely what has happened. Soon after we wrote that report, we followed it up in this publication almost three years ago (*↗Vol. XIV, No. 1, January 2009*) with the further observation that the length of a business cycle recovery is not determined by the severity of the recession that preceded it, but is primarily a function of two factors: the economy's trend rate of growth during expansions and cyclical volatility.

To illustrate this point in principle, Chart 2a shows how a higher trend rate of growth or lower volatility can theoretically extend the duration of business cycle expansions. All three panels present a stylized picture of the growth rate of an economy, with the dashed line representing the economy's trend rate of growth and the solid line at zero its recession threshold. The top panel shows economic growth dipping below zero three times. Thus, in this instance, the economy experienced three business cycle recessions.

Keeping the amplitude of the growth rate cycle unchanged while raising the trend rate of growth sufficiently (middle panel) would produce two shallower recessions and one non-recessionary slowdown. This is because, in an economy with a higher trend of growth, the rate of growth needs to fall further in order to enter negative territory, resulting in a contraction. Finally, even if trend growth is unchanged, a sufficient reduction in the amplitude of the growth rate cycle (bottom panel) would also produce two shallower business cycle recessions and one non-recessionary slowdown, as growth rate cycles become more muted, so that economic growth hews closer to the trend growth line.

ECRI's hypothesis that the duration of expansions is a function of the economy's trend rate of growth and its cyclical volatility is supported by the actual data for the last ten postwar U.S. expansions. We find that long U.S. expansions were typically associated with either high trend growth, or low volatility, or both. For example, the long 1961-69 expansion was propelled by a strong pace of growth along with relatively low cyclical volatility, while the 1991-2001 expansion saw weaker trend growth and among the lowest cyclical volatility readings on record. On the flip side, shorter expansions were marked by low trend growth and/or high cyclical

Chart 2a: Effects of Higher Trend Growth and Lower Cyclical Volatility on Business Cycles



volatility. For instance, during the brief 1958-60 expansion, cyclical volatility was high and economic trend growth was below average. Unfortunately, in terms of trend growth and volatility, the current expansion more closely resembles the 1958-60 expansion. Therefore, it is not really surprising that it will likely be short-lived.

In this context, there are two developments that demand attention. First, the trend rate of growth in the key coincident indicators of the U.S. economy has been trending down during successive expansions since the 1970s, as reiterated in a recent report *(↗U.S. Cyclical Outlook, Vol. XVI, No. 8, August 2011)*. Secondly, the Great Moderation in cyclical volatility that allowed for the long expansion of the 1990s is now history *(↗International Cyclical Outlook, Vol. XIV, No. 1, January 2009)*, as cyclical volatility has surged in recent years. This suggests that the U.S. economy is more likely to experience shorter expansions, and therefore, more frequent recessions.

In light of the current global downturn, it is important to verify whether such patterns are also present in other major world economies. To answer this question, we examine whether the trend rates of growth in two key coincident indicators – output and employment – show similar patterns across the G7 economies. In conjunction, we also analyze the historical relationship between the trend rate of growth and cyclical volatility with the length of economic expansions across these economies.

For each G7 economy, a set of three charts per country is presented. The first chart in each set shows the trend growth rates of GDP and employment during the country's expansions. The second chart presents the 36-month standard deviation of the growth rate of the country-specific coincident index, used as a proxy for the country's cyclical volatility. The third chart is a scatter plot pairing the 36-month standard deviation of the coincident index growth rate (horizontal axis) with the 36-month trend growth of the coincident index (vertical axis) at the end of business cycle expansions, with the diameter of the bubbles representing the duration of the expansions. In the scatter plots, the locations of the black diamonds indicate the trend growth and volatility in the current expansions to date.

The English-Speaking Countries In the U.S., the trend growth rates of GDP and employment during the early and mid-1970s were at 5.2% for GDP growth and 3.6% for employment growth (Chart 2b). Since then, trend growth for both measures has gradually declined, reaching record lows in the current expansion. Meanwhile, cyclical volatility has surged (Chart 2c). In fact, it has not been this high since 1984. Furthermore, Chart 2d shows that in the U.S., historically, higher volatility and/or lower trend rates of growth have been associated with shorter expansions (smaller bubbles). All of this suggests not only that the current expansion is likely to be relatively short-lived, but also that the U.S. economy has entered a period where recessions will probably be more frequent.

Similarly, in Canada, the trend growth rates of GDP and employment have been trending down since the 1950s (Chart 2e). Unlike the U.S., however, trend growth in GDP has not dropped further in the current expansion, but has stayed below its pre-1990 readings. Meanwhile, volatility rose to a 20-year high in 2011 (Chart 2f). The fact that the shortest Canadian expansion on record happened when cyclical volatility was at its highest (Chart 2g) attests to the validity of the interrelationship among trend growth, cycle volatility, and expansion length. While the Canadian economy looks better in some respects than the U.S. economy, the fact that trend growth in GDP and jobs is relatively modest – and even more so in terms of the growth rates of more comprehensive measures like the Canadian Coincident Index – undermines the case for long expansions, especially with volatility at a two-decade high. As a result, prospects for a relatively long expansion are only slightly brighter than in the U.S.

In the U.K., the trend growth rates of GDP and employment have both been stair-stepping down, after peaking in the 1975-79 and 1981-90 expansions, respectively (Chart 2h). In the latest expansion, trend growth has plunged for both measures, with employment trend growth even dipping into negative territory. Meanwhile, despite recent easing, cyclical volatility stands at 2008's 16-year high (Chart 2i). Although, in the past, the U.K. economy did experience its longest expansion on record when volatility was at its highest, its trend rate of growth was also relatively strong at the time (Chart 2j). Currently, the trend rate of growth of the U.K. economy is near historical lows. It remains to be seen how the U.K. economy will fare given the combination of low trend growth and high volatility.

In sum, all three English-speaking countries have been experiencing declining trend growth in GDP and employment, along with higher cyclical volatility. Historical evidence suggests that this combination increases the likelihood of shorter expansions, and thus, more frequent recessions. However, given the

Chart 2b: Trend Growth (%) in Output and Employment During U.S. Expansions

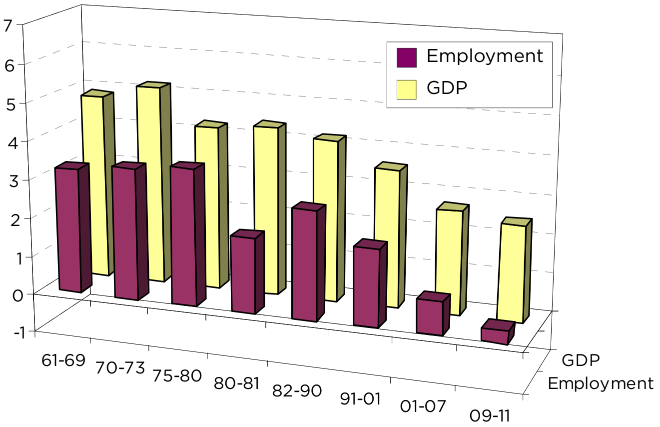


Chart 2e: Trend Growth (%) in Output and Employment During Canadian Expansions

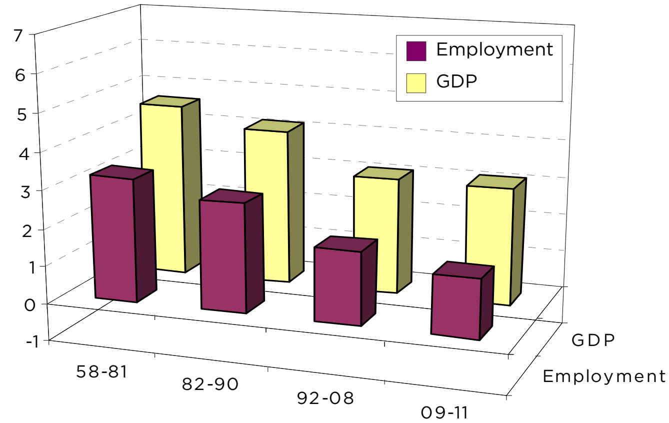


Chart 2c: Cyclical Volatility of U.S. Coincident Index Growth

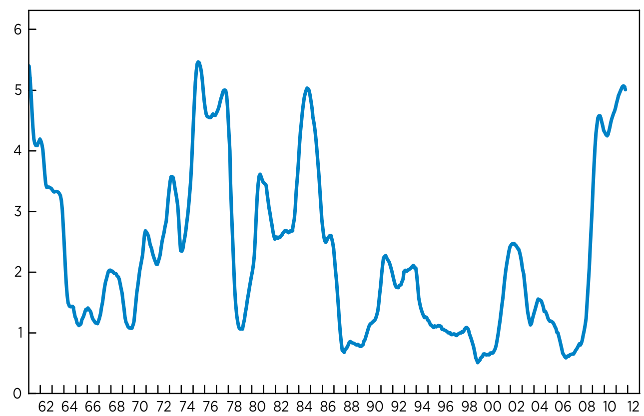


Chart 2f: Cyclical Volatility of Canadian Coincident Index Growth

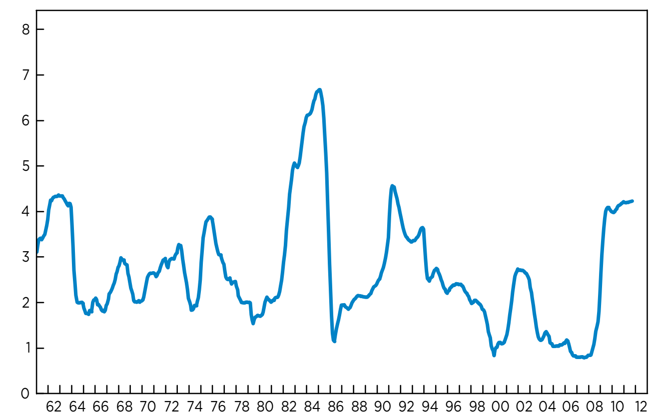


Chart 2d: Trend Growth (%) and Cyclical Volatility at U.S. Expansion Peaks

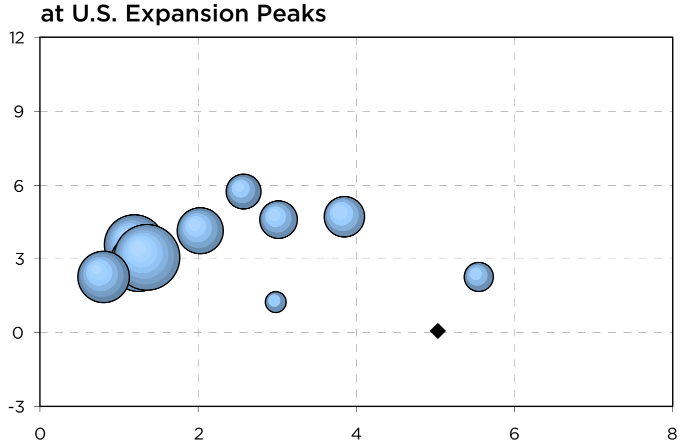
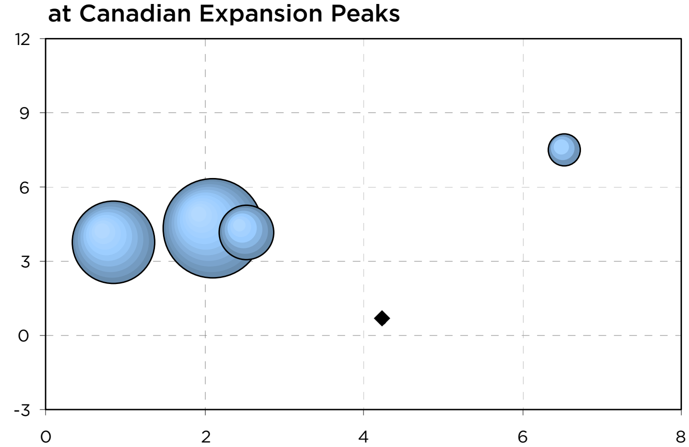


Chart 2g: Trend Growth (%) and Cyclical Volatility at Canadian Expansion Peaks



more pronounced declines in the trend growth rates of the U.S. and the U.K., their expansions currently look more fragile than the Canadian one.

Eurozone and Japan: Patterns Diverge Naturally, given the close geographic proximity and strong trade linkages among the three largest Eurozone economies (Germany, France and Italy), one might expect them to exhibit similar patterns. Instead, they are on divergent paths. Specifically, in Germany, all expansions through 2001 saw gradual declines in the trend growth rate of output (Chart 2k), but since then, GDP trend growth has been strengthening. Meanwhile, German employment trend growth has declined from the rates

Chart 2h: Trend Growth (%) in Output and Employment During U.K. Expansions

Chart 2i: Cyclical Volatility of U.K. Coincident Index Growth

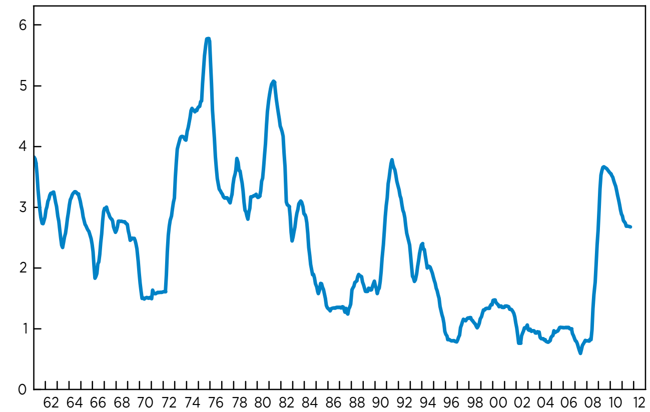
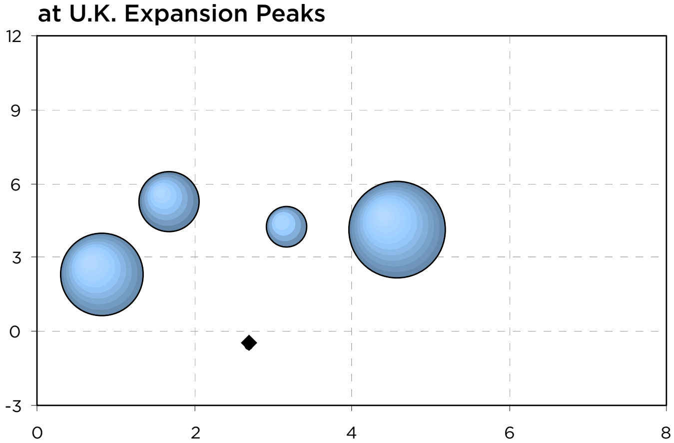


Chart 2j: Trend Growth (%) and Cyclical Volatility at U.K. Expansion Peaks



seen in the 1982-91 expansion, but appears to have held relatively steady over the last three expansions. Cyclical volatility has also risen in Germany (Chart 2l), and it is currently at a 41-year high. In the past, the expansion with the highest trend growth, but also the highest volatility, had the longest duration (Chart 2m). Currently, with trend growth nowhere near that level,

Chart 2k: Trend Growth (%) in Output and Employment During German Expansions

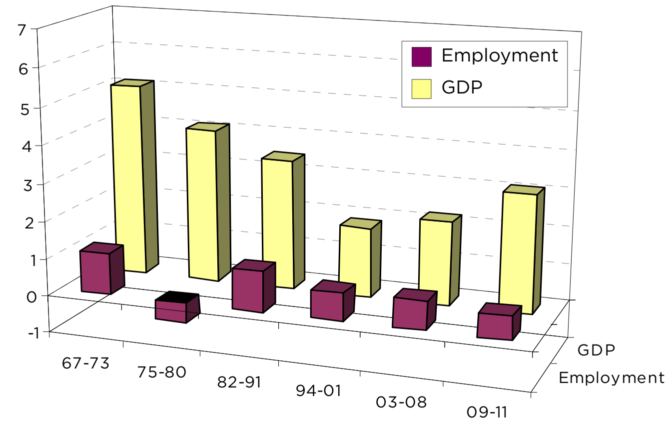


Chart 2l: Cyclical Volatility of German Coincident Index Growth

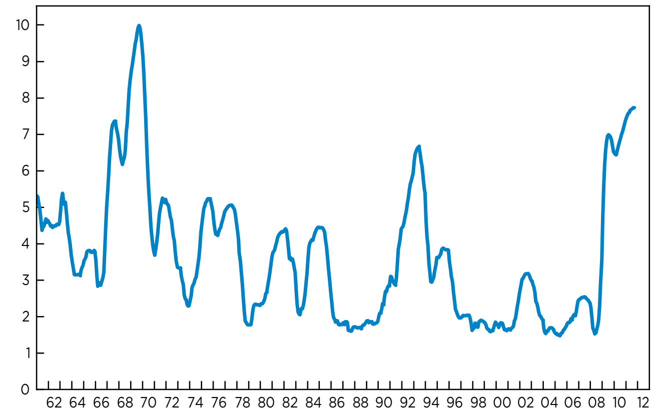
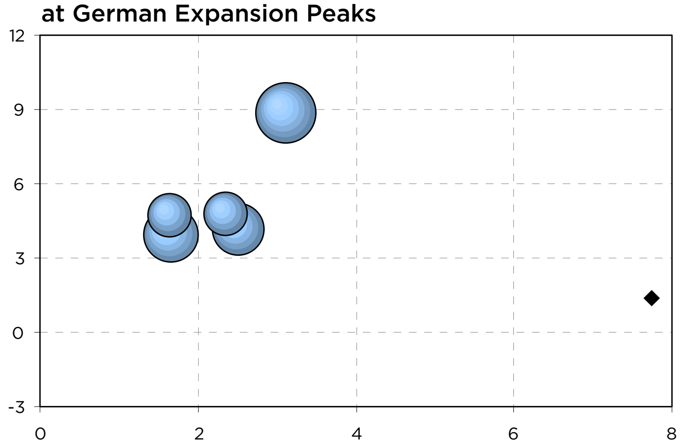


Chart 2m: Trend Growth (%) and Cyclical Volatility at German Expansion Peaks



and cyclical volatility spiking, it remains to be seen how sustained the German recovery will be. Still, with GDP trend growth heading higher, the German economy is on a more solid footing than its European counterparts.

In France, the trend growth rates of GDP and employment have clearly trended down over time

Chart 2n: Trend Growth (%) in Output and Employment During French Expansions

Chart 2q: Trend Growth (%) in Output and Employment During Italian Expansions

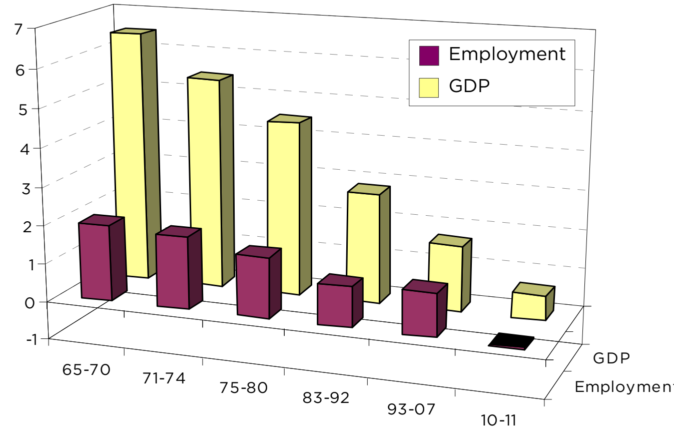


Chart 2o: Cyclical Volatility of French Coincident Index Growth

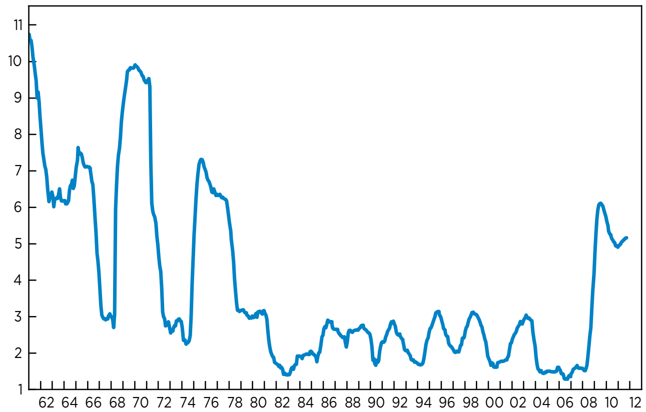


Chart 2r: Cyclical Volatility of Italian Coincident Index Growth

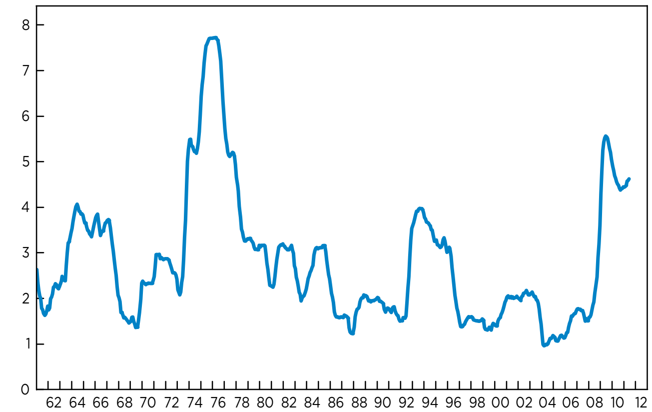


Chart 2p: Trend Growth (%) and Cyclical Volatility at French Expansion Peaks

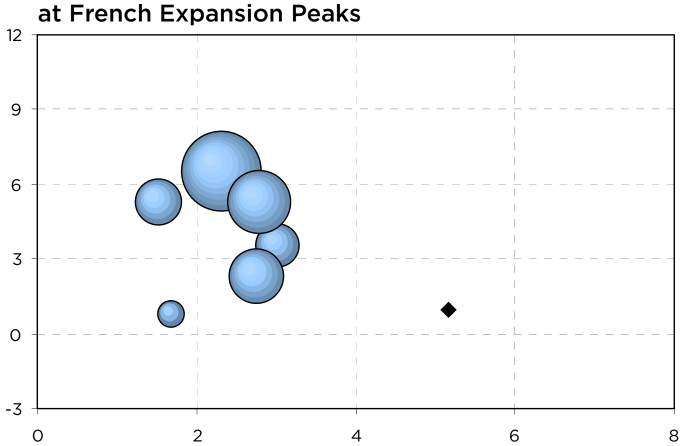
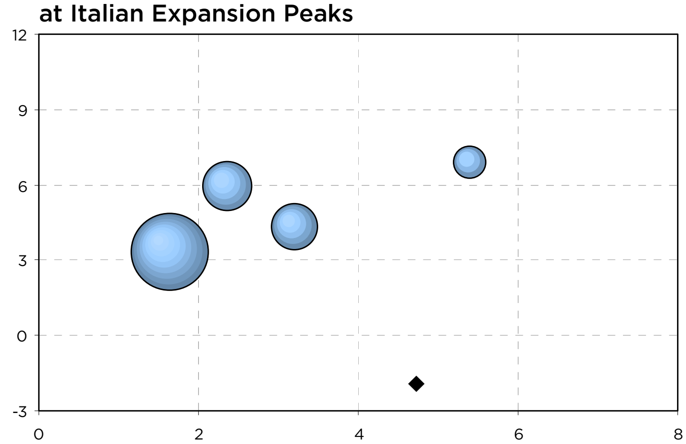


Chart 2s: Trend Growth (%) and Cyclical Volatility at Italian Expansion Peaks



(Chart 2n), with the former currently at a record low and the latter at its lowest levels since the early 1980s. Simultaneously, volatility, though it has eased a bit, is hovering near the 31-year high seen in 2009 (Chart 2o). In the French case, the expansion with the lowest trend growth and one of the lowest volatility readings was also the shortest (Chart 2p). Currently, with trend growth near those readings and with volatility much higher, the outlook for a long expansion is not hopeful. On the bright side, it is not as dire as the outlook for Italy.

Italy is the perfect example of trend growth in GDP and employment declining in each successive expansion since their peaks in the 1965-70 period

Chart 2t: Trend Growth (%) in Output and Employment During Japanese Expansions

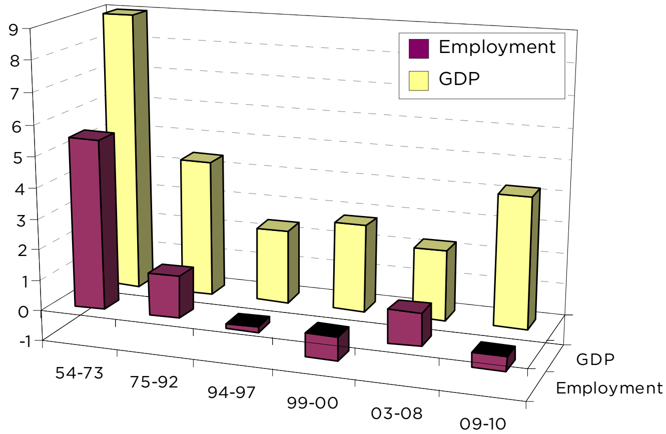


Chart 2u: Cyclical Volatility of Japanese Coincident Index Growth

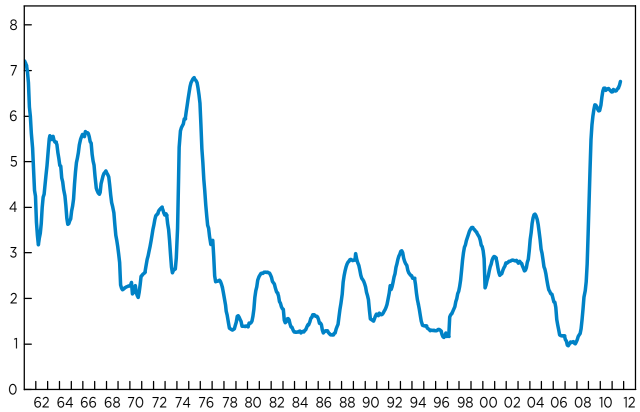
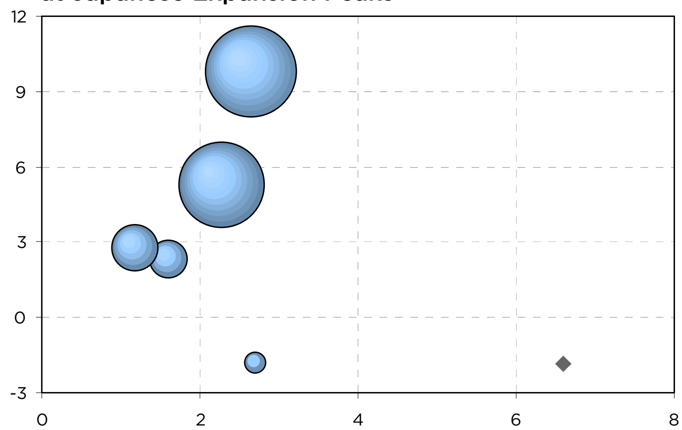


Chart 2v: Trend Growth (%) and Cyclical Volatility at Japanese Expansion Peaks



(Chart 2q). In the latest expansion, GDP trend growth is nearing zero, while employment growth is already slightly negative. At the same time, volatility has increased (Chart 2r) and remains close to highs not seen since the late 1970s. This is particularly ominous because, as Chart 2s illustrates, the Italian economy has shown a clear pattern of association between longer expansions and lower levels of volatility and/or high trend growth. Now, with trend growth near historical lows and cyclical volatility at multi-decade highs, the outlook for long expansions is quite bleak.

Japan's experience of expansions is somewhat different from that of the other G7 economies. Trend growth in GDP and employment declined sharply from the 1970s to the late 1990s (Chart 2t), and, while other major developed economies saw long expansions sustained by low volatility, Japan entered its lost decade, spending more time in contraction than expansion. This, as we pointed out in an earlier issue of this publication (*↗ Vol. XVI, No. 2, February 2011*), led to deflation. However, the most recent expansion (2009-10), which, according to preliminary ECRI estimates, probably ended in February 2010 (Chart 2v, grey diamond), saw a strong rebound in GDP trend growth. Yet, in contrast to the lost decade, cyclical volatility is near its 1975 high (Chart 2u), which explains in part why the latest expansion was cut short despite higher trend growth.

More Frequent Recessions Building on our 2008 work for the U.S., the above analysis reveals a fairly pervasive pattern of long-term declines in the trend growth rates of GDP for most G7 economies. Germany and Japan are the notable exceptions. In the case of Germany, GDP trend growth has been strengthening in recent expansions, while in Japan the same has been true only for the latest expansion. Employment trend growth has been declining, as well, in all G7 economies, with the current expansion's trend growth rate being the lowest or among the lowest in every case.

At the same time, cyclical volatility has been increasing across all G7 countries and has reached multi-decade highs in many of them. Meanwhile, an examination of the historical durations of expansion for the G7 economies confirms the strong association between the trend rate of growth of an economy and volatility, on the one hand, and the duration of expansions, on the other, that we had uncovered years ago.

This has critical implications beyond the U.S. economy. In fact, several other major international economies, including the U.K., France and Italy, are facing increased risk of more frequent recessions. In Canada and Germany the risk is mitigated somewhat by the recent firming in the trend rate of growth of GDP, but with cyclical volatility soaring, it remains to be seen how sustainable their expansions can be. ■

