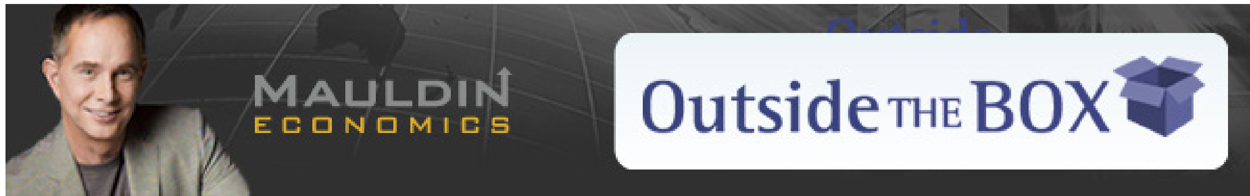


International Inflation Cycles Sync Up

JOHN MAULDIN | May 24, 2017

My friend Lakshman Achuthan, Co-Founder & Chief Operations Officer of the Economic Cycle Research Institute (ECRI), has done some really interesting work on international inflation cycles, and in today's *Outside the Box* he shares it with us. This is a special treat – ECRI does not normally make its material available outside of its client base. I am truly grateful that he allows me to share this. Lakshman will be joining us at SIC this week in Orlando, to the great benefit of the attendees.

It turns out that inflation volatility has been greatly dampened in the 11 OECD (advanced) economies in the 21st century, as compared to the late 20th century: It's now only about a quarter of what it was then. Additionally, the domestic inflation cycles of these countries have increasingly come into sync. These two trends have made it possible for ECRI to devise a leading index of global inflation cycles that offers earlier and more accurate forecasts of cyclical turning points in international inflation.

In concluding this short but groundbreaking piece, Lakshman adds,

> The synchronization of international inflation cycles highlights the importance of global factors in assessing domestic inflation prospects. Our analysis underscores the 21st-century reality that the timing of inflation cycles may be beyond the control of any individual central bank. Yet this very development makes it possible for ECRI to provide even earlier signals of peaks and troughs in the inflation cycle.

Lakshman's piece runs with an argument that my friend John Vogel wrote about this morning, highlighting another piece of research. I've been arguing for years that the world is basically in a long-term deflationary trend, despite all the monetary intervention and money printing. It's a bit difficult to measure, but the cost of producing goods is dropping. Which means that the cost of living will continue to fall – at least as far as purchasing goods is concerned (as opposed to buying services like healthcare and education). As John writes (somewhat controversially):

> What I think is more interesting is the productivity created by CHEAP oil and natural gas. We don't measure this, no fault of men like Prof. Gordon who think in straight lines.
>
> As the price of energy came down in the US, energy companies didn't go out of business as some had forecast. They have pressed hard to find ways to find, drill and lift energy out of the ground in cost effective ways. While this effort may have hurt short term profits, it has also ensured the survival of service companies and E&P companies.

> Next, as the price for natural gas has come down and stayed down (with no sign of supply shortages), the industries that thrive on natural gas, such as chemicals, plastics, etc, have become more profitable. Third order: Lower feedstock may also lead to lower chemical prices that will feed into clothing, agriculture, etc, in the form of more competitive pricing of high quality stock to many industries. Organic chemistry applications are being reborn as reduced cost leads to more or better applications.
>
> This entire process means that we should be able to recreate entire industries that had gone to other countries, as wages no longer pose impediments to competitive pricing.
>
> In short, what we are seeing is the same ripple effect that lower cost semiconductors had on computer and electrical applications; now we are seeing it in industrial applications. However, it now has to be measured as a secondary or tertiary effect, rather than a direct application.
>
> Further, this helps explain why deflation is needed economically; it may be a salvation for employment…. If deflation can lead to a lower cost of living, we can recreate industrial jobs outside high cost of living cities. It is the opposite of the mega trends that others keep point to. The latest rage is co-living, where small living spaces with a bath replace an entire apartment. Gone are living rooms and kitchens. But even with this, rent in Chicago is $1000 per month and in NYC $1900 per month. In fact, the developers make more money this way than they do in conventional 1 and 2 bedroom apartments.
>
> Deflation will force relocation of jobs and therefore will force geographical redistribution. Because this is not being touted as a good solution, the transition will be rocky. But it must occur. It is the future of economic success for the entire country.

The future is changing the world around us, but it's a gradual transition that is not readily apparent on a day-to-day basis. If you pay attention to the long-term data, as Lakshman does, you can see that change is happening faster than we think.

I cooked yet another chili dinner, accompanied by my world-class prime (just because I could) for a group of investment advisors who flew into town to look at the latest programs we've developed. Last weekend you got your first peek, and I'll have much more to share as we go along.

I am really psyched about the Strategic Investment Conference this week in Orlando – we're off to a great start! Not just all the cool information but all the many friends (and new friends) I'm sharing it with. Frankly, even with all the problems of the world, I see opportunities everywhere. A Muddle Through Economy may seem boring to some, but I think they are looking in the wrong places.

I'm going to go ahead and hit the send button and dive right back into the whitewater here at SIC. You have a great week – and make sure you watch my Twitter feed for SIC updates.

Your life is what happens to us when we dive right in and swim analyst,

John Mauldin, Editor
Outside the Box

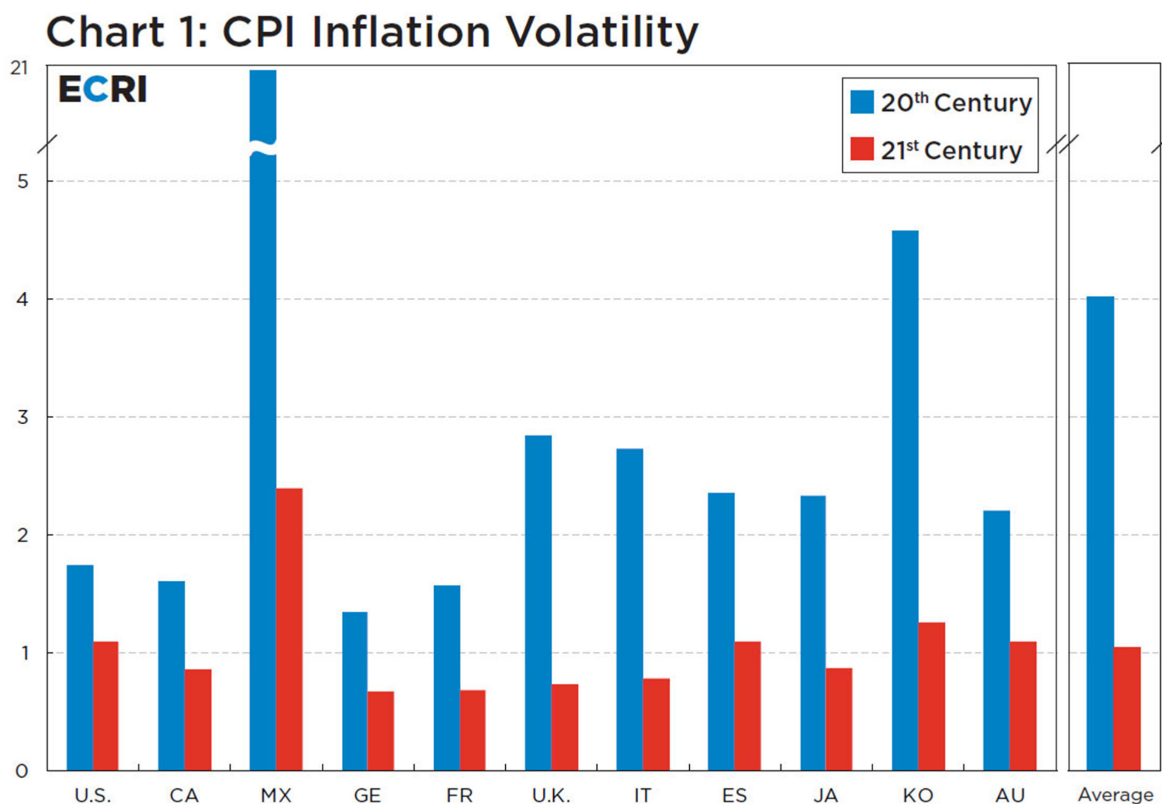
International Inflation Cycles Sync Up

In the 21st century international inflation cycles have become more synchronized, enabling even earlier detection of cyclical turns in inflation.

Taming Inflation

The behavior of international inflation cycles has changed substantially in the 21st century in terms of the coordination of cyclical timing as well as amplitude. These shifts have made it feasible to devise a long leading index of those inflation cycles that works sequentially with ECRI's 11 existing international future inflation gauges (FIGs), offering the earliest forecast of cyclical turning points in international inflation.

To understand how dramatically the international inflation landscape has changed, we first showcase inflation volatility in the 11 OECD, i.e. rich-country economies, whose inflation cycles are regularly monitored by ECRI (Chart 1). For these economies, we present the five-year moving standard deviation of year-over-year (yoy) CPI growth – a proxy for its volatility – comparing the 20th-century (1969-99) and the 21st-century (2000-17) patterns.



Without exception, it is clear that inflation volatility in all 11 economies has decreased considerably in the 21st century (red bars) from the 20th century (blue bars), with Mexico seeing the greatest drop from the hyperinflationary highs of the 1980s, followed by Korea and the U.K. Across all countries, CPI inflation volatility in the 21st century is, on average, only about a quarter of what it was in the 20th century (rightmost set of bars).

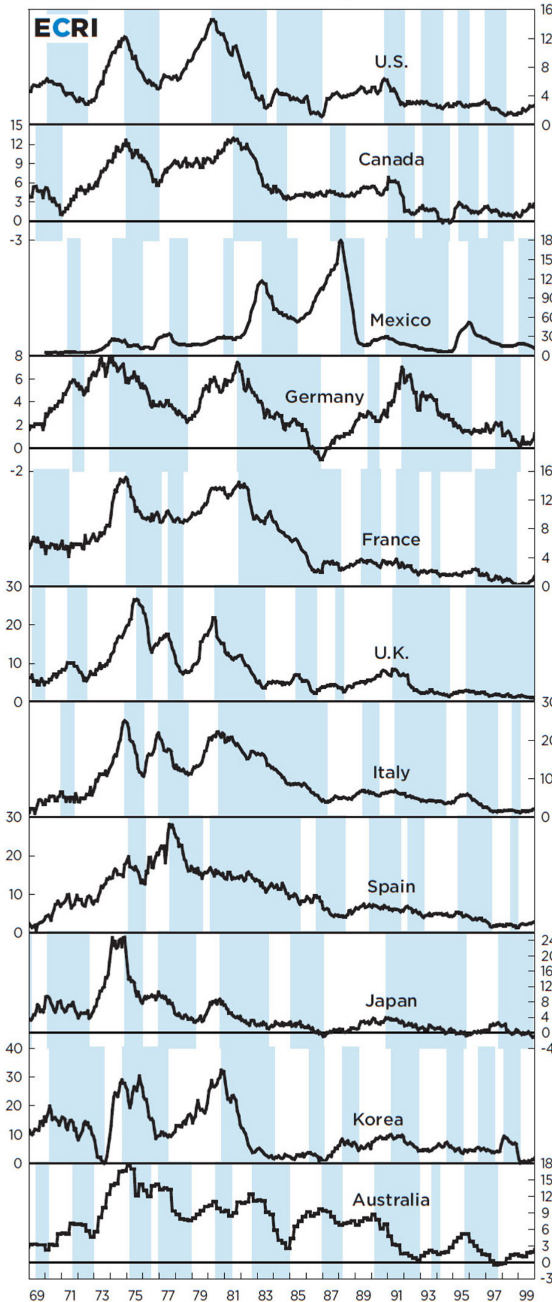
A number of factors are responsible for this plunge in volatility, including the waning power of OPEC – in part resulting in smaller oil shocks – alongside high oil prices incentivizing greater supply, as well as concerted efforts by major central banks to target and curb inflation. Also playing an important role were the disinflationary and deflationary effects of globalization, as China, India and ex-Soviet economies were integrated into the global economy, starting in the late 20th century. As globalization advanced, economies turned much more trade-dependent by the early years of the 21st century *(ICO Focus, October 2016)*, with significant consequences for international inflation cycles, as we shall now detail.

Inflation Cycles Increasingly in Sync

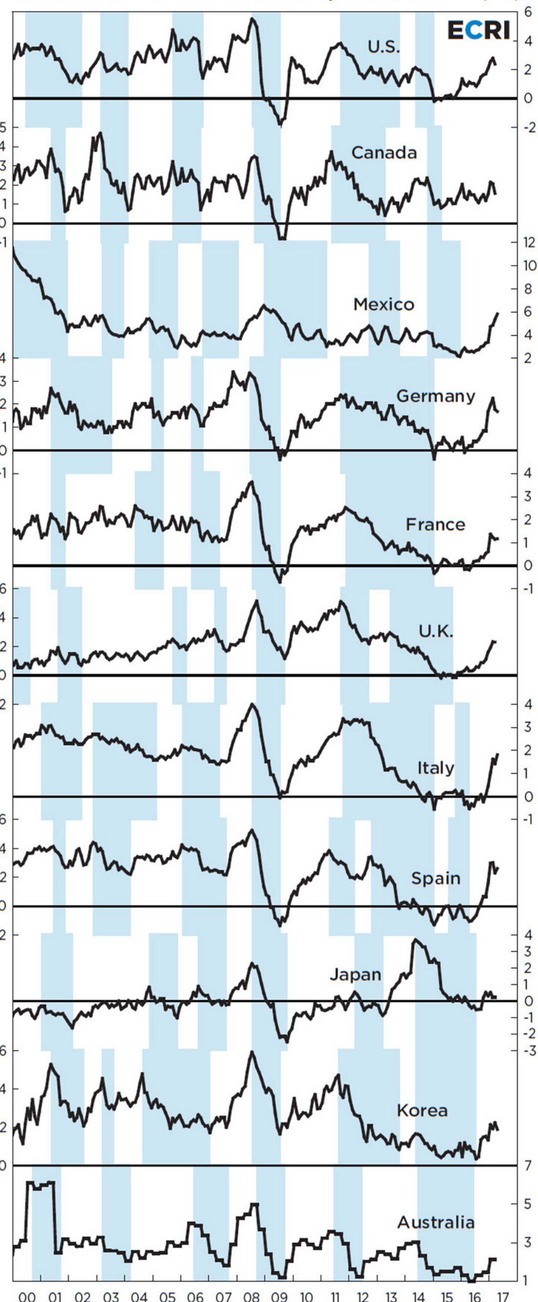
More than a decade ago, we showed that cycles in industrial growth for major economies tend to be more or less synchronized *(ICO, October 2006)*. A key reason for such synchronization has been the growing global interdependence among countries through expanding trade and financial linkages. It therefore makes sense to monitor global industrial growth cycles, and to do so we have employed a set of sequential leading indexes.

We now examine whether there is also a distinct international *inflation* cycle marked by broadbased cyclical upturns and downturns in inflation rates across different economies. That is, do economies exhibit similar cyclical patterns in inflation, or do they move independently? If a single international inflation cycle can be identified, monitoring a country's inflation outlook would entail monitoring both this international inflation cycle and country-specific swings in inflationary pressures.

Aligning the yoy CPI growth rates of the 11 economies for which ECRI has developed country-specific FIGs over the two different timespans shown in Charts 2 and 3 offers some visual clues. White areas and blue bars represent cyclical upturns and downturns, respectively, in each country's CPI growth. The reason for splitting the overall timespan into two periods, namely, 1969-99 and 2000-17, is that the drop in volatility is so sharp that cycles in the 21st century become largely imperceptible when plotted on the scales appropriate for the earlier period.



Shaded areas represent cyclical downturns in CPI inflation.



Shaded areas represent cyclical downturns in CPI inflation.

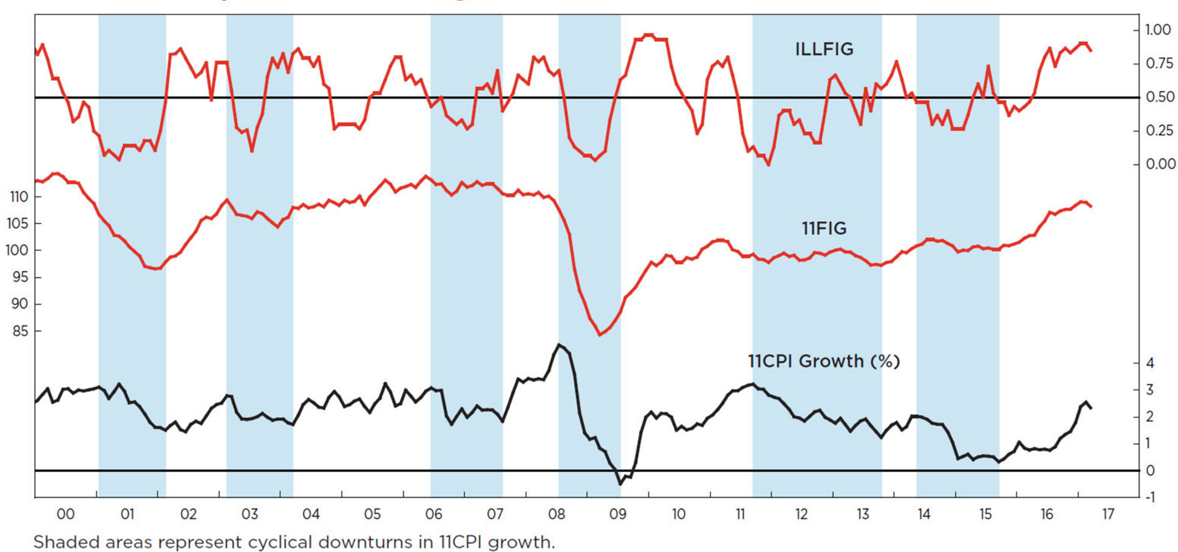
Comparing the two charts, it is apparent that there is greater alignment of cyclical upturns and downturns in the 21st century than in the 20th century. For instance, in the 30-year period from 1969 to 1999, the 11 economies experienced roughly concurrent inflation cycle downturns only three times, starting in the mid-1970s, early 1980s, and early 1990s (Chart 2). Since 2000, however, these economies have already had four fairly concerted inflation cycle downturns in 17 years – starting around the early 2000s, the mid-2000s, 2008 and 2011 – and are currently all in cyclical upturns (Chart 3).

To objectively measure the degree of synchronization of cyclical upturns and downturns among the 11 economies, we calculated the concordance of cyclical swings, i.e., the proportion of months during which those economies were in simultaneous inflation cycle upturns or downturns. According to this measure, the proportion of time that all 11 economies spent in synchronized upturns or downturns has more than tripled in the 21st century, while the proportion of time that over 80% of the economies were in the same phase of the inflation cycle rose more than 1½ times (not shown).

Predicting International Inflation Cycles

With 21st century inflation cycles across major economies becoming fairly synchronized, it makes sense to define and forecast the resultant international inflation cycle. The international inflation cycle consists of cyclical upswings and downswings in the yoy growth rate of the 11-Country CPI (11CPI), a weighted average of the 11 individual countries' CPIs (Chart 4, bottom line). Meanwhile, ECRI's 11-Country Future Inflation Gauge (11FIG, middle line) is constructed in an analogous weighted manner, combining the 11 corresponding future inflation gauges. The 11FIG is a summary measure of underlying inflation pressures across these economies, and leads cyclical turning points in 11CPI growth by a little over one quarter, on average.

Chart 4: Sequential Leading Indicators of International Inflation



Shaded areas represent cyclical downturns in 11CPI growth.

Adding to this toolkit, we introduce the International Long Leading Future Inflation Gauge (ILLFIG, top line), designed to be a long leading indicator of the international inflation cycle. The ILLFIG leads the 11FIG by almost one quarter, on average, at cycle turning points, therefore leading the international inflation cycle by a little over half a year, on average. Together, the ILLFIG and the 11FIG serve as a sequential leading indicator system for international inflation cycles, increasing the forecast horizon and enhancing the clarity of the international inflation outlook.

As the chart shows, in the most recent cycle, the ILLFIG and 11FIG turned up in early 2015, signaling with conviction an upcoming cyclical upswing in international inflation pressures. Indeed, 11CPI growth started to turn up, as well, in the fall of 2015. In their latest readings, both indexes remain elevated, though slightly off their recent highs.

With the yo-yo years unfolding as the major developed economies experience long-term declines in secular trend growth *(ICO, March 2012)*, lowflation, and even occasional deflation, has become the norm. Meanwhile, with CPI inflation volatility having dropped markedly, especially in the 21st century, international inflation cycles have become more subdued.

The synchronization of international inflation cycles highlights the importance of global factors in assessing domestic inflation prospects. Our analysis underscores the 21st-century reality that the timing of inflation cycles may be beyond the control of any individual central bank. Yet this very development makes it possible for ECRI to provide even earlier signals of peaks and troughs in the inflation cycle.

Currently, both the ILLFIG and the 11FIG remain in cyclical upturns, and close to multiyear highs. However, they both dipped in their latest readings. As such – and especially in the context of the global industrial growth downturn that is now at hand *(ICO Essentials, April 2017)* – they bear watching for early signs of a potential reversal in the global reflation cycle that we flagged last summer *(ICO Essentials, August 2016)*.

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