We construct macroeconomic risk indicators for Emerging Markets (EM) countries and the US (so-called Icarus Indices). We find that the mild easing stance adopted by most EM central banks is consistent with the state of EM business cycles, but that Fed policy is too easy given the US business cycle. This implies that allocations out of US markets and into EM are not merely justified in terms of relative valuations, but also by relative risk measures.

Introduction

All economies naturally go through business cycles. Central bankers are supposed to limit the amplitude of business cycles using monetary policies, while fiscal authorities are supposed to ensure that debt stocks are kept in check and that reforms are undertaken in a timely manner so as to remove bottlenecks to growth. In the current business cycle, however, developed economies have relied far more on monetary stimulus than in previous business cycles, while governments have paid very little attention to rising debt stocks and declining productivity. This imbalance in the application of monetary and fiscal policies and reforms has produced a peculiar situation — where macroeconomic disequilibria are far more likely to show up in currencies and asset prices than in the real economy. In addition, the extensive reliance on asset purchases by central banks has induced major re-allocations of capital in the global economy as institutional investors have taken capital from otherwise healthy EM countries in order to chase short-term returns in the Quantitative Easing (QE) sponsored markets.

The result is a severe misallocation of global capital, which means that macroeconomic risks are now increasingly concentrated in developed economies, where too much capital is chasing financial assets against a backdrop of neglected fundamentals. By contrast, EM assets are now more attractive not just in terms of better valuations, but also because macroeconomic risks are declining outright as EM countries resume their growth trend on the back of very competitive real exchange rates.

This paper aims to quantify the relative macroeconomic risks associated with investing in EM countries at this juncture in the global business cycle compared to investing in the United States. To this end we calculate a set of macroeconomic risk indicators, which we call Icarus Indices in recognition of the natural limitations on markets imposed by economic constraints, such as real exchange rates. Icarus Indices combine estimates of real exchange rate misalignment with measures of monetary policy appropriateness. Real exchange rates are a suitable way to measure macroeconomic disequilibrium over the long term in a world dominated by unconventional monetary policies that operate by impacting the value of currencies and asset prices.

The majority of EM countries today operate appropriate monetary policies, given their real exchange rates. By contrast, the US monetary policy stance is inappropriately loose in relation to the overvalued US real exchange rate.

Using a sample comprising all the countries in the JP Morgan GBI EM GD index plus the US, we find that macroeconomic risks have been steadily declining in the EM economies, while macroeconomic risks have been rising in the US over the same period. These changes in relative riskiness are mainly due to the adjustments undertaken since 2013 in relation to nominal exchange rates, relative inflation and monetary policies. We find that the majority of EM countries today operate appropriate monetary policies, given their real exchange rates. By contrast, the US monetary policy stance is now inappropriately loose in relation to the overvalued US real exchange rate.

Given the balance between macroeconomic risks in the US and EM countries, we believe that investors should dial down their exposure to US markets in favour of EM. This rotation should not only enhance returns, but also reduce risks. We believe this is particularly relevant for EM central banks, which sit on some of the largest and most concentrated long USD positions in the world.

A turning point in the global macroeconomic picture

Macroeconomic conditions are the single most important determinant of asset prices. There is now growing evidence that global macroeconomic fortunes are turning back in favour of EM after several years of headwinds. Yet, the global market place still allocates nearly seven times more capital to every unit of GDP in developed economies than in EM. This suggests that global capital is today grossly misallocated.

Global macroeconomic conditions have been shaped materially by the heavy reliance on asset purchases by developed market central banks since 2009/2009. Global capital responded strongly to asset purchases, which helped to push stock and
bond prices in the QE economies to all-time highs and the Dollar soared against almost all other currencies in the world.

Still, developed economies, including the US, failed to achieve ‘exit velocity’ despite the abundance of financial tailwinds. In fact, growth rates in developed economies have declined by 42% on average relative to before the crisis, according to IMF figures (see table below). Looking forward, as monetary tightening gradually takes hold in the US and later in other QE economies it is likely that both economic performance and asset prices will face greater headwinds.

### Table 1: Real GDP growth rates (averages)

<table>
<thead>
<tr>
<th>Country</th>
<th>1998-2007</th>
<th>2012-2016</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>4.2</td>
<td>3.3</td>
<td>-21%</td>
</tr>
<tr>
<td>Emerging Markets</td>
<td>5.9</td>
<td>4.6</td>
<td>-21%</td>
</tr>
<tr>
<td>Developed economies</td>
<td>2.8</td>
<td>1.6</td>
<td>-42%</td>
</tr>
</tbody>
</table>

Source: Ashmore, IMF.

In sharp contrast to the QE economies, most EM countries faced significant financial headwinds in the past few years, but now appear to be recovering. A great deal of the capital, which flowed into the US in the aftermath of 2008/2009 came from EM countries, either via direct investments by EM central banks or due to deliberate re-allocations by global asset allocators in response to the incentives created by the powerful asset purchase programmes of the QE central banks. EM currencies thus declined by 40% between 2010 and 2015, while bond yields surged. Equity returns plummeted in the deepest earnings recession in living memory as economies were adversely impacted by severe financial tightening. Remember that most EM economies are finance constrained to begin with, so when yet more money left the asset class growth rates adjusted lower. The rising Dollar contributed to the malaise by pushing down commodity prices, which reinforced the negative financial dynamics in Latin America and Africa in particular. Importantly, however, EM growth rates only declined half as much as growth rates in developed economies in developed economies as shown in the table above.

Indeed, the vast majority of EM countries were sufficiently resilient to cope with the tougher financial conditions without major balance of payments crises or defaults. By 2015 the EM fundamental outlook began to improve due to competitive real exchange rates and the aggressive reforms undertaken in many countries. As capital begins to flow back to EM, it is likely that fundamentals will improve further. The EM growth premium is now on track to rise steadily for the next few years.

The anecdotal evidence therefore points to a shift in the global macroeconomic fortunes back in favour of EM countries.

The US Icarus Index is now two and half standard deviations away from equilibrium, whereas the EM Icarus Index is almost exactly in equilibrium. This suggests that macroeconomic risks are higher in the US relative to EM.

### Measuring macroeconomic risks

In order to provide further evidence of the relative riskiness of macroeconomic conditions in EM and developed economies we have calculated Icarus Indices for all the EM countries in the JP Morgan GBI EM GD index as well as the US.\(^1\)

Icarus Indices are simple but powerful indicators of macroeconomic risk. They are indices, which combine (with equal weights) measures of (a) real exchange rate misalignment and (b) monetary policy accommodation relative to neutral (as measured by the Taylor Rule\(^2\)). The units of the Icarus Indices are standard deviations from equilibrium, so a value of zero implies equilibrium and the further away from zero they are, the greater the macroeconomic misalignment and hence the larger the risk of a macroeconomic correction.

Icarus Indices include both real exchange rates and monetary policy conditions to reflect that business cycles and policy conditions can both add to or subtract from macroeconomic riskiness. It all depends on the starting point for the real exchange rate and whether monetary policy is pro- or counter-cyclical at any given point in the cycle. For example, a central bank that maintains negative real policy rates at a time when the real exchange rate is overvalued will exacerbate macroeconomic imbalances and therefore push risks higher. The appendix explains the construction of Icarus Indices.

### Relative safely in EM

Chart 1 shows Icarus Indices for the US and EM countries (GBI-weighted). The key observation is that the US Icarus Index is now two and half standard deviations away from equilibrium, whereas the EM Icarus Index is almost exactly in equilibrium. This provides prima facie evidence that macroeconomic risks are higher in the US relative to EM. Indeed, the scale of the macroeconomic disequilibrium in the US should give investors grounds for caution regarding the outlook for US asset prices and the Dollar in case the macroeconomic risks materialise. By contrast, it is reassuring that EM countries as a group are operating without material excesses. This indicates that the relatively high yield on offer in some EM countries today are not a symptom of major macroeconomic imbalances.

### Chart 1: Icarus Indices for the US and EM (GBI weighted)

Source: Ashmore, Bloomberg, JP Morgan.

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1. We first introduced the Icarus Index in “The Icarus Index” Weekly Investor Research, 13 March 2017.
2. We place special emphasis on the United States for one reason only: most EM currencies trade against the US dollar and most offshore sovereign and corporate bonds in EM trade as a spread over the US Treasury curve.
3. The US is quite simply far more important for EM investors than other developed economies.
4. The Taylor Rule offers a general guide as to where central banks should keep interest rates given macroeconomic conditions.
Icarus Indices can be broken into their constituent parts, that is, monetary stance and real exchange rate misalignment, in order to get a better sense of why the US and EM indices are so different. Chart 2 shows the US and EM monetary stances, where a positive number indicates excessive easing relative to neutral. Clearly, the Fed is currently maintaining a far more dovish monetary policy stance than EM countries. The US monetary policy stance nearly a full standard deviation to the dovish side of what the Taylor Rule would prescribe (reflected in the fact that the Fed funds rate is currently sitting 155bps below the rate of core inflation in the US). While EM central banks also maintain a dovish stance they are only 0.3 standard deviations to the dovish side of neutral.

It is critical to place the different monetary stances in the US and EM into the context of their respective business cycles. Chart 3 shows that the US real effective exchange rate is currently 1.5 standard deviations overvalued relative to equilibrium, while EM real exchange rates are about half a standard deviation undervalued. Clearly, it is appropriate for EM central banks to maintain a slight easing bias in these circumstances, but it seems highly inappropriate for the US Fed still to maintain such easy monetary policy at this late stage of the US business cycle. The risk is clearly that the US economy begins to experience material inflation, which in turn either pushes the real exchange rate even further into overvaluation territory or leads to Dollar depreciation. This would have no happy ending. Real exchange rates are stationary variables, so serious misalignments usually end with a recession and/or jarring adjustments (lower) in nominal exchange rates. That, of course, does not bode well for Dollar-based investors.

Most EM Central Banks are currently biased towards easing, which is appropriate since most EM countries have room to grow

Intra-EM macroeconomic risks

Business and policy cycles are not coordinated within the broad EM universe, even if global investors often treat EM countries as identical risks. In Chart 4 we unpack the GBI weighted Icarus Indices to show how individual EM countries sit within an Icarus Square, based on conditions as of December 2016. The Icarus Square shows the extent of real exchange rate misalignment along the horizontal axis and the monetary stance versus neutral on the vertical axis. Again, the units are standard deviations from equilibrium/neutral. The light blue boxes represent ‘problem areas’, that is, where the business cycle dynamics and the monetary policy stance are clearly poorly aligned. In Area A the REER is overvalued yet the central bank is still pushing on the stimulus button. Today, the only country in the sample to sit in Area A is the US, while Thailand is just outside. Area B is also inappropriate, because in this area central banks are tightening policy even when the economy is running with significant spare capacity. No EM country currently sits in this space, although South Africa, with its famously hawkish central bank, is close. The main conclusions from Chart 4 are that:

- a) not a single EM country currently sits within the light blue boxes; and
- b) most EM countries are situated in the top left quadrant, where their central banks are biased towards easing and where this is the appropriate policy stance, since real exchange rates are undervalued, i.e. the countries have room to grow.

Chart 4: Icarus Square for EM countries and the US
Discussion

There is no disputing that valuations have moved sharply in favour of EM assets in recent years. For example, the Dollar has rallied about 40% against most currencies in the world, while EM currencies are still trading near 13-year lows in real terms. Bond yields are negative in real terms in most developed economies, while in EM bond yields are close to levels last seen when the Fed had interest rates at 5.25%. Local EM bond yields are also near record highs in real terms, because domestic inflation rates in EM countries have fallen materially since 2010. By contrast inflation is already above target in the US.4

Yet, relative valuations are rarely sufficient to overcome deep-seated prejudices about the EM asset class. Many investors still mistake volatility for risk. Many still cling to a quasi-religious belief that developed markets are somehow risk-free. Today there is clear evidence that it is not just valuations but also relative macroeconomic risks that favour EM countries. Most EM countries have plenty of room to grow even if their currencies appreciate and their policy stances seem appropriate. Debt levels are moderate and FX reserve stocks are healthy. On the other hand, the growth outlook and return prospects are looking less compelling in developed economies as inflation resurfaces and central banks may be forced to tighten financial conditions.

Looking five years into the future, we expect EM currencies to recoup about half of their losses over the past five years. Together with decent carry due to high bond yields, we see EM local bond markets return as much as 50% in Dollar terms over this period. Returns of this magnitude should easily dwarf local bond markets return as much as 50% in Dollar terms over this period. Returns of this magnitude should easily dwarf.

The arguments in the Taylor Rule include; a) central bank inflation targets which are country-specific, b) real neutral rates which are defined for each country as US Treasuries (2%) plus the average spread of the country’s sovereign Dollar debt over the past five years c) non accelerating inflation rate of unemployment (NAIRU) which is set at 5%, and d) EM country-specific inflation targets which are from HSBC.

The effective exchange rate data is from BIS, while the remaining data is from Bloomberg. Index weights are from JP Morgan.

Icarus Indices

Icarus Indices are calculated as follows:

\[ \text{Icarus Index} = \text{Monetary stance} + \text{Real Exchange rate misalignment} \]

where the monetary stance is calculated as the current interest rate minus the rate dictated by the Taylor Rule and real exchange rate misalignment is calculated as the current real exchange rate minus the equilibrium real exchange rate. Both arguments are normalised by their standard deviations, so the units of the index is standard deviations from neutral/equilibrium.