How Will Latin America's Major Central Banks Cope with the Upcoming Normalization of US Monetary Policy?

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<EXECUTIVE SUMMARY>

- The Fed's upcoming policy normalization can pose serious risks to financial stability and economic growth in emerging markets. As the taper tantrum of 2013 showed, Fed policy changes can potentially roil financial markets, rattle investors, and spark a widespread sell-off that winds up sending shockwaves across the global economy.

- The economic situation in Latin America has become more challenging. First, the extraordinary windfalls from high commodity prices and the benign global financial conditions, which have benefited the region since the global meltdown in 2009, are dwindling. Second, the macroeconomic fundamentals are weaker today than in 2007. Third, the policy space to support growth is narrowing for central banks because inflation is currently floating above the upper bound of the target range.

- Cutting interest rates to hasten economic recovery would be a blunder in most cases given mounting inflationary pressures. Raising rates before the Fed's move is not an attractive option either as their economies continues to lose steam.

- Mexico will likely to be the first major economy in the region to follow the Fed. The so-called Andean economies (Chile, Colombia and Peru) appear to have more room to maneuver than Mexico, so their tightening cycle could be delayed until the second or third quarter of 2016. Brazil, on the other hand, is already in a tightening cycle and might not raise rates further. In fact, a policy-rate cut is possible after the second quarter of 2016.

- The pace of policy rate moves in Chile, Colombia, Mexico and Peru will largely depend upon how fast the Fed raises the federal funds rate. Under normal conditions, we should not expect their central banks to tighten more aggressively than the Fed. Brazil's monetary-decisions are more dependent on domestic factors. Its pace of rate cuts will probably hinge on how headline inflation and inflationary expectations evolve throughout 2016.

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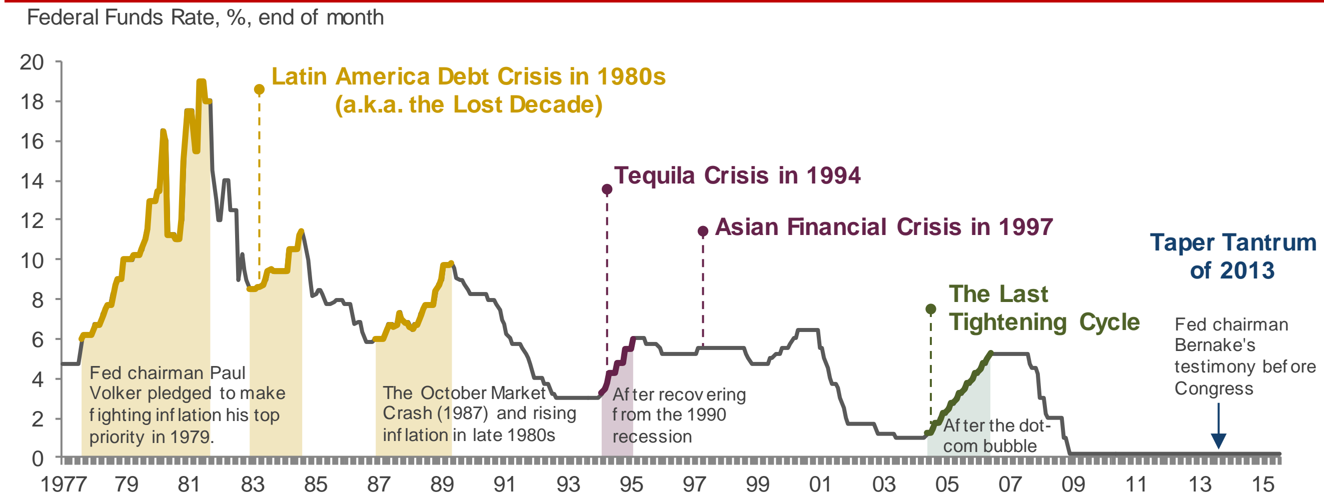
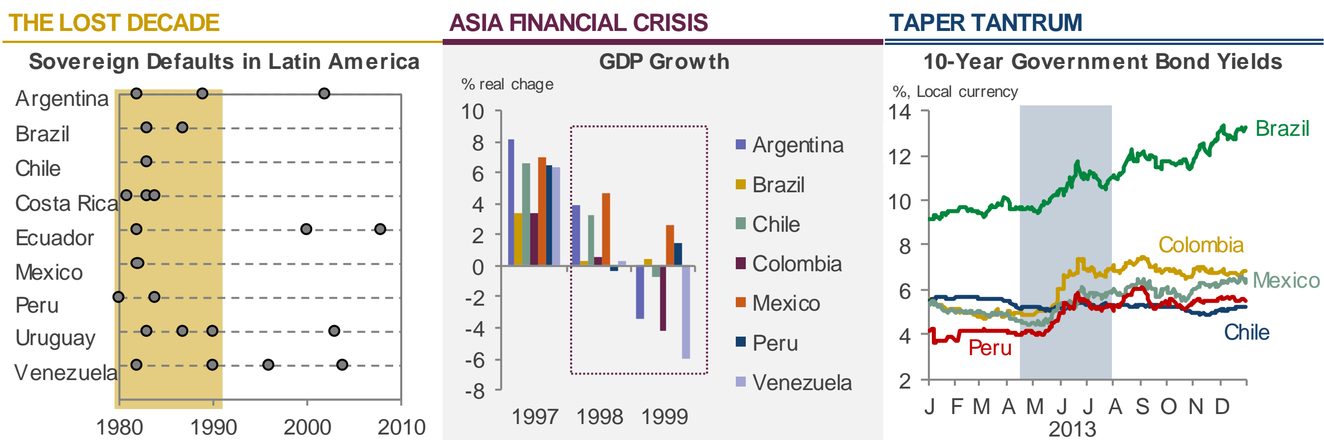
1. Lessons from Past Tightening Cycles of US Monetary Policy

A sharp rise in US interest rates could prompt an abrupt decline in capital inflows to emerging markets.

There is no doubt that the looming interest-rate tightening cycle in the US is a major concern for emerging markets (EMs) (Figure 1). As the so-called taper-tantrum episode showed in 2013, the immediate impact and spillover effects on EMs can be potentially harmful. For instance, global financial conditions could suddenly tighten and undue volatility in financial markets might lingers; term premia and spreads may decompress, prompting an abrupt adjustment of long-term interest rates; and in particular, the exchange rates and asset prices could come under intense pressures as a result of a sharp reduction or a sudden stop in foreign-capital inflows[1]. Worse yet, sudden stop episodes can be extremely costly in terms of GDP growth: 22 out of 33 systemic sudden stop episodes[2] throughout the period 1980-2004 were linked to collapses in GDP of 4.4% from peak to trough[3].

Figure 1: Tighthening Cycles of US Monetary Policy and Some Associated Economic Turmoils





Source: Thomson Reuters Datastream; The Economist; IMF WEO Database April 2015; BTMU

[1] According to World Bank (2015), a rise by 100 basis points in US term spreads could potentially trigger a fall between 18% and 40% in the level of capital flows to EMs.
[2] i.e., periods of capital inflow collapse, couple with ballooning bond spreads that affected emerging markets at the same time.
[3] See Calvo, Izquierdo and Talvi (2006).

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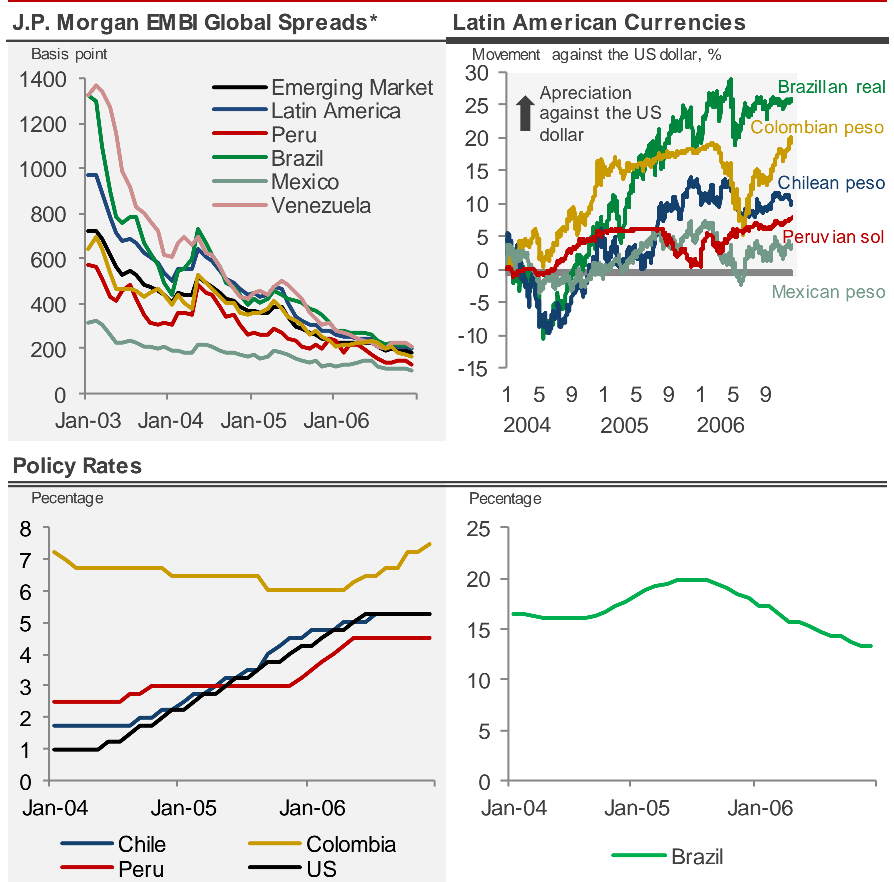
Latin American economies fared reasonably well during the Fed's last tightening cycle.

Yet major Latin American economies seem to have successfully weathered similar situations in the recent past. For instance, the last time the Federal Open Market Committee (FOMC), the Federal Reserve's policy-setting arm, decided to embark on a hiking cycle was in mid-2004[4], when headline inflation begun to bump up steadily due to persistent upward pressures from energy prices, in particular oil prices. That tightening cycle ended in mid-2006 and the federal funds rate increased to 5.25% from 1.0% gradually. Still, major economies in the region did not undergo episodes of unusual financial volatility during that period. In fact, private non-resident capital inflows to Latin America more than doubled from 2004 to 2006, according to statistics from the Institute of International Finance; while sovereign bond spreads dropped considerably and most currencies appreciated against the US dollar (Figure 2). As a result, policy decisions in most major central banks of the region were influenced, to a large extent, by other domestic and global factors rather than by Fed's rate moves. Even during the taper-tantrum episode in 2013, economies such as Chile, Mexico and Peru fared reasonably well as the initial impact and spillover effects on financial markets were mostly fenced off from the real economy and swiftly tailed off in the second quarter of 2014.

Figure 2: Sovereign Bond Spreads, Exchange Rates & Policy Rates



*EMBI: Emerging Market Bond Index

Source: Bloomberg; Thomson Reuters Datastream; BTMU

Most major Latin American economies are indeed more resilient to external shocks now, but they are not immune.

So, does this imply that a highly expected and gradual exit of accommodative monetary policy by the Fed does not pose a great risk for Latin America? No, what it does entail is that most economies in the region have shored up their macroeconomic fundamentals and built up

[4] Until then, the US monetary policy had remained broadly accommodative since the dot-com bubble in 2000. The Fed's dovish stance yielded results: by the time the FOMC opted to increase interest rates, the economy was growing at a pace above 3%.

resilience to such external shocks over the last decade, which is, no doubt, good news given its history repeated economic crisis (Figure 1) [5].

The extent in which the upcoming tightening cycle in the US will affect Latin America is difficult to know ex ante, and may hinge on a wide range of internal and external factors. On one hand, the optimists could argue the hiking cycle will probably take place within the context of robust economic growth in the region's largest trading partner (i.e. the US) [6]. Stronger demand from the US, the argument goes, should be enough to offset the damage caused by short-term turmoil in the financial markets. The pessimists, on the other hand, might insist that markets will overreact as in 2013 despite Fed's optimism, undercutting the US recovery.

The possible effects of the upcoming normalization of US monetary policy on financial markets are still very much unknown.

But as far as we are aware, it is still very much unknown how the normalization of US monetary policy would affect financial stability after a protracted period of unconventional easing measures such as quantitative easing. And despite Fed's repeatedly stated intention to warrant a slow-moving, smooth adjustment period of rising federal funds rate, it is still uncertain how financial markets will respond to the upcoming policy changes. As revealed in the taper tantrum of 2013, even subtle shifts in the Fed's monetary policy, such as the case when Mr. Bernanke, then the chairman of the Federal Reserve, testified before Congress, can potentially disturb financial markets, exacerbate investor jitters, and spark a widespread sell-off in stock and bond markets that ends up sending shockwaves across the global economy[7].

In short, just because Latin American countries have weathered similar external shocks in the recent past does not necessarily mean that they will be able to tame extreme financial volatility or isolate the spillover effects from their economies if markets overreact to Fed's moves. Policymakers in the region, especially central bankers, must stay wary and ahead of any possible disruption to the financial markets and their economies that stems from the normalization of US monetary policy.

[5] If one thing Latin America can boast about is the sharp improvement in its macroeconomic fundamentals and institutional framework over the last ten years, which arguably laid the foundation for its recent impressive economic growth. But that has not always been the case. Back in the 1980s, rise of interest rates in the US to curb inflation, and external debt overhang steamed from disproportionate risk-taking by US commercial banks led to widespread sovereign defaults in Latin America (i.e. the so-called "Lost Decade"). In the early 1990s the situation was not any much promising either as the region struggled with simmering inflation. Countries like Argentina, Brazil and Peru even experienced periods of hyperinflation.

[6] In 2014, the US market was a top destination for exports from several Latin American countries: Mexico (80.3% of its total exports), Ecuador (43.9%), Guatemala (36.2%), Colombia (26.4%), Panama (19.8), Peru (16.2%), Bolivia (15.6%), Chile (12.2%), and Brazil (12.1%), according to data from UN Comtrade.

[7] Even if the Fed manages the process of normalization successfully, there is still the question of what will happen to the $4 trillion pile of bonds in its balance sheet. Policymakers have said that the Fed will gradually and predictably shrink its balance sheet after the first rate increase. Although the details and the timing are still unclear and will possibly hinge on how the economy and financial markets evolve.

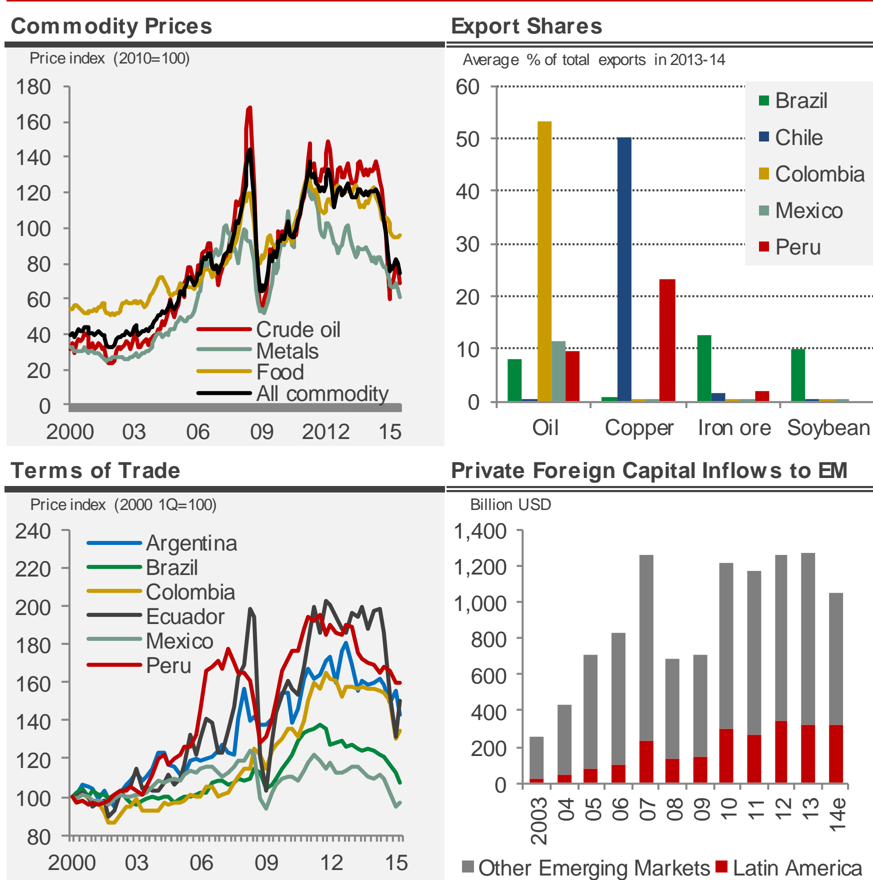
2. The Current Situation in Latin America

A quick review of the minutes and inflation reports released by Latin America's major central banks[8] is enough to discern that the monetary authorities are indeed watchful of (and concerned about) the potential risks posed by the forthcoming shift in US monetary policy. Yet how they will respond to that external shock so as to ensure both price stability and healthy economic growth is still quite blurred for now. But with the market expecting the FOMC to lift interest rates from zero in late 2015 or early 2016; it is essential to fathom what monetary policy will be made by the authorities. To do so, we need first to have a clear understanding of the current situation in the region and how it could shape the monetary-policy decisions from now on.

The windfalls from buoyant external conditions are waning for most Latin American economies.

First off, the favorable external conditions relished by Latin American economies over the last decade have largely petered out, leaving the region less resilient to other external shocks (Figure 3). China, the second most important destination for the region's exports and an influential player in the commodity market, is finding it increasingly difficult to keep high growth rates as it shifts from a more export and investment-driven model to a consumption-led one[9]. Not surprisingly, terms of trade and export growth declined steadily over the last three years, being the commodity-dependent economies like Brazil, Chile and Peru the most affected[10].

Figure 3: External Conditions



Source: IMF; UN Comtrade; Thomson Reuters Datastream; Institute of International Finance; BTMU

[8] We focused on Brazil, Chile, Colombia, Mexico and Peru.

[9] Guimarães-Filho and van Elkan (2015) argue that China's GDP growth rate will probably continue to edge lower over the medium term as rebalancing proceeds and economic activity is expected to continue to move toward the more labor-intensive services sector.

10 Since a less vigorous pace of growth in China is the most plausible scenario in the short-to-medium term, then it is more probable to see the Chinese demand and commodity prices weakening further, rather than a swift recovery.

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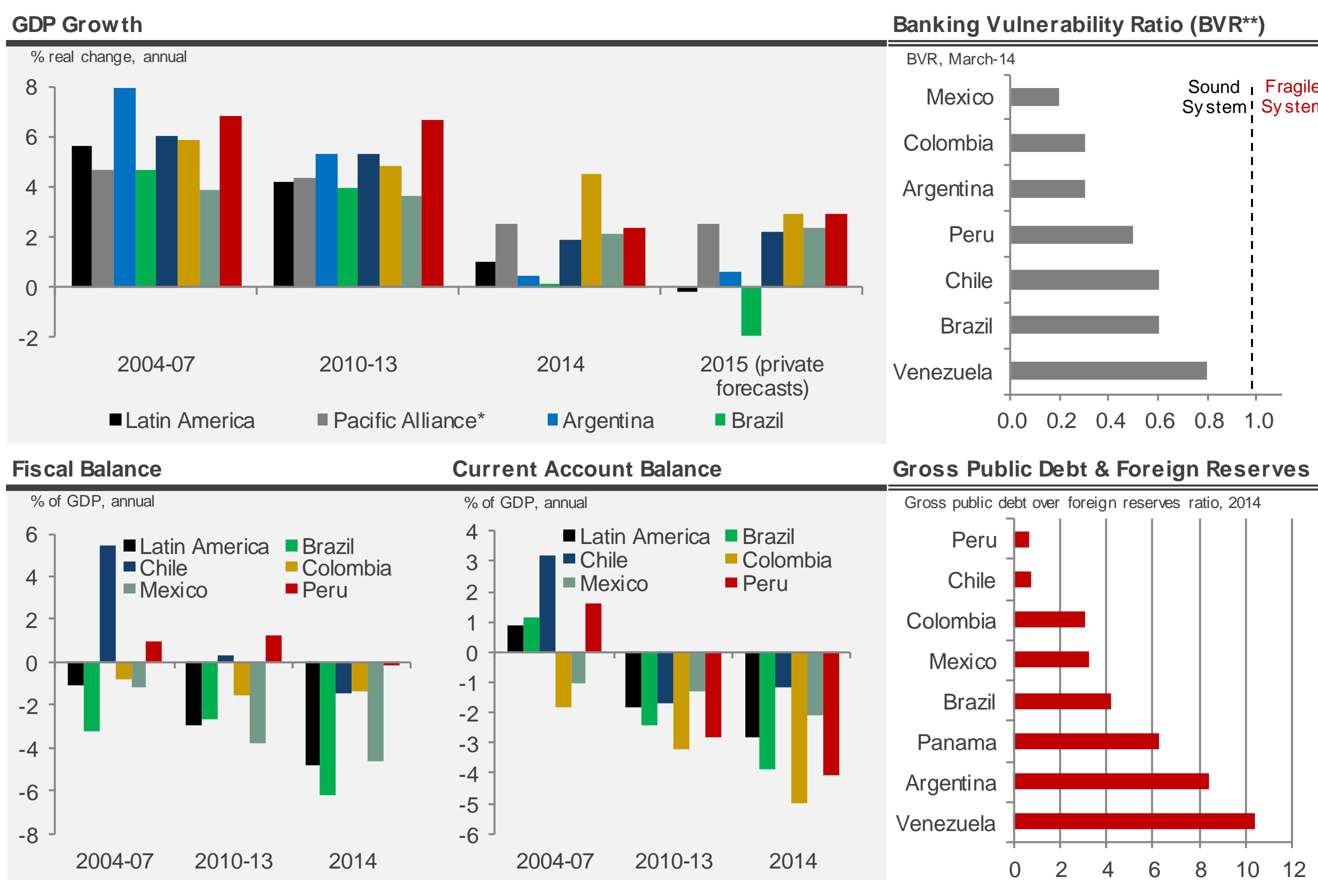
It seems that investors are moderating their appetite for emerging market assets.

Also, after the global economic meltdown in 2009, emerging markets, and Latin America in particular, benefited from favorable external financing conditions and received large waves of capital inflows, pushing most currencies to appreciate against the US dollar. The situation seems to have reversed last year as investors' appetite for emerging market assets appears to have cooled in response to the prospect of higher interest rates in the US. Given the changing conditions described above, and the expectations for higher economic growth in the US, it is hardly surprising to see most Latin American currencies depreciating against the US dollar.

Macroeconomic fundamentals have started weakening since 2013, driven by the fall in commodity prices and homegrown woes.

Second, the region's macroeconomic fundamentals[11] are softening as domestic and external conditions deteriorate (Figure 4). True, most countries have learned from the past: both public and external debt are now relatively low and sustainable in most economies; while inflation rate has remained in single digit and long-term inflation expectations are firmly anchored in

Figure 4: Latin America's Macroeconomic Fundamentals



*Pacific Alliance members are Chile, Colombia, Mexico and Peru. **The BVR is defined as the ratio of projected nonperforming loans to maximum nonperforming loans. Maximum nonperforming loans is defined as the level at which bank capital and loan loss provisions are completely exhausted.

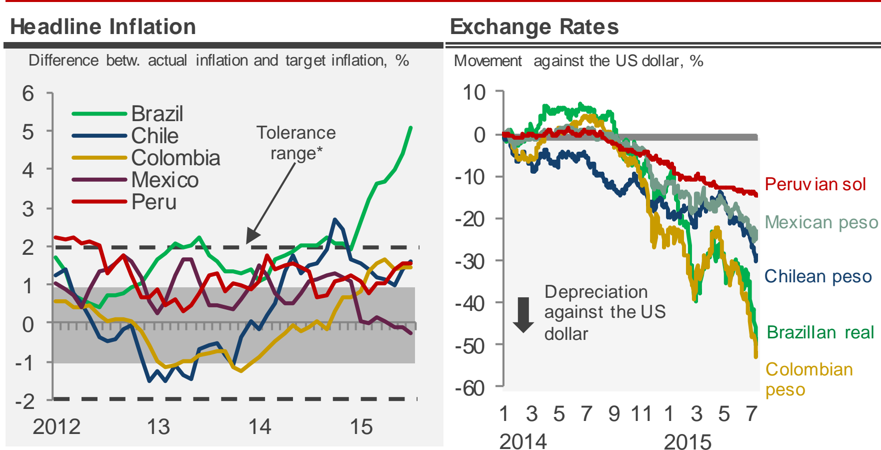
Source: Thomson Reuters Datastream; Consensus Economics; IMF; Economist Intelligence Unit; Talvi (2014); BTMU

[11] De Gregorio (2013) found that sound macroeconomic conditions were vital to Latin America's unprecedented resilience to the global financial crisis in 2008, as they allowed policymakers to maintain loose fiscal and monetary policies.

countries with sound institutional framework of monetary policy. Their banking systems as well are fairly sound and resilient, as evidenced in the global financial crisis of 2008. Yet it is also true that the macroeconomic fundamentals have softened recently. Some countries, such as Brazil and Venezuela, are jockeying to tame inflation amid soaring public debt. Others, like Colombia and Peru, are facing widening current account deficits. But in general most economies are meeting weakening fiscal position, rising inflation, and above all, slowing economic growth. Even the institutional framework in some countries, which appeared to be solid, is being undermined by a serial of ongoing corruption scandals such as the massive bribery and kickback scheme involving Petrobras, a state-run oil firm.

Major central banks in the region are facing rising inflation and slowing economic growth.

Figure 5: Headline Inflation and Exchange Rates



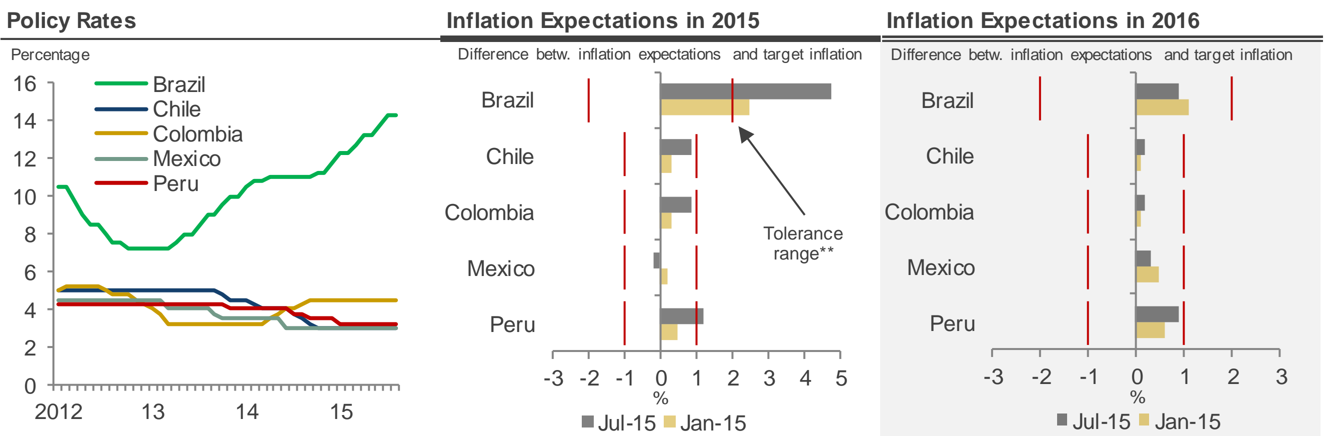
*Brazil: +/- 2%; Chile, Colombia, Mexico and Peru: +/- 1%

Source: Thomson Reuters; Central Banks of Brazil, Chile, Colombia, Mexico and Peru; BTMU

Last but not least, the trade-off between inflation and output has become more apparent in major Latin American economies. GDP growth has been slowing down in all countries since 2013, mainly owing to sapping commodity revenue, subdued domestic business confidence, and growing homegrown woes. At the same time, headline inflation has been hovering around or above the upper limit of the tolerance range, and will probably remain so this year in Brazil, Chile, Colombia and Peru (Figure 5). To be fair, several transitory forces are behind this surge in prices and, therefore, are expected to wane gradually in 2016. Yet it is important to remark that the pass-through of recent currency depreciation to inflation has also played a significant role in driving prices up, especially when the upcoming tightening cycle in the US could strengthen the dollar further and add more upward pressures on prices.

Until now, only the Central Bank of Brazil has tightened its stance in an effort to curb rampant inflation. With the Brazilian economy already mired in a deep recession, the Copom, the country's monetary-policy committee, is hoping the recent hiking cycle that started in September 2014 will be enough to bring inflation back to its 4.5% target. Other major central banks in the region, on the contrary, have decided to leave rates low to fire up household consumption and investment spending (Figure 6). Granted, unlike in Brazil, short to medium-term inflation expectations remain well anchored to the target in those countries, which will probably leave their policymakers with some room to keep a growth-supportive policy stance for some time yet if they so decide.

Figure 6: Policy Rates and Inflation Expectations*



*surveys conducted by central banks; **Brazil: +/- 2%; Chile, Colombia, Mexico and Peru: +/- 1%

Source: Central Banks of Brazil, Chile, Colombia, Mexico and Peru; BTMU

Evidently, all this does not bode well for Latin America because past experiences suggest that initial economic conditions before the outbreak of an unfavorable external shock matter a lot to a country's macroeconomic resilience. In fact, the region's resilience to external shocks appears to have weakened since 2007[12]. Under those circumstances, policymakers should not take the rate-liftoff lightly. It is better to be criticized for being too cautious than for being reckless. It is probably fair to say that their positive track records since inflation targeting was adopted do warrant some degree of confidence that in most cases the authorities will make the tough decisions to achieve their main objective: prices stability (see Box A). But it is also fair to underline that the macroeconomic situation in the region has become more challenging for central bankers over the last two years.

[12] In a study that assessed emerging markets' capability to endure the effects of a negative external shock, as well as its ability to cushion or neutralize the impact with effective policies, Rojas-Suarez (2015) found that Latin America is now less resilience to external shocks than it was in 2007.

Box A

Monetary Policy Objectives of Major Central Banks in Latin America

Inflation and growth are usually the two concerns that shape most central banks' policy-decisions.

In theory, what central banks pursue is quite explicit. Single-mandate central banks with explicit inflation targets (e.g., in Brazil, Chile, Mexico and Peru) usually seek to preserve price stability; whereas dual-mandate ones (for example, in Colombia and the US) often have the additional goal of attaining potential growth or maximum employment. In practice, however, most central banks pay close attention to both inflation and output, regardless of the nature of their mandates or the monetary policy framework that is in place (Table A1).

Table A1: Policy Regimes in Latin America's Major Central Banks

Country	Policy regime	Year of Adoption	Current Target
Brazil	Inflation targeting	1999	4.5% +/- 2%
Chile	Inflation targeting	1999	3% +/- 1%
Colombia	Inflation targeting	1999	3% +/- 1%
Mexico	Inflation targeting	2001	3% +/- 1%
Peru	Inflation targeting	2002	2% +/- 1%

Source: Central Banks of Brazil, Chile, Colombia, Mexico and Peru; BTMU

Central banks do face short-term trade-offs between inflation and growth.

This obviously raises the question of whether those two objectives are compatible or not because if the answer is no, then the policy decisions and the path of monetary policy could vary depending on which objective the central bank puts first. Economists in this regards generally agree that there is no long-run trade-off between inflation and unemployment, known as the Phillips curve, meaning that central banks cannot keep unemployment rate below its natural rate permanently (or, equivalently, GDP growth cannot stay above its potential indefinitely) at the expense of higher inflation. However, in the short-run, monetary authorities do have to deal with trade-offs between inflation and output, and their preferences can shape the path of monetary policy greatly and lead to unintended consequences.

Take the example of Brazil. In 2014 the country's headline inflation was rising steadily, and the possibility that it would exceed the upper limit of the central bank's target range by the end of the year was certainly high. Worse yet, short to medium-term inflation expectations were clearly drifting away from the target, and the economy was visibly on the brink of recession, posing a tough policy dilemma for the monetary authorities (Figure A1).

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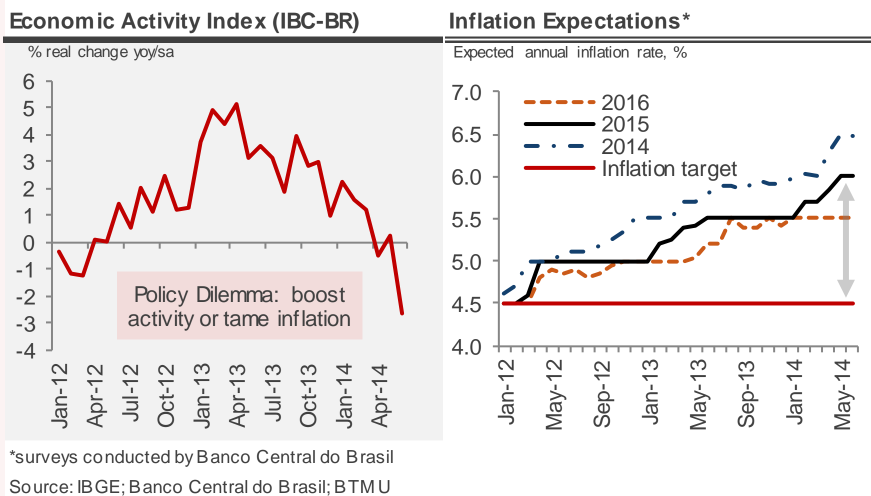

Central banks can be caught in a tricky dilemma between inflation and economic growth. Price stability does not always prevail.

Under those circumstances, and if keeping medium to long-term inflation close to the target were paramount as it was supposedly under Brazil's inflation-targeting policy; the central bank would have tightened as soon as possible in order to bring inflation down and contain rising inflationary expectations, even if the decision ends up pushing the economy into recession. Surprisingly (or not), the Copom chose to leave the benchmark Selic rate at 11% from April to September in a bid to buoy the economy, which was arguably a risky move given Brazil's lingering struggles with high inflation in the past. And because monetary policy usually operates with a lag and the dented credibility might have already impaired its effectiveness; the output cost of lowering inflation back to the target may wind up being higher than the initial benefit of keeping a loose stance a little bit longer.

In conclusion, it is unwise to take for granted that central banks, even those with a publicly stated inflation target, will always prioritize inflation over output. There is usually some degree of uncertainty regarding the central banks' policy-decisions.

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3. Outlook for Latin America's Monetary Policy

The tightening cycle in the US will probably put Latin America's major central banks into a policy dilemma: inflation or growth.

Given the current situation in Latin America, it seems quite clear that the normalization of US monetary policy will have serious implications for its major central banks. For Brazil, the Copom will have to ponder whether it should hold rates longer to make sure that inflation will converge to its target, at the expense of boosting economic recovery. As for Chile, Colombia, Mexico and Peru (the Pacific Alliance trade bloc), the monetary authorities will have to weigh between following the Fed with interest rates increases to restrain, among other effects, the pass-through effect to inflation, and keeping rates relatively low (or even cutting rates) until the economy shows clear signs of recovery. Both options can potentially fuel unintended consequences. If they tighten too soon or too fast, economic growth could slow further. If they keep rates low too long, the risk of large capital outflow and steep currency fluctuation could rise; inflation expectations may become unanchored; and headline inflation might get out of control.

The exit of accommodative monetary policy by the Fed is expected to begin in late 2015 or early 2016.

Here we analysis all the possible policy options that is currently on the table and try to clarify what policymakers will end up doing[13] so as to deal with the normalization of US monetary policy that is expected to begin in late 2015 or early 2016 [14] (Table 1). Given the wide range of monetary tools at the disposal of each central bank, our focus will be on policy rates.

Table 1: Federal Funds Rate Implied Probability

Meeting	0-0.25	0.25-0.5	0.5-0.75	0.75-1	1-1.25	1.25-1.5
9/17/15	70.0%	30.0%				
10/28/15	58.8%	36.4%	4.8%			
12/16/15	43.5%	42.2%	13.0%	1.2%		
1/27/16	37.4%	42.4%	17.1%	2.9%	0.2%	
3/16/16	26.9%	41.0%	24.2%	6.9%	0.9%	0.0%
4/27/16	23.2%	39.0%	26.5%	9.3%	1.8%	0.2%
6/15/16	14.8%	33.3%	31.0%	15.5%	4.5%	0.8%

Source: Bloomberg, as of 9/3/2015; BTMU

3.1. The policy rate decisions: What should we expect?

a. Chile, Colombia, Mexico and Peru

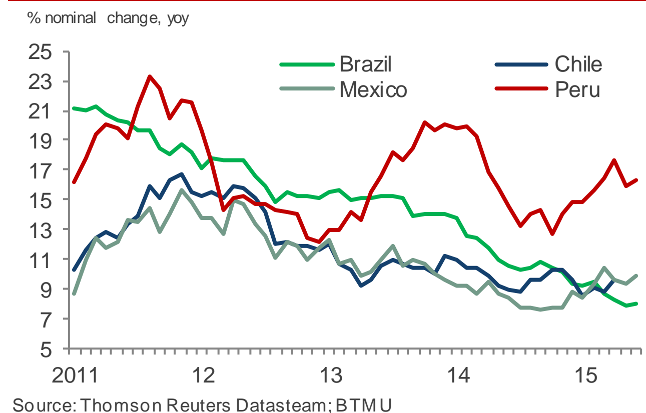
Major Central banks in Latin America will probably not move their policy rates before the Fed's first rate increase.

[13] Knowing what central banks will do essentially implies knowing the direction and timing of their monetary policies. Despite the increased efforts in Latin America to promote greater transparency in central banks' decisions, it is still hard to tell which policy the authorities will take, let alone when they will take it. Of course, being completely transparent is not risk-free either as it could encourage excessive or insufficient risk-taking (e.g., forward guidance).

[14] The Fed's first rate increase in September 2015 looks less likely now that William Dudley, the president of Federal Reserve Bank of New York, said that in the light of recent market volatility in China the decision to begin the normalization process at the September meeting seems less compelling to him than it did several weeks ago.

We expect central banks in the Pacific Alliance trade bloc to hold rate steady until the Fed's first rate hike. Why? The policy rates in all those economies are already fairly low. Cutting rates before the rate-liftoff would be a blunder not only because inflation in those four countries except Mexico is hovering around or above the target range, but also because the effectiveness of a rate cut to spur domestic demand is at best doubtful. Their monetary policies have already stayed largely accommodative since mid-2014, and yet credit growth has remained broadly stagnant (Figure 7), signaling that consumers and investors might not respond to further monetary stimulus[15].

Figure 7: Banking Lending



Source: Thomson Reuters Datasteam; BTMU

If lowering rates is off the menu, then the remaining option would be to raise interest rates before the rate-liftoff to dampen foreign-capital outflow and currency depreciation. Some might argue that if the authorities are on the cautious side, which is probably a realistic assumption, then the best policy would be to raise rates before the Fed does. However, this policy option might not be as attractive and safe as it looks like. First, economic activity has been losing steam in all those four countries since 2013, so a rate increase would probably push the economy to slow down further, making this option hardly attractive for the authorities unless they see clear evidence of an unanchoring of medium-term inflation expectations. This option is not only costly in terms of GDP growth; it may pose risks to financial stability too: the authorities may end up sending a wrong message to the financial markets by tightening too soon. For example, some economic agents may well read the move as an indication that the country's resilience to the future external shock is less strong than they initially assumed, prompting an overreaction. Overall, we do not expect any policy rate moves within the Pacific Alliance bloc before the rate-liftoff, which is consistent with market expectations[16] (Table 2).

Table 2: Market Expectations on Policy Rates

Percentage, end of period

Country	2015			2016			
	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Brazil	13.75	14.25	14.25	14.25	13.75	13.25	12.38
Chile	3.00	3.00	3.00	3.00	3.25	3.50	3.50
Colombia	4.50	4.50	4.50	4.50	4.50	4.50	4.50
Mexico	3.00	3.25	3.25	3.75	4.00	4.00	4.25
Peru	3.25	3.25	3.25	3.25	3.50	3.75	3.75

Source: Bloomberg, as of 8/26/2015; Thomson Reuters Datasteam; BTMU

[15] This view is reflected in most central banks' minutes.

[16] What the market expects does not always match what the authorities wind up doing, and sometimes the gap could be fairly wide. One explanation is that while central banks do take into account the information coming from the financial markets and survey-based expectations in their decision-making process, they might not follow what the market dictates simply because they have different views regarding the current and future conditions of the economy and prices. Another explanation could be that central banks sometimes misread the information coming from markets. In that sense, it is important to use every piece of information available so as to gauge the timing more accurately.

Cutting interest rates to speed up economic recovery would be a blunder in the Pacific Alliance Bloc.

What about after the rate-liftoff? If the monetary authorities decide, say, to cut rates (or keep them low for a long period of time) to hasten economic recovery; yield spreads will probably widen sharply after the Fed's rate decision, raising the risk of a sudden stop of capital and fund inflows to the region. Under those circumstances, local currencies tend to face intense downward pressures, while central banks may have no other choice but to step in and use their foreign reserves to smooth out extreme volatility in the foreign exchange markets, given their concern over currency mismatch risks. However, because foreign reserves are not unlimited, the authorities may not be fully capable of stabilizing their currencies if downward pressures linger for a long time.

Granted, the banking systems in Latin America are fairly sound and resilient. Also, public debt is low and mostly denominated in local currencies, so it is unlikely to see governments running into trouble like in the Lost Decade. Nevertheless, this scenario is still potentially injurious to the economy. According to Fitch Ratings, corporates in some countries have high currency mismatch risks. In Peru, for example, 90% of the corporate debt is denominated in foreign currency; while in Mexico high-yield issuers have limited access to the domestic capital market, resulting in high proportion of foreign currency debt. More importantly, the pass-through of recent currency depreciation to inflation has played a significant role in driving prices up, meaning that new episodes of sharp currency depreciation could fuel already-high inflation further and feed inflationary expectations. Thus, we think central banks in the Pacific Alliance bloc will probably rule out the option of cutting rates or keeping them low for a prolong period, as the underlying risks are just too great. In brief, the most likely policy option after the Fed's first rate move would be to raise interest rates.

b. Brazil

The Central Bank of Brazil has limited policy room to maneuver, but it may not raise interest rates further once the normalization of US monetary policy kicks off.

Brazil's monetary policy is already in a tightening cycle that begun in September 2014. Market pundits expect the Copom to leave the Selic rate at its current level of 14.25% for a while. More importantly, the Copom clearly stated in its last meeting that *maintaining* the benchmark interest rate at that level, for a sufficiently prolonged period, is needed to ensure that inflation converges to the target by the end of 2016. Therefore, a policy rate move by the Copom before the rate-liftoff is highly unlikely.

Now, with the economy mired in recession, the Copom has probably limited policy room for further rate increases. But since its policy rate is already high, the authorities may not tighten further after the rate-liftoff unless, of course, medium-term inflation expectations continue to drift away from the target. If further rate increases are ruled out, then the Copom would either keep the Selic rate unchanged for a protracted period of time (say, throughout 2016 if the Fed

kicks off its hiking cycle in December 2015) to tame inflation, or cut rates as soon as possible to stimulate Brazil's shrinking economy.

If headline inflation and inflationary expectations begin to weaken in 2016, the Copom will probably cut its policy rate to stimulate the economy.

There are certainly arguments for both directions, but probably the debate can boil down to whether the Fed's rate moves will add enough pressures on the real so as to further derail medium to longer-term inflation expectations in Brazil. We think there are more compelling reasons to lean on the second option (i.e., cut policy rate). The real, one of the worst-performing currencies of the region this year to begin with, has already depreciated 75% against the US dollar since the taper-tantrum episode in May 2013. Of course, whether the Brazilian currency is still overvalued is debatable. What is not debatable though is that the real is much closer to fair value now than two years ago. Thus, we should not expect extreme volatility in the real under normal conditions, although it might continue to depreciate given the country's large current account deficit. The other reason in favor of rate cuts is the output gap, which has moved toward the disinflationary direction, according to the Central Bank of Brazil. One major caveat to our analysis is the possibility that Brazil loses its investment grade next year.

3.2. What would be the timing of their policy decisions?

a. Chile, Colombia, Mexico and Peru

Mexico will probably be the first major Latin American economies to follow the Fed.

We believe the first major Latin American economies to raise its policy rate will be Mexico. Not only is the Mexican economy closely entwined with the US market, but the Mexican peso is also the most-traded currency in EMs and used as a hedge by investors. Unfortunately, in period of uncertainty, that virtue could be a weakness as well: if the normalization of US monetary policy does not go as smooth as expected, chances are high for bouts of extreme volatility in foreign exchange markets. Obviously this is a scenario that the Central Bank of Mexico (Banxico) will try to avert, as extreme exchange-rate volatility can fuel inflation and potentially make inflation expectations become unanchored.

Does all this imply that Banxico will begin raising rates right after the Fed lifts rate from zero? The answer is probably yes. For starters, in the latest minutes released by Banxico, the authorities clearly underscored that a delayed reaction from the central bank can pose a great risk to financial stability, and force them to tighten more aggressively than planned. Also, market expectations are for a rate increase right after the Fed's first move, and Banxico unexpectedly rescheduled its policy meetings to follow those of the Fed in July. Still, because inflation is close to the target of 3% and medium-term expectations are well-anchored, there might be some room for the authorities to postpone the first rate increase until the next few meetings if they so decide.

Central banks in the Andean economies appear to have more room to maneuver than Banxico. Policy rate moves could be delayed until the second or third quarter of 2016.

The so-called Andean economies, which encompass Chile, Colombia and Peru, seem to have a little bit more room to maneuver than Mexico. The reasons are twofold. First, their economies are relatively less reliant on US demand. Second, their growth potential, a key factor of differentiation during episodes of turbulence, is higher than that of Mexico, so they might have more cushion to withstand the impact of financial turmoil[17]. Furthermore, the fall in commodity prices, especially oil and metal prices, has put a dent in their GDP growth, prompting the monetary authorities to place more emphasis on growth, rather than on inflation. And because their economies are still weaker-than-expected, it is likely the monetary authorities will embrace a wait-and-see approach throughout the first quarter of 2016 so as to continue to boost demand. Thus, the hiking cycle in the Andean economies will more likely begin in the second or third quarter of 2016.

Among the Andean economies, Chile will probably be the last one to raise rates, given that its economy is currently weaker than that of Colombia and Peru. Also, Chile's macroeconomic fundamentals seem to be more solid: lower public debt denominated in foreign currency and narrower current account deficit. Now, between Colombia and Peru the differences are subtle. Yet because the Peruvian economy is highly dollarized, it is likely that Peru will start raising interest rates before Colombia.

b. Brazil

The Copom will probably cut its policy rate after the second quarter of 2016.

It is highly probable that Brazil's headline inflation will drop sharply in the first quarter of 2016 due to a base effect[18]. Still, we think it is unlikely that the Copom will start cutting rates right after the first quarter because inertia and persistence in inflation could delay the expected improvements in inflation expectations. All in all, we expect the Copom to cut rates within the third quarter of 2016 (Figure 8).

[17] Nowak, et al. (2009) found that domestic macroeconomic conditions in emerging bond markets affect both conditional returns and volatility.

[18] Transitory factors such as energy subsidy cuts and a severe drought in Brazil's southeastern are probably the main reasons behind the country's rampant inflation.

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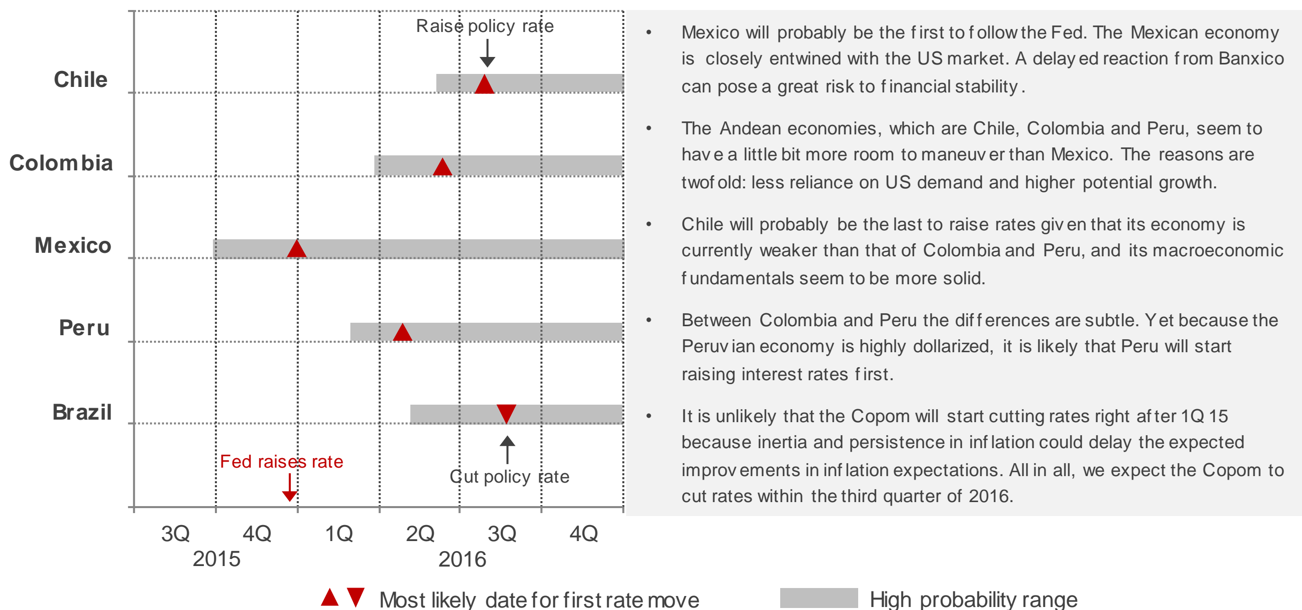
Figure 8: Most Likely Timinig for Rate moves in Major Latin American Economies*



*ASSUMPTION: the Fed's first rate hike will be in December 2015 (current market expectation).

Source: BTMU

A final thought: in general the pace of rate moves will chiefly depend upon how fast the FOMC raises the federal funds rate. Under normal conditions, we should not expect central banks in the Pacific Alliance bloc to tighten more aggressively than the Fed, as economic growth will probably remain below potential in most cases. Brazil's monetary-decisions are less dependent on the Fed's decisions. Its pace of rate cuts will probably hinge on how headline inflation and inflationary expectations evolve throughout 2016.

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