Mexico Strategy Flash. Equity Research.
BTG Pactual Global Research

Private Equity Summit AMEXCAP. April, 2021

Equity Research
BTG Pactual Global Research

Mexico
Strategy
SectorNote
26 April 2021

Mexico Strategy Flash

MxQs #2: MXN – is it cheap or not?

Gordon Lee
New York – BTG Pactual US Capital LLC
gordon.lee@btgpactual.com
+1 646 924 2473

Alejo Costa
Argentina - BTG Pactual
alejo.costa@btgpactual.com
+5411 3754 0945

Sofia Ordonez
Argentina - BTG Pactual
sofia.ordonez@btgpactual.com
+54 11 3754 0913

Alvaro Garcia
New York – BTG Pactual US Capital LLC
alvaro.garcia@btgpactual.com
+1 646 924 2475

Mariana Cruz
Mexico - BTG Pactual - Estrategias de Inversión
mariana.cruz@btgpactual.com
+52 55 3692 2517

Second installment of BTGP's "Questions for Mexico" series of reports

Mimicking the format of our yearly previews, we will select the questions we address largely on the basis of the frequency of queries on particular topics received from investors and corporates. This report follows on from our October 2020 note, *MxQs #1: Biden vs. Trump – who's better for Mexico?* However, different from our yearly notes, in which we address some half-dozen question in a single go, we will now handle this individually, aiming for smaller, more digestible reports.

Why questions and not answers?

First, our predictions are usually wrong, whereas the questions we select are more likely to be on the mark. Second, some questions do not have a single answer; there may be many "right" answers. Third, the type of questions being asked probably also says more about investors' main concerns and focal points than do the answers themselves, which is in itself useful information. And, fourth, perhaps the framework for addressing any given question may be more useful than the answer itself.

Why does MXN's being cheap or not matter?

The question of whether the MXN is cheap or not is one that we have received often through the years, from various different classes of potential stakeholders in the question, and for many different reasons. For some it matters when thinking of potential total returns on MXN investments (portfolio and private equity investors) and whether or not it might be advisable to hedge (private equity and corporates). For others, it may have to do with following particular investment themes (e.g., nearshoring) or to gauge the risks of any potential macro imbalances that might be building (macro or fixed income investors). And, finally, the direction MXN can matter for certain stock-specific investment theses and for overall portfolio construction. Whatever the reason, how MXN performs matters to returns and various different types of decision-making processes and is, thus, a pertinent question almost always.

MXN cheap? We think so…

There might be no more difficult question to answer than if a highly liquid currency that often responds to events that have little to do with its host country is fairly valued. This is especially so when the people answering it are mere equity analysts/strategists and not economists or currency forecasters (though we did recruit our Mexico Macro team for help on the more technical section of this report). We have broached the question through a technical REER exercise, through a host of more experiential measures (think of *The Economist's* Big Mac Index), and through a discussion of other macro factors that weigh on a currency's path (i.e., imbalances). The general conclusion is that there do not seem to be any indicators that suggest that MXN is overvalued on a fundamental basis, which given an absence of macro imbalances would indicate that if global tailwinds prevail it should remain stable.

MxQs #2: MXN – is it cheap or not?

This is a question that we receive often from many different types of Mexico watchers. For equity and credit investors having a sense of how the MXN is valued is important both to gauge their expected USD returns and to inform their decisions about stock selection and portfolio construction. For private equity investors this matters for their total return analysis and for decisions on hedging; this is also relevant for corporates, particularly when they are managing the liability side of the balance sheet. For strategic investors, especially those involved in manufacturing, a view on the competitiveness of MXN matters a great deal, which is also relevant for equity (public and private) and credit investors at both the macro (investment theme) and micro levels. Finally, for macro funds it's about choosing whether or not to be invested in Mexico and, if so, where on the curve and via what instrument. In sum, whether MXN is cheap or not is a question that matters a great deal to anyone involved in any investment decision in Mexico.

Yet properly assessing whether a currency is fundamentally over or undervalued remains one of the most elusive exercises in finance and economic research. We will not pretend that we will do it either, particularly for a currency as liquid as MXN. However, we think it might be possible to at least have a directional view, which we will attempt to arrive at through various different lenses, including simplistic first order analysis, real exchange rate calculations, some experiential measures, and finally a discussion of Mexico's economic metrics as any macro imbalances can be as important a driver of currency performance as its fundamental value.

What this report is not...

We stress here and make an a priori apology that this is not meant as a technical or purely fundamental analysis. We are simply not equipped to do that and would be wise to leave that to economists. This is a view of MXN from the vantage point of equity analysts, who, like most of their ilk, use and appreciate data but are impelled to weave it into the quilt of a narrative and a story. As a result, while we have asked our Mexico economic team to put together a section analyzing MXN through the prism of Real Exchange Rate exercises, we have also framed this discussion in the context of past performance, how the MXN has behaved and interacted with Mexico's recent story, and what it's outlook is in the context of the Mexico story going forward.

In the end, when investors of all sorts quiz us on our view on MXN the question is ultimately less about whether it is cheap and what level we think is fair than it is about what direction we think it will take. So, perhaps the question we are really answering, is do we think the MXN is more likely to strengthen or weaken from here?

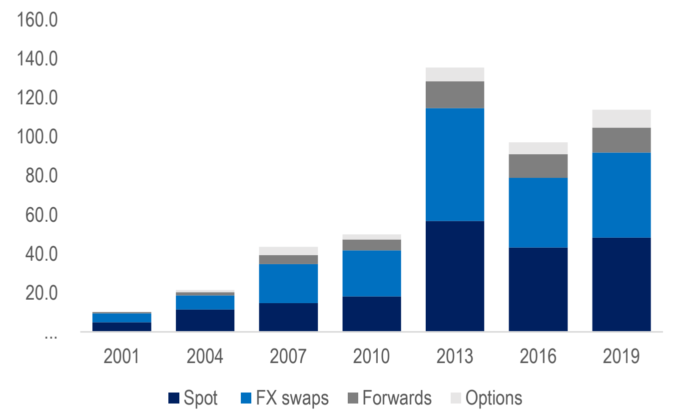
First level analysis: the MXN market; trade trends; recent performance

With this disclosure behind us yet before delving into the more technical contribution from our macro team, it might be worthwhile answering three questions that are themselves part of the larger question we are addressing in this report. First, how deep is Mexico's FX market and what does this mean for trading MXN? Second, what, at first glance, are Mexico's external accounts saying? And third, what can one glean from MXN's historical performance, particularly its more recent strengthening?

For the following section, like for the analysis of a REER-based valuation of MXN, we have recruited the help of our Mexico Economics team, led by Alejo Costa and Sofía Ordóñez. We thought that before we began reviewing the recent history of MXN and exploring fundamental and anecdotal levels of valuation, it would be useful to understand the context in which it trades as this, in part, can lead to a better understanding of many of its drivers.

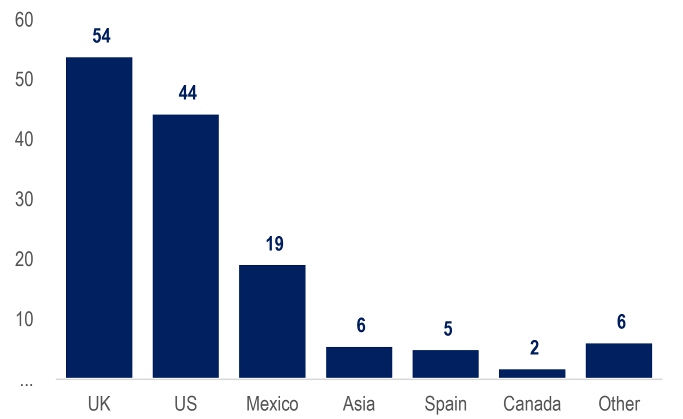
How deep is the MXN market? (by Alejo Costa and Sofía Ordóñez)
The Mexican peso remains one of the most traded EM currencies, with an average daily traded volume of US$114bn as of 2019, considering global turnover of all FX operations. Based on the latest Triennial Central Bank Survey of foreign exchange and OTC derivatives markets carried out by BIS in April 2019, the MXN was the 15th most traded currency in the world, and the third most traded EM currency, behind China's Renminbi and the South Korean Won. Considering trading on a local scale (with at least one local counterparty) and including swaps, FX forwards and spot transactions, the daily traded volume is about US$20 billion, meaning that most transactions involving the MXN take place outside of Mexico (see chart 2 below), likely explained by the fact that the Mexican peso trades 24 hours a day. Regarding domestic transactions, about 66% of the daily trades take place with offshore counterparties. Given that the BIS survey is released every three years, availability of accurate global traded volume is limited, although Banxico publishes daily data on traded volumes in Mexico (both with domestic and offshore counterparties).

Chart 1: MXN global traded volume (US$ billions)
OTC foreign exchange turnover by instrument



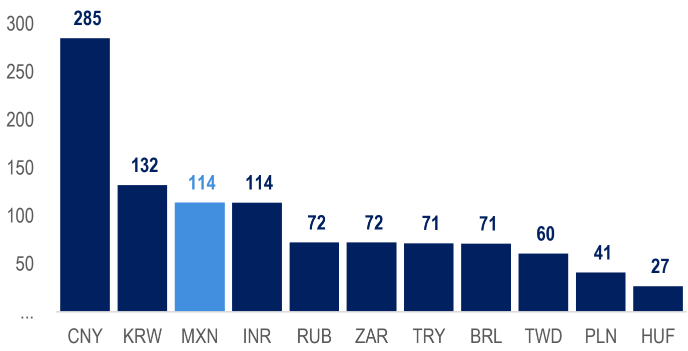
Source: BIS Triennial Central Bank Survey. Turnover for years prior to 2013 may be underestimated owing to incomplete reporting in previous surveys.

Chart 2: MXN global traded volume by country (US$ billions)



Source: BIS Triennial Central Bank Survey, April 2019. In "net-gross" basis

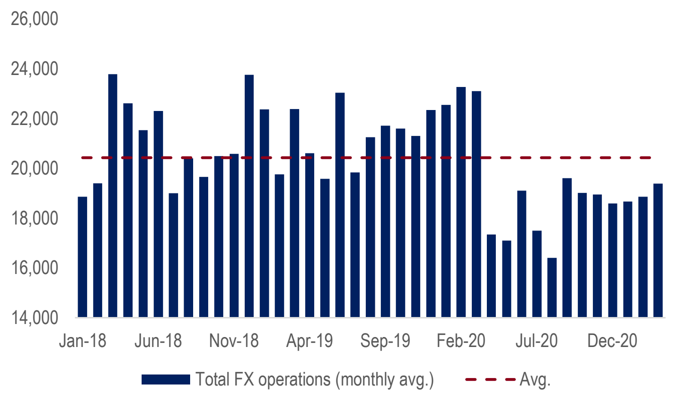
Chart 3: MXN is the third most liquid FX in EM
OTC Global Currency – Daily average liquidity (US$ billions)



Source: Banxico, SHCP, Bloomberg, BTG Pactual Estimates

Local trading volumes have improved in the last several months, though they remain below the last three years' average and especially low compared to levels right before the pandemic (see chart 4 below). Looking at the average for the last 3 years, total daily traded volume in the local scale ranged between US$16 billion and US$24 billion (considering average daily volumes during the month), while spot market transactions ranged between US$6.5 billion and US$12.5 billion. Significant flows are also transacted in the FX swaps market.

Chart 4: Total local FX operations (monthly avg. of daily traded volume)



Source: BTG Pactual based on data from Banxico

Chart 5: MXN/USD spot

Source: Banxico

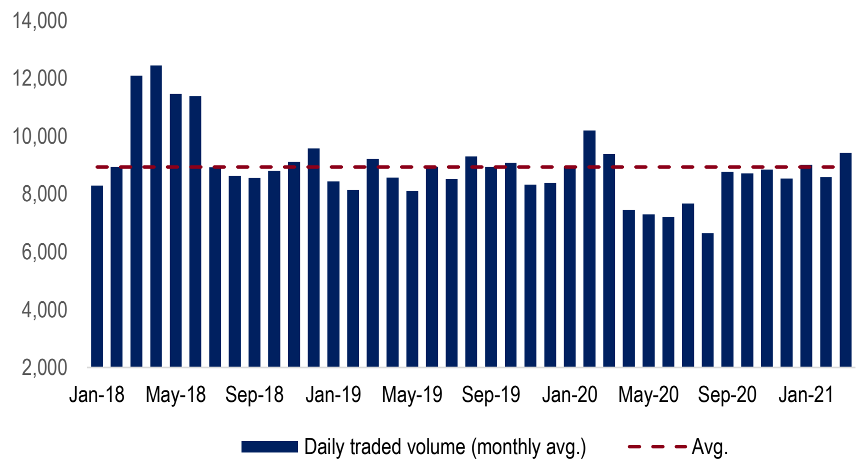
Table 1: Summary of avg. daily traded volumes

Average daily volume	
Daily volume	US$16-24bn
Spot market volume	US$6.5-12.5bn
Average daily swap volume	US$8-12bn
Average daily forward volume	US$0.9-1.7bn
Bid/Ask spread (pips)	45-100

Source: BTG Pactual, based on data from Banxico

Spot market: For local spot market transactions, volumes have recovered above the three-year average and are near pre-pandemic levels, mainly due to increased traded volume by domestic counterparties. Daily traded volume in the spot market averaged US$9.4 billion in the March, above the US$8.9 billion average for the last three years, with domestic counterparties representing about 46% of traded volume in the MXN spot market in March, higher than the 40% average since January 2018 to the present. In the last three years, the daily volume for spot market transactions ranged between US$6.5 billion and US$12.5 billion.

Chart 6: Local spot market traded volume (US$ millions)



Source: BTG Pactual based on data from Banxico

Forwards / FX Swaps: Significant flows are also traded in the FX swaps and forward markets, particularly in swaps. There is a wide range of exchange-traded and OTC for the Mexican peso. Mexico is also the only Latin American country that operates a deliverable forward market open to non-residents. Looking at the last three years, the volume daily for forwards in Mexico ranged from US$900 million to US$1.7 billion, while the daily volume for swaps ranged from US$8 billion to US$12 billion, with short tenor swaps having the highest liquidity.

Bid-ask spread: Bid-ask spreads have recovered some stability, with significantly lower volatility than during 2020. The rise in trading volumes for the peso in Mexico in the past several months has driven a decline in bid-ask spreads, which has recovered some stability amid a more stable peso, although the spread remains above pre-pandemic levels (see Chart 7 below). Bid-ask spreads are at around 1 cent (or 100 pips), slightly higher than the 0.86 cent average for the past few years (86 pips), but lower compared to the 3.2 cents peak reached last year (320 pips). Prior to March of last year, the bid-ask spread ranged from between 0.45 to 1.0 cents.

Chart 7: MX/USD bid-ask spread (cents)

Source: BTG Pactual based on data from Banxico

FX framework: Banxico was granted formal independence in 1994 and has conducted monetary policy under an inflation targeting scheme since 2001. The Foreign Exchange Commission, integrated by officials from the Ministry of Finance and Banxico, is responsible for foreign exchange policy, and has maintained a free-floating FX regime since 1994, though it has implemented measures from time to time (executed by Banxico) to preserve market stability when it considers necessary. Foreign exchange interventions are not used to set the exchange rate, but rather are aimed at other objectives, such as managing international reserves or reducing FX volatility in unusual market circumstances. Different tools and mechanisms have been used over time, though most of the interventions have been made through pre-announced auctions.

In March 2020, at the start of the pandemic, Banxico announced a temporary swap line with the Federal Reserve for up to US$60 billion. The liquidity arrangement between Banxico and the Fed was designed to provide liquidity on US dollars. In the original statement, Banxico said the swap would last for at least six months. On March 30th, Banxico said it would activate the swap mechanism to support liquidity in the market, and the swap line would be used to carry out credit auctions in dollars with Mexican credit institutions. The first actions took place on April 1st,and April 6th, 2020 for a total amount of $6.6 billion. The FEC renewed the maturities from the auctions and offered additional liquidity in dollars through auctions held on June 24th and 29th, 2020, when US$3.5 billion and US$1.4 billion were assigned. The FEC renewed once again maturities on those transactions on September 15th and 21st, when US$850 million and US$965 million were allocated and again in December 2020, for US$475 million and US$655 million Banxico said in December it renewed the swap line with the Fed until September 2021.

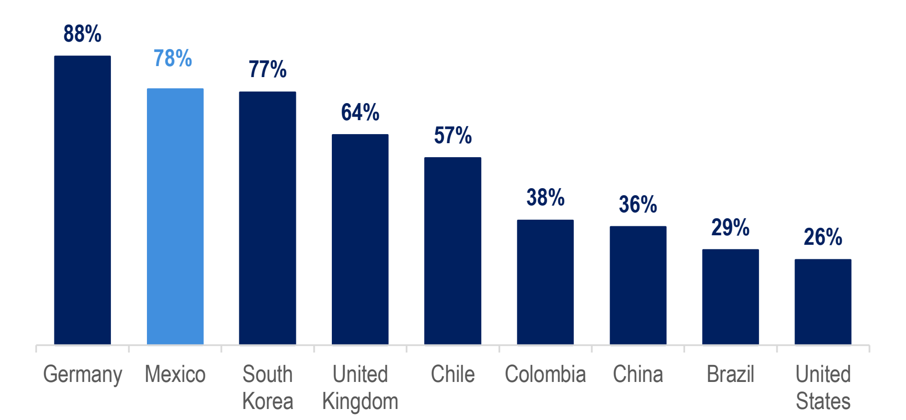
What do Mexico's external accounts tell us?

The Trump administration heralded the unexpected return of a modern version of Mercantilism, an economic theory that had by the second half of the 19th Century been replaced as orthodoxy by the classical economic liberalism espoused by the likes of Adam Smith, David Ricardo, John Stuart Mill, etc. Mercantilism has it that successful economies are those that are able to accumulate trade surpluses (which in its heyday were reflected in growing heaps of gold in the coffers), while those who were chronically in deficit are doomed to failure. Having thought that Mercantilism as a theory had gone the way of the dodo, economists found themselves in 2016 scrambling to explain to policymakers, pundits, the public, and markets why trade is good, why deficits are not necessarily a sign of policy failure, and why dismantling global trading institutions and infrastructure was probably not the best path forward. In the end, they were just about able to stymie the more pernicious impulses of Trump's New Mercantilism (e.g., USMCA, for all the fear that the disavowal of NAFTA produced, is probably an improvement over its predecessor), but not after some real damage was done (i.e., the WTO or TPP). Only time will tell whether the protectionist genie was really put back in the bottle or not.

It is therefore ironic that we opt to start with the trade balance as a means of assessing the valuation of the currency of one of the most globalized and open economies in the world (Mexico trades freely with over two-thirds of global GDP and with FTAs with almost 50 countries it is, along with Chile, the country with most FTAs globally). This is particularly so when one considers that the heart and soul of its economic model was put at grave risk by this New Mercantilism. And we have chosen to focus on the trade balance excluding oil because we believe that other aspects of the Balance of Payments (Tourism/Remittances) may be distorted in both 2020 and 2021 because of COVID. However, we believe both should be additive to the flow of USDs to Mexico over the coming years. Thus, to the degree that the purpose of the exercise is to assess the competitiveness of MXN, the trade balance excluding oil may be about the most basic first lens through which to start the exercise.

When a currency is as liquid as MXN and its home country trades as freely with the world as Mexico does, its trade balance trends should tell us something about competitiveness (if not about the success of its economic policy). Moreover, when its main trading partner is the US (still some 80% of total trade), which itself is the biggest importer of goods in the world, Mexico's relative performance should, most other things being equal, indicate at least directionally if MXN is under or overvalued. After all, just as it would be difficult to argue that the currency of country that reports chronic trade deficits is cheap, so too is it difficult to say that one that delivers consistent surpluses is expensive. And this is especially true for a country for whom trade is as important as it is for Mexico (with total trade of over 75% of GDP, Mexico is in the same league as Germany and South Korea) and in which manufacturing dominates the figures (over 80% of Mexico's trade is in intermediate and final manufactured goods), particularly when the currency is truly free-floating, as discussed above.

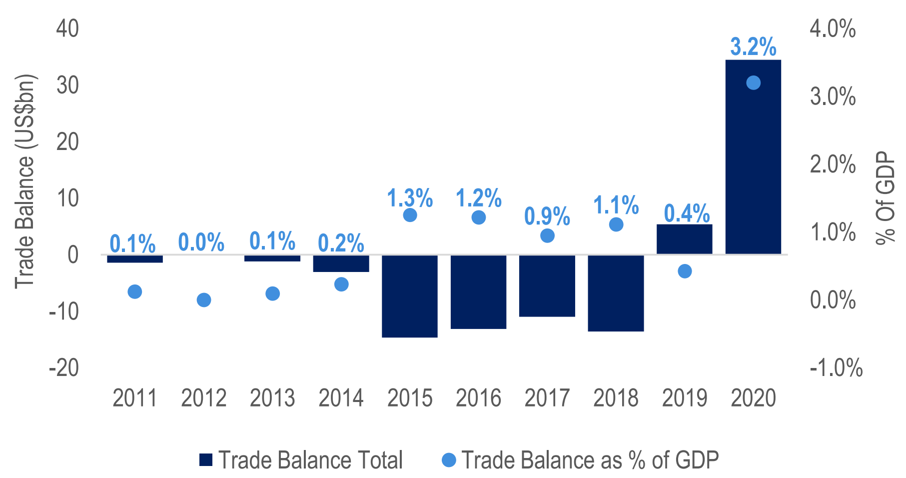
Chart 8: Total trade to GDP (%)



Source: World Bank

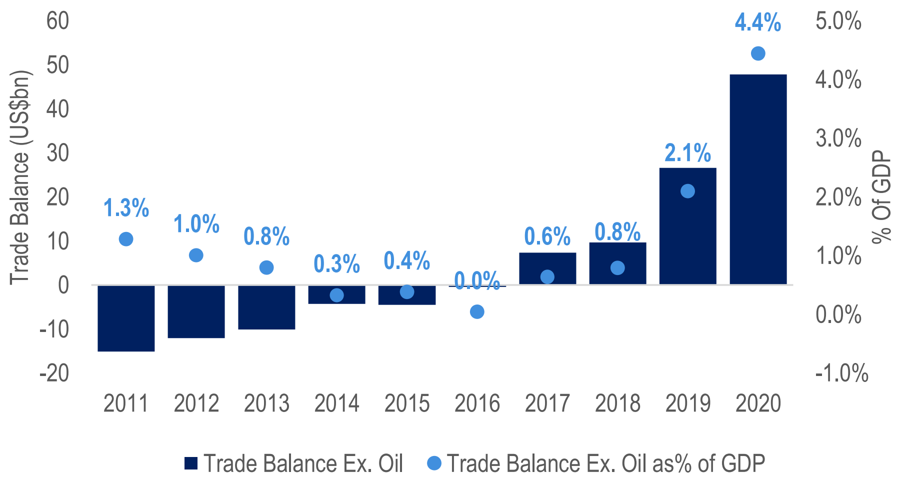
As can be seen in Chart 9 below, Mexico posted a trade surplus in 2019 and 2020, reducing its cumulative deficit during the past decade to US$18.1 billion or roughly 3.2% of 2020 GDP. But during this timeframe Mexico went from being a net oil exporter to becoming a net importer (once one includes gasoline and natural gas) as Pemex's oil production contracted from a peak of 3.8m bpd in 2004 to 1.7m in 2020. Excluding oil from the trade balance, which is actually more a product of nature's bounty and of policy than it is a function of currency competitiveness, Mexico's trade balance (which would be driven primarily by manufacturing and agriculture, the demand for which would respond to currency fluctuation) has been in surplus for four years in succession, reaching US$48.5 billion in 2020, or 4.4% GDP (its highest on record). For the past decade, Mexico's cumulative non-oil surplus is US$46 billion, 3.9% of 2020 GDP.

Chart 9: Mexico – Annual trade balance in absolute terms and as % of GDP



Source: Banxico, BTG Pactual

Chart 10: Mexico – Annual trade balance (excl. oil) in absolute terms and as % of GDP



Source: Banxico, BTG Pactual

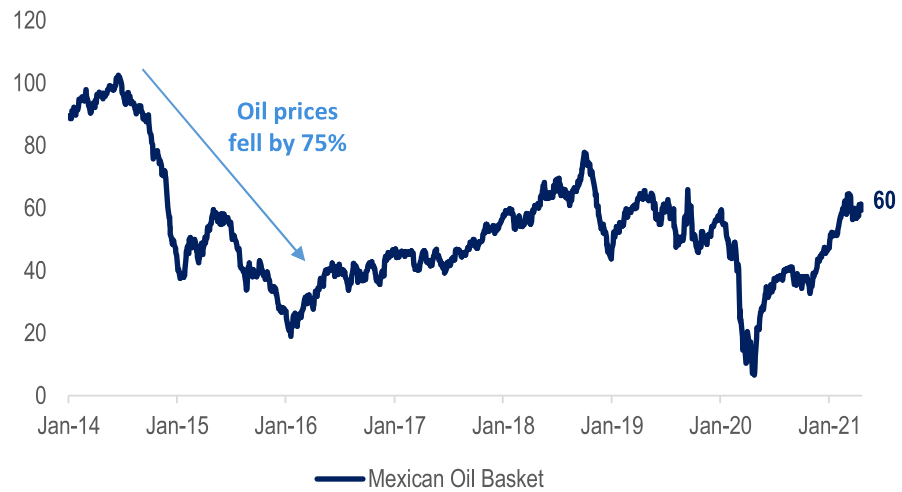
Again, currencies move for a myriad factors that might have little do with competitiveness or fair value. And what happens to the trade balance in any given year may not say much. But long-term trends in trade for an economy as open, reliant on trade, and focused on manufacturing as Mexico's and whose currency is as free-trading and liquid as the MXN are, in fact, a good starting point to assess fair value. It would seem reasonable to say that, at least through this lens, Mexico's terms of trade are favorable and have been improving.

What does MXN's historical and more recent performance tell us?

Mexico went through a series of shocks from 2014 to 2020 that we believe were fully and effectively absorbed by MXN and that contributed to a total re-set to its level of valuation. The magnitude, frequency, and speed of succession of these shocks proved, in our view, the *bona fides* both of MXN as a liquid and free-floating currency and of its being the most effective mechanism for the economy to adjust in the least disruptive manner possible. By the time the worst fears of COVID had come and gone, we believe that any excesses priced into MXN had completely disappeared. What were these shocks?

- **The oil price shock of 2014-2015**: From June 2014 through January 2016, oil prices fell by 75%, with Brent touching US$27/bbl at its lowest. When the shock began, Mexico was still a net oil exporter that had just recently passed decades-long awaited constitutional reforms intended to open up the oil industry to private and foreign investors in an effort to stem the decline in production that a creaking Pemex had been unable to correct. Not only did the hopes of an investment boom in oil fizzle when prices fell, but they rapidly compounded Pemex's balance sheet woes, leading to the first concerns that the government would have to prop up its finances at some point (something it ended up doing in 2019 and throughout 2020).

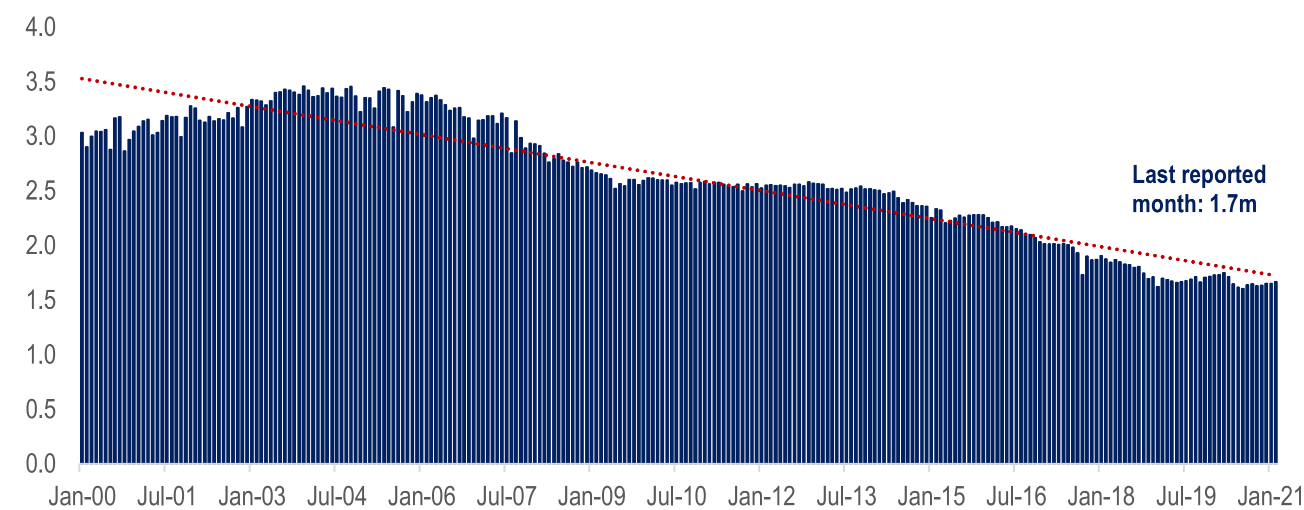
Chart 11: Pemex – Mexican Crude Oil Basket Price (US/barrel)



Source: Bloomberg, BTG Pactual

- **Pemex's production decline (2004-2020)**: Plunging oil prices compounded the effect of Pemex's declining oil production, which in the decade from their 3.8m bpd peak in 2004 had fallen by over a third to 2.4m bpd. By 2020, it had fallen by half to 1.7m bpd.

Chart 12: Pemex – Historical Oil Production (millions bpd)



Source: Pemex, BTG Pactual

- **Becoming a net energy importer (2015-2018):** The combination of both these trends, added to the fact that Mexico's refining capacity was curtailed owing both to poor maintenance and to a mismatch between the heavy oil increasingly produced by Mexico and the type of oil that its refineries can process, turned Mexico into a net importer of energy in 2015. By 2018 Mexico's oil deficit peaked at US$23 billion, 2% of GDP; this declined to US$14 billion (1% of GDP) by 2020. For an economy that has historically been a net exporter of energy, the fact that it was able to manage this transition with relative to ease is a testament to the benefits of a flexible currency regime. At other moments in time or for countries that are less flexible on the currency front an energy transition such as this one could have been dramatically more traumatic. After all, it took Mexico a decade to recover from the effects of the oil crash of 1982.

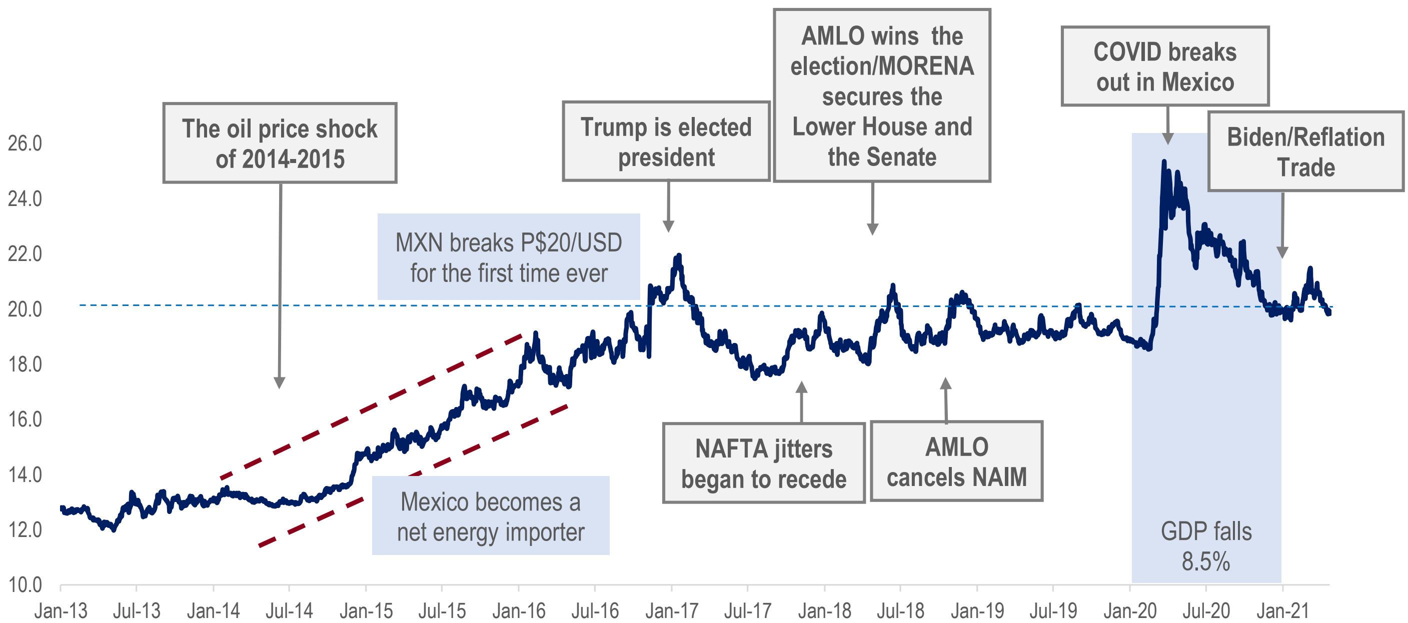
- **The election of Donald Trump and the renegotiation of NAFTA (2015-2017):** By late 2015 markets and pundits began to worry about the possibility that Donald Trump would become the Republican Party's 2016 presidential candidate. Breaking with decades of Republican tradition, Mr. Trump won the nomination by campaigning on a nativist, nationalistic, and protectionist platform that seemed particularly hostile to Mexico. As Mr. Trump would have it, Mexico was largely responsible for many of the US's woes (drugs, immigration, and unfair trade) and became the focal point for much of his most spiteful vitriol; his wall became the concrete symbol of this. Markets brushed off the wall and concerns around immigration, but anxiety quickly rose when Mr. Trump proposed doing away with NAFTA altogether unless Mexico agreed to negotiate a completely new and presumably less even agreement. This was an existential threat to Mexico's trade-based economic model and was promptly reflected in MXN, which broke P$20/USD for the first time ever in the week of Mr. Trump's election. In the end, Mexico successfully navigated these waters and was able to rally US CEOs and state governors whose companies and states rely on Mexico for support in crafting USMCA, an agreement that ultimately was a much-needed update for NAFTA. But while the uncertainty lingered it loomed large and took a heavy toll on MXN.

- **The rise and election of AMLO (2Q and 3Q 2018):** Yet just as the NAFTA jitters began to recede in early 2018, another source of uncertainty materialized in the form of what seemed an unstoppable march to the presidency by AMLO. This was his third successive presidential run and the combination of a newly created party (Morena) that was fully under his thumb and that had managed to coalesce all left of center parties under its tent, along with a somewhat more moderate message and, perhaps most important, almost universal voter dissatisfaction with the status quo, traditional parties, and the outgoing president, delivered him an electoral win in June 2018 the likes of which had not been seen for decades. That he would win was never really in question, but the magnitude was: he was the first presidential candidate to receive an outright majority of the vote since 1988 and defeated his closest rival by over 30 points. More importantly, Morena and its allies managed to secure 68% of the Lower House (the first two-thirds majority since 1985 and the first simple majority since 1994) and 60% of the Senate. In other words, he ran the table and was able to concentrate power in his hands like no other president since perhaps Carlos Salinas in 1988.

- **The cancellation of the NAIM (October 2018):** While AMLO's pre-electoral moderation delivered him a post-election honeymoon with investors and the business community, this came to a screeching halt when, still as President-elect, he cancelled the New Mexico City Airport (NAIM) in October 2018 following the results of a Potemkin referendum. Though this was consistent with his messaging about NAIM since it was first proposed in President Fox's term (2000-2006), the logic and arithmetic around the decision to continue with its development were so overwhelming that the private sector and markets saw it as a litmus test of AMLO's moderation that he was sure to pass. In the event, he did what he said he would, cancelled the airport in spite of the costs this implied, and unleashed a market sell-off and a loss of private sector confidence that he has yet to recover.

- **And then COVID happened…**: The combination of public sector austerity and a private sector investment strike (owing to the loss of confidence in the AMLO administration that the cancellation of NAIM triggered) led to Mexico's dipping into recession (admittedly mild) in 2019, even before the COVID pandemic broke out. Although in the end of the economic impact of COVID was less severe than initially feared (GDP contracted by 8.5% vs. 11% that at the low point was expected by consensus), at a certain point in time it was thought to be sharp enough to raise significantly the risk that Mexico would lose investment grade.

Chart 13: What does MXN's historical and more recent performance tell us?



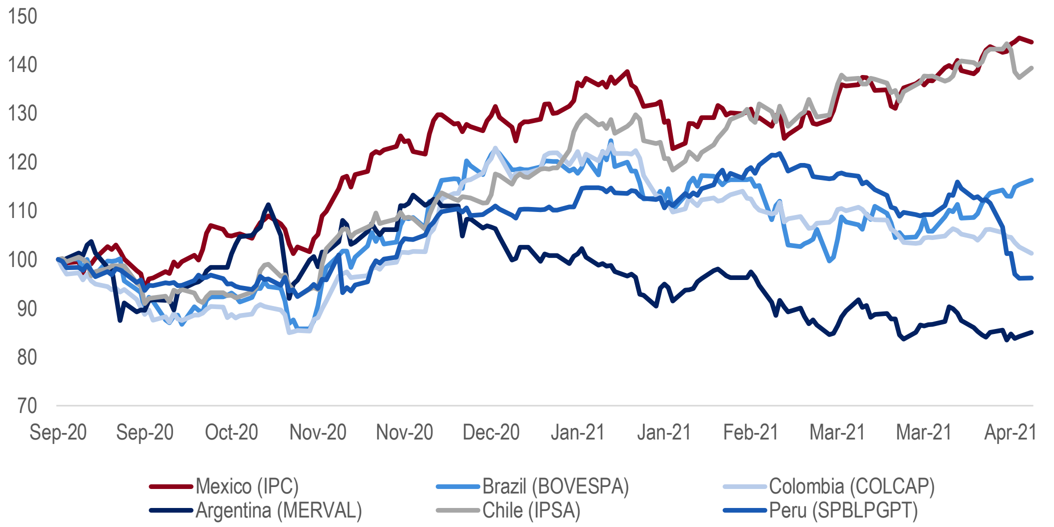
Source: BTG Pactual, Bloomberg

As a result, when all was said and done, MXN went from P$13/USD at the beginning of 2014 to P$25.4 at its lowest (March 2020) and only partially recovering to P$19.9/USD at writing. In other words, in the span of seven years, MXN has lost a third of its value (halving at the peak of COVID anxiety) during a period of time in which inflation averaged less than 4%.

One conclusion when looking at the MXN's chart is that if there was any premium priced into it at any point in time, over the past seven years it's been knocked out of it. The second, and perhaps related conclusion, is that whenever there is a moment of relative calm (e.g., early 2017, when NAFTA renegotiations began, and April 2018, when campaigning for Mexico's presidential elections kicked off; or January 2019 through February 2020, when the COVID pandemic began), MXN has tended to strengthen.

And this has been particularly evident over the past several months. Since September 2020 global markets began discounting the policy implications of a Biden victory in the US presidential elections. The increased likelihood of greater stimulus implied by a Biden win, compounded by the ability to look into a "normalized" world provided by the combination of the good news on COVID vaccines and ample monetary stimulus, has led to a reflation trade that has taken bond yields higher, weakened the USD, promoted a rotation from growth to cyclical/value stocks, and from developed markets to GEMs. Mexico has been a primary beneficiary of this, propelling it to the best performance among LatAm equity markets in 2020 and to a 9% USD gain so far in 2021 (which within a LatAm context means underperforming Chile, but outperforming all the rest of its peers, including Brazil by 15%). In fact, since mid-September, Mexican equities are up 50% in USD.

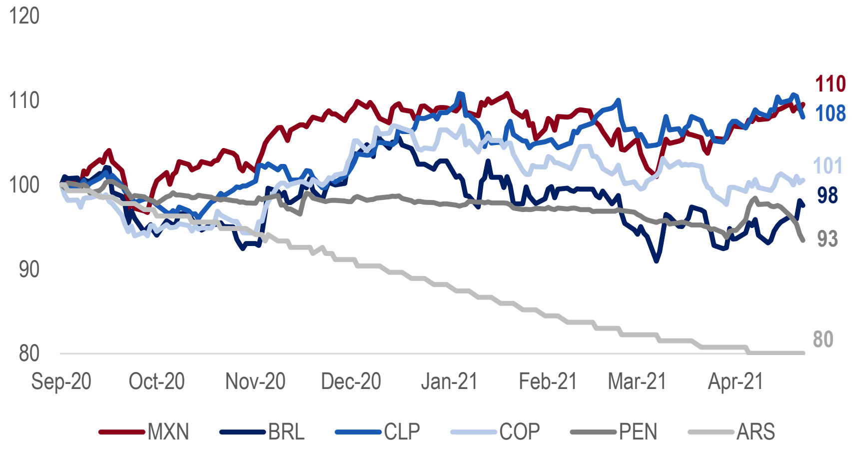
Chart 14: Latin American Index - Historical performance in USD (September 2020 – Today)



Source: BTG Pactual, Bloomberg

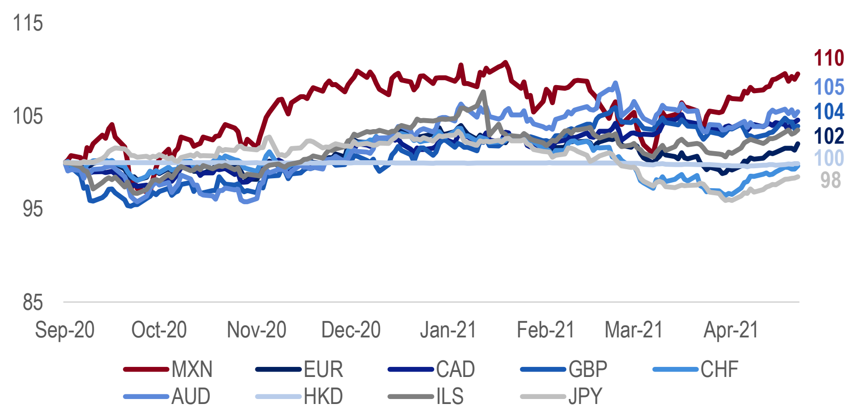
We argued in our October Mexico Strategy report, *MxQs #1: Biden vs. Trump – who's better for Mexico?* that a Biden presidency would be better for Mexico for a number of reasons, including the reflation trade and rotation away from growth to cyclicals. Mexico is a primary beneficiary of i) additional US stimulus (something we have called "positive economic second-hand smoking"); ii) rotation into cyclical/value and away from growth; and iii) the peering into the future that the "normalization" trade allows for. To this we would add a number of ancillary benefits on domestic politics as we believe that a more "normal" administration in Washington is likely to represent a broader and more persistent check on President AMLO.

Chart 15: MXN Performance vs. LATAM Currencies



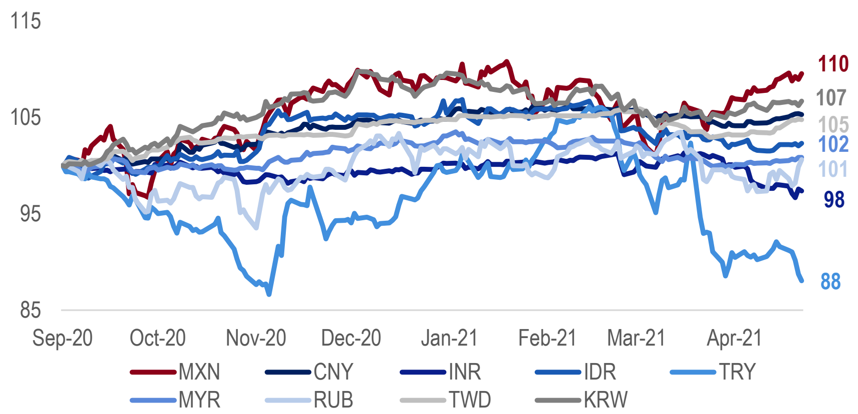
Source: Bloomberg, BTG Pactual. Notes: 100 basis

Chart 16: MXN Performance vs. Developed Market Currencies



Source: Bloomberg, BTG Pactual. Notes: 100 basis

Chart 17: MXN Performance vs. Non-LATAM Emerging Markets



Source: Bloomberg, BTG Pactual. Notes: 100 basis

Further, as can be seen in Charts 15 through 17, not only has MXN appreciated vs. USD, but it has also outperformed all of its LatAm peers, most of its non-LatAm EM peers, and many DM currencies. And, while long yields have moved up alongside those of the US and most of the rest of the world, they have not done so abruptly or disproportionately. At the 10-year point of the curve, Mexico sovereign nominal fixed yield is roughly at the same level it was prior to the outbreak of COVID and still some 250bps tighter than it was at the end of 2018 (when market were still aghast at AMLO's cancellation of NAIM).

Chart 18: Mexico - 10 Year Bond (in MXN)

Source: Bloomberg

We acknowledge that recent performance is no indication of future results and that MXN has proven to be exceedingly sensitive to both external and internal shocks (which, as we argued in the previous section, is largely a function of being an EM currency benchmark). Yet its performance over the years and in particular during the periods bookending the global COVID sell-off (January 2019 to February 2020 and September 2020 to the present) suggest that in the absence of stressors it gradually tends to drift towards appreciation both against the USD and other currency peers.

Admittedly at a very superficial level, MXN's performance over the past two years would indicate that any premium that it once had was removed in the sell-off that began in 2014 and that, when left alone, it appreciates both in absolute and relative terms.

What does all this tell us then?

The three preceding first level analyses should lay the context and framework for the fundamental and experiential assessments of the valuation of MXN discussed in the sections that follow. We draw three main conclusions from our introductory discussion:

1) **The MXN market is deep, broad, and liquid, which is mostly a positive but carries some costs.** With total daily traded volume in excess of US$100 billion, MXN ranks as the 15th most liquid currency globally and the third in EM, behind only China's Renminbi and the South Korean Won. Unlike most of its EM peers, however, MXN trades globally, with roughly half its volume traded in the North American hub (Mexico and the US) and the rest elsewhere (mostly in Europe, though also in Asia). This depth and breadth makes it cheap both to trade and to hedge, which is mostly a good thing. However, because it is that much more liquid than its EM peers, it is often used by investors as the vehicle to hedge overall EM exposure and therefore tends to exaggerate episodes of global volatility relative to their real fundamental impact on Mexico. In fact, as Alejo and Sofía explain in the section that follows, some 60% of variation in MXN can be explained by global factors, which is why we have often referred to it as a "barometer of global risk aversion".

2) **Since the 1994 Tequila crisis, MXN is Mexico's macro safety valve and was the main adjustment factor of two fundamental challenges to terms of trade over the past decade: 1) the transition to being a net energy importer and 2) the ongoing risks to free trade.** Since 2014, Mexico, and thus MXN, faced unrelated though sequential frontal assaults, first on the pillar of its previous economic regime (oil) and then on that of its current one (free trade). The first leg of MXN's weakening (from P$12-18/USD), which happened from 2014 to 2016, reflected the fact that, owing to a drop in the price of oil and what was then a decade's long decline in Pemex production (which has now been extended to 16 years), Mexico became a net importer of energy in 2015, something that would have been unthinkable just a few years earlier. Its external energy balance went from a 1.5% of GDP surplus in 2011 to a deficit of 2% of GDP by 2018; this is clearly not a trivial adjustment for which MXN proved itself to be the safety valve. Just as this adjustment appeared to be complete, MXN was assailed by a threat that was perhaps even graver in the form of a President Trump who seemed intent on dismantling most of the world's global trading architecture, including NAFTA, the anchor of Mexico's economic model for the previous quarter-century. Though in the end it would seem that catastrophic risk was averted, there was a period of time when this outcome was not guaranteed and serious concerns emerged that whatever replaced

NAFTA could be egregiously disadvantageous to Mexico. In the end, USMCA seems to be a worthy and timely successor (NAFTA was, after all, a quarter of a century old by the time USMCA came into effect), but things could have turned out very differently and for an economy as open to trade as Mexico's (total trade is 78% of GDP) it might have been traumatic.

3) **Following this adjustment, MXN seems to "drift stronger" whenever volatility subsides.** MXN broke P$20/USD around the time of President Trump's inauguration in January 2017, but once the worst of the NAFTA anxiety had been replaced by an expectation that USMCA would be agreeable to Mexico, it began to drift towards P$18/USD. There were, of course, episodes of volatility during this time, the most relevant of which was the stress to markets of AMLO's cancellation of NAIM and the immediate flurry of speculation that the gloves were off and that the more moderate tone of his campaign had been little more than a ruse to win over the private sector prior to the election. In the end, markets and investors (though less so the private sector) calmed and, despite maintaining serious reservations about a number of AMLO's policies (particularly as they pertain to the Energy sector), have warmed to his genuine commitment to fiscal discipline. This calm came ended abruptly with the outbreak of COVID in early 2020, which threw global markets into a tailspin that drove MXN above P$25/USD by March. However, following overwhelming global fiscal and monetary response, MXN began to drift stronger by June and received a significant boost from the "reflation trade" that began in September 2020 when markets began pricing in both the good news on the development of COVID vaccines and the potential stimulus implied by a Biden presidency. Since September 2020, MXN has been one of the best performing currencies in the world.

Enter the Technicians -- a fundamental analysis of MXN

Recognizing that certain things are better left to the experts, we turned to our Mexico Economics team (led by Alejo Costa and Sofía Ordóñez) for a more technical response to the question of whether MXN is cheap or not. In the following section, Alejo and Sofía use a Real Effective Exchange Rate framework, adjusted for a number of factors to produce two estimates of fair value, including one that attempts to adjust for the impact of policy uncertainty prevalent in the AMLO administration. Their conclusion is that on a fundamental basis MXN looks undervalued, but that once one incorporates the AMLO factor its recent rally has put it in "fair' territory.

MXN: Cheap for Mexico, fair for AMLO (by Alejo Costa and Sofía Ordóñez)

We look at the exchange rate level relative to the last three decades, to measure the strength of the currency in historical terms. Mexico's currency is particularly liquid among emerging markets and is often used as a hedge to EM selloffs as a result. This characteristic generates a high correlation between the MXN and EM currencies, to the point where almost 60% of the variation in the MXN is explained by global factors: when EM currencies weaken or strengthen, the MXN tends to move more than one-to-one. The recent trend, however, has been more related to local drivers and US policies, and in this section we look at the currencies current value relative to the past.

Under our estimations, we find that i) the MXN seems cheap from a historical standard, on average being close to USDMXN18 at current prices; ii) relative to AMLO's presidency, a level around USDMXN20 seems fair. We start from a simple calculation. We first look the real exchange rate, and using it show the level of the exchange rate of the past at today's prices. At current prices, the average exchange rate since 1990 is USDMXN18.3, suggesting the current level, around 20, is a good entry point. Under López Obrador's administration, however, the exchange rate has been on average higher, USDMXN19.8 at current prices, hence suggesting the current level is fair.

A pure calculation using the REER ignores changes in local and global drivers. To take them into account, we consider the four variables that affect the level of the exchange rate from a fundamental point of view: i) terms of trade; ii) global risk aversion; iii) the relative monetary stance; iv) the level of net foreign assets. To measure the impact of each variable, we use IMF's latest estimation for the REER level model under the Exchange Balance Assessment Model (EBA). Terms of trade are relevant, as more favorable terms of trade allow a stronger currency. So we adjust historical terms of trade to adjust them to current terms of trade. In the same way, higher risk aversion generates a weaker currency, so we use the VIX to proxy the global level of risk aversion, and adjust previous levels to today's VIX level. We also adjust for the relative monetary stance, as well as the level of net foreign assets. Table 2 summarizes the main results:

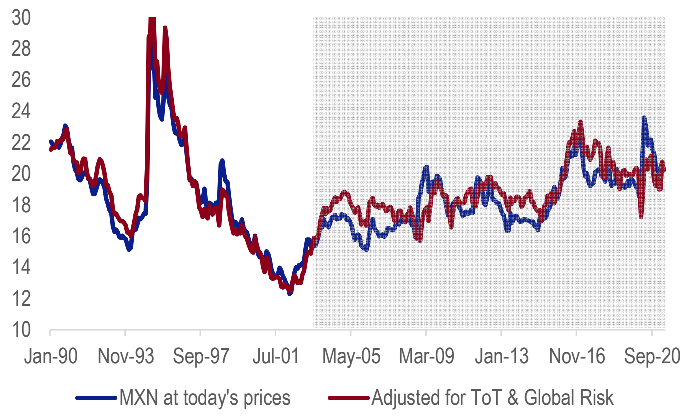
Table 2: Bottom Up: Real Effective Exchange Rate
REER level model under the Exchange Balance Assessment Model (EBA)

	1990-2021	July 2018-2021 (AMLO)
Average FX at current prices	18.33	20.15
Adjusted for:		
Terms of Trade	18.57	20.12
+ Risk Aversion	18.72	19.92
+ Monetary Policy	18.84	19.94
+ NFA	18.31	19.92

Source: BTG Pactual Estimates, Banxico, Bloomberg

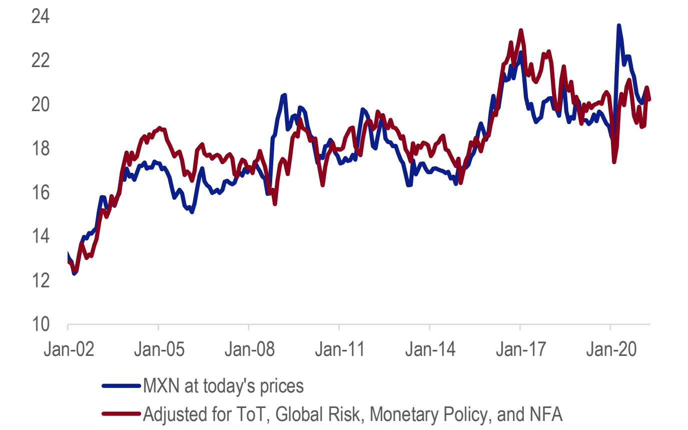
From a historical perspective, at USDMXN19.9 the currency looks cheap, though it looks fair under AMLO's presidency. In fact, the currency has been relatively stable at valuations around 20 at current prices since 2016. After adjusting for the four macro variables we use, the valuation flattens out, with volatility around global events and news around US-Mexico relations, particularly during Trump's administration. The historical average is lower, with the Tequila crisis as the main anomaly of the series, a moment when the currency reached a level equivalent to 30 at current values. Since inflation targeting solidified, the currency has moved mostly in a range of 17-22 at current prices, and the current level is on the upper side of that range.

Chart 19: Implied value of MXN vs. Spot
Considering Terms of Trade and Global Risk



Source: Banxico, Bloomberg, BTG Pactual estimates

Chart 20: Implied value of MXN vs. Spot
Considering Terms of Trade, Global Risk, Monetary Policy and NFA



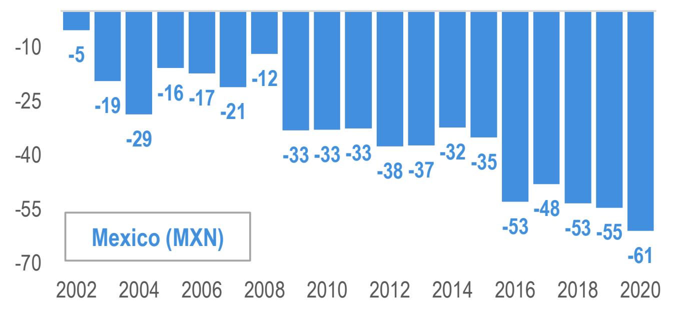
Source: Banxico, Bloomberg, BTG Pactual estimates

Experiential analysis: MXN from the perspective of the user

One can model and forecast and do regressions until the cows come home, but sometimes the best investment conclusions can be reached through observation and anecdote. When it comes to currencies, however, every experiential or anecdotal conclusion can be objected to. For instance, to *The Economist's* Big Mac Index consumer analysts would say that Mexicans don't like burgers as much as Argentines and, thus, to compete with tacos they must be priced more attractively than elsewhere. Real estate prices might be impacted, for instance, by permitting restrictions or commercial bank lending conditions, which can vary dramatically from city to city, let alone across countries. Different tax rates or import tariffs could also influence relative final prices too.

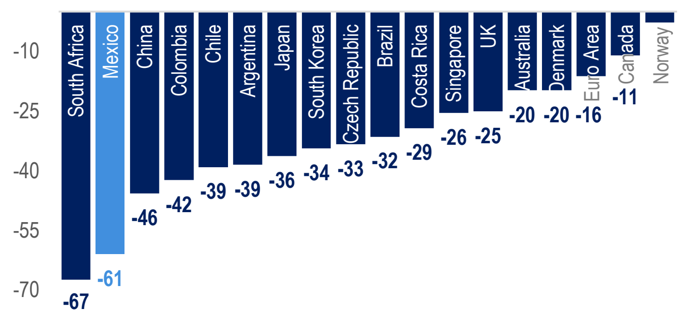
While all these shortcomings are true of any individual anecdotal relative pricing exercise, we would argue that the idiosyncrasies of any one comparison should be evened out by those of another. Thus, we believe that a mosaic of such comparisons can, in fact, be indicative of the relative purchasing power of a given currency. To that end, we have put together four such comparisons, including the Big Mac Index, but adding global price comparison for Heineken beer, Starbucks, and Domino's Pizza. All these have the advantage of being relatively basic goods that are produced locally (although, admittedly, some ingredients may be imported) and that have a global band produced under similar conditions and with similar requirements.

Chart 21: Big Mac Index – % undervalued/overvalued vs. USD
Mexico – Historical data



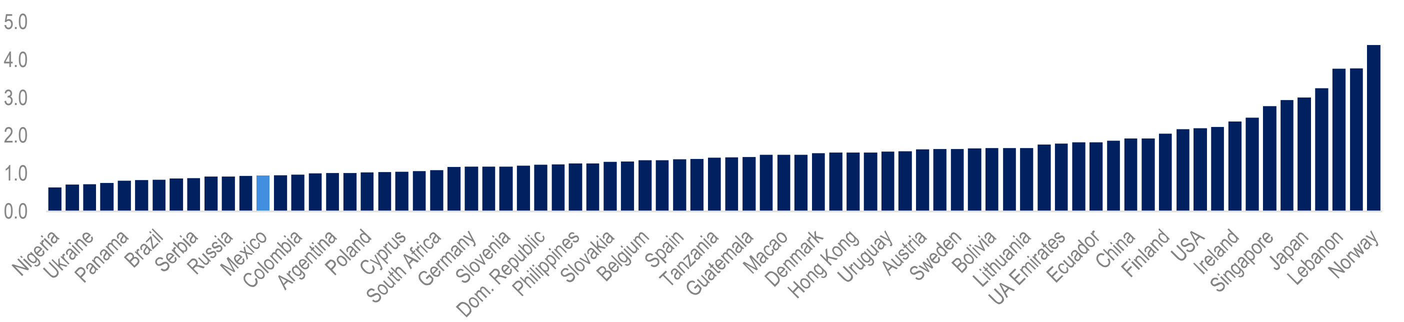
Note: The Big Mac Index is updated as of January 2021 and uses Big Mac prices in USD as the base currency. Source: BTG Pactual Estimates, Bloomberg, The Economist, Global Product Prices

Chart 22: Big Mac Index – % undervalued/overvalued vs. USD
Mexico – in a global context



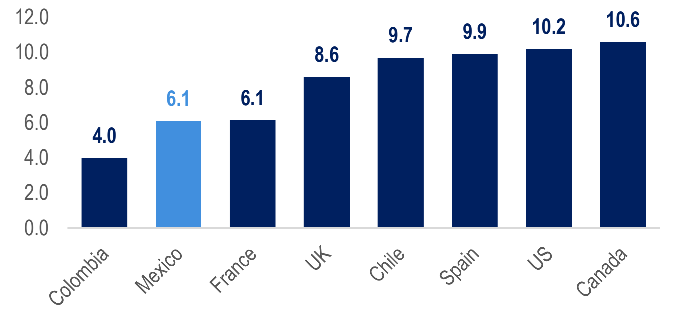
Note: The Big Mac Index is updated as of January 2021 and uses Big Mac prices in USD as the base currency. Source: BTG Pactual Estimates, Bloomberg, The Economist, Global Product Prices

Chart 23: How much does a standard Heineken cost in different countries around the world?
Heineken beer price, 330 ml. bottle, March 2021 – in US$



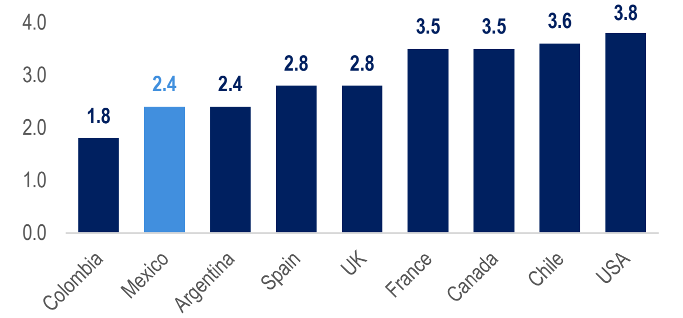
Source: BTG Pactual Estimates, Global Product Prices

Chart 24: How much does a pie of pizza cost in different countries around the world?
Domino´s 12" Pizza (excl. VAT), November 2020 – in US$



Source: BTG Pactual Estimates, Bloomberg

Chart 25: How much does a Starbuck's latte cost in different countries around the world?
Starbuck's large latte (excl. VAT), November 2020 – in US$



Source: BTG Pactual Estimates, Bloomberg

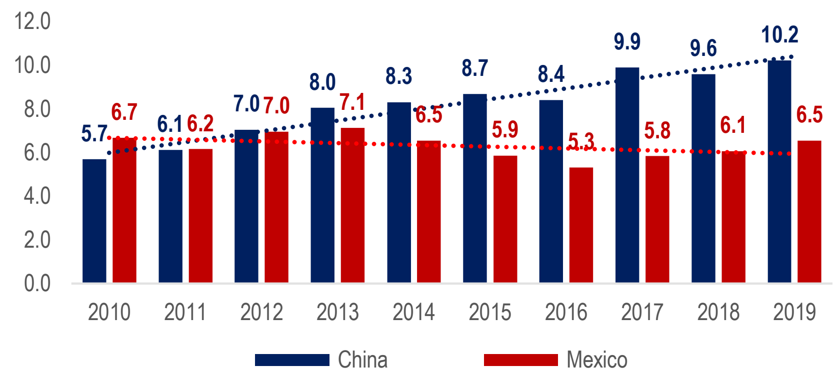
The first and most important conclusion is that, in varying degrees, all of these anecdotal measures of relative value suggest that MXN is cheap relative to most currencies globally, be them EM or DM. Secondly, the Big Mac Index has been compiled by *The Economist* since 1986 and the product itself is virtually unchanged, which gives the index the advantage of not only providing a sense of how a given currency is valued relative to others, but also how its relative valuation has changed over the years. In the case of MXN, the Big Mac Index shows very clearly that over the past twenty years MXN has consistently cheapened: it was 5% undervalued relative to USD in 2002 and was 60% undervalued in 2020.

Mexico vs. China: the other test of competitiveness…

As with the objections that could be raised when assessing the relative valuation of currencies on the basis of the pricing of consumer goods, the same could be said when doing it by comparing relative labor costs. Labor costs are affected by a number of factors that may have little to do with the competitiveness of the currency itself: i) taxation, ii) benefits, iii) demographic profiles, and iv) levels of education, among others.

However, total trade to GDP is now 78% for Mexico, which makes it one of the world's most heavily trade-dependent economies. Total exports to GDP is 40%, of which 80% is manufacturing. As a result, the competitiveness of its labor force is at once a read into the relative valuation of its currency and also a major driver of it. And increasingly the comparison for Mexico that matters most is against China, particularly as we are living through a period of time in which it is trying to position itself as one of the major beneficiaries of the shift in US trade diplomacy that is leading to a weaning off from China and to potential nearshoring opportunities for manufacturing facilities.

Chart 26: Manufacturing labor costs per hour (US$)



Source: BTG Pactual Estimates, Bloomberg, IMF, Brookings, Cato Institute, WSJ, Asesoría y Estrategia Económica

Figure 1: Mexico is the country with the most FTA globally
Mexico trades freely with some 45 countries and with over two-thirds of global GDP

Source: BTG Pactual Estimates, Bloomberg, IMF, Brookings, Cato Institute

As can be seen in Chart 26, Mexican manufacturing labor costs in USD are largely unchanged over the past decade. By contrast, in China they have almost doubled, overtaking Mexico's in 2013 and now stand 50% higher. Some of this has to do with relative performance of the currencies (MXN has depreciated by a third vs. CNY since 2013), but much of it has to do with rising wages in China reflecting, in part, the decade's long decline in the size of China's labor force. The main driver behind this is demographics and specifically the impact of the "One Child Policy" implemented by China in 1978. Though it has been loosened in recent years, absent immigration this will take, by definition, a generation to change, while Mexico continues to enjoy the benefits of a young population and its "demographic dividend".

The AMLO administration's Labor Reform of 2019 (which was a condition for implementation of USMCA) and its more recent tinkering with its regulation on outsourcing, together with its continued push to increase Mexico's minimum wage, might put some upward pressure on Mexico's unit labor costs. However, its cushion vis-à-vis China is sizeable and it would now seem that, while perhaps Mexico's labor competitiveness may have needed a bit of a boost from MXN in 2012-2013, it is no longer needed at present.

Valuation is not all that matters….

We said at the beginning of this report that we believe that when equity or fixed income investors ask us whether we think MXN is undervalued what they're really asking is "in what direction do you think MXN will move?". A good starting point is, of course, to determine if it is cheap or not. But just as important, however, is to have a good understanding of the status of the other factors that could influence the way in which a currency moves. After all, BRL is a good reminder that a currency that is cheap as a means of exchange might still weaken if it is adjusting for other macro factors or imbalances.

We believe part of the reason that MXN seems to "drift stronger" whenever volatility diminishes is that, for all its challenges, Mexico has for some time been free of major imbalances. This is to a large degree the reason MXN and Mexico more broadly has been a major beneficiary of the reflation trade.

We argued in our October Mexico Strategy report, *MxQs #1: Biden vs. Trump – who's better for Mexico?* that one of the pillars behind the argument in favor of Biden was that Mexico's lack of imbalances and overall fiscal health would stand out as global monetary conditions normalized. We quoted Warren Buffet's famous maxim, "It's only when the tide goes out that you learn who has been swimming naked", and argued that when it came to EM rising US yields was tantamount to the tide going out.

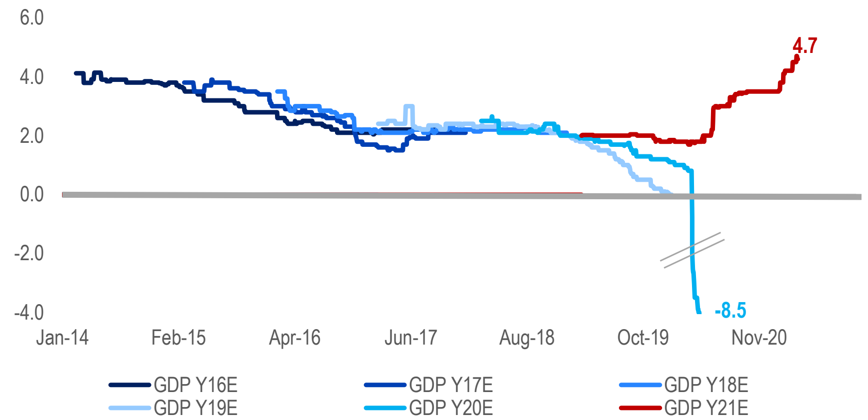
We said at the time that one of the derivate effects of the Biden plan could be higher yields given the possible combination of an improvement in growth expectations, the assumption of tighter labor markets feeding into inflation, and, at least initially, greater borrowing by the US government. While even under this scenario one would expect that global yields would remain low by any historical standards, they would rise from where they stood at time. This would draw markets' attention towards countries whose imbalances or generosity around COVID have been overlooked given the inordinate amounts of liquidity globally, perhaps putting pressure on their yield curves and, thus, on asset prices. By contrast, the same dynamics could put those countries without any such imbalances in a relatively favorable light.

This is broadly how things have played out. It will take years to know the true cost of AMLO's resistance to buffer the economic impact of COVID, once we understand exactly what impact it had on poverty rates, the erosion of the middle class, the speed with which both returned to previous levels, and the damage done to the corporate sector, particularly at the SME level. For now, however, markets are rewarding Mexico for its fiscal prudence, which is reflected in 2020's primary fiscal surplus and its debt/GDP of 52%, which will decline as early as 2021 given expectations of a 2.5-5% budget deficit in 2021 and of 5% GDP growth.

Moreover, if there was any doubt as to the reliability of AMLO's credentials on fiscal responsibility these have been put to rest after his actions in 2020. When the accepted response to COVID became to spend aggressively and he was asked cap in hand to do so by the very same people who had urged him as a candidate to commit to preserving the good state of public finances (i.e., the business community, IMF, and rating agencies, among others), AMLO refused point blank. If he did not cave then, his bona fides would seem beyond reproach and would suggest that AMLO is one of the last fiscal hawks standing.

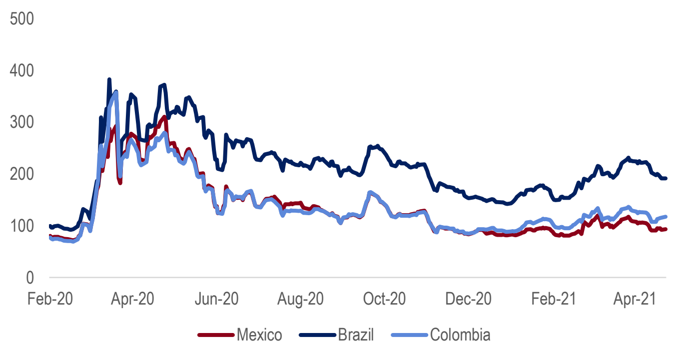
This has done more than anything else to reduce concern in the market that Mexico will lose its BBB- investment grade rating in the short to medium term. To be fair, rising oil prices and seemingly stabilizing oil production, have, at least for now, also helped ease anxiety over Pemex, which remains Mexico's fiscal Achilles heel. Admittedly, AMLO has also been helped by the fact that no country benefits more directly and indirectly from US stimulus; via exports, tourism, and remittances, it receives many of the benefits to growth from US spending without incurring any of its costs. This largely explains the sharp rebound in GDP growth expectations for 2021, which began the year at 2% and now sit at 5%.

Chart 27: Mexico – Historical GDP growth expectations (%)



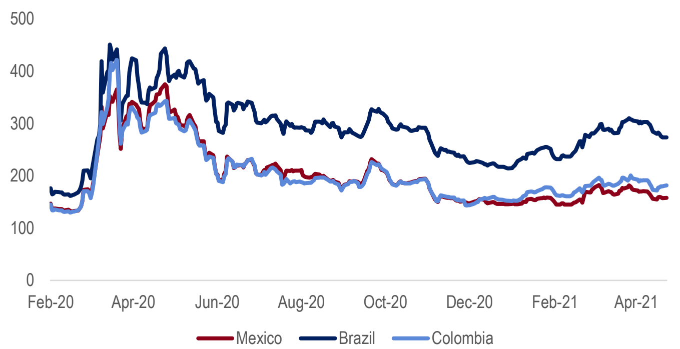
Source: Bloomberg, BTG Pactual estimates

Chart 28: 5-Yr CDS USD – February 2020 - April 2021



Source: Bloomberg, BTG Pactual estimates

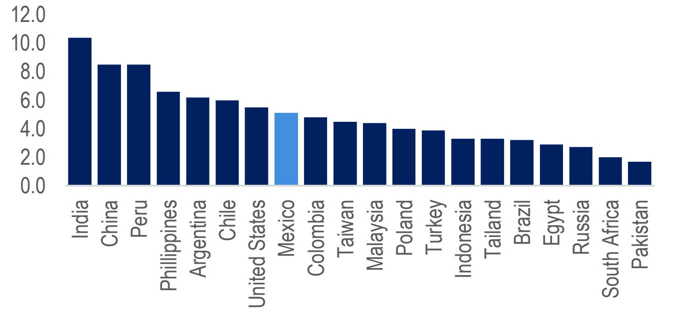
Chart 29: 10-Yr CDS USD – February 2020 - April 2021



Source: Bloomberg, BTG Pactual estimates

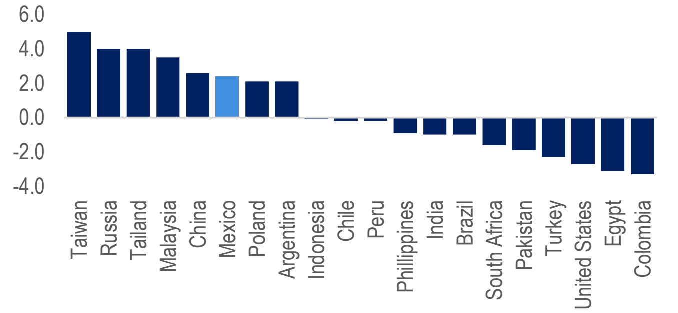
After an 8.5% collapse in GDP, there is no arguing that, like much of the world, Mexico suffered greatly from COVID. The economic and human toll of the pandemic will leave long-lasting scars and will take years to fully overcome. However, in relative terms, Mexico has emerged from the pandemic in better position vs. most EM peers than it had prior to its outbreak. As the charts below show, Mexico has no major economic or financial imbalances to speak of: its 2.8% 2021E fiscal deficit is the narrowest of the 15 EMs shown, while its current account surplus of 2.4% is the highest in LatAm and comparable to the healthier Asian peers. Further, its debt/GDP of 52% is similarly reasonable, particularly considering that it will begin to decline as early as 2021. All of this should continue to support MXN, especially considering that it also seems to be fundamentally undervalued or, at worst, fairly valued.

Chart 30: Expected GDP Growth for 2021E (%)



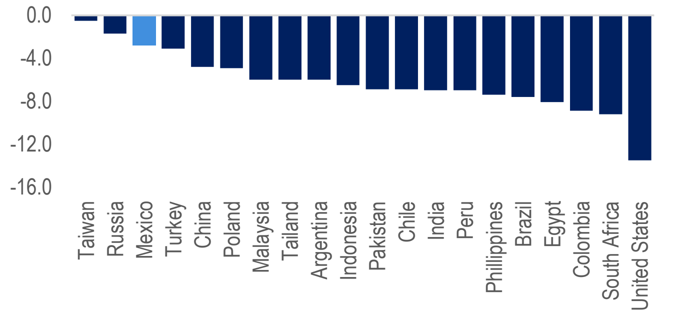
Source: BTG Pactual Estimates, Bloomberg, The Economist

Chart 31: Current-account balance 2021E as a % of GDP



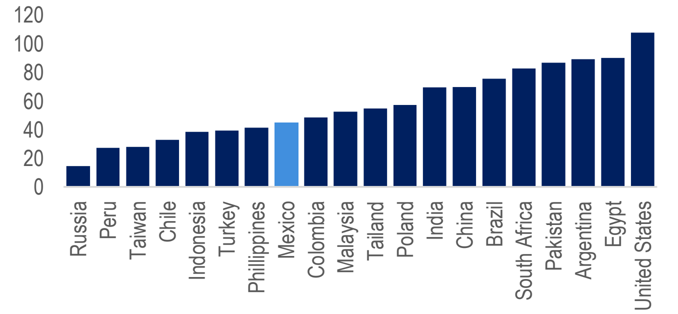
Source: BTG Pactual Estimates, Bloomberg, The Economist

Chart 32: Budget balance 2021E as a % of GDP



Source: BTG Pactual Estimates, Bloomberg, The Economist

Chart 33: Government debt as a % of GDP



Source: BTG Pactual Estimates, Bloomberg, The Economist

Potential Peso Pitfalls and Perils….

The main conclusion of this report is that through most lenses MXN looks undervalued to potentially fairly valued if one incorporates an AMLO risk premium. Experiential readings of consumer goods or labor costs point to the same conclusion. The recent historical performance suggests that, after a multi-year adjustment process to a continued deterioration in its energy trade balance, MXN has lost any premium that it might once have enjoyed and, thus, tends to appreciate whenever volatility subsides. And, finally, its overall macro picture is robust, both in absolute terms and, importantly, in relative terms, explaining its outperformance in the context of the ongoing reflation trade.

But, as ever, nothing is without risks – we highlight the most relevant:

Long-term, Mexico's main challenge remains tepid growth: Consensus for Mexico's GDP growth is now at +5%, which is much better than the 2% that was expected at the beginning of the year and would be the highest in several years. This, however, is largely on the coattails of the US and the unprecedented peacetime stimulus now in place and potentially extended if the Biden Administration's infrastructure bill is approved. This is driving a cyclical rebound that could well extend into 2022. Nevertheless, the same problems that have plagued Mexico's GDP growth for years remain in place and have potentially been aggravated by the pandemic. Among these are high levels of informal activity, the drag to growth represented by Pemex, low credit penetration, an inefficient legal system, insufficient investment in education, etc.

AMLO and the business community remain estranged: Market unfriendly policy in the Energy sector, together with several additional initiatives that have been irritants (e.g., the recent outsourcing bill), has led significant portions of the business community to lose its confidence in the AMLO administration. This estrangement began with the cancellation of NAIM in October 2018 (when AMLO was still president-elect) and the relationship remains frayed, which has reduced private sector investment at a time when austerity measures are impacting public investment. This exacerbates an already mediocre long-term outlook for growth.

The June 2021 mid-term elections: Voters will go to the polls in June 2021 in what are the largest elections in Mexico's history: all of its Lower House, along with 15 (out of a total of 32) state governorships and 30 (out of 32) state assemblies. We believe that in most scenarios the outcome is neutral to marginally positive, although there is a risk that if the ruling party's coalition runs the table as it did in 2018 AMLO will take that as a mandate to harden his stance on matters of importance to the market and business. Thus, the political atmosphere could become even more highly-charged as we approach the election and its outcome could drive the agenda of the back-end of AMLO's term. For more on this, please refer to our Mexico Strategy note, *GTKM#4 – The road to the 2021 midterms…*

A potential tax reform: Most Mexico watchers would agree that a true tax reform that would raise the government's ex-Pemex tax take from 15% of GDP has been badly needed for decades. In that sense, the Finance Ministry's warning that following the mid-term election it will likely introduce a tax reform should not take anyone by surprise. In general, this reform would look to further curtail tax evasion and to transfer some of the burden of taxation to the states (via the collection of property or vehicle registration taxes, for instance). However, it is difficult to imagine a reform that would have a material-enough impact on tax revenues to allow for an effective overhaul of Pemex's tax burden without an increase in personal and corporate tax rates. The Biden tax plan, which will take corporate rates higher, could create some room for higher corporate taxes rates without necessary impacting MXN competitiveness. But higher corporate taxes would likely represent an additional irritant to a grumpy private sector. For equity markets it would mean lower earnings, although the negative effect of this might be offset by lower discount rates if the reform is well-designed and further reduces the risk of a loss of Mexico's investment grade rating.

Pemex and the cost of unconditional support: The deterioration in Pemex's production and balance sheet over the better part of the past two decades has converted it from a major source of tax revenue to a burden on the federal government's balance sheet. But the AMLO administration is ideologically committed to defending national giants in the Oil and Power sectors and to use the government's balance sheet to prop them up. As such, Pemex has become Mexico's fiscal Achilles heel and any deterioration there could pull Mexico's own sovereign rating lower.

Inflation and its impact on global yields: For now, the world is taking the recent increase in inflation in its stride, assuming that it is a temporary blip that reflects the very depressed base (we are now lapping the worst of the COVID economic prints). But if it turns out to be more pervasive or to accelerate further, markets might quickly reassess what higher inflation means for interest rates. Rapidly rising US treasury yields typically spell trouble for EM assets and, as we discussed above, MXN is often among the first EM currencies to react.

Required Disclosures

This report has been prepared by BTG Pactual US Capital LLC.

The figures contained in performance charts refer to the past; past performance is not a reliable indicator of future results.

BTG Pactual Rating	Definition	Coverage *1	IB Services *2
Buy	Expected total return 10% above the company's sector average.	63%	51%
Neutral	Expected total return between +10% and -10% the company's sector average.	36%	33%
Sell	Expected total return 10% below the company's sector average.	1%	0%

1: Percentage of companies under coverage globally within the 12-month rating category.

2: Percentage of companies within the 12-month rating category for which investment banking (IB) services were provided within the past 12 months.

Absolute return requirements

Besides the abovementioned relative return requirements, the listed absolute return requirements must be followed:

a) a Buy rated stock must have an expected total return above 15%

b) a Neutral rated stock can not have an expected total return below -5%

c) a stock with expected total return above 50% must be rated Buy

Analyst Certification

Each research analyst primarily responsible for the content of this investment research report, in whole or in part, certifies that:

(i) all of the views expressed accurately reflect his or her personal views about those securities or issuers, and such recommendations were elaborated independently, including in relation to BTG Pactual US or its affiliates, as the case may be;

(ii) no part of his or her compensation was, is, or will be, directly or indirectly, related to any specific recommendations or views contained herein or linked to the price of any of the securities discussed herein.

The research analyst responsible for this report is registered/qualified as a research analysts by FINRA.

It is possible that research analysts contributing to this report are employed by a non-US broker-dealer. In this case the analysts will not be registered/qualified as research analysts under FINRA rules and therefore will not be subject to the restrictions contained in the FINRA rules regarding communications with a subject company, public appearances, and financial interest in the securities of the subject company.

Part of the analyst compensation comes from the profits of BTG Pactual US or its affiliates as a whole and/or its affiliates and, consequently, revenues arisen from transactions held by BTG Pactual US or its affiliates.

Statement of Risk

Fomento Económico Mexicano, SAB de CV [MXFEMSA] - Downside risks include, but are not limited to capital allocation decisions (which might exacerbate some form of holdco discount), slower than expected growth in OXXO (normalizatoin in selling area or financial services key risks), the formalization and rapid digitalization of the Mexican consumer, risks related to KOF (pricing power, excise taxes, shifts in consumer preferences), and risks related to Heineken, among many others.

Regional [MXREGIO] - Latin American banks can be affected by changes in both global and local economic conditions and are also subject to political, interest rate, and foreign exchange risks. Our target prices are highly dependent on the level of country risk.

Wal-mart de Mexico, S.A.B. de C.V. [MXWALM] - Risks to our rating include weaker than expected results at Bodega in 2021 as the Mexican consumer trades down into the informal channel, higher competition from hard discounter BBB, higher tax rates in Mexico, greater aggressiveness from Amazon and MELI as they foray into grocery segments, continued macroeconomic weakness in Central America, additional hikes in royalty rates to parent Walmart, higher structural labor costs in Mexico, among others.

Orbia Advance Corporation [MXORBIA] - The primary risks that we perceive for Orbia are: (i) its considerable degree of dependence on the construction industry; (ii) competition from other suppliers in products that lack differentiation and are mostly seen as commodities; (iii) possibility of results being affected by changes in prices of key raw materials (e.g. natural gas, energy, ethane, ethylene, sulfur, oil and oil products); (iv) political risk potentially affecting operations in some countries; (v) possible cost increases arising from FX variation; (vi) antitrust limitations on non-organic expansion; and (vii) exposure to geological risk – since (by the nature of the resource) fluorspar reserves, recovery rates and production may undergo changes.

Cemex S.A.B. de C.V. [MXCMX] - Downside risks include, but are not limited to: 1) Weaker peso, which negatively affects dollar earnings on a translation basis, along with adversely impacting the mark-to-market of the hedge book; 2) Further slippage in the US, which for the past few years has been the main drag on cash flows; 3) Balance sheet – specifically, the risk of covenants being breached and/or material dilution via equity issuance; 4) Sovereign risk – as a multinational corporation operating in numerous countries, Cemex is exposed to a wide range of country risks.

Valuation Methodology

Fomento Económico Mexicano, SAB de CV [MXFEMSA] - Our TP is derived via a SOTP analysis based on (i) a 12MF P/E multiple of 30x for FEMSA's proximity division, (ii) our DCF-derived target for KOF, (iii) stake in Heineken on a post-tax basis (iv) Jan-San and Jetro at cost, and (v) Health, Fuel and Logistics at their corresponding valuations. We apply a 5% discount to our SOTP.

Regional [MXREGIO] - Our primary valuation tool for LatAm banks is the Gordon growth model, which works with profitability levels, cost of equity, and expected growth rates. Our 12-month TP of P$103 is based on a 15.5% sustainable ROE, 12.5% cost of equity, and 6% growth, producing a target P/BV of 1.5x, which we apply to our BVPS estimate for 2021YE.

Wal-mart de Mexico, S.A.B. de C.V. [MXWALM] - Our 2021YE TP is DCF-based, discounted at a nominal WACC in MXN of 9.0% (CoE of 9.4%).

Orbia Advance Corporation [MXORBIA] - We valued Orbia using a 10-year DCF, discounted at 8.0%, with perpetuity growth of 3.0%. This produced an EV of US$12,428mn; after discounting the net debt (at book value) and minorities (at 1.5x book) this gave us an equity value of US$8,416mn, consistent with a price of MXN75.7/share.

Cemex S.A.B. de C.V. [MXCMX] - Our TP is DCF derived and is discounted with a WACC of 8.3%.We assume a terminal growth rate of zero. We assume a beta of 1.5, an equity risk premium of 500bps and LT leverage of 33.3% in our WACC calculation.

Company Disclosures

Company Name	Reuters	12-mo rating	Price	Price date
Cemex [18, 19, 20, 21, 22]	N.A.	Buy	US$7.64	26-4-2021
Femsa [18, 19, 20, 21, 22]	N.A.	Buy	MXN160.23	26-4-2021
Orbia [1, 2, 4, 6, 18, 19, 20]	ORBIA.MX	Buy	MXN55.67	26-4-2021
Regional [18, 19, 20, 21, 22]	RA.MM	Neutral	MXN101.07	26-4-2021
Walmex [18, 19, 20, 21, 22]	WALMEX* MX	Buy	MXN64.45	26-4-2021

1. Within the past 12 months, BTG Pactual US or its affiliates has received compensation for investment banking services from this company/entity.

2. BTG Pactual US or its affiliates expect to receive or intend to seek compensation for investment banking services and/or products and services other than investment services from this company/entity within the next three months.

4. This company/entity is, or within the past 12 months has been, a client of BTG Pactual US or its affiliates, and investment banking services are being, or have been, provided.

6. BTG Pactual US and/or its affiliates receive compensation for any services rendered or presents any commercial relationships with this company, entity or person, entities or funds which represents the same interest of this company/entity.

18. As of the end of the month immediately preceding the date of publication of this report, neither BTG Pactual US nor its affiliates or subsidiaries beneficially owned 1% or more of a class of this company`s common equity securities.

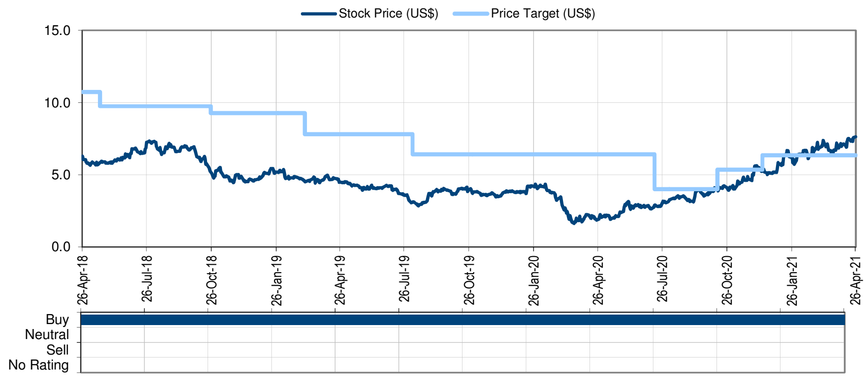
19. Neither BTG Pactual US nor its affiliates or subsidiaries have managed or co-managed a public offering of securities for the company.

20. Neither BTG Pactual US nor its affiliates or subsidiaries engaged in market making activities in the subject company's securities at the time this research was report was published.

21. BTG Pactual US or its affiliates or subsidiaries have not received compensation for investment banking services from the companies in the past 12 months.

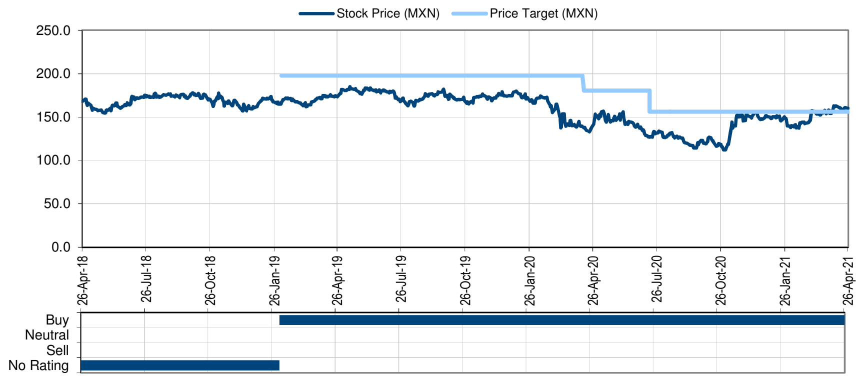
22. BTG Pactual US or its affiliates or subsidiaries do not expect to receive or intends to seek compensation for investment banking services from the companies within the next 3 months.

Cemex



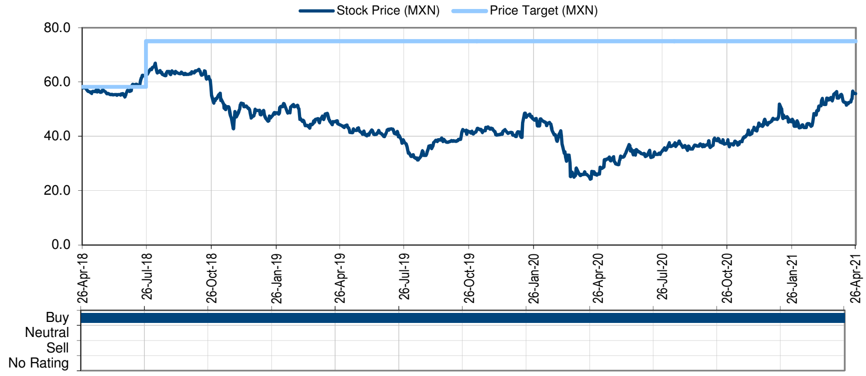
Source: BTG Pactual and Economatica. Prices as of 26 April 2021

Femsa



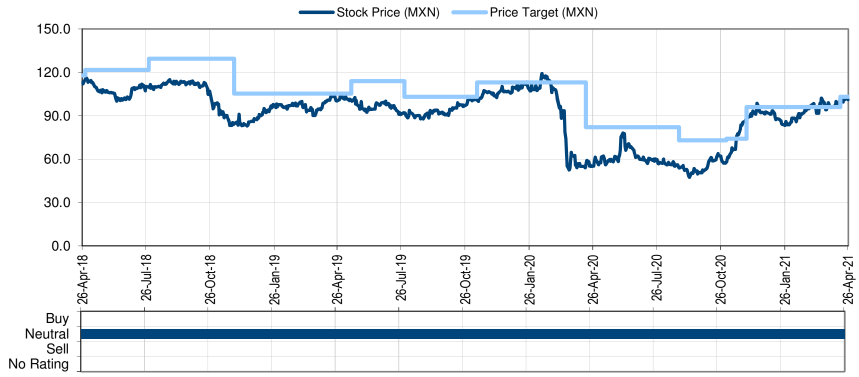
Source: BTG Pactual and Economatica. Prices as of 26 April 2021

Orbia



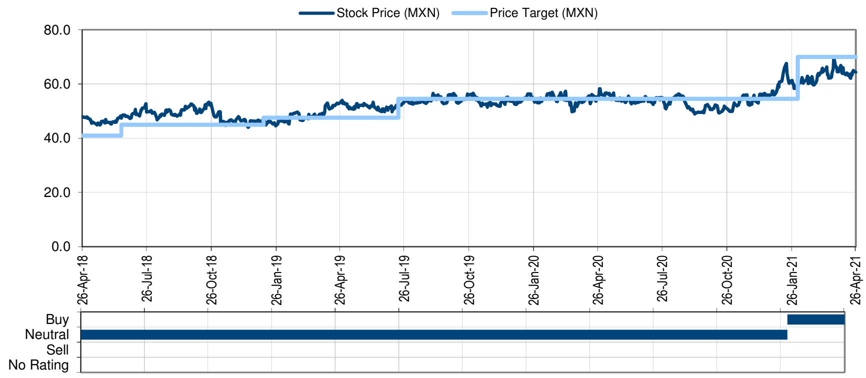
Source: BTG Pactual and Economatica. Prices as of 26 April 2021

Regional



Source: BTG Pactual and Economatica. Prices as of 26 April 2021

Walmex



Source: BTG Pactual and Economatica. Prices as of 26 April 2021

Global Disclaimer

This report has been prepared by BTG Pactual US Capital LLC ("BTG Pactual US,"), a broker-dealer registered with the U.S. Securities and Exchange Commission and a member of the Financial Industry Regulatory Authority and the Securities Investor Protection Corporation, and BTG Pactual US is distributing this report in the United States. BTG Pactual US is an affiliate of Banco BTG Pactual S.A, a Brazilian regulated bank, responsible for the distribution of this report in Brazil. BTG Pactual US assumes responsibility for this research for purposes of U.S. law. Any U.S. person receiving this report and wishing to effect any transaction in a security discussed in this report should do so with BTG Pactual US at 212-293-4600, 601 Lexington Ave. 57th Floor, New York, NY 10022.

This report is being distributed in the United Kingdom and elsewhere in the European Economic Area ("EEA") by BTG Pactual Europe LLP ("BTG Pactual UK"), which is authorized and regulated by the Financial Conduct Authority of the United Kingdom. This report may also be distributed in the United Kingdom and elsewhere in the EEA by BTG Pactual S.A. and/or BTG Pactual US. BTG Pactual UK has not: (i) produced this report, (ii) substantially altered its contents, (iii) changed the direction of the recommendation, or (iv) disseminated this report prior to its issue by BTG Pactual US. BTG Pactual UK does not distribute summaries of research produced by BTG Pactual US.

BTG Pactual Chile S.A. Corredores de Bolsa ("BTG Pactual Chile"), formerly known as Celfin Capital S.A. Corredores de Bolsa, a Chilean broker dealer registered with Superintendencia Valores Y Seguros (SVS) in Chile and responsible for the distribution of this report in Chile and BTG Pactual Perú S.A. Sociedad Agente de Bolsa ("BTG Pactual Peru"), formerly known as Celfin Capital S.A. Sociedad Agente de Bolsa, registered with Superintendencia de Mercado de Valores (SMV) of Peru, is responsible for the distribution of this report in Peru. BTG Pactual Chile and BTG Pactual Peru acquisition by BTG Pactual S.A. was approved by the Brazilian Central Bank on November 14th, 2012.

BTG Pactual S.A. Comisionista de Bolsa ("BTG Pactual Colombia") formerly known as Bolsa y Renta S.A. Comisionista de Bolsa, is a Colombian broker dealer register with the Superintendencia Financeira de Colombia. BTG Pactual Colombia acquisition by BTG Pactual S.A. was approved by Brazilian Central Bank on December 21st, 2012.

References herein to BTG Pactual include Banco BTG Pactual S.A., BTG Pactual US Capital LLC, BTG Pactual Europe LLP, BTG Pactual Chile, BTG Pactual Peru and BTG Pactual Colombia.

This report is for distribution only under such circumstances as may be permitted by applicable law. This report is not directed at you if BTG Pactual is prohibited or restricted by any legislation or regulation in any jurisdiction from making it available to you. You should satisfy yourself before reading it that BTG Pactual is permitted to provide research material concerning investments to you under relevant legislation and regulations.

Nothing in this report constitutes a representation that any investment strategy or recommendation contained herein is suitable or appropriate to a recipient's individual circumstances or otherwise constitutes a personal recommendation. It is published solely for information purposes, it does not constitute an advertisement and is not to be construed as a solicitation, offer, invitation or inducement to buy or sell any securities or related financial instruments in any jurisdiction. Prices in this report are believed to be reliable as of the date on which this report was issued and are derived from one or more of the following: (i) sources as expressly specified alongside the relevant data; (ii) the quoted price on the main regulated market for the security in question; (iii) other public sources believed to be reliable; or (iv) BTG Pactual 's proprietary data or data available to BTG Pactual. All other information herein is believed to be reliable as of the date on which this report was issued and has been obtained from public sources believed to be reliable. No representation or warranty, either express or implied, is provided in relation to the accuracy, completeness or reliability of the information contained herein, except with respect to information concerning Banco BTG Pactual S.A., its subsidiaries and affiliates, nor is it intended to be a complete statement or summary of the securities, markets or developments referred to in the report. In all cases, investors should conduct their own investigation and analysis of such information before taking or omitting to take any action in relation to securities or markets that are analyzed in this report.

BTG Pactual does not undertake that investors will obtain profits, nor will it share with investors any investment profits nor accept any liability for any investment losses. Investments involve risks and investors should exercise prudence in making their investment decisions. BTG Pactual accepts no fiduciary duties to recipients of this report and in communicating this report is not acting in a fiduciary capacity. The report should not be regarded by recipients as a substitute for the exercise of their own judgment. Opinions, estimates, and projections expressed herein constitute the current judgment of the analyst responsible for the substance of this report as of the date on which the report was issued and are therefore subject to change without notice and may differ or be contrary to opinions expressed by other business areas or groups of BTG Pactual as a result of using different assumptions and criteria. Because the personal views of analysts may differ from one another, Banco BTG Pactual S.A., its subsidiaries and affiliates may have issued or may issue reports that are inconsistent with, and/or reach different conclusions from, the information presented herein. Any such opinions, estimates, and projections must not be construed as a representation that the matters referred to therein will occur. Prices and availability of financial instruments are indicative only and subject to change without notice.

Research will initiate, update and cease coverage solely at the discretion of BTG Pactual Investment Bank Research Management. The analysis contained herein is based on numerous assumptions. Different assumptions could result in materially different results. The analyst(s) responsible for the preparation of this report may interact with trading desk personnel, sales personnel and other constituencies for the purpose of gathering, synthesizing and interpreting market information. BTG Pactual is under no obligation to update or keep current the information contained herein, except when terminating coverage of the companies discussed in the report. BTG Pactual relies on information barriers to control the flow of information contained in one or more areas within BTG Pactual, into other areas, units, groups or affiliates of BTG Pactual. The compensation of the analyst who prepared this report is determined by research management and senior management (not including investment banking). Analyst compensation is not based on investment banking revenues, however, compensation may relate to the revenues of BTG Pactual Investment Bank as a whole, of which investment banking, sales and trading are a part.

The securities described herein may not be eligible for sale in all jurisdictions or to certain categories of investors. Options, derivative products and futures are not suitable for all investors, and trading in these instruments is considered risky. Mortgage and asset-backed securities may involve a high degree of risk and may be highly volatile in response to fluctuations in interest rates and other market conditions. Past performance is not necessarily indicative of future results. If a financial instrument is denominated in a currency other than an investor's currency, a change in rates of exchange may adversely affect the value or price of or the income derived from any security or related instrument mentioned in this report, and the reader of this report assumes any currency risk.

This report does not take into account the investment objectives, financial situation or particular needs of any particular investor. Investors should obtain independent financial advice based on their own particular circumstances before making an investment decision on the basis of the information contained herein. For investment advice, trade execution or other enquiries, clients should contact their local sales representative. Neither BTG Pactual nor any of its affiliates, nor any of their respective directors, employees or agents, accepts any liability for any loss or damage arising out of the use of all or any part of this report. Notwithstanding any other statement in this report, BTG Pactual UK does not seek to exclude or restrict any duty or liability that it may have to a client under the "regulatory system" in the UK (as such term is defined in the rules of the Financial Conduct Authority).

Any prices stated in this report are for information purposes only and do not represent valuations for individual securities or other instruments. There is no representation that any transaction can or could have been effected at those prices and any prices do not necessarily reflect BTG Pactual internal books and records or theoretical model-based valuations and may be based on certain assumptions. Different assumptions, by BTG Pactual S.A., BTG Pactual US, BTG Pactual UK, BTG Pactual Chile and BTG Pactual Peru and Bolsa y Renta S.A. or any other source, may yield substantially different results.

This report may not be reproduced or redistributed to any other person, in whole or in part, for any purpose, without the prior written consent of BTG Pactual and BTG Pactual accepts no liability whatsoever for the actions of third parties in this respect.

Additional information relating to the financial instruments discussed in this report is available upon request.

BTG Pactual and its affiliates have in place arrangements to manage conflicts of interest that may arise between them and their respective clients and among their different clients. BTG Pactual and its affiliates are involved in a full range of financial and related services including banking, investment banking and the provision of investment services. As such, any of BTG Pactual or its affiliates may have a material interest or a conflict of interest in any services provided to clients by BTG Pactual or such affiliate. Business areas within BTG Pactual and among its affiliates operate independently of each other and restrict access by the particular individual(s) responsible for handling client affairs to certain areas of information where this is necessary in order to manage conflicts of interest or material interests.

Any of BTG Pactual and its affiliates may: (a) have disclosed this report to companies that are analyzed herein and subsequently amended this report prior to publication; (b) give investment advice or provide other services to another person about or concerning any securities that are discussed in this report, which advice may not necessarily be consistent with or similar to the information in this report; (c) trade (or have traded) for its own account (or for or on behalf of clients), have either a long or short position in the securities that are discussed in this report (and may buy or sell such securities), with the securities that are discussed in this report; and/or (d) buy and sell units in a collective investment scheme where it is the trustee or operator (or an adviser) to the scheme, which units may reference securities that are discussed in this report.

United Kingdom and EEA: Where this report is disseminated in the United Kingdom or elsewhere in the EEA by BTG Pactual UK, this report is issued by BTG Pactual UK only to, and is directed by BTG Pactual UK at, those who are the intended recipients of this report. This report has been classified as investment research and should not be considered a form of advertisement or financial promotion under the provisions of FSMA 2000 (Sect. 21(8)).

Dubai: This research report does not constitute or form part of any offer to issue or sell, or any solicitation of any offer to subscribe for or purchase, any securities or investment products in the UAE (including the Dubai International Financial Centre) and accordingly should not be construed as such. Furthermore, this information is being made available on the basis that the recipient acknowledges and understands that the entities and securities to which it may relate have not been approved, licensed by or registered with the UAE Central Bank, Emirates Securities and Commodities Authority or the Dubai Financial Services Authority or any other relevant licensing authority or governmental agency in the UAE. The content of this report has not been approved by or filed with the UAE Central Bank or Dubai Financial Services Authority.

United Arab Emirates Residents: This research report, and the information contained herein, does not constitute, and is not intended to constitute, a public offer of securities in the United Arab Emirates and accordingly should not be construed as such. The securities are only being offered to a limited number of sophisticated investors in the UAE who (a) are willing and able to conduct an independent investigation of the risks involved in an investment in such securities, and (b) upon their specific request. The securities have not been approved by or licensed or registered with the UAE Central Bank or any other relevant licensing authorities or governmental agencies in the UAE. This research report is for the use of the named addressee only and should not be given or shown to any other person (other than employees, agents or consultants in connection with the addressee's consideration thereof). No transaction will be concluded in the UAE and any enquiries regarding the securities should be made with BTG Pactual CTVM S.A. at +55 11 3383-2638, Avenida Brigadeiro Faria Lima, 3477, 14th floor, São Paulo, SP, Brazil, 04538-133.