Q4 2022

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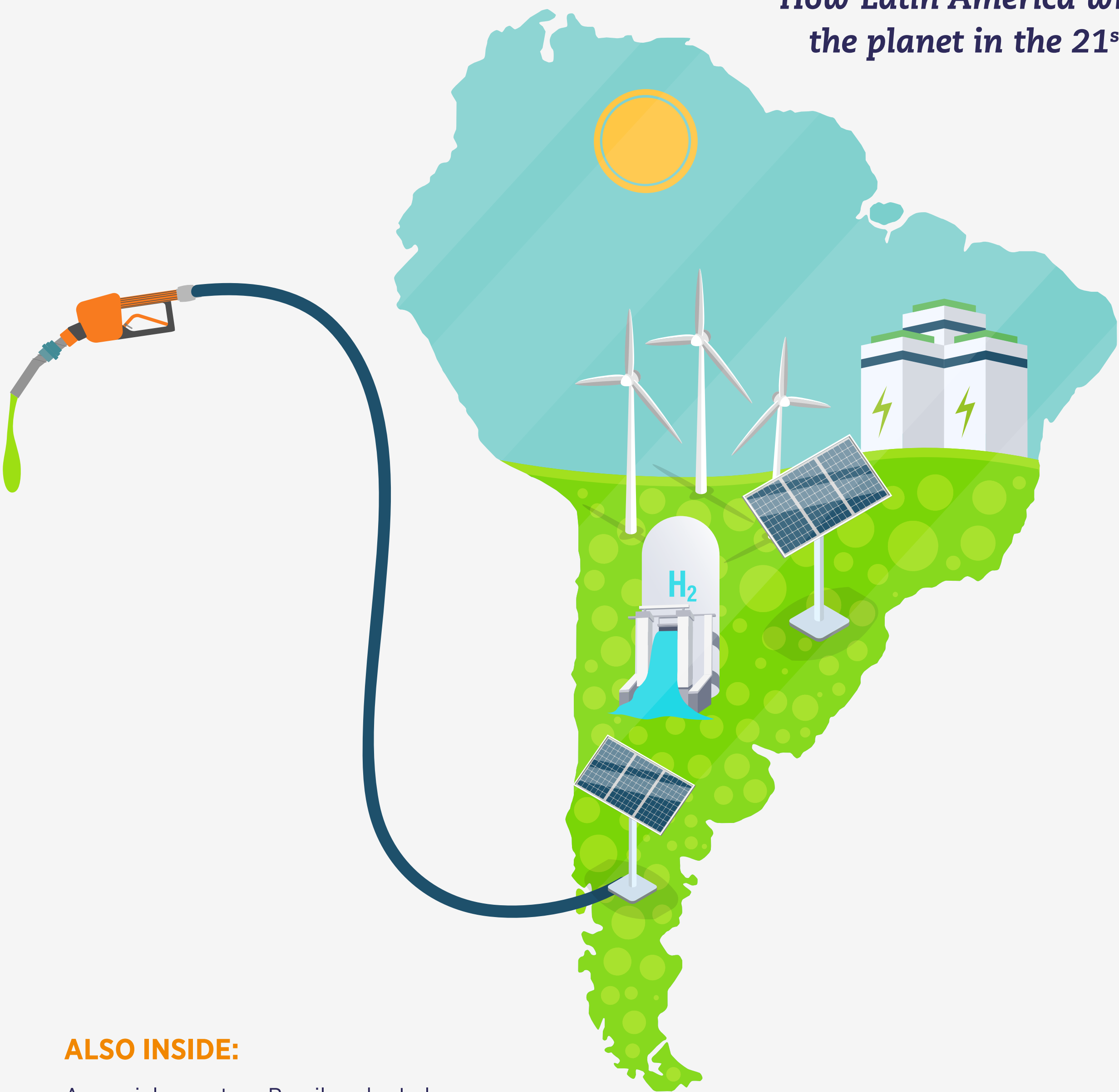

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EDITOR'S LETTER

Political change but Latin America's path remains the same

Dear Readers,

Latin America's largest economy just gave the world a lesson on how to handle bitterly-contested elections. Or at least that's my interpretation of the recent victory of Luiz Inácio Lula da Silva, better known as Lula, in Brazil's presidential polls. Not everyone agrees with me of course, which is why we asked a range of experts to contribute their analysis to our Brazil: In-depth special report, which begins on page six.

Something everyone should agree on is that Lula will be better for the Amazon rainforest than his predecessor, Jair Bolsonaro. Given Brazil's precarious fiscal position, Lula, who has a good track record of slowing deforestation in his previous mandates, may struggle to find the funding to protect the rainforest this time. But international donors will be willing to help, which is why Lula was at COP27 in early November.

He will have been pleasantly surprised by the advances in green finance since he was last president. It is no longer a case of donor countries pledging a few million dollars. The Amazon rainforest, which is the world's most important tool in the fight against climate change, could eventually raise tens of billions of dollars in green finance and investment for Brazil.

Latin America's role in energy transition is the focus of this issue's main report, which begins on page 17. The region – as regular readers will be tired of hearing by now – will decide the fate of humanity's efforts to slow global warming. It has the greenest electricity grid in the world, the majority of the planet's copper and lithium (the two key electrification metals), and is the largest biofuel producer. It also has some of the world's cleanest, cheapest and most reliable hydrocarbons.

That last point is sometimes controversial in energy transition circles. Why, people ask, do we need oil if we are moving away from fossil fuels? Unfortunately, the transition away from oil will take decades. Some analysts expect us to be using the same amount of oil in 2050 as we do today. Even the most ambitious projections have world consumption at between 50% to 80% of current levels. If we are still using oil, albeit more selectively, there will immense regulatory and financial pressure to use the cleanest and cheapest crude, which is where Latin America comes in.

For much of its post-independence history Latin America has been on the margins of the world economy. Today it finds itself at the centre of the most important investment trend of the 21st century. Elsewhere in the issue you will find the usual features, such as the excellent analysis from S&P Global, plus a look at sustainable real estate in Latin America.

Happy reading,

James McKeigue

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using only paper from
FSC/PEFC suppliers **www.magprint.co.uk**

Latin America: Global economic slowdown set to dampen growth in Latin America

Pollyanna De Lima, Economics Associate Director
Economic Indicators & Surveys, S&P Global Market Intelligence

Overview

As signalled by the S&P Global PMI data, official statistics confirmed that second-quarter economic growth in Latin America was better than anticipated by the market, leading to upward revisions to full-year GDP forecasts. Heading towards the end of 2022, the PMI figures indicated a considerable loss of momentum across the manufacturing economies of Brazil, Colombia and Mexico in the third quarter and a mixed picture was painted for October. Stagnation in Colombia compared with marginal growth in Mexico and a moderate expansion in Brazil.

For 2023, risks remain skewed to the downside, with domestic and external challenges expected to dampen economic performances. Drawbacks range from the war in Ukraine, which is driving the energy crisis in Europe and pushing up global food prices, to the possibility of recessions in key markets such as China and the US dampening exports and tourism.

Meanwhile, central banks will likely lift or maintain interest rates in the near-term to tame inflation, while policymakers face the difficulty of avoiding endangering such efforts whilst addressing the cost-of-living crisis. Besides, exchange rates are expected to remain under pressure from capital flow volatility as investors turn to the US for attractive returns and a safe haven.

With macroeconomic data surprising on the upside, our 2022 GDP forecasts for Brazil, Colombia and Mexico were upgraded to +2.8%, +7.1% and +2.1% correspondingly. All of these three nations are expected to record notable slowdowns in growth during 2023, with our predictions at +1.3%, +0.9% and +0.7% respectively.

Brazil

Sales of Brazilian goods took a turn for the worse in October, according to our PMI data, contracting for the first time in eight months amid weaker domestic and international demand. That said, despite political uncertainty and concerns surrounding squeezed household finances, manufacturers were confident towards the outlook. Buoyant optimism continued to support growth of jobs and production at the start of the fourth quarter. Providing some respite to goods producers, input costs fell for the first time in eight years owing to reduced commodity prices and lower tax measures. Cost savings were passed on to consumers via cuts to selling charges.

In services, Brazil's dominant sector, the PMI figures indicated that new business and output expanded at solid rates that were the strongest since July. Resilient demand conditions here meant that both input costs and output charges continued to rise sharply.

The official inflation rate for the monetary policy target has moderated substantially throughout the second half of the year so far, to the lowest in over a year-and-a-half. At +6.5% in October, although above the central bank's upper limit of +5%, inflation was almost half of the peak seen in April.

The SELIC was unmoved at 13.75% in October, as the central bank kept the tightening cycle paused to assess the accumulated impacts of previously-undertaken hikes. We forecast cuts to the policy rate in 2023, which is anticipated to end the year at 9.8%, in line with predictions of inflation slipping to an annual average of +4.5%. Lastly on Brazil, October's S&P Global Business Outlook data showed strong hiring and investment (capex and R&D) intentions among private sector firms for the year ahead, against a worldwide trend of waning sentiment. Still, demand weakness, high interest rates, competitive pressures, inflation and political uncertainty were cited as key threats to growth prospects.

Colombia

For the first time in three months, Colombian goods producers signalled lower sales and output volumes in

October. According to PMI survey participants, demand was dampened by challenging economic conditions and inflationary pressures. Businesses responded to these headwinds by reducing input purchasing to the greatest extent since mid-2021 and leaving workforce numbers broadly unchanged from September. S&P Global forecast the unemployment rate to settle at 10.6% in 2022, then fall to 9.4% in 2023.

PMI price indices indicated that inflation rates remained elevated in October. Due to stubborn price pressures, the central bank lifted the interest rate to 11.0% in its most recent meeting, the highest in over 21 years. We foresee one more increase this year (to 11.5%) and cuts from the third quarter of 2023.

With regards to economic growth, S&P Global forecast Colombian real GDP to expand +7.1% in 2022. An increase of only +0.9% is predicted for 2023 due to base effects, a global slowdown, inflation, high interest rates and their negative impact on demand.

Mexico

Mexico's GDP is yet to recover to pre-pandemic levels, and the PMI data continued to point to weakness in the manufacturing industry. October saw further, albeit softer, contractions in new business and production but there were back-to-back increases in employment. As for inflation, the survey showed a sharper upturn in input costs parallel to a slower rise in selling prices. Firms' attempts to boost sales continued to restrict pricing power.

Amid persistent inflation, the central bank hiked the interest rate to 10.0% in November, its highest on record. We expect inflation and subsequently interest rates to retreat in the second half of 2023, the former averaging +6.1% and the latter ending the year at 8.5%.

Our GDP forecast for 2022 was upgraded to +2.1%, while we anticipate growth of just +0.7% in 2023. The slowdown for next year stems from a predicted recession in the US, which should negatively impact Mexican exports, tourism and foreign direct investment.

Manufacturers in the PMI panel foresee growth in 2023, but sentiment slipped in October due to growing concerns about a lack of money in circulation, acute price pressures, insolvency and automotive sector uncertainty.

Key Forecasts for 2022 and Latest Manufacturing PMI data

Brazil

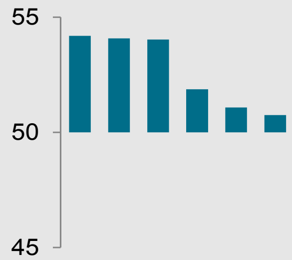
GDP: +2.8%

Inflation (annual avg.): +9.3%

Policy Rate (year-end): 13.8%

Unemployment Rate: 9.7%

50.8
BRAZIL MANUFACTURING PMI Oct'22



Source: S&P Global

Colombia

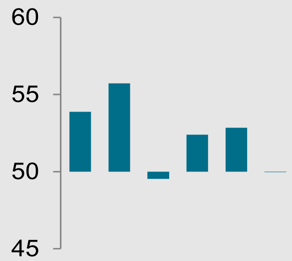
GDP: +7.1%

Inflation (annual avg.): +10.1%

Policy Rate (year-end): 11.5%

Unemployment Rate: 10.6%

50.0
COLOMBIA MANUFACTURING PMI Oct'22



Sources: Davivienda, S&P Global

Mexico

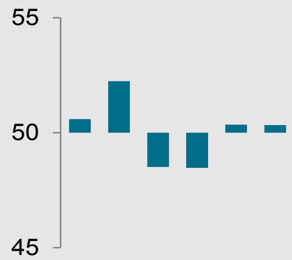
GDP: +2.1%

Inflation (annual avg.): +8.2%

Policy Rate (year-end): 10.3%

Unemployment Rate: 3.5%

50.3
MEXICO MANUFACTURING PMI Oct'22



Source: S&P Global

Source of all forecasts: S&P Global Market Intelligence, November 2022.

Special Report

How will a Lula victory impact investors?

Bet on Brazil

It will drive the global econony

Latin America's powerhouse will profit from the two key trends of the next 20 years: **the global energy transition and population growth,**

says James McKeigue in an article first published in MoneyWeek...

Brazilians across the political spectrum reacted passionately to last Sunday's election victory for socialist 'Lula'. The supporters of Luiz Inacio Lula da Silva took to the streets across Latin America's largest economy to celebrate with red flags and convoys of honking cars. Meanwhile those of his defeated rival, outgoing president Jair Bolsonaro held mass prayer meetings for their country's impending challenges.

The passion was understandable, given the bitter election had been billed as a historical crossroads for the country. The market reaction was more muted, with early losses on the Monday morning were recouped by lunch. Perhaps that shows the two rivals are far more similar – in economic terms at least - than their supporters would like to admit. After all, in their respective terms as president, both spent too much, meddled in the national oil company, Petrobras, and faced plenty of corruption claims.

Brazil grows despite – not because – of its politicians and regardless of who won, the country should reward investors. Brazil will benefit from the two major themes driving the world economy over the next two decades – the energy transition and global population growth.

Don't fear Lula

In theory, Lula presents some worries for investors. One major difference between the two candidates is that Bolsonaro privatised state companies, while Lula wants them to play a bigger role in the economy. Lula is also keen to do away with the fiscal restriction that caps budget growth to the level of inflation in the country. Yet Lula's history proves him a more moderate president than campaigner. And even if he wanted to be radical, Brazil's political system of proportional representation limits his power. No party ever wins a majority in Congress, the federal legislative body, which means the president has to cut deals with the 'Centrao' (big centre) block of lawmakers. It is pork barrel politics, where presidents exchange local funding for supportive votes and, sadly, it probably prevents some of the reforms Brazil needs. But, on the plus side, it prevents presidents from implementing an extremist platform.

Another check on Lula is that while he won the presidency, centre-right politicians secured their power of the senate and the congress in the same election. Bolsonaro's party also controls three of Brazil's most populous states, which is significant in the country's federal system, where most of the regulations that impact businesses are set at a local level. The most valid criticism of Lula is his corruption, as his administration was involved in the largest graft scandal in Brazil's history. However, the consequence of that is improved protocols and increased scrutiny – it is hard to imagine his government attempting the same this time around.

Lula's handpicked successor oversaw the worst recession in Brazilian history but his own two terms – from 2003 to 2011 – coincided with an economic boom. Judging by historical Brazilian standards you would have to say that Lula – much like Bolsonaro – was a relatively competent, pro-growth president.

EM Darling

The most significant aspect of the Brazilian election, isn't who won but how efficiently the system worked. An incredibly tight vote – 50.9% to Lula and 49.1% to Bolsonaro – was decided within hours and key allies of Bolsonaro quickly congratulated Lula. Brazil is one of the most efficient large democracies in the world and a marked contrast to fellow Brics, Russia and China. The democratic dividend is often ignored by investors when autocracies are going well, but the erratic decisions of Russian leader, Vladimir Putin China's Xi Jiping, show why investors should value democracies.

Indeed, Brazil has shone this year, amidst an historic sell-off of emerging markets. As Julian Rimmer puts it so well in the Financial Times: "At a moment when most of EM is radioactive, Brazil offers something the others can't: democracy and


The Amazon rainforest will attract international green finance

growth." Brazil's GDP growth is set to come in at 2.6% in 2022, above analyst expectations at the start of the year and only just behind China's expected 3% growth.

One reason is that Brazil has benefited indirectly from the Ukraine war. Soaring commodity prices for food, fuel and raw materials have fuelled Brazilian exports. As a result, the Brazilian real is one of the few currencies that has managed to gain against the all-powerful dollar and is up 7% so far this year. But while the commodity crunch caused by the war is hopefully a short-lived phenomenon, Brazil's world-leading agribusiness, mining and energy industries will continue to thrive. They will be driven by the two most powerful trends the world economy – the energy transition and the growing global population.

Heat and eat

Most economic analysis of Brazil is gloomy. Growth might be good in 2022, concede analysts, such as Capital Economics, but in the coming years it will hover between 1.5% and 2%. Perhaps, but steady growth of almost 2% is better than the recessions awaiting most of the developed world. Brazil is also doing well with inflation, a traditional bugbear for the Brazilian economy, which declined from a peak of 12% in April and is now at 8%. For the first time in my lifetime Brazil will have lower annual inflation than the UK. The success is down to the central bank – made independent by Bolsonaro – which began to increase rates in March 2021, while the hapless Bank of England was still insisting that inflation was transitory.

Unfortunately, Brazil's politicians aren't as thrifty as their central bankers. Bolsonaro pumped the economy with pre-election spending that ratings agency Fitch believes could swell the fiscal deficit to 7.5% by the end of the year. And Lula, a famous proponent of state spending, is hardly likely to be more austere. But I'm not asking you to invest in Brazilian government bonds. What excites me is the country's booming export sector. Put simply, Brazil makes what the world needs. As population growth and the energy transition reshapes our world, demand for Brazil's goods will soar.

The world can't fight climate change without Brazil. And as pressure grows to slow global warming, more money will flow into the country. Its main asset is the Amazon rainforest, which is home to more biodiversity than anywhere else on the planet. A healthy Amazon rainforest would act as the planet's lungs, absorbing huge quantities of C02 and releasing fresh oxygen. Under Bolsonaro, deforestation increased, which led some scientists to worry that fires in the rainforest were releasing more C02 than it could capture.

Lula has a proven track record of combatting deforestation when he was last president and international donor countries, like Norway, have already announced plans to resume funding Amazon projects. Lula's stance on the environment is great for the planet but it will also yield economic benefits. Deforestation was a major sticking point in ratifying a trade deal between the EU and Mercosur – South American trade bloc of which Brazil is the largest member. As William Jackson of Capital Economics notes, "were Lula to get the trade deal over the line, it would be a move towards trade liberalisation, which is one -among many – factors holding back productivity growth in the country."

Brazil's next globally significant climate change asset is its mining industry.

That might seem to contradict the previous paragraph but Brazil's iron ore and nickel are essential for the energy transition. Brazil has the world's fourth-largest reserves of nickel – a metal that is used in electric vehicle batteries. At present the main use of nickel is stainless steel, as adding it to the mix helps make steel more resistant to extreme temperatures and corrosion, while batteries account for just 6% of overall nickel demand. But S&P Global expects that to reach 35% by 2030 as electric vehicle production jumps.

Brazil also has the world's second-largest iron ore reserves. Iron ore isn't a 'clean tech' metal, directly associated with renewable energy. But a little-understood aspect of the ambitious plan to electrify the global economy is that it will turn the world into one big construction project. Switching from internal combustion engines to electric vehicles needs the build-out of a network of charging stations. And if these electric vehicles are going to reduce emissions then they must be powered by renewable energy, which means adding huge amounts of wind and solar plants, which all then have to be hooked up to the grid. The energy transition involves overhauling the entire planet's built environment. It's no coincidence that Brazil's golden decade at the start of this century coincided with China's building boom. The South American iron ore producer will benefit from the electrification building boom too.

Feed the world

Brazil is well established as an agricultural superpower and, according to credible studies from its state-run agricultural research agency, the country's food production feeds 10% of the world's population. It is the world's largest exporter of beef, soybean, sugar and coffee. It is also very near the top in corn, cotton and pork. Depending on how it is measured, agribusiness now accounts for 25% of the Brazilian economy. The sector's massive growth has been partly responsible for the increase in deforestation in the Amazon rainforest. Yet Lula has been careful not to declare direct war on the influential agribusiness lobby. Instead, he has been looking for innovative solutions, such as offering subsidised loans to encourage farmers to plant non rainforest land. Without doubt, companies with questionable practices will come under pressure from the new administration as it restores much-needed funding to environmental agencies. But serious players will be able to benefit from growing food demand.

The US Census Bureau estimates the world population will hit 8 billion in mid-November 2022. That will grow to almost 10 billion by 2050 and 11.2 billion by 2100. Over the same period, an increase in extreme weather events – that most scientists attribute to manmade climate change – will undermine farming production. Of course, Brazil isn't the world's only breadbasket but recent conflicts have shown that it is one of the most reliable. Food exports have been used as a weapon in the Russia-Ukraine conflict, and it is likely that something similar could happen if China were ever to attempt to invade Taiwan. Brazil, which happily sells both to the US and China, will see demand increase as the global population rises.

The same dynamics described for food apply to energy. Brazil is the largest oil producer in Latin America, and its production has climbed to 3 million barrels per day, from 2 million barrels of oil per day in 2012. Consultants McKinsey believe it could reach almost 4 million barrels per day by 2035. The massive growth is down to the giant 'pre-salt' offshore fields that were discovered in Lula's first spell as president but, because of the technical difficulties of extraction, are only staring to be properly exploited.

This oil wealth might seem to contradict Brazil's climate change appeal but hydrocarbons are an important part of the transition. In his recent book, The New Map, energy analyst, Daniel Yergin, posits a 'planning scenario' in which the current consumption of 100 million barrels of oil per day, rises to 113 million barrels by 2050. One reason is that cars and light duty vehicles only account for 33% of oil demand, so even if we manage to replace the entire global fleet to EVs we will still need more oil for petrochemicals, aviation fuel, asphalt etc for a rising population. Linked to both energy and food is Brazil's biofuel production. Brazil is the world's second-largest producer and consumer of biofuels. That was led by the sugar industry in the 1970s but now modern biofuels can use a much wider range of feedstock, such as plant waste, dead animals and used vegetable oil. As the technology improves Brazil will be able to extract ever more value from its agricultural waste products.

You wouldn't think it from the press coverage surrounding the election but Brazil has been the standout emerging market in 2022. Despite that success its stockmarket still looks attractive, with the Bovespa trading on a price-to-earnings ratio of just seven compared to the MSCI Emerging Markets average of ten. Commodities – and Brazilian politicians – are inherently volatile and investors can't predict what will happen in two years' time. But if you can afford to take a longer time horizon you can profit as Brazil's exporters feed, heat and move the world. **This article first appeared in MoneyWeek.**

Brazil's new president begins **stitching the country back together,**

writes Jeremy Browne, CEO, Canning House

On Sunday, an election that gripped Brazil long before official campaigns started came to a dramatic close. Luiz Inácio Lula da Silva, better known as Lula, beat the incumbent Jair Bolsonaro with 50.9% of the vote to Bolsonaro's 49.1%. Both candidates harbour genuine hatred for each other, and the bruising campaign has left the country more polarised than ever. Lula now faces the mammoth task of reuniting this fractured nation.

The face of Brazilian left-wing politics for over three decades, Lula served as president from 2003 to 2010, his social policies helping tackle Brazil's acute inequality and lifting millions out of poverty. He left office with sky-high approval ratings, however the Workers' Party (PT) he founded became embroiled in a series of corruption scandals, eventually resulting in his imprisonment in 2018 (although his conviction was overturned in 2019).

Bolsonaro rose to power in 2018 after a long career as a fringe politician. His anti-establishment, socially conservative messaging struck a chord with a population exhausted by economic stagnation, widespread corruption and the inefficiencies of PT rule. He is a highly divisive figure due to his inflammatory rhetoric targeting minorities and political opponents, his supposed mismanagement of the COVID-19 pandemic, and his pursuit of economic development of the Amazon rainforest, despite the environmental damage it causes.

While many pollsters predicted a comfortable lead for Lula in the first round, with some even declaring the former president would win an outright victory, the result was much closer than expected, with Bolsonaro finishing just 5% behind Lula. Furthermore, many of Bolsonaro's allies were elected to Congress, the Senate, and governorships around the country, potentially inhibiting Lula's ability to govern effectively via coalition. The results from both rounds of voting throw up several interesting questions about Brazil's political future.

Right revival

The first point to mention is that although Lula has won, Bolsonaro, and more widely 'bolsonarismo', is going nowhere. Bolsonaro's party, the Liberal Party (PL), is the largest in Congress and the Senate, while bolsonaristas won governorship of the key states of Rio de Janeiro, Minas Gerais, and seven other states. This was achieved in spite of an unfavourable economic climate, widely-perceived mismanagement of the pandemic, and what is undoubtedly an anti-incumbent wave throughout Latin America (Bolsonaro's defeat constitutes the 15th consecutive electoral defeat of a sitting president in the region).

The movement that Bolsonaro spearheads is highly sophisticated, effectively utilising social media and

Luiz Inácio Lula da Silva is returning for a third term as Brazil's president fake news campaigns to communicate with supporters and discredit opponents. Due to the strong political representation of the right and hard right, Lula will likely be forced to dilute some of his policies that are unpalatable for the opposition, such as increasing environmental protections, or state-funded infrastructure projects.

Bolsonaro's message, combining anti-establishment sentiment, social conservatism, and family values, has clearly resonated with a large part of Brazilian society. His incessant attacks on the Left have found a receptive audience with the many Brazilians who view Lula and the PT as unpalatable, blaming their corruption and incompetence for the economic crisis that began in 2014 and from which Brazil has never fully recovered.

Bolsonaro has also understood that the Evangelical Church and agribusiness barons hold the keys to Brazil in 2022. Around a third of Brazilians are now Evangelical, up from a quarter just two decades ago, while agricultural exports are the largest part of Brazil's economy, equivalent to $125 billion per year. He has formed a sizeable base with their support, not least in Congress, where Evangelical and agribusiness interests are two of the strongest voting blocs.

Lula's in tray

The continued appeal of bolsonarismo inevitably brings into question the role of the Left in Brazil. Without the figurehead of Lula, it is likely that the Left would have struggled even more in this election. In many ways, Lula is both his party's worst enemy and its greatest asset. His charisma and strength of character, as well as his undoubted political nous, have brought him back to the presidential palace. However, the allegations of corruption that have plagued him and his party have permanently tarnished his reputation among many Brazilians, leading to rejection rates almost, but not quite, as high as those of Bolsonaro. His victory does not change the fact that almost half of the country does not approve of him. Over the next four years, the Left must find a new figurehead to unite around, not only because Lula is divisive, but due to the more practical reason that he will not be standing for a second term.

As well as negotiating political agreements and coalitions, Lula faces the even greater task of uniting a country that has torn itself apart over the last four years. Both sides of the battle are deeply entrenched, with little to no room for the middle ground (centrist candidates won just 7% of votes in the first round).

To win re-election, Lula asked Brazilians to remember what life was like the last time he was president. But Brazil, and the world, was completely different in 2010. In 2022, Lula will have to deal with a war in Europe and a stagnating global economy, while domestically he must address an economy plagued by an overcomplicated tax system and chronic low productivity, as well as levels of polarisation in Brazilian society that have spilled over into violence in recent months. It is no small task; Brazil needs Lula to be up to it.

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Brazil passed the election test - **what now?**

Asks Mário Braga Control Risks' lead analyst for Brazil...

Brazilian institutions faced their biggest challenge since the re-democratization of the country in 1985. Concerns of a potential unconstitutional regime change, widespread unrest or a Capitol-like incident did not materialise following the run-off presidential election on 30 October. However, companies and investors will continue to face limited institutional and political instability until the next administration is inaugurated in January 2023. In the meantime, all eyes are on what the new government means for the business environment.

Given that President Jair Bolsonaro lacks institutional support (especially among the Armed Forces, the domestic political establishment and the international community), risks of a democratic rupture are very low. That said, the next two months will bring limited threats to overall instability and sporadic social unrest incidents.

The incumbent has not explicitly challenged the election results. Although he hasn't acknowledged former President Luiz Inácio Lula da Silva's (2003-10) electoral victory either. That means Bolsonaro and his allies will likely seek to question Lula's legitimacy to keep right-wing supporters energised. This strategy will likely result in occasional protests mostly over the next few months – and to a lesser extent throughout the next administration. That said, protests are unlikely to escalate to widespread violence.

Government transition

Lula has appointed Vice-President-elect Geraldo Alckmin to coordinate the government transition. While Bolsonaro's Chief of Staff Ciro Nogueira has taken the initial measures for the transition to occur, in accordance with Brazilian legislation.

Alckmin's track record as a centrist politician who formerly opposed Lula and the Workers' Party (PT) signal an effort by Lula implement a coalition government. It also helps to ease concerns among centrist allies and financial market participants that Lula's next administration would be dominated by leftist, radical appointees, or the PT alone.

Relatively limited risks on the unrest and institutional fronts will reduce financial volatility. The main triggers to shift market sentiment will come from the government transition process and the appointments to cabinet positions.

So far, gains in Ibovespa - Brazil's main stock index - and a strong performance of the real indicate positive expectations of Lula's third administration – especially among foreign investors. While local investors are unlikely to give the new government the benefit of the doubt, foreign capital inflows are likely to remain positive amid the absence of political turmoil coupled with a nod to fiscal discipline and an ESG-oriented rhetoric. Such an environment is likely to position Brazil ahead of its emerging markets, such as Russia or China, when it comes to investor sentiment.

Lula's ESG focus

Lula's ESG approach starkly contrasts with Bolsonaro's disregard for deforestation, indigenous populations and overall human rights. The president-elect will likely enhance the country's standing before the international community and investors. The quick reaction of foreign governments in acknowledging his electoral win and his participation in the United Nations' Climate Change Conference (COP 27) in Egypt indicate a clear path for a reduction in overall ESG-related reputational and operational risks for companies operating in Brazil. However, fiscal constraints will continue to undermine oversight, and the burden of ensuring compliance to ESG best international practices will still fall on the private sector.

Policymaking outlook

Lula will be pragmatic vis-à-vis the economy and the business environment. He is unlikely to significantly change Brazil's monetary, fiscal and trade policies. Brazil's Central Bank (BC) will remain autonomous and current Governor, Roberto Campos Neto, will be able to finish his term in 2024, should he wish so. That means that interest rates will likely remain stable over the coming months, only starting a gradual easing cycle in 2023. The constitutional spending cap, which was introduced in 2017 to limit public expenditure and work as a fiscal anchor, will be replaced by a new framework. These rules are highly likely to be more flexible and make room for social spending. That said, Lula will seek to demonstrate fiscal discipline to avoid a negative market reaction. A waiver for extraordinary spending in 2023 followed by a clear roadmap of attainable rule for the following years is likely to ease concerns. Moreover, Brazil's $326billion of reserves will also limit any risks of default.

On the regulatory front, sector-specific agencies will remain mostly independent, while public banks will occasionally be used for economic policy purposes, such as for subsidised credit in an attempt to boost consumption and growth.

Given that fiscal constraints will continue to limit public investment capacity over the next four years, the government will rely on the private sector to modernise and expand the country's infrastructure. That will result in moderate progress of the concession agenda and other public-private partnerships mechanisms. Likewise, contract risks will be very low. Lula is highly unlikely to reverse the privatisation of electricity company Eletrobras.

Renewable energy will continue to be a priority, amid efforts to diversify the Brazilian energy matrix (and reduce the role of hydroelectric power plants). That will also help reinsert the country into the global arena as an important player around discussion around climate change and energy transition. In this sense, tax incentives or subsidised credit lines for the construction of wind farms and solar parks are likely.

The strategic nature of the oil and gas industry will likely result in occasional political interference. Petrobras – and other state-owned companies – will once again be used as policymaking tools. Measures to increase tax collection, such as the introduction of a windfall tax, are also likely. In a price shock scenario, the government is also likely to adopt extraordinary measures to mitigate impacts on inflation. The government could increase mining taxes or royalties especially while global commodities prices remain elevated.

More broadly, the administration will seek to introduce taxes on dividends and wealth as part of its tax reform to fund increased social spending. Indeed, tax reform will be a priority in 2023. The proposal will seek to substitute several existing taxes with a VAT-like levy, simplifying the country's complex tax system. That is also likely to entail a shift in terms of tax collection from consumption to income. Top salaries are likely to face higher taxes, while those at the bottom of the payroll pyramid will be exempted from income taxes.

Economic growth, job creation and income distribution will be key to reduce the social inequality exacerbated by the COVID-19 pandemic. It is also Lula's chance to reduce his rejection rates, which currently stand at 45% of the electorate, and try to reduce heightened political polarisation levels. The question now is whether Lula will pass the test.

Policy making outlook under Lula's government

Continuity	
Monetary	Autonomous central bank
Fisical	Spending cap is replaced by more flexible but credible framework
Trade	Diplomatic activisim, with limited economic impact
Public-Private Partnerships	Moderate progress
Seector specific regulation	Autonomous regulatory agencies
ESG	The public sector is not a protoganist, but does not undermine iniatives

Change	
Privatisations	No significant progress
State-owned enterprises	Strategic political interference
Tax reform	Limited changes and the introduction of taxes on the wealthy
Administrative reform	Not a priority
Labour reform	Minor changes to the 2017 reform

Brazilian elections – **back to the past?**

Adam Patterson, our correspondent in Curitiba, worries for the economic implications of Lula's controversial victory...

After an extraordinarily atypical and polarized election cycle, Brazilians went to the second-round polls on Sunday 30th October to choose their next President. With 50.9% of the votes cast, former head of state Luiz Inácio Lula da Silva, known as Lula, was declared the winner, with incumbent President Jair Bolsonaro receiving 49.1%, the tightest margin in Brazilian election history. That despite Bolsonaro taking the largest share of the votes in four out of five Brazilian regions.

Controversial victory

Lula, a two term President between 2002-2010, was convicted on corruption and money laundering in one of the world's largest graft scandals and only served three years of an initial 12-year sentence before being controversially freed on a technicality by a supreme court judge his Worker´s Party nominated, allowing him to run again in 2022.

A key overlooked development from the first round of voting was a huge and historic "Bolsonaro wave" in congress. Bolsonaro´s Liberal Party (PL) elected the largest contingent in the lower house (99 out of 513 seats) and in the Senate — where it now has 14 of the 81 senators. Added to together with centre right parties like PP, Repulicanos and União Brasil and both legislative houses have the most conservative make-up in a generation. Centre-right governors in Every Southern and South-East region state – which total more than 75% of Brazilian GDP – also provide a barrier to radical policy.

Acoording to researcher Oliver Stuenkel, professor of International Relations at Fundação Getúlio Vargas (FGV) "The right has triumphed. The Lula government will have many difficulties with Congress, a lot of resistance. Bolsonarism will be very present in Brazilian political life over the coming years". However, analysts expect negotiation and horse-trading. And yet, as the saying goes, life can only be understood looking at the past but must be lived in the future. Thus, as the dust settles attention turns to what the economic outlook is for the Latam giant with a Lula government.

Economic prospects

First let us look at the economy Lula inherits. Despite being hamstrung by a weak majority in Congress, dependent on centrist parties, and COVID there has been marked progress. Central bank independence was formalized, corruption vastly reduced, and pension reform was passed which put Brazil on a more sustainable fiscal footing.

There have also been incremental advances in regulation liberalization, digitalization of government services and privatization. Almost 14 million new companies have been opened since 2019, a record amount. Brazil also had a much smaller economic downtick during the pandemic due to one of the world´s largest fiscal and monetary support packages. The Legal Framework for Sanitation helped bring clean water to millions of people.

These macroeconomic measures, supported by early monetary tightening to counter inflation, have put Brazil in an attractive economic position. Real GDP growth is expected at close to 3% in 2022, and with inflation around 5%, it's never been so low relative to the US and Europe. Unemployment at 8.9% is the lowest for a decade.

The government reduced more than 4000 taxes, including on energy and imported goods. The business community would have liked to see more administrative and tax reforms passed but, overall, the economy has advanced from Brazil´s worst recession left by the outgoing PT government in 2016. There has also been progress at the social level, murder rates are at the lowest 20 years, as are rural property invasions and burnt areas in the Amazon Forest. It seems likely that history will give Bolsonaro much more credit than the media has over the last few years.

	PT 2015	Bolsonaro 2022
Unemployment	14%	8,9%
Minimum wage	R$788	R$1212
Population below the poverty line	17,4%	10,8%
GDP growth	-3,55%	3%
Public Accounts	Loss of R$32billion	Profit of R$187billion
Public company accounts	Deficit of R$111billion	Surplus of R$109billion
Monthly Social benefits	R$82	R$600

Yet two major economic challenges await Lula. Firstly, the global scenario: energy shocks and rising interest rates increase the chance of recession in some of the main world economies.

China, Brazil´s biggest trade partner is confronting multiple economic crises. The second challenge is internal, and based on fiscal pressures, driven by expenditures already undertaken by the current government and new campaign promises by the incoming PT party which must be managed carefully so as not to lead to upticks in the deficit and public debt dynamics.

State intervention

Few details about the president-elect's proposals surfaced during the election campaign. At the time of writing the new economic team has not been announced. However, at the macro level, based on PT´s economic program submitted to election authorities and their "Letter to Brazil of Tomorrow", the new administration plans to expand the role of the State in the economy, suspend privatizations, modify the market friendly labour and social security legislation, reformed by both the Temer and Bolsonaro governments, and repeal government spending limits via a more flexible fiscal policy. The plan also seeks to review tax policy – Lula has talked about "taking large fortunes" – and increase social benefits and the minimum wage. Concerns around these interventionist policies and u-turning on privatization weighed on shares of state-controlled companies in the days since the result was announced. Oil giant Petrobras, fell more than 20% in the first three days. Xavier Hovasse, head of emerging equities at Carmignac, said he prefers to stay away from state-owned companies due to expected higher intervention by the government.

However, using the past as a guide. Equities in education, construction and retail sectors, for example, could benefit from the possible expansion of student and housing financing programs and a potential easing of credit, especially by publicly owned banks. There is also talk of reinstating a reformed Growth Acceleration Program (PAC), with the objective of reactivating civil construction and social infrastructure such as housing and urban mobility.

Launched in 2007, at the beginning of Lula's second term, the PAC increased public investment in infrastructure, but was marked by delays, abandoned projects and corruption.

PT have said they will aim for fiscal responsibility, with "clear and realistic rules". The market is however suspicious of how such a leftist economic wish-list can be financed. For Alejandro Arevalo, head of emerging markets debt at Jupiter Asset Management: "How do they plan to fund social spending? Are we going to see some tax reforms, or where is the windfall going to come from to be able to keep the fiscal deficit in check?"

In summary Lula will face not only a vastly different domestic political climate but an international economic scenario. Gone are the heady days of his first mandates when Brazil, surfed a commodity cycle and global economic stability.

But on the other hand, at least over the near term, Brazil remains attractive relative to the original BRICS countries and other emerging markets. The stock market remains cheap and there is a clear lack of alternatives in terms of a sizable EM equities market. For investors it remains a country too big to ignore.

Assuming Lula can conclude his term given political pressures, Brazil will have to wait for 2026 for an economically liberal President who can help pass the needed macroeconomic reforms and put Brazil back on a market-friendly growth path. Until then it seems that it has chosen to go back to the past.

MARKET-MOVING EVENTS CALENDAR

NOVEMBER

Tuesday 1st
6:00 AM - Brazil - BCB Copom Meeting Minutes
7:00 AM - Brazil - Industrial Production MoM SEP
7:00 AM - Mexico - Business Confidence OCT
8:00 AM - Peru - Inflation Rate MoM OCT
10:00 AM - Colombia - Exports YoY SEP
10:30 AM - Mexico - S&P Global Manufacturing PMI

Wednesday 2nd
6:00 AM - Mexico - Foreign Exchange Reserves

Thursday 3rd
3:00 AM - Brazil - IPC-Fipe Inflation MoM OCT

Friday 4th
8:00 AM - Brazil - S&P Global Services PMI OCT
12:40 PM - Uruguay - Inflation Rate YoY OCT

Saturday 5th
12:00 PM - Colombia - Inflation Rate YoY OCT

Monday 7th
6:30 AM - Brazil - BCB Focus Market Readout
6:30 AM - Chile - Balance of Trade OCT
7:00 AM - Mexico - Consumer Confidence OCT
7:00 AM - Mexico - Gross Fixed Investment YoY
11:30 AM - Costa Rica - Inflation Rate MoM OCT

Tuesday 8th
6:00 AM - Chile - Inflation Rate MoM OCT
10:30 AM - Colombia - Consumer Confidence
2:00 PM - Argentina - Industrial Production YoY

Wednesday 9th
7:00 AM - Brazil - Retail Sales MoM SEP
7:00 AM - Mexico - Inflation Rate YoY OCT
7:00 AM - Mexico - Core Inflation Rate MoM OCT
10:30 AM - Ecuador - Inflation Rate YoY OCT

Thursday 10th
7:00 AM - Brazil - Inflation Rate YoY OCT
7:00 AM - Brazil - Inflation Rate MoM OCT
2:00 PM - Mexico - Interest Rate Decision
6:00 PM - Peru - Interest Rate Decision

Friday 11th
2:00 AM - Peru - Balance of Trade SEP
7:00 AM - Mexico - Industrial Production MoM
9:00 AM - Brazil - Business Confidence NOV
10:00 AM - Colombia - Industrial Production YoY

Monday 14th
6:30 AM - Brazil - BCB Focus Market Readout

Tuesday 15th
8:15 AM - Peru - GDP Growth Rate YoY SEP
9:00 AM - Dom. Republic - Inflation Rate MoM
11:00 AM - Colombia - GDP Growth Rate QoQ Q3
2:00 PM - Argentina - Inflation Rate YoY OCT
2:00 PM - Argentina - Inflation Rate MoM OCT
5:00 PM - Uruguay - Interest Rate Decision

NOVEMBER

Friday 18th
6:30 AM - Chile - Current Account Q3
10:00 AM - Peru - Current Account Q3

Monday 21st
6:30 AM - Brazil - BCB Focus Market Readout

Tuesday 22nd
7:00 AM - Mexico - Retail Sales MoM SEP
2:00 PM - Argentina - Balance of Trade OCT

Wednesday 23rd
10:00 AM - Colombia - Business Confidence OCT
2:00 PM - Argentina - Economic Activity YoY SEP

Thursday 24th
10:00 AM - Argentina - Consumer Confidence
12:00 PM - Argentina - Interest Rate Decision

Friday 25th
7:00 AM - Mexico - GDP Growth Rate QoQ Final Q3
7:00 AM - Mexico - GDP Growth Rate YoYFinal Q3

Monday 28th
6:30 AM - Brazil - BCB Focus Market Readout
7:00 AM - Mexico - Balance of Trade OCT

Wednesday 30th
7:00 AM - Brazil - Unemployment Rate OCT
7:00 AM - Chile - Copper Production YoY OCT

DECEMBER

Thursday 1st
7:00 AM - Mexico - Business Confidence NOV
10:30 AM - Mexico - S&P Global Manufacturing PMI
1:00 PM - Brazil - Balance of Trade NOV
1:00 PM - GT - Interest Rate Decision

Friday 2nd
7:00 AM - Brazil - Industrial Production MoM OCT
7:00 AM - Brazil - GDP Growth Rate QoQ Q3

Monday 5th
6:00 AM - Colombia - Inflation Rate MoM NOV
6:30 AM - Brazil - BCB Focus Market Readout
7:00 AM - Mexico - Consumer Confidence NOV
8:00 AM - Brazil - S&P Global Services PMI NOV

Tuesday 6th
10:00 AM - Colombia - Business Confidence OCT
2:00 PM - Argentina - Economic Activity YoY SEP

Wednesday 7th
6:30 AM - Chile - Balance of Trade NOV
10:30 AM - Colombia - Consumer Confidence NOV
4:00 PM - Brazil - Interest Rate Decision
6:00 PM - Peru - Interest Rate Decision

Thursday 8th
7:00 AM - Brazil - Retail Sales MoM OCT
7:00 AM - Mexico - Inflation Rate YoY NOV
7:00 AM - Mexico - Inflation Rate MoM NOV

DECEMBER

Friday 9th
7:00 AM - Brazil - Inflation Rate YoY NOV
9:00 AM - Brazil - Business Confidence DEC

Monday 12th
6:30 AM - Brazil - BCB Focus Market Readout
7:00 AM - Mexico - Industrial Production MoM OCT

Tuesday 13th
6:00 AM - Brazil - BCB Copom Meeting Minutes

Wednesday 14th
10:15 AM - Peru - GDP Growth Rate YoY OCT
5:00 PM - Costa Rica - Interest Rate Decision

Thursday 15th
9:00 AM - Dom. Republic - Inflation Rate MoM
2:00 PM - Mexico - Interest Rate Decision
4:30 PM - Ecuador - Balance of Trade OCT

Friday 16th
1:00 PM - Colombia - Interest Rate Decision

Monday 19th
6:30 AM - Brazil - BCB Focus Market Readout

Tuesday 20th
7:00 AM - Mexico - Retail Sales YoY OCT
10:00 AM - Colombia - Balance of Trade OCT
6:00 PM - Colombia - Monetary Policy Minutes

Wednesday 21st
7:30 AM - Brazil - Current Account NOV
7:30 AM - Brazil - Foreign Direct Investment NOV

Thursday 22nd
6:00 AM - Brazil - FGV Consumer Confidence DEC
6:30 AM - Chile - Monetary Policy Meeting Minutes

Friday 23rd
7:00 AM - Brazil - IPCA mid-month CPI MoM DEC
7:00 AM - Mexico - Balance of Trade NOV
11:00 AM - Colombia - Business Confidence NOV

Monday 26th
6:30 AM - Brazil - BCB Focus Market Readout

Tuesday 27th
7:30 AM - Brazil - Bank Lending MoM NOV

Wednesday 28th
7:00 AM - Brazil - Unemployment Rate NOV
2:00 PM - Argentina - Current Account Q3

Thursday 29th
7:00 AM - Chile - Unemployment Rate NOV
10:00 AM - Argentina - Consumer Confidence DEC

Friday 30th
7:00 AM - Chile - Copper Production YoY NOV
7:00 AM - Chile - Retail Sales MoM NOV

Special Report

Latin American Energy Transition Report

The region is key in the fight against climate change

COUNTRY ANALYSIS:

Ecuador
Argentina
Peru
Colombia

BIG INTERVIEWS:

Marcela Hernando, Chile's Minister of Mining

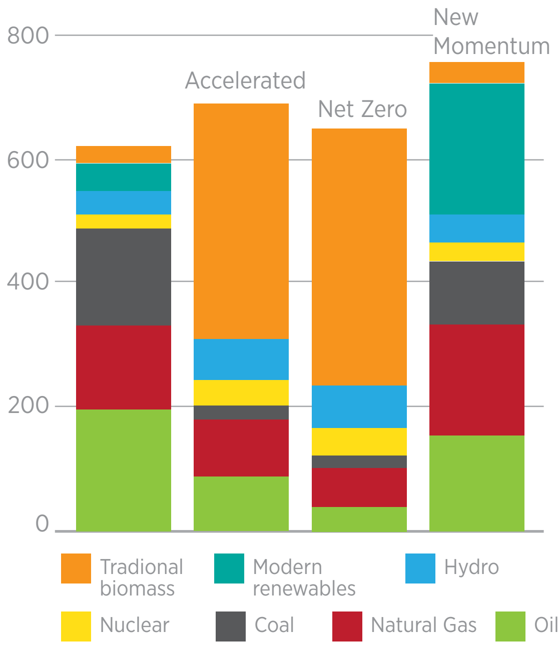
Alejandro Monteiro, Neuquén's Minister of Energy and Natural Resources

SECTOR ANALYSIS:

Wind
Solar
Oil & Gas
Infrastructure

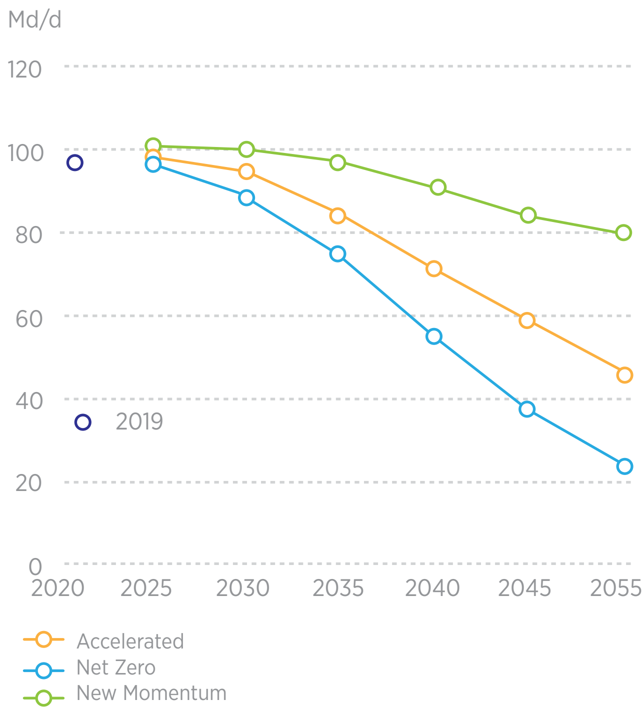
We use BP's Energy Outlook to explore how the energy transition will shape global demand...

Primary energy by fuel



Modern renewables include wind, solar, geothermal, biofuels, bioethane and modern biomass

Oil demand



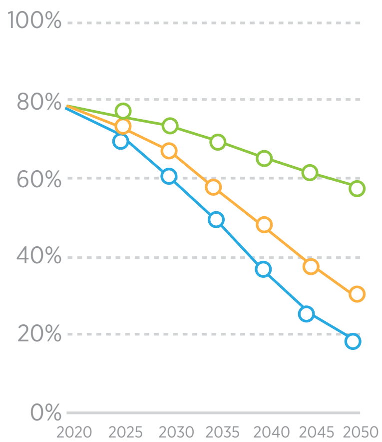
New Momentum is designed to capture the broad trajectory along which the global energy system is currently progressing.

Accelerated and **Net Zero** explore how different elements of the energy system might change in order to achieve a substantial reduction in carbon emissions. They are conditioned on the assumption that there is a significant tightening of climate policies leading to a pronounced and sustained fall in CO2- equivalent (CO2e) emissions. The fall in emissions in Net Zero is aided by a shift in societal behaviour and preferences.

Gradual shift in energy demand: declining role for hydrocarbons, rapid expansion in renewables and electrification

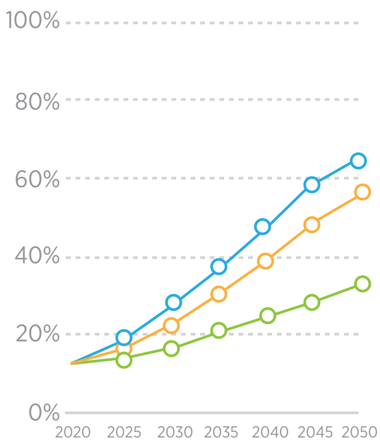
Fossil Fuels

Share of primary energy



Renewables*

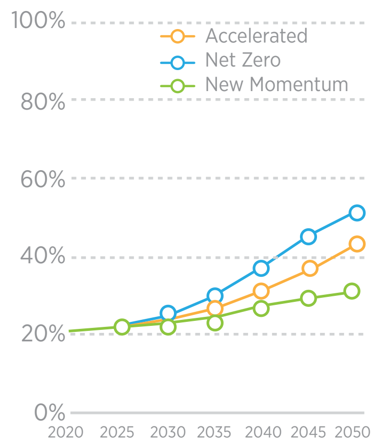
Share of primary energy



*Includes wind, solar, bioenergy and geothermal

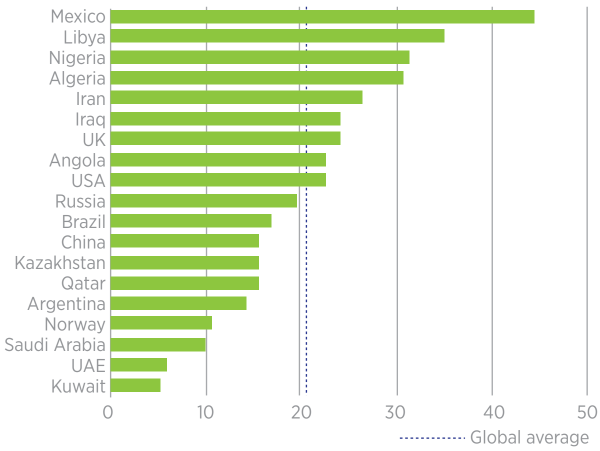
Electricity

Share of total final consumption

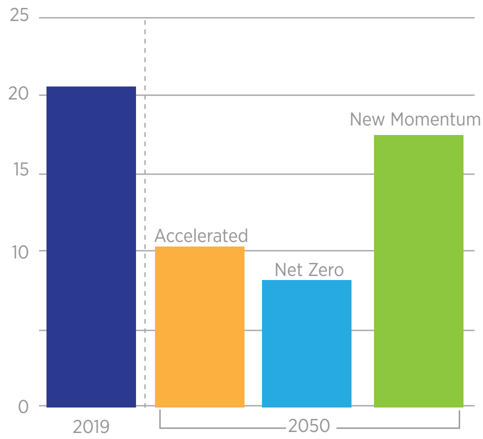


Climate policies and ESG investment favour low-carbon oil

Average carbon intensity of oil production by country, 2019

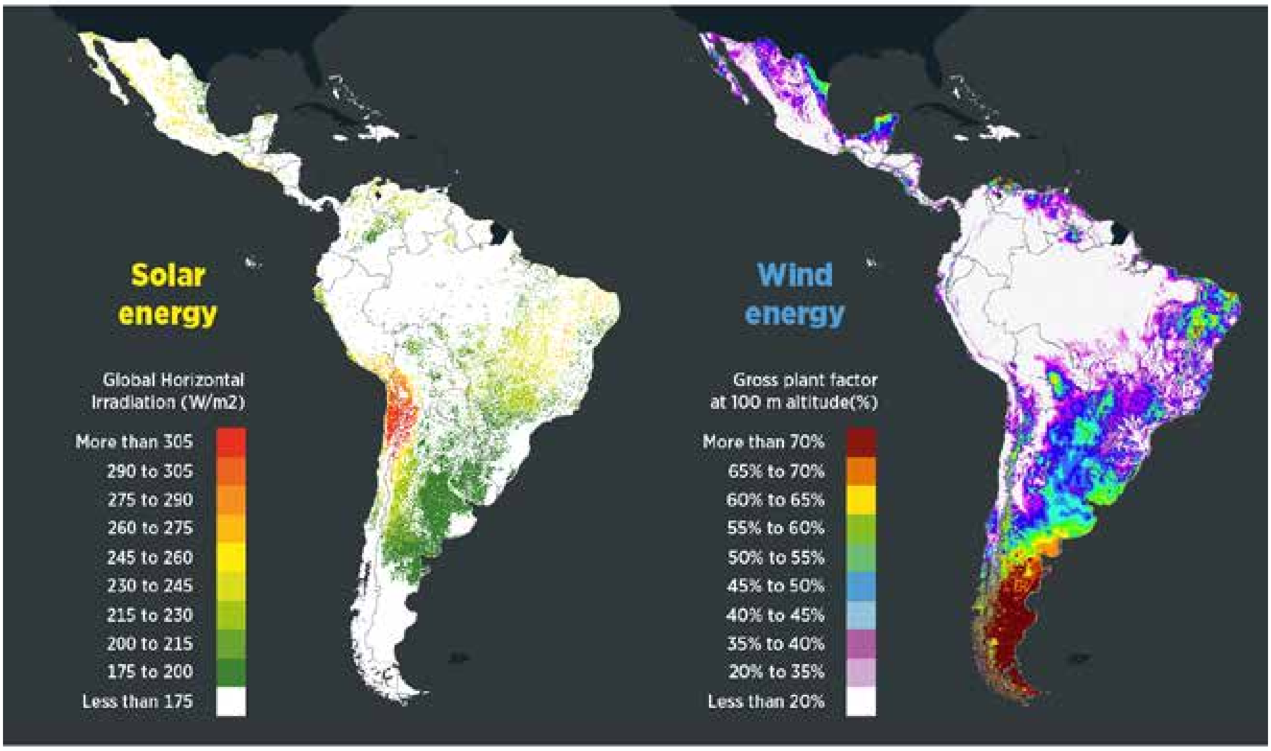


Global average carbon intensity of oil production



Latin America has great potential for renewable energy

However, factors such as latitude, weather, and the frequency and consistency of wind speed or solar radiation influence the degree to which a renewable power plant is able to provide electrical energy.



Source: La Red del Futuro, IDB (2017).

IDB

Latin America had a record year for new installations in 2021 and new additions are expected to be even higher this year. This strong growth momentum is primarily driven by Brazil, where project development under the private PPA market continues to bring new "blood" into a market that had hitherto been driven by regulated public auctions. However, annual growth in LATAM is likely to drop to 4-5 GW in the period 2023-2026 following the slow-down of installations in key markets such as Mexico and Argentina as a result of an unhelpful policy environment and economic instability. Colombia is projected to be the largest onshore wind market in this region after Brazil, Chile and Mexico.

We need Latin America's **low-carbon oil and gas**

The region is home to the clean, cost-effective hydrocarbons we need to fuel the energy transition...

It is safe to say that oil is not very popular at the moment. Universities are closing their petroleum faculties because young students believe the industry has no future. Governments across the world have made ambitious plans to stop using it. Even the oil companies themselves seem keen to disown hydrocarbons, with a raft of name changes that remove any reference to the black stuff.

There is a widespread assumption that the world is on an irrevocable energy transition that will move us out of the oil age. This assumption is correct but there is one problem – few people realise how long it will take. Yes, we desperately need to reduce emissions of greenhouse gasses (GHGs). But that requires a gigantic, multi-decade investment programme to electrify the global economy. To build that new, all-electric infrastructure we need to use the best tools at our disposal – and at present oil and gas are, by far, the most powerful, flexible and cost-efficient fuels we have. The quickest way we can cut GHG emissions, while building our green, new world, is to use the cleanest oil and gas available.

> *At SLB we support the energy transition and we are working a technology portfolio to be a key actor during this change*
>
> **Ruth Zambrano, Managing Director for SLB**

"I think the transition will take several decades", says Martin Grisolle, General Manager, Hunt Oil Peru. "I know we hear a lot about different countries or companies that pledge to be carbon neutral but I don't see how the whole world can do it quickly.

"Take China, for example, at present 62% of power generation comes from coal, with approximately 20% more coming from other fossil fuels. The amount of investment needed to replace that 80% of thermal power generation with renewable energy is impossible to deploy in a short time frame. So, it will be a long time before China is carbon neutral. Maybe there are a few European companies or countries that can become zero emission more quickly, but most of the world will need several decades. And during that timeframe, switching to natural gas is the most effective way at reducing emissions."

Hunt Oil Peru is one of the country's largest gas producers, part of a consortium working the immense Camisea gas project. So it is understandable that Grisolle is a big proponent of the fuel. "I believe that natural gas is the fossil fuel that helps humanity transition away from fossil fuels", says Grisolle. "I know that sounds strange but natural gas is the cleanest of all the fossil fuels and by switching from coal or oil to natural gas we can make massive emissions reductions. I don't see any way that we can move overnight from a world that today still runs mainly on fossil fuels to one that is zero emissions." But while gas has its advantages, oil remains the world's most important energy source. Indeed, it has other uses too, explains Ruth Zambrano, Managing Director for SLB – a global technology company focused on the energy transition - in Peru, Ecuador and Colombia.

"I think there is a lack of understanding around the whole world about the importance of oil", says Zambrano. "People don't realise that everything, from the paint on the wall to the plastic on their phone, needs oil. Everything we consume uses oil at some part of the value chain.

"I believe that the recent geopolitical conflict has highlighted the importance of energy security. Everybody was talking about the energy transition and then we suddenly realised that we still need oil and gas. We have seen European countries turn back to coal-fired power plants, despite the extra CO_2 that emits, because energy security is as important as the transition. When things get difficult the human being will do whatever it takes for two things: to heat and to eat. At SLB we support the energy transition and we are working a technology portfolio to be a key actor during this change but we also realise that it will take decades because many of these technologies are still in full deployment stage." In his recent book, The New Map, energy analyst, Daniel Yergin, posits a 'planning scenario' in which the current consumption of 100 million barrels of oil per day, rises to 113 million barrels by 2050. One reason is that cars and light duty vehicles only account for 33% of oil demand, so even if we manage to replace the entire global fleet to EVs we will still need more oil for petrochemicals, aviation fuel, asphalt etc for a rising population.

Clean oil

Once you face the reality that the world will still be producing billions of barrels of oil per day in 2050 then the next step is to make that fuel as low-carbon as possible. And that's where Latin America comes in. Home to 20% of the world's oil and gas reserves, but less than 10% of its people and GDP, the region is a natural exporter. It also contains some of the 'cleanest oil' in the world. This concept isn't widely understood by the general public but as ESG principles become more important for institutional investors, they are allocating their capital to energy companies that mitigate their environmental impact and have a positive social influence.

Alfredo Mordezki, Head of Fixed Income, Latin America, for Santander Asset Management, manages several funds for his clients. One of them is an ESG fund, which we discuss elsewhere, but it is striking how environmental and social concerns are now an important part of his general funds. Here he runs us through how each aspect of ESG impacts his investment decisions.

"Governance has always been relevant for credit risk because it is an integral part of the willingness of a debtor to return the money it has been lent", says Mordezki. "Nowadays the E and S are much more relevant for credit risk because there are more disclosure requirements and questions from investors and ratings agencies. Take an energy company as an example - it will be routinely asked about how it is going to manage the energy transition, their emissions strategy and targets, the re-

Why Latin American oil and gas needs private capital

Traditionally Latin American oil and gas production has been dominated by its national oil companies. Mexico started the trend when Lazaro Cardenas nationalised production in 1936 and created Pemex, the country's national oil company. Since then national oil companies have sprung up in all of the region's major oil and gas producers: Brazil has Petrobras, Argentina has YPF, Bolivia has YPFB, Venezuela has PDVSA, Colombia has Ecopetrol and Ecuador has Petroecuador. The record of these companies is mixed. Ecopetrol and Petrobas, which are both listed on the NYSE, are the most successful and have succeeded in boosting national production. Ecopetrol is also a leader in clean oil and was one of the first to stop flaring gas in Latin America. YPF has a mixed record but deserves credit for overseeing the development of Argentina's massive Vaca Muerta deposit.

On the other end of the scale PetroEcuador doesn't seem to be making the most out of its country's resources, while politically-managed PDVSA has become a slush fund for the country's kleptocratic elite, sending national production to 300,000 bpd from 3.5million bpd in 1998. In Mexico Pemex has notable successes in the past but currently lacks the financial muscle to develop the country's impressive offshore deposits and the country's oil production has fallen to 1.9 million bpd, down from 3.6 million bpd a decade ago.

The result is that investors have plenty of choices, says Mordezki. "In Latin America you have the 'Noics' – National integrated oil companies. They have some state ownership and have businesses through upstream to downstream. Then we have the independent small companies that only focus on exploration and production.

The advantage of not being exposed to refining, is that you avoid the sensitive issue of (retail) fuel prices. But for these smaller producers, the E&P business is a grow or die story. The fixed costs need to be diluted by expanding production. They are all aiming to get above 50,000 bpd to leave the danger zone where fixed costs can destroy you if prices fall."

»

> *The solution is to have thriving oil and gas companies like GeoPark that can produce low-cost energy and invest excess returns in positive social and environmental impacts*
>
> **Andrés Ocampo,**
> **CEO, GeoPark**

lationship with communities, etc.

"If you look at Latin America, we have had energy companies that disregarded environmental and social impacts, while there are others that have had excellent standards. In our Article 6 Latam Credit fund, we do invest in some oil & gas companies but ESG metrics do have a say on our investment decisions. For example, we will assess the C02 emissions per barrel produced.

You may find that Latin American companies listed in Canadian, US or European exchanges will disclose more of ESG information than pure local peers, because they are required to, but this provides a benchmark to the locals.

"There are quite a few different ways to get exposure to the energy transition in Latin America. One obvious way is through the energy generation companies. However, investment approach can differ. Some money managers just take a snapshot of the company metrics in the present moment. If it has some fossil fuels in its energy mix then they may decide not to invest in it.

However, we need to consider the direction the company is travelling. If a generator has some legacy fossil-fuel assets but it is investing in cleaner fuels and is aligned with the host country's climate goals, then I think that is a positive step for the transition."

The nuanced, considered approach from Mordezki contrasts with the hysterical tone of the climate debate playing out in our newspapers and TV screens. The reality is that we have to work with the world as it is, not as we want it to be. And switching off all the world's oil and gas wells overnight would not create the 100% green energy matrix the planet needs.

Financing clean oil

As Mordezki says, the most established measure of oil's impact is the C02 emitted in the process of making each barrel. On that criteria South America scores very well. Each barrel of oil produced in Argentina's Vaca Muerta shale basin, emits 15.8 kg of C02 per barrel, well below the global average. Indeed GeoPark, an NYSE-listed, independent Latin America-focused oil and gas E&P that produces oil onshore in Colombia, Ecuador and Chile, emits 19.6 kg of C02 per barrel. To give some comparisons with other major oil producers, the US emits 19.9 kg of C02 per barrel, Russia 20.7 kg, Canada 36.6 kg and Mexico 42.3 kg. So if the world still needs oil but wants to reduce emissions the solution is simple – replace the dirty oil with cleaner onshore Latin American crude.

"The energy transition can't happen without reliable, clean oil and gas, so it doesn't make sense to starve the industry of capital", says Andrés Ocampo, CEO, GeoPark. "Indeed, high oil prices hit renewable energy because they make it less competitive as an investment. The solution is to have thriving oil and gas companies like GeoPark that can produce low-cost energy and invest excess returns in positive social and environmental impacts. Embedded in our five-year plan is a commitment to reduce carbon emissions by 40% over the next three years. Hopefully we can do even better."

If the world wants to cut emissions during the transition it needs companies like GeoPark to increase production. "We definitely want to get our production to 100,000 boepd", says Ocampo, using the measure of barrels of oil equivalent that also includes gas production. "However, we are realistic about what that means. Being a larger company multiplies both the opportunities and the challenges – after all, when you are producing that much you need to replace 40 million barrels of reserves per year. But that size makes us a meaningful, a less risky investment for institutional investors."

"If we implement our five-year plan, we can grow organically to between 55,000 boepd and 60,000 boepd over the next five years. That growth will be delivered by developing our own assets and unlocking our high-potential portfolio. We are drilling around 50-55 gross wells this year, 35-40 of which are development wells and 15 are exploration wells in core areas. It is the most ambitious exploration campaign in the history of the company as we are drilling back-to-back, low-risk, high-potential wells. We can keep up that pace of drilling for the next five years."

"Growing at 10% CAGR is good", says Ocampo, "but we believe we may be able to grow even more. Our average chance of exploration success is approximately 15% to 45%. If our results are better, then our annual growth will exceed 10%."

That type of steady 'growth by the drill bit' is what has made GeoPark an investor favourite but acquisitions can accelerate that. "We are selective and patient buyers and will look for the right opportunities either in Colombia or elsewhere. In 2019, we completed two types of acquisitions that gave us 1.5 million extra acres in the Llanos basin. Two-thirds came from bidding rounds, which didn't require any capital upfront. The rest was through the acquisition of Amerisur. We were unable to raise equity because the target company lacked timely financial statements, so we financed 100% with debt, which isn't what we normally do." Since the acquisition GeoPark has been steadily reducing that debt, repaying $275million in the last 18 months while also paying dividends and buying back shares.

"Looking ahead the third option is to use our own equity", says Ocampo. "Maybe today it doesn't make sense because we are not fully priced, so it would be expensive and dilutive but with the right opportunity that creates value for shareholders we can use equity, which is our own currency. We have been listed on the NYSE since 2014 and never raised equity, which shows that we are disciplined in our use of equity. That is good for shareholders because you preserve their stake, but if you are in the biggest capital market in the world you should probably ask for capital, or use it, at some point." In theory the new era of high interest rates should complicate M&A activity but Ocampo doesn't believe it will stop GeoPark, which also partners with Petrobras in the offshore Manati gas field, to increase. "If we are financing with debt and the interest rates are higher, then we need to ask for larger returns - way beyond the 5%, 10% capital cost or debt cost we are seeing in the markets. Oil prices impact more than interest rates. A high oil price makes it harder to find good acquisition opportunities."

The world needs oil and gas to fuel an energy transition that will take decades to complete. In the meantime, we need to reduce emissions by allocating capital to the low-carbon oil and gas producers. Well-run Latin American energy companies should benefit from the inflow of capital while helping the planet. ■

We sit down with

Alejandro Monteiro,

Minister of Energy and Natural Resources, Neuquén Province, Argentina

LatAm INVESTOR: ***How are oil and gas policies decided in Argentina's federal system?***

Alejandro Monteiro: The province of Neuquén has been producing hydrocarbons since 1918. But we didn't become a province until 1956 because underpopulated Patagonia was the last area to be converted from national territory to provinces. Once you become a province you have more control over the licensing regimes for hydrocarbon exploration and production. Another factor is that since 1962, Neuquén has been governed by the same political party – Movimiento Popular Neuquino.

That has created incredible stability in a country that has a lot of political uncertainty at the federal level. I have been Minister since 2017 and in that time I have seen six national Ministers of Energy and Mining. That political uncertainty makes it difficult to build a coherent national energy policy but at least we can compensate with stability at the provincial level.

In Neuquén we have separate regimes for conventional and unconventional assets. Conventional concessions have a 25-year term, while unconventional concessions have 35 years. Both have the possibility to renew for ten years. The royalty is 12% of profits but that increases first to 15% and then to 18% with each subsequent renewal. Obviously unconventional concessions are still very new, with the oldest one still nine years away from renewal. So, we have a lot of regulatory control at the provincial level but anything to do with oil and gas prices, markets or export is decided by the federal government. Oil and gas producers know that Neuquén always respects the terms of a concession and won't change the total burden – of combined taxes and royalties – that were set at the start of the term. At a national level the federal government regulates the price of gas to assure local supplies, while the price of petrol is effectively set by national oil company, YPF as it controls most of the refineries.

When WTI is at $90 the price of crude in Argentina is around $65, compared to a global price. YPF can decide what it wants to pay producers and there is strong political pressure to keep prices low to alleviate the significant poverty in Argentina. The good thing is that the oil and gas producers here have learned to live with lower prices and have invested in new technology to reduce prices. That means they can be competitive if global prices fall.

LAI: ***Vaca Muerta's production growth is impressive; how did it happen?***

AM: In 2012 there was some exploration work in Vaca Muerta to identify the scale of the resource. In 2013 we awarded the first concession, to a joint venture between YPF and Chevron. That pilot project committed to investing $1.2million in the first five years. But it was followed by more concessions. The rate of development increased partly because of the solid early work of YPF and Chevron, which combined local knowledge with leading shale technology from the US.

But the Vaca Muerta story is only just beginning. So far, our 45 unconventional concessions cover just one third of the basin's total 9,000 km2 area. Of those 45, only ten are in constant production, with the infrastructure in place to export the oil and gas. So really Vaca Muerta is only 8% developed. We have lots of concessions that are ready to develop but they are limited by infrastructure constraints. With just a few small concessions we are growing Vaca Muerta crude production at a 45% compound annual growth rate (CAGR) and gas at 25% CAGR.

LAI: ***What is the next stage in Vaca Muerta's growth?***

AM: Now the key for us is to build more pipelines. We need to restore the Trans-Andino pipeline to Chile, which was built in the 1990s. It has 115,000 bpd capacity though it hasn't been used since 2006, when Argentina's conventional crude production fell. The integrity of the pipeline is currently being tested, with a view to pumping

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The Vaca Muerta story is only just beginning. So far, our 45 unconventional concessions cover just one third of the basin's total 9,000 km2 area

50,000 bpd of crude to Chile by February next year. Neuquén today produces 290,000 bpd of oil, so the Trans-Andino pipeline will have a significant impact. It is also symbolically important because it marks Argentina's return as a significant exporter There is a similar situation with gas, where pipelines that were built to supply gas to Chile ended up being reversed so that we could receive some of its excess LNG.

The only buyer would be Chile's state-owned refiner, Enap, which can take the light crude from Vaca Muerta. Oil from Vaca Muerta is lighter than conventional Neuquen oil, so we could mix them together to create a blend that works well for Enap. Yet the most Enap could take is 70,000 bpd, so if we get the pipeline up to its maximum capacity of 115,000 bpd (perhaps even higher with upgraded pumping stations), the excess could be transported to Chile's ports for export to Pacific markets. Another big boost will come from Oldelval's Duplicar Project that should be ready by 2025.

In 2025 the Nestor Kirchner gas pipeline will transport 22 million cubic metros of gas (mcm) per day, reaching a total of 39 mcm when fully completed. Total Neuquén gas production is 90 mcf at the moment, so the pipeline will be able to add 40% of extra transport capacity. It means Argentina will no longer have to import gas in our winter (June, July and August) when our demand is highest. The swing between our winter demand of 180 mcf and our summer demand of 120 mcf is very high and is currently covered by expensive imports of LNG or Bolivian gas.

LAI: ***Can Argentina help solve the global energy crisis?***

AM: Vaca Muerta has 300 tcf of natural gas. At current demand that is 200 years of Argentina consumption and we all know that in two centuries' time we won't be using natural gas. So yes, we could double or triple production and sell most of the excess to international markets.

We can export gas to Chile for $7.50 per British thermal unit. That is a good price, especially when you consider that transport is changed on top. Our initial plan with gas is regional. Bolivian gas production is in terminal decline, so we could reverse the pipelines that currently supply us with its gas and send our exports through the Bolivian pipeline to Brazil. There is also another option of sending it through Uruguay, which gives us negotiating power.

If we want to make regional markets then we would need to build LNG facilities. We could export 1 million tonnes per year, using the existing pipeline projects but the LNG modules would take between three to six years to build. For example YPF and Petronas have an LNG plan that involves beginning with a floating LNG facility, that is quicker to install, and then replaced by an inland plant that is more expensive but more efficient in the long-run. However, it is not just a technical challenge - you also need to create the conditions for such capital-intensive projects.

We imported 50 boats of LNG last year, so the first step of our gas production is to replace those imports. There also an exciting global market for LNG, which as accelerated following the conflict in Russia.

As for oil we are currently producing 290,000 bpd but that can increase to 750,000 bpd by 2030 – it is just a question of building the oil pipelines. We could get to 1 million bpd with other oil pipeline projects.

Can Argentina solve the **global energy crisis?**

Technology and investment have breathed life into Argentina's 'dead cow' unconventional play and the country could soon become one of Latin America's biggest energy exporters...

Most international investors keep clear of Argentina. It has an unenviable record of default and expropriations while successive governments seem unable to manage the country's incredible natural wealth. The return of the controversial Cristina Kirchner - who was Argentina's first lady then president from 2003 to 2015 - as vice president was also a red flag for foreign firms. In one sense investors were right to stay away. The economy is a mess and inflation is currently running at 100% (it will probably be higher by the time this goes to print).

But there is one incredible economic success story coming out of Argentina - during the last two years, oil and gas production has increased by 80%. Analysts think oil output could increase by a further 300% over the next decade, propelling it into the world's top 20 oil producing nations and bringing much-needed fuel to a global energy market strained by Russian sanctions.

Success story

Let's not gloss over the facts. Argentina is a distorted, poorly-run economy, which is a difficult place for companies to do business. Someone who knows all about the challenges is Andrés Ocampo, the Argentine CEO of GeoPark, a NYSE-listed oil and gas producers with assets across Latin America. "Investing in Argentina is complicated by various economic distortions created by the government", says Ocampo. For example, oil producers in Argentina currently receive around \$70 per barrel, when the global price is above \$90. Another challenge is the ten different exchange rates between the Argentine peso and the US dollar. You pay a different rate depending on the nature of your transaction, so it makes it more difficult for businesses to operate. It especially impacts companies that need to import international funds to finance capital-intensive projects like Vaca Muerta as they need to use the official exchange rate, which gives you about half as many dollars as the other ones."

"Despite those challenges, Vaca Muerta is a positive story", says Ocampo. "It is delivering beyond expectations in terms of hydrocarbon potential, and technological advances mean that wells can be drilled far more economically than just a few years ago. If you speak to the operators in Vaca Muerta, they are upbeat because the economic productivity per well is better than expected. It is a huge opportunity for the country to exploit."

The story is already attracting the attention of institutional investors like Alfredo Mordezki, Head of Latin American Fixed Income for Santander Asset Management. "A very interesting trend in the oil and gas industry, that is off the radar, is how Argentina has been slowly but consistently increasing production. The growth is mainly in natural gas, and tight and shale gas plays linked to the Vaca Muerta formation. If you translate it into barrels of oil equivalent, Argentina now produces 1.5 million barrels per day. What it is interesting is that most of this development has been carried out by private companies, who are responsible for two thirds of total production."

Pipeline potential

To understand how this happened, and how far it can go, we spoke to Ricardo Hosel, CEO of Oldelval, the pipeline carrying all of Vaca Muerta's oil.

"We transport 100% of Vaca Muerta's crude, so we are very sensitive to production there", says Hosel. "In 2017 just 27% of all the liquids in our pipeline was coming from Vaca Muerta – today it accounts for more than 70% of our fuel, so the growth has been incredible. Indeed, Neuquén now produces 60% of the country's oil and gas, while Vaca Muerta accounts for 60% of all of Neuquén's production.

"We have always asked our clients – who are also our shareholders – for their production plans. For many years those goals were very ambitious but they never seemed to be achieved. So, we had to be realistic and tone down our own expansion plans. But in the last two years, their production has increased dramatically. By October

> *This is an important turning point in Vaca Muerta, where the optimism has turned into reality. These producers invested heavily over the last five years and they have now found a way to produce oil at competitive costs*
>
> **Ricardo Hosel, CEO of Oldelval**

of last year, we were at full capacity, and implemented the 'Vivaldi project' which allowed us to increase capacity 25% by upgrading four pumping stations. But now we have reached full capacity once again, so the rapid growth of Vaca Muerta in the last 18 months has outstripped our ability to transport oil.

"This is an important turning point in Vaca Muerta, where the optimism has turned into reality. These producers invested heavily over the last five years and they have now found a way to produce oil at competitive costs. It takes longer to develop infrastructure than drill a well so they have taken us by surprise."

At present, with less than 10% of the deposit connected to pipelines, Vaca Muerta is producing 270,000 bpd. The race is now on to boost transport capacity. "When we were finishing Vivaldi, we knew it wouldn't be enough", says Hosel, "so we began Proyecto Duplicar, straight away. That project will help us get from 270,000 bpd to 450,000 bpd and will involve building 525 kilometres of pipeline from Neuquén to Puerto Rosales. We will also have to upgrade four pumping stations."
In addition to Oldelval's new pipeline, there are plans to restart the abandoned Trans-Andino pipeline to Chile, which could eventually take 115,000 bpd. Work has also begun on a new gas pipeline to carry 39 million cubic metres of gas per day.

What's surprising – given Argentina's international reputation for chaotic bureaucracy – is that after making the decision in January 2022, Oldelval has the permits in place, has completed the tenders and is already soldering some of the pipes. "Without doubt it helps that both the provincial and national governments realise the fundamental importance of this project", says Hosel. "Nearly all the capacity that we are adding will be exported and earn much-needed hard currency for the Argentine economy. That's what probably encouraged the national government to renew our concession past 2027 to 2037, which was vital if we were going to be able to sign the long-term 'ship or pay' type contracts with our clients."

The speed with which the $750million Duplicar Project is advancing is impressive but McKinsey estimates Vaca Muerta will need an extra $45bilion over the next ten years to achieve its potential. That's a big ask for a country that has burnt international investors many times in the past but industry insiders believe it will happen.

Hosel believes that Vaca Muerta will need more than $45billion but he is optimistic the money will arrive. "In the last year the government has realised it needs dollars for the country to grow. At present the biggest source of export earnings is agriculture. Hydrocarbons are in second place but it could overtake agriculture if we reach our potential. Last year Argentina imported $12billion of natural gas, but if we utilise the associated gas in Vaca Muerta we could become a major exporter. We can also become a much more significant oil and gas exporter."

Another believer is Alejandro Monteiro, Minister for Energy and Natural Resources of Neuquén province, home to Vaca Muerta. "What you need to remember is that unconventional oil and gas began in this country under the Cristina Kirchner presidency. That was when we had the contract between YPF and Chevron. Her populist left-wing government was replaced by the right-wing, market-friendly Macri administration. And despite having a completely different ideology, the support for Vaca Muerta continued. Anybody who comes to power in Argentina will want to support Vaca Muerta. The Argentine economy needs the export earnings, while our industrial sector can thrive on cheap energy and create jobs. What's more, the most difficult » part, establishing an industrial operation to extract shale oil and gas at competitive prices, has already been done. The different parties might disagree about how to do it, but they all want to develop Vaca Muerta."

We aren't trying to downplay the obstacles. "Of course, we have economic challenges that we must resolve", concedes Monteiro. "We need to create a regulatory framework that allows us to build long-term investment, for example an LNG compression train because those long-term investments can't be subject to the whims of national politics." Hosel agrees, noting that "what we need at a national level is stability, to give investors the visibility they need to make long-term commitments."

Clean oil

But this isn't just about the conditions that authorities in Argentina or Neuquén offer investors. Both Monteiro and Hosel agree that the incredible competitive advantages of Vaca Muerta will encourage investors to take risks.

"The last two years haven't been easy for the country – or the world – so an asset like Vaca Muerta that can solve the global energy crisis and help Argentina grow, can't be ignored", says Hosel.

"The 8% of Vaca Muerta that is producing so far is incredibly productive", says Monteiro. It ranks alongside Permian in the US and has more impressive output than other basins in North America. Another great advantage for developing Vaca Muerta is that it is counter-seasonal to the energy demand of the northern hemisphere. We will have surplus supplies in the precise months that you most need them. The other plus is that we don't have the geopolitical tensions you find in other major gas producers." Sadly, the war in Eastern Europe demonstrates how valuable peace is.

The Vaca Muerta story isn't just about volume – although that's what makes it globally significant – it is also about low-carbon, low-cost oil. When it comes to cost, a report from consultants McKinsey found that Vaca Muerta's technical break-even price for oil is $36.00 per barrel (BBL) and for gas wells is $1.60 per million British thermal units (MMBtu), both of which are in line with most US unconventional fields at $34.00 to $51.00 per BBL and $1.30 to $1.80 per MMBtu. "Higher local drilling costs in Vaca Muerta are mostly offset by higher well productivity, which is the result of higher initial production peaks and longer, sustained production levels."

The low cost structure will encourage investors because it means Vaca Muerta can remain competitive in an oil market downturn. Moreover, now that producers have resolved the technical

Community support and abundant water

Vaca Muerta is less susceptible to the environmental and social protests that typically hit large energy projects in Latin America...

"It helps that we have 100 years of experience with oil and gas", says Minister Monteiro. "Of course, people were worried about unconventional production at the beginning because it is a more industrial process with a bigger footprint that involves more people, chemicals, equipment and processing plants. The provincial government had an important role in regulating this new activity to make sure that it didn't have a negative impact. We also had to communicate well with local people to assuage their fears.

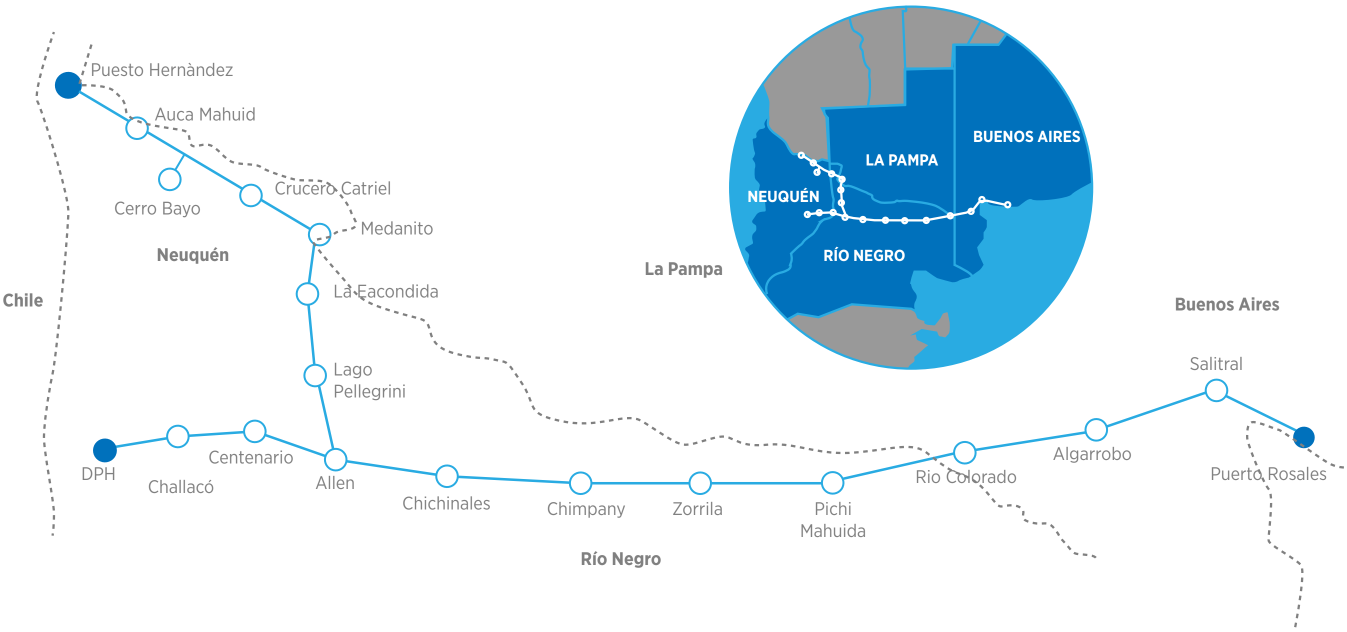
"But we aren't complacent. We know that the world needs clean hydrocarbons and we are pushing producers to increase the sustainability of their projects. Natural factors mean that oil produced in Vaca Muerta already has one of lowest ratios of kilograms of C02 emitted per barrel produced in the world. But we are encouraging the use of innovative technology to reduce C02 emissions further. When we reach the technical barrier, we will then ask companies to compensate for the C02 emissions created by their production. For example, we want carbon capture projects. "The C02 emitted affects the global environment, but we are also conscious about local impacts. Our water regulation is stricter than the US. We have better protection to ensure that the wells don't contaminate the water tables while we also monitor water levels. We are fortunate that we have Argentina's second-largest water basin. So even if we reach the rapid output expansion in our 2030 plan, the oil and gas industry will only consume 5% of the flow of River Neuquén."

From Neuquén to the sea

Expanding pipeline capacity will allow Argentina to export gas to the world...

Oldelval - the pipeline carrying 100% of Vaca Muerta's crude oil

Atlantic Ocean (Rosales Port) - Pacific Ocean (Otasa - Chile) Plaza Huincal Refinery



challenges, the huge resources of Vaca Muerta can be developed more quickly than offshore projects of a comparable size. Indeed one of the advantages of unconventional wells is that they have front-loaded production with high levels of output in the early stages that then tails off. That is ideal in today's market, where oil and gas investors are unsure about the long-term prospects for black gold and want a quick return on capital.

You wouldn't think it from the regular objections to 'fracking' in the UK but shale oil and gas can also be environmentally-friendly. As McKinsey explains, "Vaca Muerta's production processes have an oil carbon intensity of 15.8 kilograms (kg) of CO_2 per barrel of oil equivalent BOE, which is among the lowest carbon intensities for oil and gas operations worldwide—and well below the global average of 23.0 kg CO_2 per BOE." UK offshore oil for example, produces 24.2 kg of C02 per barrel.

"In addition", continues the McKinsey report, "shale oil from Vaca Muerta is within the lighter range of oils and has low sulphur content (less than 0.5%, compared with the typical 1.0% to 3.0%). This makes it easier to refine and convert into gasoline and therefore requires less complex refinery technologies. Exports of US light crude to Europe (primarily France, Italy, and the United Kingdom) and East Asia (primarily China, Korea, and Singapore) have also recently increased. Thus, it stands to reason that Vaca Muerta's oil could also be placed in these markets, given its similarity to US light crude."

Argentina has vast quantities of cheap, low-carbon light crude that will sell well in international markets. The only bottleneck to tripling production over the next decade is pipeline capacity and, so far, work on new routes has been surprisingly rapid. Neuquén is currently producing 350,000 bpd and with the different projects planned, it should be able to extract 750,000 bpd in 2025 and 1 million bpd by 2030. The projections for gas are just as exciting. State energy company, YPF is already exploring an LNG export project, while existing pipeline connections to Bolivia and Uruguay gives Argentine gas easy routes into the lucrative Brazilian market.

It is a rare good news story for both Argentina and battered global energy markets. As Hosel eloquently puts it: "I feel fortunate to be involved in the industry right now. Vaca Muerta has given a second life to the Neuquén Basin. All the other oil regions in the country are in decline but Neuquén is growing." And because development is being led by the private sector there are lots of ways for international investors to get exposure.

Meeting the **Decarbonization Challenge**

Published by: Dr. Katharina Beumelburg, Chief Strategy and Sustainability Officer, SLB

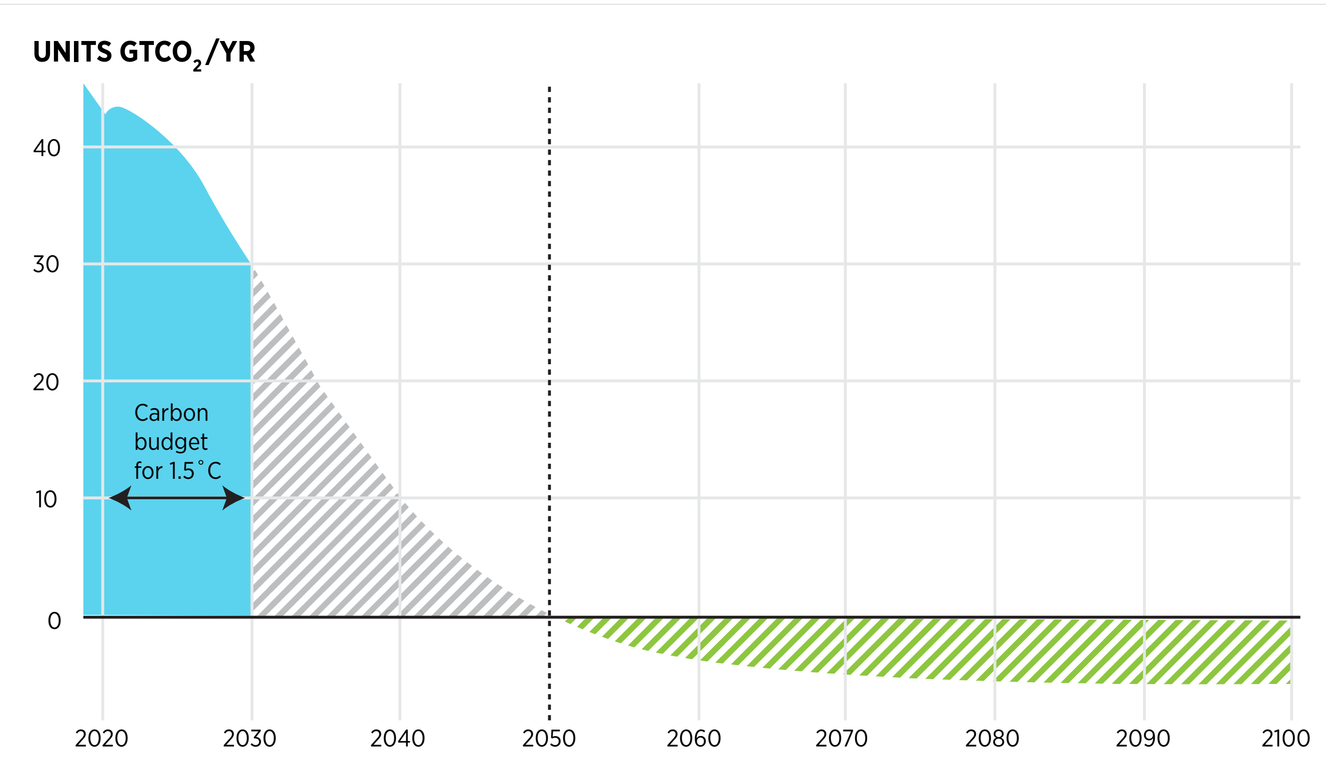
The challenge is here: the world's energy mix must transform into one that can continue to meet demand safely, securely, and reliably while decarbonizing for a lower-carbon future.

It's a tall order for our industry and world – and we can see it clearly when looking at the carbon budget curve:

This curve shows us three things:

- **Our carbon budget (blue)**. This is the number of emissions that is left to prevent global temperatures from rising above 1.5°C. A budget which, given the current pace of things, would be exhausted by 2029.
- **The carbon overshoot (grey)**. Happening between 2030 and 2050, this is the excess of carbon that will be produced outside of the limit set by the carbon budget – an excess of about 300 Gigatons of CO2.
- **Our goal for tomorrow (green)**. We must sustain net negative carbon actions long beyond 2050. Removing excess carbon throughout the second half of this century will require massive carbon capture and sequestration efforts and the determination to see it through.

In my view this curve is a compass, one that will guide us on our journey towards net zero. Most importantly, it means that we have to accelerate our progress and go further than carbon neutrality to become carbon-negative well beyond the 2050 mark.



Source: DNV, Based on IEA NZE (2050) and IPCC Temperature Mandate (2100)


Responsible oil production can live in harmony with nature

Sustainability and our strategy are linked and will guide us forward in our mission to drive energy innovation for a balanced planet. SLB is in a distinct position to lead the energy transition and our commitment is strong.

The carbon curve: The compass to SLB's mission and identity

Balancing the energy mix while balancing the climate is no small task, but it's one that creates opportunities.

So, what will it take?

Bold innovations, bold investments, and bold commitments. It requires a culture of action, an environment of collaboration and partnership, and a singular focus on making giant leaps.

At SLB, we're driven by the ambitious – and attainable – vision represented in the carbon curve. With our mission and the carbon budget curve at the center or our identity, we're ready to build a balanced planet together.

We have already embarked on this path:

- with our innovations to eliminate methane emissions with our end-to-end solutions business
- with our Transition Technology portfolio which is directly linked to our scope 3 targets and focused on reducing emissions of our customers' operations.
- through our sustainability platform, enabling hard-to-abate, heavy-emitting industrial companies to collect, measure, report and verify their sustainability data…accurately and efficiently.
- with our plans to implement breakthrough, exciting solutions in new energy and low carbon energy.
- Sustainability and our strategy are linked and will guide us forward in our mission to drive energy innovation for a balanced planet. SLB is in a distinct position to lead the energy transition and our commitment is strong.


People are at the heart of SLB's business

Can Ecuador help solve the **global energy crisis?**

If the former Opec member kickstarts stagnating oil production it would help ease supply shortages...

One unexpected winner from Russia's tragic invasion of Ukraine is Venezuelan dictator, Nicolás Maduro. The West's decision to sanction Russian oil left it scrambling to find a replacement. Unfortunately, that means cosying up to the likes of Maduro, whose country has the world's largest oil and gas reserves. The US sent a high-level delegation to Caracas in March, while French leader Emanuel Macron, recently recognised Maduro as a legitimate president. But while Venezuela's hydrocarbon reserves are massive, its production is pitiful. Years of corruption and mismanagement reduced its output by 80% and it now produces just 700,000 barrels per day.


Silvana Pastor, VP Finance and Administration, Gente Oil

That's even less than the UK. Moreover, investors are unlikely to put money into a country famous for expropriating private energy assets and imprisoning executives.

Instead, other Latin American countries with impressive growth potential will attract capital. One of the most beguiling is Ecuador. It doesn't have the massive, headline-grabbing discoveries like Brazil's pre-salt, Mexico's offshore or Argentina's Vaca Muerta, but its government recently announced an ambitious plan to double production to 1 million bpd, up from around 500,000 today. We spoke to some of the country's most important energy companies to find out if it can do it.

Northeast potential

At present, the vast majority of Ecuador's oil comes from the basins in the north-east of the country, deep in the Amazon jungle. Some of these fields have been worked for decades, while others are yet to be properly exploited. One thing that everybody we spoke to agrees on is that these supposedly 'marginal' fields have exciting production potential.

> **“When there was civil unrest in Ecuador in 2019 and 2022, we were protected by our local communities, who didn't want Gente Oil to be harmed**

Let's take Gente Oil, which has been operating the Singue Field for the last ten years, as an example. “Supposedly it was a marginal field but we are producing 4,000 barrels per day (bpd) with 16 operating wells, two water injection wells and the largest water treatment plant in Ecuador”, says Silvana Pastor, VP Finance and Administration, Gente Oil. “We have discovered almost 17 million barrels of reserves over the last decade.”

It is a similar story for a nearby producer, Orion Energy, says CEO, Carlos Fernando Emanuele. “It has been a very good year and Orion Energy was active in terms of drilling. We are in the second stage of a drilling campaign with three wells to go. Production is now at 5,000 barrels per day (bpd) up from 4,000 and we aim to finish 2022 with output close to 7,000 bpd. That will position us where we want to be. We haven't just increased production but also reserves thanks to sub-surface analysis that has allowed us to target areas that had previously been of secondary importance. Wells that were producing 60 bpd have gone back up to 600 bpd because of this new targeting.”

Another common trend in oil production in Ecuador's northeast is that it is cheap. Gente Oil's all-in operating cost is around $17 per barrel while Orion pumps at around $10 per barrel.

The most exciting part of the story is that these companies believe they could easily increase – even double – production. “We could easily double production", says Pastor. "We believe that we could find another 20 million barrels in the northern section of our field."

Emanuele also sees growth potential. "We still have more than 20 million barrels of 2p reserves that we want to develop, which gives us four or five years of potential investment within our existing assets. We can extend that by building up our exploration assets." One person well-placed to judge Ecuador's oil and gas potential is Ruth Zambrano, Managing Director for SLB in Ecuador, Colombia and Peru. "From a technical, reservoir evaluation perspective, Ecuador provides less exploration risk than anywhere else in Latin American onshore." The glaring question is: why, with high oil prices, are these companies holding back? We investigate some of the challenges below.

Infrastructure

One of the key bottlenecks for Gente is pipeline access, explains Pastor. "Our peak production was 8,000 bpd in 2015 but now production has declined to 4,000 bpd. The reason for the drop is that there was limited space on the local pipeline network, so we didn't have any way to transport the excess oil. Now Petroecuador and Petroamazonas have cut production, meaning that there is space on the Sote pipeline. However, we are reluctant to invest more in boosting our output because we aren't guaranteed space on the pipeline in the future.

"There is considerable spare capacity on the OCP pipeline", says Pastor, "but that is a heavy oil route and for the benefit of Ecuador and Gente Oil our high-quality, light oil should go through the Sote pipeline as it will get a higher price in the market."

The problem, says Emanuele, is that while there is spare capacity on the OCP heavy crude pipeline, transit on the secondary, inter-field pipeline is restricted. "It would be quite simple to increase capacity [on the inter-field pipeline] because you just need to upgrade the pumping stations. However, that pipeline is owned and operated by the government. And because the state is fiscally-constrained there is no money available to improve the pipeline. If the contracts allowed oil companies to benefit from price upside, then they would invest in pipelines to bring more to market." The positive news is that the inter-field pipeline is simple to fix with the right incentives. While the difficult challenge – the massive pipelines that bring production to the coast – has already been solved. "OCP is a 485-kilometre-long pipeline built twenty years ago to help Ecuador develop its reservoirs of heavy oil in the Amazon", explains Jorge Vugdelija, Executive President, OCP Ecuador. "There was already an existing, state-owned pipeline, called Sote, but that transports light oil, while OCP was designed to carry heavier crude with a low API."

"OCP Ecuador has been successfully operating the project for 19 years, meaning that we are nearing the end of our current concession. The volumes of oil haven't matched the expectations of when the pipeline was planned, yet OCP has still played a vital role in getting that oil to market, as it would have been stranded in the Amazon otherwise. We are currently transporting 150,000 barrels of oil per day (bpd) but we have a capacity to carry 450,000 bpd.

"The crude we are currently transporting is heavier than originally anticipated but we have adjusted the pipeline to deal with that. The spare capacity means Ecuador can support extra oil and gas production, but that requires investment from oil companies."

"It is well known that this government wants to double Ecuador's oil and gas production", says Vugdelija. "OCP is part of this value chain and a strong pipeline will help to encourage the E&P companies to increase production, as we can bring their oil to market. There is a singular know-how that we have developed in OCP Ecuador after almost two decades of operating the pipeline. We continue to push ourselves to the best national and international standards, which is why you see us committing to initiatives such as the Global Compact, ISO 50001 and the Ecuadorian Prize for Quality and Excellence. We always challenge ourselves to improve and that is just as important as the investment we can deliver.

"We also offer incredible value for Ecuador. Since the beginning, OCP has given the Ecuadorian state a preferential tariff of $2.14 per barrel. According to a benchmark study, it is the cheaper tariff in the region, Moreover, if the flow of oil increases our tariff drops even further."

Contracts

So far the Ecuadorian story seems very positive. Its established oil and gas province in the northeast has incredible exploration potential and is well served by pipelines. So what more needs to be done to double production? "Unfortunately, here the risk doesn't come from the sub surface but from above ground", says Zambrano. "As an Ecuadorian I passionately believe that if we don't unite as a country to achieve this common goal of increasing production, and producing as much oil as we can in a way that is safe for the environment and communities, then we are losing a big opportunity. This isn't 'easy oil' but it can be brought to the surface with investment and advance technology. Some of the large fields like Sacha will need exploration technologies, the others will need very little, but this is »

> ***We are open to partnering with a larger player that would benefit from our knowledge of the geological conditions in Ecuador's north east***
>
> **Carlos Fernando Emanuele, CEO, Orion Energy**

the 2020s, not the 1970s, so we need to invest in technology that maximises output while minimising the impact."

We can split above ground risks into two parts: contracts and communities. In this context 'contracts' refers to the legal and business conditions created by the Ecuadorian government for oil and gas companies. While 'communities' refers to the social acceptance of the industry. First let's look at the legal and business environment.

"The fundamental issue is the politicisation of oil and gas, which is the most important industry in this country", says Pastor. She speaks from experience, with Gente Oil recently winning a long-running legal case that was brought against it by the Ecuadorian state. "Cases such as ours dissuade potential investors from coming to the country. Unfortunately, the state controller doesn't understand the hydrocarbon business, so it pursues legal cases that paralyse progress."

Aside from specific legal disputes a more general problem is the type of participation that Ecuador offers oil and gas companies. "The last big increase in production came in 2012 when production sharing contracts were introduced and attracted international companies to the sector", says Pastor. "That saw national output increase to 500,000 bpd from 400,000 bpd. But subsequent contract changes made the sector less attractive. Also, the mid-level bureaucrats in the key institutions are nervous about being sued by the controller of the state, so they don't approve any new initiatives. The constant rotation of ministers doesn't help either. Indeed, I believe the Minister of Energy and Mines should be split into three separate ministries: one for mining, one for electricity and one for oil and gas. These aren't problems that [president] Lasso created, because they predate him. However, he has proved unable to solve them."

Emanuele agrees with Pastor. "The main problem is the current contract model. It isn't directly connected to the oil price, so it doesn't create an incentive to increase investment when the price is strong. In Orion's case we have recouped all of our IOUs and carry-forwards etc, so our service fees are capped at their current level. By producing more oil we can dilute our fixed cost structure, but we aren't benefiting from the higher oil price.

"Because we have very low all-in operating costs at around $10 per barrel then it makes sense for us to invest in increasing production", says Emanuele. However, operators with more mature assets will have higher costs because of secondary recovery. Moreover, our average water cut is 60%, while some other firms have ten times more water than oil flowing from their wells. Water is good because it provides energy for the reservoir but it costs money to treat and manage. So, these higher cost producers need to be incentivised by exposure to the price upside if they are to invest in increasing output. The overall government target to double production makes sense but it can't happen with these contracts. We haven't seen much progress is migrating these service contracts to production sharing contracts (PSCs)."

Communities

In June 2022 Ecuador was rocked by protests. In theory led by indigenous groups, the protests also contained a wide range of radical elements. They closed roads, blockaded cities and attacked mining and oil and gas infrastructure. Eventually both sides agreed to settle their differences through dialogue workshops that hammered out agreements. One concession the government made was to abandon Executive Decree 95, which had been intended to boost the oil and gas industry. Emanuele is sanguine about the decree being revoked. "The executive decrees for oil and gas and mining were macroeconomic guidelines that set out the government's priorities in these sectors. But they didn't give the government any special powers that it doesn't already have enshrined in law."

Pastor believes social programmes can mitigate community challenges. "We work closely with 14 communities and have never had any social protests. When there was civil unrest in Ecuador in 2019 and 2022, we were protected by our local communities, who didn't want Gente Oil to be harmed.

"Because we understand the communities' realities and needs, we realise that it isn't them causing the problems. Rather it is the politicians trying to manipulate them. We have built a school, a medical centre and a potable water system for the people in our area. We give them jobs in the field, in maintenance or in security. We support their projects, as long as they are environmentally-friendly. I would love to see an oil and gas university in the Amazon, so local people could work and we wouldn't need to bring people in from the cities."

Indeed, one positive aspect to come from the protests may be increased scrutiny on the generous funding that oil and gas companies give the communities. "We pay 12% of net revenues plus 4% or a minimum of 2 dollars per barrel to the local communities", says Emanuele. It's a massive amount of money, for example last year it came to $650million, but sadly most of it never reaches the people who live around the oilfields. Instead, it accumulates in funds before being used by central government in the national budget."

Few Ecuadorians realise the huge indirect economic benefits the industry brings them. For example, when OCP was built almost 20 years ago it had a hugely positive impact says Vugdelija. "At the time it was Ecuador's largest-ever private investment and many economists believe that the inflow of international capital for the $2.5billion project helped to stabilise the country's dollarisation. So, from the beginning, OCP has a been a strategically-important project for Ecuador."

Will it double?

Oil has done a lot for Ecuador but it could do much more. SLB's Zambrano believes "this government's aim to double oil production is excellent" and highlights the upcoming *Intracampos* round as an exciting initiative. "The second *Intracampos* round offers concessions in the mature oil basins. In addition, one of the country's crown jewels, the Sacha oilfield will most probably also be put on auction to capture private investment. In total, the concessions up for offer could potentially add 100,000 barrels per day to Ecuador's oil production."

"We are interested in *Intracampos* because it is a better contract being offered", says Emanuele. "The great thing about those opportunities is that they have a very short time to market. They are close to existing infrastructure - indeed there is one neighbouring block on offer that we could drill from our existing well pads. It's a production sharing contract, which is great because it gives you that upside potential." Orion Energy could be an ideal partner for an international peer looking to enter Ecuador. "We are open to partnering with a larger player that would benefit from our knowledge of the geological conditions in Ecuador's north east. We will definitely be active in the *intracampos* rounds."

"There are lots of opportunities in the mature and marginal fields of north-east Ecuador and they are relatively simple, low-cost plays", says Emanuele. "But if the government wants to really double production, then it must open up the south-east of the country. That likely holds lots of oil but it will take time and investment to develop as you need to conduct the exploration, build the supporting infrastructure and obtain new environmental permits. As a result, it needs to be developed by larger companies than are currently present in Ecuador."

"This government talked about doubling oil and gas production and that clearly won't happen", says Hassan Becdach, President of HJ Becdach and a 40-year veteran of Ecuador's extractive industry. "Part of the problem is the opposition from indigenous communities that only make up 7% of the population but have a veto over national energy projects.

The second *Intracampos* round in the northeast, opening-up the southeast and potential offshore deposits all offer ways for Ecuador to boost its reserves and production. Until now local political pressures have stopped the country from making the most of its incredible hydrocarbon resources. However, external pressures, such as an energy crisis that increases demand for low-cost, geopolitically-reliable oil, may finally encourage the country to do so. ■

Can we produce clean oil in the Amazon?

Oil production in the rainforest has come under attack but with modern technology it can be cleaner than the alternatives...

The Amazon rainforest is the world's most important asset in the fight against climate change. It has the potential to act as the planet's lungs, inhaling C02 and breathing out oxygen. It stores immense amounts of carbon and is the most biodiverse ecosystem we have. As a result, most people – and definitely this magazine – don't want to see any environmental damage to happen to the Amazon.

But the Amazon biome is such a large area – it is roughly the size of the 48 contiguous US states – that it is unrealistic to expect Latin America to maintain it as an untouched paradise for the benefit of foreigners. Moreover, the millions of people live in low-income communities in the Amazon would benefit from the responsible development of its natural resources. Unfortunately, recent history is littered with examples of irresponsible mining, logging, farming and energy companies that damaged the Amazon in the pursuit of profits. But over the last few decades a new generation of environmentally-responsible projects have shown it can be done.

Environment & communities

The largest natural gas project in the Amazon is the Peruvian Camisea operation which produces 1.6 billion cubic feet (bcf) per day of natural gas and 90,000 barrels per day (bpd) of liquids, around half of which is liquified petroleum gas (LPG). Yet despite its size and sensitive location, the project has been designed so that its impact on the jungle is minimal, explains Martin Grisolle, General Manager of Hunt Oil Peru, which is part of the Camisea Consortium. "Our main base in the jungle is only accessible by river or by air. And from that base, we send helicopters to our various wells. We are not connected by road, because when you build roads into the jungle you find that illegal miners or loggers invariably follow and cause environmental damage. We transport our natural gas by one pipeline and our NGL by another, which minimises the impact we have on neighbouring communities. Trucking the gas out from there would be a nightmare because we would have a negative impact on so many lives."

Using helicopters or pipelines to reduce environmental or social impact is a wise approach. But "it's important to realise that social and environmental concerns often overlap", says Jorge Vugdelija, Executive President, OCP Ecuador – a 485 km-long pipeline that transports oil from oil wells in the Amazon. "For example, earlier this year our pipeline suffered a rupture. It was caused by a natural disaster, with rocks falling on the pipeline. Despite the fact that it wasn't our fault, and clearly a force majeure, we took responsibility for fixing the problem. We spoke to Ecuadorians at all levels, from community meetings to the authorities and reassured them that OCP Ecuador would resolve the issue. We hired local workers to help with the clean-up, which was a wonderful way to generate economic development from a negative incident, and I am pleased to report that we are very close to finish the remediation task.

Currently we are working in the reforestation of what we call the zero zone, and we are doing it with the help of the team of National Park Rangers."

The benefit of having an energy company in the area is that it can help Amazo-

> *The society that we are part of has decided about the future of energy, we can't be reactive, rather we should be driving the change*
>
> **Jorge Vugdelija, Executive President, OCP Ecuador**

nian communities deal with challenges they face. For example, some communities in OCP Ecuador's footprint have been impacted by a new phenomenon of regressive erosion that has nothing to do with the pipeline. "It has already caused the San Rafael waterfall to disappear and the river level is dropping as the erosion changes the shape and depth of the river bank. It is something that we are monitoring closely and – although it is not our legal responsibility – we will help the villagers cope with the consequences."

Technology

The general public doesn't realise the progress that the energy industry has made in environmental sustainability, says Ruth Zambrano, Managing Director for SLB in Peru, Colombia and Ecuador. "Back in the 1970s the way things were done left a poor image of our industry mainly due to using practices that are no longer what the industry uses today. Ecuador is investing in 'green oil' and SLB is an example of that. We invest in technologies that are more efficient and emit less CO2. I believe that if European investors are concerned about this, they should put their capital to work in companies that are trying to produce the cleanest oil possible."

One exciting example of how technology can help is in Ecuador, says Zambrano. "Here in Ecuador, ITT is a controversial oil block because it is in a nature reserve. But now our extended reach directional drilling means that we could access that oil without stepping foot inside the national park. SLB has drilled horizontal wells in Russia that are more than 10 km long, so it could be a great solution for extracting oil from environmentally sensitive places."

As a global technology company, SLB has various solutions to minimise the impact of energy production on the environment. "We are constantly working to reduce our emissions", says Zambrano. "For example, in the jungle of Ecuador we are field testing electric vehicles that would allow us to switch our existing fleet of pickups and small busses. We also have six technologies that have been certified under Ecuador's 'green dot' system."

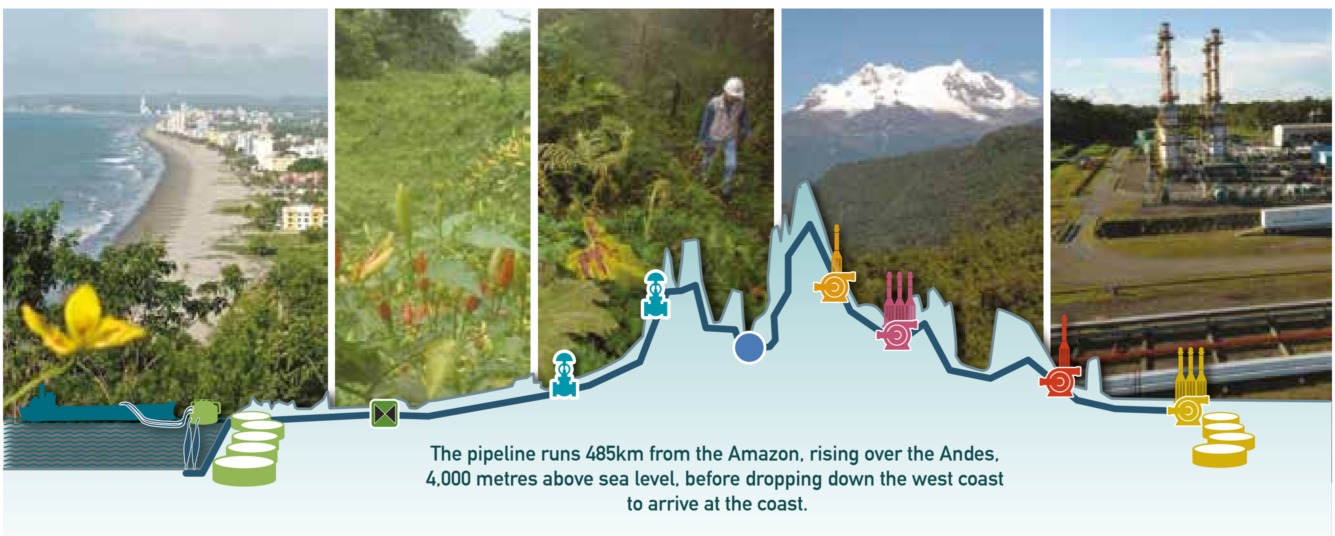
Silvana Pastor, VP Administration and Finance, Gente Oil, agrees with Zambrano that technology is the solution. Indeed, Gente Oil has invested in the largest oilfield water treatment plant in Ecuador. "We are very proud of the water treatment plant because it produces clean water that we can reinject into the well with zero environmental risk. That's especially important because 98% of the liquid that flows from our wells is water.

Another aspect that is misunderstood is the stringent level of local regulations – especially for large, formal operations like oil and gas companies. "When it comes to the environment, we operate under strict controls", says Pastor. "We can't contaminate the rivers, we must limit our noise levels and constantly demonstrate that the flora and fauna isn't affected by our operation. We have never had a single oil spill in the last ten years and we reforest our working areas with native species of vegetation."

Those of us sitting in comfortable offices in the UK probably wish the Amazon rainforest could be sealed off and preserved as an idyllic natural paradise. The reality is that humans have sought out Amazon's riches for thousands of years and, as the world population grows and we fight climate change, pressure on the forest will increase. Investors can help by allocating capital to companies that extract those resources responsibly, while Latin American governments need to clamp down on those that don't.

The OCP Route - from the Amazon to the sea

OCPECUADOR



We sit down with

Marcela Hernando,

Chile's Minister of Mining, to find out how the copper and lithium powerhouse will save the planet...

LatAm INVESTOR: ***The world needs copper for the energy transition yet mining is a major source of C02 emissions; how will you mitigate the environmental impact of the Chilean mining industry?***

Minister Hernando: Mining is a key activity for fighting the climate crisis that we are living. We need strategic metals, such as lithium and copper, to advance in clean energy, switch to electric transport and for the next generation of telecommunications.

That's why the mining industry has been taking important steps in to become more sustainable, using alternative renewable energy to lower its carbon footprint. In 2025, 62% of the power consumed in the mining industry will come from renewable energy, up from 44% in 2021. That will help to reduce the sector's carbon emissions.

Water use is another key impact of mining. In Chile miners have been using desalination plants or recycled water to minimise the industry's water use. We hope that by 2032 seawater will represent 68% of all water used by the copper mining sector in Chile. We are also exploring how green hydrogen can help us decarbonise mining by replacing the use of diesel in heavy transport, such as the giant mining trucks.

This government, the Chilean state an the mining sector is committed to a more sustainable mining industry that enjoys stronger dialogue with the communities. To do that we need to work together, involving the private sector, public sector, academics and civil society.

LAI: ***Chile has enormous lithium reserves; how will you increase production?***

MH: Chile has some of the world's largest lithium reserves and its output is the second-largest in the world. This high production is down to the advantages of having lithium naturally present in an aqueous solution that we find in the brine extracted from the Atacama salt flat, which is made up of more than 90% lithium carbonate. Chile's production will grow in two ways. On the private-sector side we have SQM and Albermarle, two private companies that extract the lithium from government concessions using the latest, cutting-edge technology.

But the government of president Gabriel Boric, has also created an integrated public policy for lithium and salt flats based on three pillars. The first is how to balance exploitation of this asset with respect for the environment and communities. The second is to create human talent for the state by establishing the Institute of Investigation into Lithium and Salt Flats. The third is the creation of a national lithium company, that will not only explore for and produce lithium but also manufacture it. This is unprecedented and will boost production while adding value with new methods of more efficient and environmentally-friendly extraction.

LAI: ***Chile has witnessed political instability since 2019; how will you attract foreign investment to the mining sector?***

MH: Chile is a young nation, but with a republican tradition that maintains our robust institutions. After the protests Chile began an inclusive journey that led us to discuss our 'carta magna' as a society.

I can tell you that during these months of the government, we have received 13 ambassadors, various international organisations and more than ten foreign companies that have all been positive about the changes that Chile is living. Indeed, all of these visitors want to live in London. This is down to the long history we have as a country that respects institutions and resolves its political differences in a democratic manner.

I am proud to say that today we have more than 25 international agreements that give us double taxation with 64 countries. This shows that Chile is a country that is open to investment, reliable and has a positive growth trajectory. So we we will welcome responsible investment from around the world.

LAI: ***Are you worried the proposed tax reform will discourage international investment in Chilean mining?***

MH: Our government's fiscal reform has various aims. One of them is mining and applies a royalty that is being discussed in Congress. We are a mining country where the citizens demand the country's natural riches are shared with fair distribution. On the other hand, the mining associations and some individual companies have declared their willingness to contribute more to the necessary social changes that our country needs. Really, the only differences are about what model to use and how far we should go – and that's what will be discussed in the Senate.

MH: Fighting climate change demands we switch from fossil fuels to a renewable-based energy matrix. In both these cases it is necessary to store the electricity produced and then despatch it. That means the world needs lithium for storing electricity and copper for transmitting it.

Chile has got abundant reserves of both these vital metals. What we need to do is start manufacturing with them. We need to integrate ourselves in global value chains and move past being simple miners. That's why President Boric is pushing for greater investment research and development.

When it comes to copper, among other measures, the idea is to strengthen value to the lithium carbonate that we produce. Of course, we don't want this to be a closed enclave but open so that our engineers, scientists, entrepreneurs, technicians, SMEs, workers and national companies can all be involved. This way it adds value while transferring the technology and know how needed for us to develop EV expertise.

LAI: ***What is the vision for the Chilean mining sector for 2030?***

MH: We want mining to be an example of productive activity, defining new economic roles for our natural resources. We want to grow past the simple extraction of minerals and add value by betting on a just social-ecological transition that is centred around the com-

> ***Chile is a young nation, but with a republican tradition that maintains our robust institutions***

So far we don't perceive any disincentive for investment. Indeed, we have a portfolio of active projects that are due to be completed by 2030, which has 51 potential mines worth $60billion. So far. $14biillion has already been invested, so mining companies seem keen to advance in Chile.

LAI: ***The transition to electric vehicles is an opportunity for Chile to become a 21st century leader; how will Chile add value to its copper and lithium?***

Chile's smelting capacity with the construction of another foundry with high environmental standards. That will boost our production of copper fines.

When it comes to lithium, it is vital that we become part of the value chains for ion-lithium batteries. We need to involved in at least the first stage, for example cathodes and anodes. That is one of the objectives of the National Lithium Company. As it has access to the resource it can make public private partnerships with tech companies that establish themselves in Chile to add munities. That involves reducing C02 emissions and the mining industry's environmental impact.

Chile should be fundamental in the transition to clean energy and for that reason it is vital to increase our smelting capacity. On the other hand, we are betting on strengthening small and informal mining by giving it the state help it needs to develop. This is the commitment of the government and our compass is also pointing at increasing the inclusion of women in the industry.

Renewable **Superpower**

Latin America has the greenest grid on the planet and potential for plenty more clean energy projects but investing in the theme isn't for the impatient...

Any way you look at it, Latin America is a green leader. The only country in the world with a 100% renewable energy grid is Costa Rica. Two of only three carbon negative countries in the world are Latin American – Panama and Suriname. Most of the world's copper and lithium – the most important energy transition metals – are found in Latin America. Brazil is the planet's second-largest producer of both hydropower and biofuel, while Chile's Atacama Desert has the highest level of solar radiation on the planet.

Of course, it is easy to pick out extreme examples, but Latin America still impresses with its averages. For example, around 50% of the region's electricity comes from renewable sources, far higher than the global average. Even when you look at total energy demand, which takes other consumption, such as car journeys and industrial use, into account Latin America still does well. According to an OECD report, renewable energy resources represent 33% of its total energy supply compared to 13% globally.

But despite Latin America's strong clean energy position, there is still massive potential for new projects. That's because the bulk of Latin American renewable energy today is provided by hydroelectric power. Yet – and this is partly down to climate change – rainfall across the region is becoming more erratic. As a result, various countries across the region are expanding their solar and wind generation capacities. We look at some of the most exciting opportunities below.

> **2022 saw the hottest summer on record in Europe, with terrible wildfires. Those types of environmental emergencies will keep the pressure for more ESG investment**

Alfredo Mordezki, Head of Fixed Income, Latin America, for Santander Asset Management,

Putin derails transition?

Some analysts worry that Russia's invasion of Ukraine, which saw European renewable advocates, such as Germany, turn coal-fired plants back on in a bid to maintain energy security, will stop the energy transition. Yet Alfredo Mordezki, Head of Latin American Fixed Income for Santander Asset Management, believes any delay will be temporary.

"The long-term trend is still there. At COP26 last year it was clear that there is political motivation to make renewables a much higher percentage of the energy matrix. Indeed, Latin America is already a leader in this regard because it benefits from a huge amount of hydro built in the 50s and 60s. That means the electricity matrix is already over 50% renewable in many countries. For example, the power grid is more than 50% renewable in Brazil, Colombia, Uruguay, Peru and Ecuador. Chile and Mexico are notable exceptions, although a pipeline of projects that are planned in Chile will make the matrix a lot greener in the future. As for Mexico, for the last century it has relied on its major discoveries of oil.

"The starting point for Latin America then is that the matrix is already quite clean. That said, the potential for additional solar and wind is enormous, so the grid can be made even more renew-

The Atacama Desert is also home to wind farms

able at low prices. That is the logical direction of travel, though we will see different countries move at different speeds. Chile has a well-established energy transition law, while Colombia has made great strides in renewable energy over the past few years. The war causes a distraction from the energy transition but it won't derail it. I think COP27 will be a wake-up call, where people realise how far they have deviated from the spirit of COP26.

"But the pre-war ESG trend will prevail again. 2022 saw the hottest summer on record in Europe, with terrible wildfires. Those types of environmental emergencies will keep the pressure for more ESG investment."

Martin Vogt, CEO of MPC Energy Solutions, a Latin America-focused renewable energy firm believes the disruption caused by the sanctions against Russia will accelerate the transition in the region. "The US is now exporting massive amounts of LNG to Europe, which has driven up prices for Latin American buyers. Even in the US we saw the cost of natural gas go from $3 per BTU to $9 per BTU. If you look at El Salvador, where a 300 MW LNG plant has been built, you see prices went up significantly. Most of these countries didn't have long-term supply contracts in place so the cost of importing quickly became more expensive. Jamaica and the DR are other examples of small markets that have suffered tremendously.

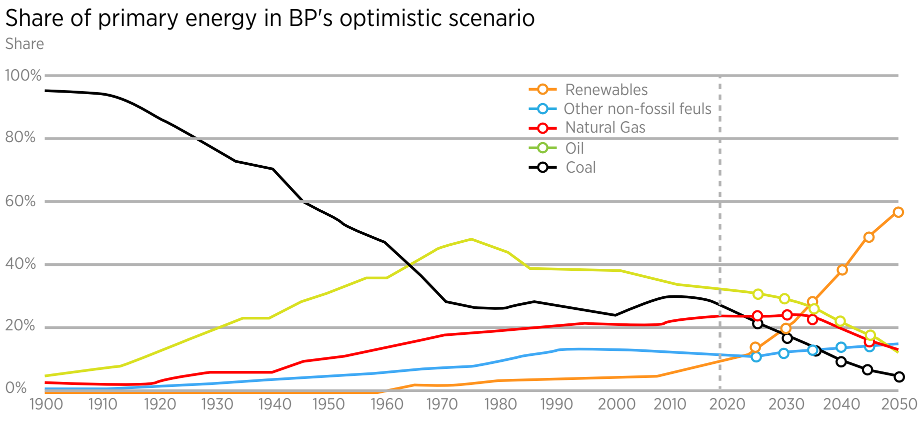
"Some countries in the region bet big on replacing diesel with LNG because it was cheaper. But now they have seen that when there is a crisis the world's limited LNG supplies will go to other markets. So that is a big boost for renewable energy because governments see that natural gas is not the Holy Grail. Coal users also suffered. Germany began importing huge amounts of coal from Colombia, which increased the price for local users by 400%. Renewable energy has emerged as the only way to get away from expensive import dependencies and exposure to geopolitical shocks like the Russian invasion."

Investing woes

Latin America is already a renewable leader and has potential for more projects but that doesn't guarantee investors in the theme an easy ride. In addition to heading Santander Asset Management's fixed income team in Latin America, Mordezki also manages a regional ESG fund. It has had a tough 12 months.

"The building blocks of the fund's performance are bonds", explains Mordezki. "When we launched in February 2021 the yield of the portfolio was 2.7% - it is now 6%, which means the price has fallen and our performance has been bad in absolute terms. This is because the rise in risk-free rates of US Treasuries. The stock market and treasury market suffered, and we did too. So far »

Changing nature of global energy markets: more diverse energy mx, increased competition and greater customer choice



Source: BP

this year, emerging market bond funds have seen outflows of $80billion. In the 25 years I have worked in the market I have never seen that level of outflows – so it has been a tough market."

But it wasn't all negative, says Mordezki. "One positive step we saw this year was that the SEC now requests further disclosure for ESG accounting. That will impact some of the Latin American names listed in the US. If you look at what in Europe we call "Article 8 ESG funds" – those that take ESG factors into account in security selection – we have seen $30billion of outflows this year. But ultimately these are vanilla funds made of up of equities and bonds, both of which did badly during the sell off. But if you look at European "Article 9 ESG funds", which are a lot more ESG-dedicated, there you see that inflows increased. The investors in those types of funds are more committed and patient to the ESG movement. The typical investor might be a Northern European pension fund; not a Latin American high-net worth individual, so the approach to impact/financial return is different. An institutional investor with a focus on ESG is not going to suddenly jump into coal because it is having a good year."

That means the more dedicated ESG investment vehicles should see greater investor loyalty. "Investors in Article 9 Funds will be prepared to ride out delays or underperformance because there is a clear environmental purpose attached to the investment. If the ESG strategy is not clearly shown and the ESG benefits aren't obvious then investors may lose patience when the market falls."

After seeing the share price of MPC Energy Solutions, which listed in Oslo last year, fall by two-thirds, Vogt empathises with Mordezki. But he is sanguine about stockmarket movements. "When you are a small company in a growth segment you live by your quarterly statements. But as a long-term infrastructure play you can't translate success into quarterly statements. Also, the environment this year, with the Federal Reserve and other Central Banks raising interest rates hit a lot of stocks, including us.

"When you are in a hard asset sector like renewable energy and in emerging markets then the increasing dollar strength and rising interest rates are going to hit you. Investors become more cautious about allocating capital. And because we are a company whose shares have low liquidity - with 60% of our stock held by five shareholders – then small orders can have a big impact on our share price. But we are not too worried about the share price at the moment because our long-term shareholders understand that we are achieving our objectives."

Attractive markets

For those investors whose primary concern is fighting climate change – not short-term movements in the share

MPC Energy Solutions' Los Santos solar plant in Mexico is part of a wave of solar projects across the region...

price – Latin America is full of opportunities. Ecuador is a pretty good example of the trends shaping renewable energy in Latin America. It has strong hydro resources but is now exploring other technologies. “Ecuador has incredibly cheap energy costs”, says Hassan Becdach, President of HJ Becdach, an Ecuadorian natural resource consultancy. “We are the second-cheapest in the Americas, just after Paraguay.

Moreover, our grid is 80% renewable. However, one problem we have is the Chinese-built hydro power plant Coca Coda Sinclair, which produces 40% of our renewable energy. It has lots of technical flaws that need to be fixed by the constructor. We have potential to do even more with solar and wind but the right conditions need to be created for investors. It helps that the cost of these alternative renewable energy technologies is coming down fast.” So a responsible wind or solar producer, ready to develop projects in-line with international best practices will be very welcome in Ecuador.

Vogt believes that MPC Energy Solutions’ relatively small size – its market cap is around $350million – allows it to “cherry pick” the best opportunities. “If you are a multi-billion dollar corporation you have to go for the massive volume markets like Brazil, Mexico and Argentina. But we can be more selective. The three factors that we consider are: counterparty; currency (because the US dollar is our functional balance sheet currency) and political exposure.

By working across a range of niche markets we can increase our diversification for those three factors. That’s why we like Central America, the Caribbean Islands and the smaller Andean countries, like Ecuador. In general, we prefer markets that offer US dollar contracts, so in Jamaica, the Dominican Republic and St Kitts we earn in US dollars. We also look for long-term PPAs with a strong counterparty. For example, in El Salvador our off-taker is a subsidiary of AES.

“In El Salvador you have a government that is committed to the energy transition. Colombia is another preferred market because we have seen immense renewable progress in recent years and the size of the country allows us to build a pipeline of projects. There are also strong off-takers in Colombia. The only downside is that we have exposure to the Colombian peso, but you can’t have everything. The Dominican Republic really seems to be in a sweet spot for international investors. There are a lot of international companies that have recently entered the market – for example Total Energies has just committed to a 100 MW renewable energy project. The DR economy is very stable, you have big local banks and great renewable resources. We have also started to see some progress with Panama, which had made some early steps with wind and solar but now looks more attractive.”

As Vogt notes, the attractiveness of each investment opportunity depends on the criteria of the investor. But underpinning them is a robust regional economy. “Latin America has got an attractive macro environment with most countries outperforming the GDP expectations at the start of the year”, says Mordezki. “If you take the regional retail market, companies have more pricing power than their US peers, so the current rise in inflation did not hurt their margins that much.”

We live in an era of corporate greenwashing, where everyone from airlines to zoos are keen to demonstrate how environmentally-sustainable their businesses are. But those nice PR statements contrasted with a ruthless market sell-off this year that wiped value off energy transition investments. That might seem like a massive contradiction but it’s just a question of timing. Capital markets react to short-term events while the renewable energy transition is a long-term trend. Investors with a mandate that allows them to ride out market turbulence will find exciting investment opportunities in Latin America.

“

Renewable energy has emerged as the only way to get away from expensive import dependencies and exposure to geopolitical shocks like the Russian invasion

Martin Vogt, CEO of MPC Energy Solutions

The future of **Colombian oil**

The world needs Colombia's clean, reliable hydrocarbons to power the energy transition...

Colombian oil was one of the most exciting investment stories of the first decade of the 21st century. The country managed to double oil production between 2004 and 2014, reaching 1 million barrels per day (bpd) during a period of high prices. The oil bonanza sparked a golden decade for Colombia's economy, whose GDP overtook Argentina's to become the third-largest in Latin America. The economic growth lifted millions of Colombians out of poverty and persuaded international investors to fund a much-needed infrastructure programme.

But in the last few years, Colombia's oil production has slipped, and is now under 800,000 bpd. In theory, the current strong prices should encourage producers to increase output but the arrival of a new 'anti-oil' government could act as a strong disincentive.

On the campaign trail, new Colombian president, Gustavo Petro, talked about ending the oil industry, and in office he has proposed a tax reform that would seek to raise more than $2billion from oil and gas companies in the country. National oil company Ecopetrol, which is listed on the NYSE and generally regarded as one of the best-run NOCs in Latin America, has warned that the reform could result in the country's oil production falling 100,000 bpd by 2026. The danger for Colombia is that this sends a heavily-indebted country into a balance of payments crisis. The threat for the world is that we will be denied Colombia's clean hydrocarbons. As noted elsewhere in this report, Colombia's onshore oil emits less C02 per barrel than the global average.

Andres Ocampo, CEO of GeoPark, a Latin America-focused oil and gas producer that produces 80% of its oil in Colombia, believes that the industry is a natural ally of the Colombian government. "The Colombian government is GeoPark's largest stakeholder. We have invested $1billion in capex in the country and plenty more including opex." Ocampo concedes that it can be difficult to persuade people to work with an oil and gas company but insists that the way to do so is by having a positive social and environmental impact.

Fuelling the transition

"For example, if we have to intervene an area to drill a well, we will compensate by replanting an area 13-times larger. Over the last 18 months we have invested heavily to connect our operations to the electric grid of Colombia, which is almost 70% renewable. That allows us to reduce our emissions significantly. The next big step we are taking toward achieving our targets is a 10 MW solar farm that will generate clean electricity to power our operations. We invest our returns in improving our footprint. We know that hydrocarbons will continue to be humanity's main source of energy for many years, but we are constantly working to reduce our environmental impact."

Colombia has great renewable potential, says Martin Vogt from Oslo-listed renewable firm, MPC Energy Solutions. "Colombia is a preferred market because we have seen immense renewable progress in recent years and the size of the country allows us to build a pipeline of projects. There are also strong off-takers in Colombia." But it will still be decades before the country can obtain 100% of its energy from renewable sources.

Ocampo believes that investors shouldn't worry too much about some of the headlines coming out of Colombia. "Risk is a relative matter. When you look around you realise that things aren't so bad in Latin America. GeoPark was born and raised in the region and investors often challenge us about Latin America being a tough place to operate because of social and regulatory matters. Yet, as our founder James F. Park, likes to say: 'try drilling an oil well in California'. We believe that Latin America has the perfect conditions for the hydrocarbon industry but also to play a key role in the energy transition. It is a region rich in energy, both fossil fuels and renewable energy."

The global energy crisis is an opportunity for Latin America to boost production and be part of the solution. Colombia, and the other countries featured in this report, have incredible natural assets that can provide secure, low-cost energy to the world. The governments in these countries need to create the right frameworks to attract the investment needed to make this happen.

Can Peru **ease the energy crisis?**

Peru already exports LNG to Europe and has the reserves to send more but political obstacles could block the way...

Peru is well-known for its mineral riches but few investors understand its energy wealth. Thanks to abundant water and gas resources it enjoys a low-cost, low-carbon electricity grid. That green power network runs a mining industry that plays a key role in the energy transition by exporting future-facing metals such as copper and zinc. Peru also supplies Europe with natural gas – a low-emission fuel that is key to maintain energy security while we transition to renewable energy. Indeed, natural gas has become even more strategic, since Russia's invasion of Ukraine.

Peru could easily double its exports to Europe and in this article, we investigate how likely that is.

Natural wealth

The jewel in the crown of Peru's natural gas reserves is Camisea. Discovered by Shell in the 1980s it was brought into production by the Camisea Consortium comprised of Hunt Oil, PlusPetrol, SK, Repsol, TecPetrol and Sonatrack. Camisea is believed to hold 28 trillion cubic feet of natural gas, though recent discoveries in nearby sites suggest that figure could eventually double. "We currently produce around 1.6 billion cubic feet (bcf) per day of natural gas", says Martin Grisolle, General Manager of Hunt Oil Peru. "Of that, around 600 million cubic feet (mcf) goes to domestic markets, 600 mcf goes to exports via the Peru LNG project and ~400 mcf is reinjected into the reservoir. The reason we reinject is that the gas produced from Block 88 can only be sold to the domestic market. When we began there was practically no local gas demand, it has grown to between 600 mcf and 700 mcf but that leaves us with plenty of surplus. Camisea currently produces around 90,000 barrels of liquids per day, of which around half is liquified petroleum gas. We are a big player in the country because 40% of power generation in Peru comes from natural gas and around 80% of LPG supply of the country comes from Camisea."

> **Peru has not fulfilled its incredible hydroelectric potential**
>
> Victor Gobitz, CEO, Antamina

So, at present, Camisea is reinjecting gas into the ground that could be sent to Europe. Saving gas for the local market would be understandable if Peru had a shortage of electricity but the opposite is true. "Peru has two big sources of energy: hydroelectric and natural gas", says Victor Gobitz, CEO of Antamina, Peru's largest mine. "Over the last few decades, we have grown our matrix with both, helping to cut the cost of electricity. Miners here benefit from one of the lowest costs of energy in the region. A decade ago, there were lots of large mining projects that looked set to come online – so the power firms built extra plants. Sadly, protests meant the mines were never built so we now have a surplus of electricity. That is bad news for the generators, as it pushes prices down, but good for the miners."

Eventually Peru's electricity demand will rise again. After all, if Peru – the world's second-largest copper producer – doesn't build more mines the energy transition will be impossible. However, the extra power demand »

> *There is a strong anti-business attitude in the current government that makes you start to worry*
>
> **Martin Grisolle, General Manager of Hunt Oil Peru**

from miners will be largely met by renewable electricity.

"Peru has not fulfilled its incredible hydroelectric potential", says Gobitz. "The country will need more electricity eventually because we miners are switching as many energy-intensive operations as possible to the grid. Take Antamina for example. We are already measuring our carbon footprint because our four partners have very ambitious emissions targets for 2030 and 2050. The first step is to ensure that all our electricity is powered by renewable energy."

Grisolle agrees with Gobitz. "The emphasis on the energy transition has encouraged new mining projects to build clean power into their design plans. For example, Quellaveco, the new copper mine, has a deal to receive wind energy from the south of Peru." Grisolle is also dismissive of the power market Cassandras. "At Camisea we monitor power demand very closely and I've noticed that first the experts predicted a shortfall in 2022, then in 2024 and finally in 2026. But I don't think we will face shortfall anytime soon." That means Peru has excess gas to export.

Political hurdles

The immediate barrier to exporting more LNG from Camisea is that the project faces a legal restriction from exporting excess gas from Block 88, which can be as much as 400 mcf per day. With political will that regulation could be changed overnight, but building a new LNG compressor train would take at least three years and cost billions of dollars.

"Peru LNG is currently operating at full capacity with a single compressor train", says Grisolle. "For it to make the significant capex investment needed to build another train, it would need a long-term contract – like the 18-year deal we currently have with them. So, it's not like they can just use the train in emergencies when European gas prices are high, it would need to be a long-term commitment to justify the incremental capex. Even if all of those changes happen, it takes time to build a new train so Peru won't be able to help this winter."

Given the demand for LNG on the global market there are plenty of investors that would be willing to invest the time and money needed to build another export facility in Peru. But the political situation is discouraging.

"Political instability in Peru is a big concern", says Grisolle. "There is meant to be a new president every five years but we have had five presidents in the last five years. As a Peruvian, I can see a longer-term cycle that began when Fujimori opened up the economy. Even when later presidents, such as Ollanta Humala, were less market friendly, we still had an open economy with some business-minded people in government."

"There is a strong anti-business attitude in the current government that makes you start to worry", says Grisolle. "For new investments, we need a clear signal of stability, and currently is not happening. Last year, Prime Minister Bellido tweeted that Camisea should be expropriated, which is obviously alarming. But it is all uncertain because later, President Castillo went on an international trip to attract investors, telling them to invest in Peru! The uncertainty is increased by the rapid turnover of ministers, as there is a constant change at the top."

Switching coal-fired plants to natural gas is the quickest way for countries to reduce their emissions. It is just a temporary step, as eventually the energy transition will require countries to run on 100% renewable energy. But it is a powerful way to slow climate change while we electrify the global economy. Peru is one of the few countries in the world that could easily ramp up gas production. So far, it prefers to keep the gas in reserve. That might seem prudent but the risk for Peru is that it misses this window to export its gas and reinvest the proceeds. In thirty years, Peru could be left with stranded gas deposits that the world doesn't need anymore. ■

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INTERNATIONAL: bnamericas · Energía Minera & Construcción · GBR · LatAm Investor · nme

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Golden times ahead?

The yellow metal has lost some shine but not its long-term value

Gold is on a dismal losing streak. The seven straight months of losses until October was the longest such run since the 1960s. That statistic would mean a lifetime for some asset classes but it is just a blip in gold's history of thousands of years. Commentators who talk of 'unprecedented crises' would be surprised at how often wars, recessions and even pandemics happen in human society. The one constant through all those cycles is gold. For thousands of years, it has kept its value as empires rose and fell.

But one thing gold did not have to deal with in ancient history is exchange-traded-funds. Today there is a strange divergence in the gold market. Financial investors are abandoning gold in the search for higher yields in an era of rising interest rates. But central banks and retail investors are buying record amounts of physical gold, no doubt spurred by worries about the colossal amounts of debt weighing down on fiat currencies. Meanwhile gold miners are caught in the crossfire – getting paid a lower price per ounce while inflation pushes their costs ever higher.

Financial flight

"Gold falls to 2-year low on US rate rise fears" screamed a recent headline in the financial press. The Federal Reserve tightening is definitely bad news for gold. As the benchmark rate rises, it increases the cost of credit throughout the economy and encourages investors to find higher-yielding assets. That has had a direct impact on the gold market, where gold-backed ETFs have seen five consecutive months of outflows. Indeed, during the third quarter, investors withdrew $12billion from gold-backed ETFs – the largest quarterly amount since 2013. According to the World Gold Council (WGC),

The golden rollercoaster

10 year gold price in USD

investment levels in financial gold assets were down 47% year-on-year.

With Fed rates between 3.75% to 4% and long-term inflation expectations just under 3%, there is a strong incentive for investors to move their money into anything yielding more than 3%. However, were that to change. Let's say for instance, that the current inflation rate of 7.75% were to prove more stubborn than current expectations and last for a decade, then we would have negative real interest rates and a strong incentive for investors to move capital out of paper assets that were losing their inflation-adjusted value every year.

Physical gold

It seems that retail investors are more worried about the second scenario. WGC figures showed that total retail demand rose 36% compared to the same quarter last year. Gold demand has now recovered to pre-pandemic levels after lockdowns in 2020 reduced jewellery purchases to the lowest record on levels. In the UK that demand is reflected in the profits of the Royal Mint, which makes gold coins. Profits are up 50% as British investors clamour for physical precious metals. Indeed, gold is performing well when measured in sterling, and has proved a safe haven for local investors trying to protect themselves from the currency's

Goldminers' costs are increasing

All-in sustaining costs

Source: World Gold Council

post-Brexit malaise.

Financial investors often move automatically in response to interest rates but retail investors make intuitive judgements about what they think will happen in the world. Time will tell who has made the right call but it's interesting to see that central banks are also on a gold-buying spree. Central banks bought 400 tonnes of gold in the third quarter, which was a record high. Many analysts believe that more secretive countries, say Russia or China, are buying far higher amounts than officially recorded. In one way, the central banks are just like the high street consumer – they worry that the huge amounts of US government debt, which increased dramatically during the pandemic, will undermine the value of the US dollar.

But some central banks have another motive. The weaponization of the US dollar as an instrument of war against enemies, such as Iran and Russia, ultimately debases the value of the currency. Gold, especially physical gold held in a country, is proving more useful to Russia than dollar-denominated paper assets.

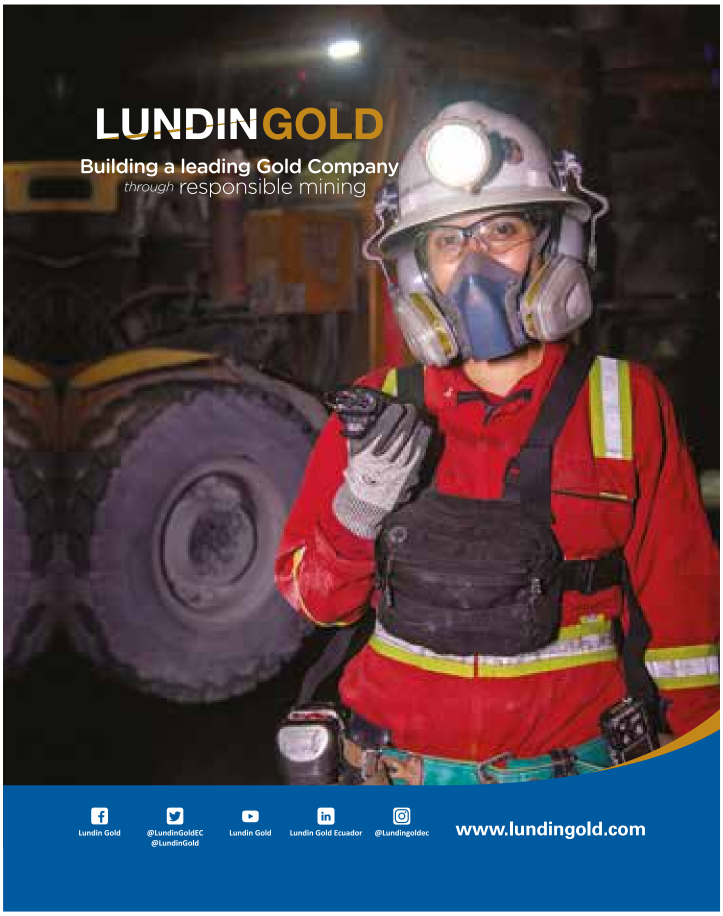
Miners

In the short-term, it is the goldminers that are suffering. The financial outflows are forcing down the price miners receive per ounce of gold. Meanwhile inflation is increasing mining costs. In particular, key petrochemical inputs, such as fuel, cyanide and explosives have risen sharply. Metals Focus, a consultancy, estimates it now costs gold miners an average of $1,693 to produce an ounce of gold. That figure, which includes financing and tax costs, is a 6% increase on 2021. With gold at around $1,780 at time of print, the higher costs don't leave much room for earnings.

Falling profit margins could force consolidation in the mining industry. An early taste of that was the bidding war for London-listed Yamana Gold, with a joint offer from Agnico Eagle and Pan American Silver beating an earlier proposal from Gold Fields.

Another outcome of the profit squeeze is that mining companies are cutting back on exploration and greenfield development in an attempt to control costs. With miners not finding or developing new deposits, production will fall. That is already happening in Latin America. In the second quarter of 2022, output from the region's ten-largest gold mines was down 5% compared to the same period in 2021.

These might sound like depressing trends for the industry but eventually they will be positive for the gold price. Some gold producers will already be unprofitable at current prices. If prices keep falling it will cause some mines to close, further restricting production. That will lead to a gold shortage, that will support higher prices in the future. Investors should take advantage of the current sell-off to find low-cost producers that have large deposits with expansion opportunities.



Mapping Risk in Latin America

Control Risk's latest analysis highlights threats in the region for investors...

Control Risks' Methodology

This is an outlook for the business risk environment in each country on a ten-point scale. The score is a composite risk score that factors in Control Risks' political, security, operational, regulatory, cyber and integrity risks, including a range of ESG-related risks.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The sustainable real estate developer helping **to solve Latin America's housing deficit**

Miraval is Europe's first Latin America-focused sustainable real estate developer. As it builds homes for the region's fast-growing middle class it will also generate exciting returns for investors...

Latin America is having a great 2022. Unlike Asia, which is being weighed down by China's economic slowdown, or Eastern Europe, which is being disrupted by Russia's invasion of Ukraine, Latin America's major economies are outperforming. One reason is the global energy crisis, as the region is a major commodity exporter that benefits from current high prices. But there are other structural forces at work.

Solid economics are underpinned by strengthened state institutions. Over the last forty years, countries throughout the region transitioned from dictatorships to democracies while Colombia ended the world's longest-running continuous war. That has fostered a growing Latin American middle class that is benefitting from decades of steady economic and political improvements. There is just one problem – housebuilders have been unable to keep pace with the extra demand.

Regional investment opportunity

The region's population is now at 665 million people, up from 175 million in 1950. That growth was accompanied by rapid urbanisation, with 80% of Latin Americans now living in urban areas and rising to 90% by 2050. As a result, the InterAmerican Development Bank estimates that Latin America's housing deficit stands at 23 missing million units plus a further 43 million houses that aren't fit for purpose. And the rapid economic and population growth means the problem is getting worse.

The growing housing deficit creates a massive, long-term investment opportunity for players like Miraval. The de-

veloper has five residential projects in different stages of planning, construction and delivery across Colombia. It is also expanding to neighbouring markets, such as Panama, Costa Rica, the Dominican Republic and Ecuador, where similar demographic and economic drivers are at work.

Miraval's first market, Colombia, is a good example of Latin America's economic resurgence. Colombia's GDP tripled over the last two decades, making it the fourth-largest in Latin America. Indeed, this year it is expected to be the fastest-growing major economy in the region. The population expanded to 50 million people today, up from 16 million in 1960. Moreover, an average age of just 27 means millions of Colombians will be looking to form new households over the next few decades. A recent study from La Haus and the Massachusetts Institute of Technology, found that Colombia will need to build 400,000 houses per year – an investment of 0.5% of annual GDP – to close the deficit.

Miraval's model

Miraval doesn't just build houses – it creates sustainable microcities. These are safe, clean, well-organised communities, with amenities ranging from swimming pools to schools. In Colombia - a state that provides inadequate basic services to the people - Miraval's sustainable microcities have an appeal that goes beyond the four walls of the house.

That model is also good for Miraval's investors. As a vertically-integrated developer it will generate profits along the whole chain, from land purchases to residential management services. Moreover, Miraval will provide utilities, such as electricity and water, for its residents, ensuring visible, long-term revenue streams that complement housing unit sales.

The business model isn't just profitable – it is also environmentally and socially sustainable. Indeed, the company's activities support eight of the UN's Sustainable Development Goals. That matters because it means that Colombian officials, from the central government to local authorities, support Miraval's projects.

Landmark milestones

The five projects that Miraval has underway are expected to earn more than $500 million of sales between 2022 and 2026. The company is currently raising funds privately to develop those projects and aims to list on a European market in the mid-term.

The most advanced project is Villanela, a 1,061-house development in the Bolivar department of Colombia. Construction began in 2018, with sales worth $16million in 2021. It is expected to sell a further $100million of units before construction completion in 2026.

Villanela integrates Calle Mayor Project, a 2,800 m2 leisure and commercial centre, that already started construction. Three more residential projects – Laguna Baru, Santa Ana Club and Rivera Baru – will launch this year. Location is everything in real estate development, and fast-growing Bolivar offers several benefits. Miraval's projects are strategically-located 25 minutes from Cartagena, a leading industrial and touristic city on Colombia's Atlantic coast.

Miraval's developments will provide much-needed, high-quality housing to Colombia's growing middle class. But it's not just Colombians that will benefit. Miraval will also create impressive returns for investors.

Coastal Class in Uruguay

Beach beauty

This modern house designed by the well-known architect, Alexa Sanguinetti, is located on the seafront very near Manantiales town. With high quality materials and equipment, the property comprises three floors. The entrance to the house is on the ground floor where there is a spacious living room with double-height ceiling and huge windows. There are also two bedrooms with en suite bathrooms, guest bathroom, staff quarters and enclosed garage. The middle floor consists of the master bedroom and a further two bedrooms with en suite bathrooms. The top floor comprises dining room, well-defined kitchen, play room and very large exterior deck with swimming pool and stunning beach views. An ideal choice for holidays or for living all year round.
This property is available for sale for $5.5million.

Sea-facing finca

A spectacular 22.5-hectare finca with 200m of coast. Located 15 minutes from José Ignacio on a signposted and very well-kept asphalt road. Next to Laguna de Rocha, an area with a great diversity of indigenous fauna and flora. The excellently built house was designed by the architect, Diego San Martín, who prioritized large spaces for enjoying with family or friends and sea views from all rooms. There are approximately 426m2 of interior on two floors. On the ground floor, there is a spacious living room with woodburning fireplace and large dining room, both surrounded by large windows displaying sea views. Also on this level, there is a kitchen with dining area, staff bedroom with bathroom, utility room and three spacious bedrooms with en suite bathrooms. The upper floor comprises the master suite with wood-burning fireplace and large dressing room. Outside, there are spacious decks running around the house both on the side of the sea and the swimming pool side. Near the house, there is the garage, tool shed, vegetable garden and caretaker's lodge. The property includes a water well, three-phase electricity and generator backup. The landscaping includes a wide variety of mature trees throughout the plot in conjunction with the lake.

This property is available for sale for $5.5million.

For more information about these properties contact

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* as at 31 March 2016