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Reviving Latin American energy transition needs wind and solar

Atradius Regional Economic Outlook – Latin America

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Executive summary

Latin America is a frontrunner in the energy transition. It has the cleanest electricity mix in the world. But it is mainly focusing on hydropower, which is susceptible to altering rain cycles. The region has huge potential in other sources of green energy, such as sun, wind and geothermal generation. To remain a leader in clean electricity and achieve net zero emissions in 2050 it needs to step up investments in these sectors. Financing will be challenging, particularly for many higher indebted Caribbean countries. Their economies are the most vulnerable to economic and financial shocks and climate change, and are the least able to adapt. Some countries in the Latin American region have shown to be innovators in climate finance. This offers hope for the rest of the region to finance investments in climate mitigation and adaptation measures, including the energy transition. Absent such investments, the region risks de-greening its energy mix and even weaker productivity and economic growth.

In 2022, Latin America region will return to the meagre economic growth path it had prior to the Covid-19 pandemic. With a forecasted 2.1 and 2.2% aggregate GDP growth in 2022 and 2023, the region will once again be the slowest growing in the world, aside from conflict hit Eastern Europe. This reflects a less supportive external environment, strong inflationary pressures, monetary tightening, and political uncertainty. Russia's invasion in Ukraine in February 2022 will aggravate these factors. This is particularly true for commodity importing countries in the Caribbean and to a somewhat lesser extent in Central America. Meanwhile, commodity exporting countries in particularly South America will be impacted less by the Russia-Ukraine conflict. However, the events are still unfolding while risks to the outlook for Latin America are mainly on the downside (see for our central global scenario the Atradius Interim Economic Outlook of April 2022).

Key points

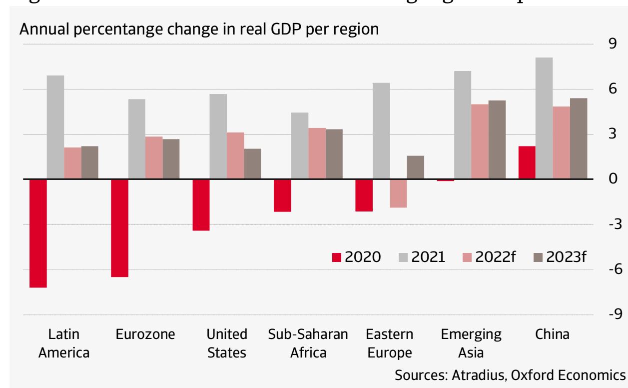
- Latin America experienced an unexpectedly strong - albeit uneven - rebound from the deep Covid-19 induced contraction. Among the world's highest vaccination rates contributed to this.
- However, going forward, economic growth will return to its slow growth path. This reflects most of all structural impediments that keep productivity low. This underscores the need for structural reforms. However, political uncertainty in many countries makes the outlook for such reforms over the forecast period unfavourable.
- Vulnerability to climate change adds to the challenges the region is facing. More extreme weather events, such as hurricanes, floods and droughts, already impact the region's infrastructure, - export generating - agriculture and tourism, and power generation, and as such the region's economic activity.
- The region is a frontrunner in the energy transition, mainly focusing on hydro power. But Latin America's energy transition is losing momentum as the region's largest countries are moving into the opposite direction. The region needs to step up investments in other green energy sources such as wind and solar, to achieve net zero emissions in 2050 and prevent an even weaker growth path.

Great potential for sun and wind energy offers opportunities

Strong but uneven economic rebound lost steam

The Latin American region (Latam) rebounded strongly from the deep economic contraction induced by the Covid-19 pandemic. The recovery, however, has lost steam and the economic outlook is quite weak. The region will return to its meagre pre-Covid-19 growth path. With a forecasted 2.1% and 2.2% aggregate GDP growth in 2022 and 2023, Latin America will be the slowest growing region in the world aside from conflict hit Eastern Europe. Next to structural characteristics and a less supportive external environment, this reflects domestic factors. High inflation, monetary tightening, rising social pressures and elevated political risk in the largest economies are suppressing domestic consumer demand and investments going forward. The Russia-Ukraine conflict has aggravated the region's main challenges as it has sent energy and food prices up. Economic growth in the energy importing countries in Central America and particularly the Caribbean will suffer more than that in the region's commodity exporting countries.

Figure 1 Latin America will return to meagre growth path

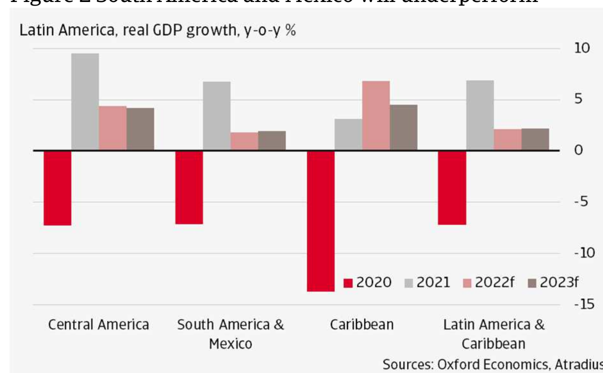


Structural characteristics explain weak economic performance

Latin America has been hit the hardest by the Covid-19 pandemic, both economically and in health terms. The pandemic revealed structural characteristics, which explain this: a high share of people working in the informal sector (34% of GDP) and in contact-intensive jobs (about 45% of the workforce), and a low share of digitisation (about 20% of jobs can be done remotely). With less than 10% of the world's population, Latin America accounts for over 25% of deaths caused by the coronavirus. Its economic contraction was by an estimated 7.2% in 2020, the deepest of all regions.

The subsequent recovery in 2021 at 6.9% outperformed expectations. Strong economic growth in the region's key export markets, the US and China, high commodity prices and record high remittances contributed to this. So did a faster than expected vaccination rollout, which accelerated strongly in H2 of 2021, making the region among the most vaccinated in the world. With 68% of its population fully vaccinated (and even 74% in South America), the region surpasses Europe (65%) and the global average (59%). What also helped is that vaccine hesitancy in Latin America is low compared to other emerging regions.

Figure 2 South America and Mexico will underperform



However, the economic recovery was uneven across the different parts of the region and across countries. Leading the recovery were the remittances reliant countries in Central America and the commodity exporting countries in South America. In both sub regions, real GDP is now back at its level before the pandemic. The tourist-dependent countries in the Caribbean were lagging, particularly those having lower vaccination rates, reliant on the cruise industry, and receiving fewer remittances.

Among the region's six largest markets, Chile was the top performer with its real GDP ending 2021 over 5% above its pre-Covid-19 level. Mexico did the worst; its real GDP was in 2021 still some 4% smaller than in 2019. The economies of the other four were at or above their 2019 level (Colombia, Brazil and Peru) or almost there (Argentina). In both Chile and Colombia, additional government support measures contributed to last year's strong performance. Note for Argentina, that its economy will need more time to recover from the financial crisis that hit the country in 2018.

Among the region's other markets, oil producer Venezuela in 2021 finally emerged from its long depression (2014-2020), which left its economy 75% smaller. Moreover, Dominican Republic and Panama stand out. Real GDP in diversified Dominican Republic surpassed its pre-pandemic level already in 2021, unlike the other Caribbean island

economies, which will take much longer to recover. Panama on the other hand did much worse than its regional peers. Its economy is still nearly 10% below its 2019 level because of its heavy reliance on services – the sector hardest hit by the Covid-19 shock.

Recovery lost momentum due to high inflation

Inflation rose substantially across the region from an average of 6.5% in 2020 to 12% in 2021, the first double-digit outcome in over 20 years. Firming domestic demand and global factors such as rising food and energy prices and supply chain disruptions explained part of the increase. But country-specific factors played a role as well, such as a severe drought in parts of Argentina, Brazil, Chile and Paraguay, currency depreciation in particularly Argentina, Brazil, Chile and Colombia and unorthodox policies in Argentina (monetary financing and currency restrictions). Recently, the Russia-Ukraine conflict has aggravated the region's inflation challenge as it has sent prices of energy and food up. The countries in the Caribbean are most vulnerable to this as they import most of their energy and food. With regard to the latter, the Caribbean imports almost all of the cereal it consumes, against some 60% in Central America and 30% in South America. As a result, it will take even longer for economic activity in the Caribbean countries to return to its pre-pandemic level. We now expect this towards the end of 2023.

Table 1 Russia-Ukraine conflict keeps inflation high

Inflation (CPI y-o-y (%) - Latin America

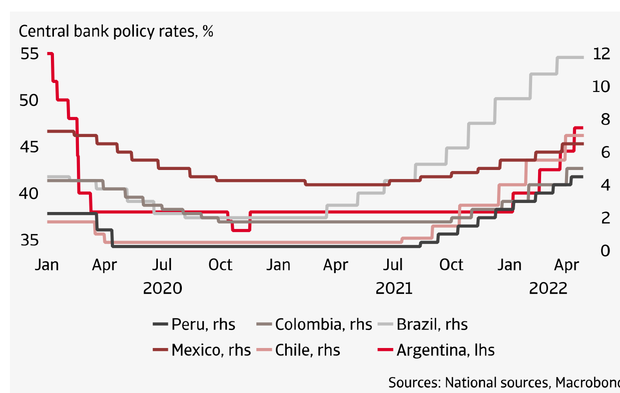
	2020	2021	2022f	2023f
Argentina	42.0	48.4	51.5	38.9
Brazil	3.2	8.3	9.2	3.9
Chile	3.0	4.5	7.6	4.0
Colombia	2.5	3.5	6.9	4.4
Mexico	3.4	5.7	6.3	3.9
Peru	2.0	4.3	4.5	2.6
Venezuela	2669	509	117	83
Latin America & Caribbean	**62.9**	**17.4**	**12.7**	**8.5**
Latin America & Caribbean (excl. Venezuela)	**6.5**	**12.0**	**12.4**	**7.8**

Sources: Oxford Economics, Atradius

Consequently, many of the region's central banks lifted interest rates much earlier than in other parts of the world. In March 2021, Brazil was the first to do so and also by far the most aggressive. In the face of stubbornly high inflation, Brazil's central bank has lifted interest rates from 2% early 2021 to 11.75% in March 2022, with further increases expected to anchor inflation expectations. 10 out of 11 Latin American countries with inflation targeting frameworks have already tightened their monetary policies. And this tightening cycle is set to continue to assure the convergence of inflation within the target range by 2023. Guatemala is the exception as inflation there is still trending within the target range.

Among the region's six largest markets, Chile and Colombia have accelerated the pace of monetary tightening, while Mexico and Peru are lifting rates at a more gradual pace. Unorthodox monetary policy in Argentina meant that its central bank responded the slowest. It started lifting rates only last January, despite inflation running over 50% in the course of 2021.Going forward, the region's central banks might have to extend their tightening cycle or raise interest rates further due to the Russia-Ukraine conflict and the associated higher inflationary pressures.

Figure 3 Leading the way with interest rate tightening cycle



Sources: National sources, Macrobond

Another channel through which the Russia-Ukraine conflict could affect the region's growth outlook is through shifts in market sentiment. So far, the currencies of the region's major commodity exporting countries with flexible exchange rates, Brazil, Chile, Colombia and Peru, have appreciated vis-à-vis the US dollar. Foreign investors are buying their bonds and stocks because of the widening interest-rate differentials with the US and on the expectation that they will on balance benefit from the higher commodity prices. However, whether this development will be sustained remains to be seen. Political uncertainty in the respective countries might for instance trigger a reversal in capital flows. This seems already to be happening in Chile. Moreover, the Russia-Ukraine conflict intertwines with the start of a monetary tightening cycle by the Fed, we now expect that it will accelerate its pace with the federal funds target rate ending 2022 at 2.25%. Higher US interest rates might make access to international capital harder and more costly. Market uncertainty, greater risk aversion or a flight to safety could also result in capital outflows, thereby putting depreciating pressure on the region's currencies. This would in turn worsen the region's growth outlook, via (even) higher inflation, lower consumer demand, increasing social tensions and weakening business sentiment.

Rising political uncertainty also constrains GDP growth

Slow economic growth and high inflation in much of the region is in turn fuelling anti-incumbent sentiment. This adds to political uncertainty and the risk of social unrest, which are other factors constraining the region's economic growth outlook. A wave of social unrest hit Latin America in late 2019, particularly in Bolivia, Ecuador, Chile, Colombia and Peru, and the region continues to deal with its effects.

Frustration after years of declining living standards, high income inequality and weakening of institutions fuelled not only social unrest but also anti-incumbent sentiment. Elections in 2021 and early 2022 for instance brought outsiders to power in Peru, Chile, Honduras and Costa Rica. In El Salvador, it provided the earlier elected outsider president with a supermajority in Congress, which has resulted in a weakening of democratic institutions. The election outcome in turn has lifted policy uncertainty in these countries. Upcoming elections in Brazil and Colombia and concerns about general policy direction in Mexico feed political uncertainty in these countries. A long-awaited IMF-programme in Argentina is a positive first step but it will take time and successful policy implementation to rebuild trust.

Return to meagre pre-Covid growth path inevitable for now

The factors described above have taken the steam out of the region's recovery. They do not explain the return to the meagre low pre-Covid-19 growth path from 2022 onwards. The forecasted average annual GDP growth rate at 2.2% is in line with the 2.5% in the past two decades. Slow growth reflects structural impediments that keep productivity low, such has high informality and bureaucracy and shortfalls in education, innovation and infrastructure. This underscores the need for structural reforms. However, political uncertainty in many countries makes the outlook for such reforms over the forecast period unfavourable.

Among the region's largest markets, Chile stands out in 2022-23. Rising interest rates and uncertainty ahead of a constitutional referendum is slowing investments and economic activity. A recession in 2023 might be even in the charts. For the other countries, annual GDP growth in 2022-23 will be the weakest in regulation champion Brazil averaging 1.2% and the strongest in Colombia and Peru, averaging 2.9% respectively 3.4%. We expect Mexico's economy to return to its pre-pandemic level in 2023. Argentina's real GDP will in 2023 still be about 1.5% smaller than its size prior to the financial crisis that hit the country in 2018. And despite strong growth forecasts, Venezuela's economy will in 2023 still be only a third of its size prior to its long depression (2014-2020).

Table 2 Diverging economic growth across major markets

Real GDP growth (%)

	2020	2021	2022f	2023f
Argentina	-9.9	10.3	2.2	1.2
Brazil	-4.2	5.0	0.9	1.4
Chile	-6.2	11.9	1.0	-0.9
Colombia	-7.0	10.6	3.8	2.0
Mexico	-8.4	5.0	1.8	2.6
Peru	-11.1	13.3	2.9	3.8
Venezuela	-34.9	7.3	16.4	9.7
Latin America & Caribbean	**-7.2**	**6.9**	**2.1**	**2.2**

Sources: Oxford Economics, Atradius

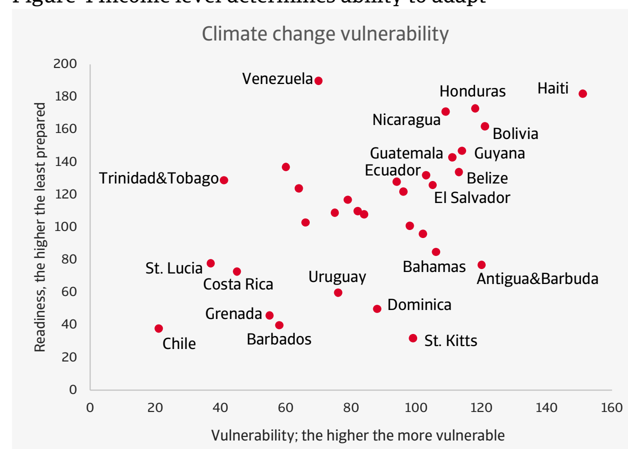
Already feeling the impact of climate change

Latin America is already experiencing the impact of global warming and extreme weather events. Storms, rains and flooding are more frequent and severe in Central America and the Caribbean, glaciers are melting in the Andean region and severe droughts are regularly hitting Southern American countries Argentina, Brazil, Chile and Paraguay. These events are already negatively impacting the region's infrastructure, power generation and agriculture and tourism – two of the region's main export sectors. Climate change is thus another factor that undermines Latin America's economic activity and as such its government finances. The latter in turn hampers the ability to respond to climate-related risks. This is particularly true for the highly indebted lower income countries in the Caribbean.

The region's lower income countries most vulnerable and least prepared

Latin America is one of the most diverse regions in terms of vulnerability and ability to respond to climate risk as well. This reflects high income inequality across countries in the region. Generally speaking, high income countries are better able to cope with the consequences of climate change than lower income countries. Figure 4 illustrates that countries in Central America and the Caribbean are particularly vulnerable. Lower and lower-middle income countries such as Haiti, Honduras, Nicaragua and also Andean Bolivia are the most at risk, as they combine high vulnerability with low readiness to deal with climate change. High income island economies Antigua and Barbuda, Bahamas and St. Kitts and upper-middle income Dominica show high vulnerability as well, but their ability to respond is much better. An exception to the general rule is upper-middle income country Ecuador; years of mismanagement under former president Correa (2007-17) resulted in a lack of funding to deal with the impact of climate change.

Figure 4 Income level determines ability to adapt



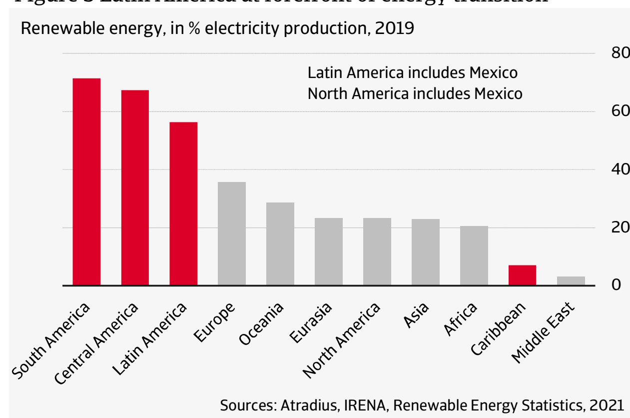
All Latam countries need to raise their ambitions to reach Net Zero…

To cope with the impact of climate change, countries in the region should raise their climate action ambitions. About half of the countries have expressed their commitment to reduce their economies' net emissions to zero by 2050 (Net Zero 2050) according to the Net Zero Tracker. But only seven of them have included these pledges in policy documents. Among the region's six largest markets, this only holds for Chile. The others have pledged or proposed a net zero target (Argentina, Brazil, Colombia, and Peru), while in Mexico a net zero emission target is still absent (it has only proposed a general emission target). Net zero emissions by 2050 is necessary to reach the goal of limiting global warning to close to 1.5°C as recently confirmed by the latest report (2022) of the Intergovernmental Panel on Climate Change (IPCC). The IPCC also warned that even if these actions are achieved climate change would still cause unavoidable increases in multiple climate hazards. Considering the region's vulnerability to these hazards, it is key that all countries commit to net zero goals and implement the measures needed to achieve this. So far, Costa Rica is the only country in the region whose commitments and policies are ranked by the Climate Action Tracker as 'almost sufficient' to reach net zero. Among the region's six largest markets, Chile is doing best, with a score of 'insufficient'; commitments and policies in the other markets are ranked as 'highly insufficient'.

…despite being at the forefront of the energy transition

Renewable energy is key for reaching climate goals and net zero emissions. The good news is that Latin America is at the forefront of the energy transition. More than half of its electricity production (56%) is generated from renewable sources. That is by far the most of all regions (see figure 5).

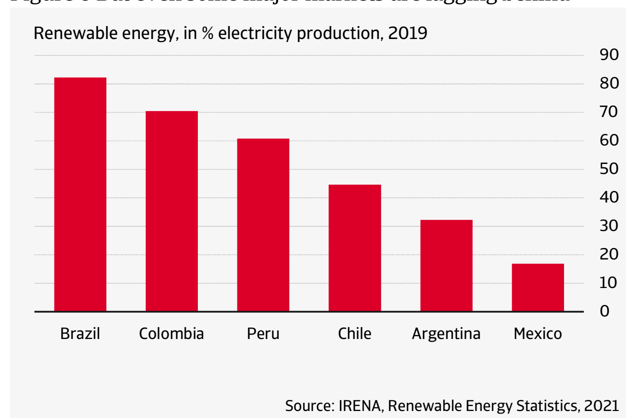
Figure 5 Latin America at forefront of energy transition



However, there are large differences within the region and between countries. While renewable sources generate 71% of electricity in South America and 67% in Central America, in the Caribbean it is just 7%. Costa Rica and Paraguay are absolute champions: almost all of their electricity is green. On the other end of the spectrum are Caribbean islands such as the Bahamas and Trinidad & Tobago with almost no green electricity. Among the region's large markets, Brazil (82%) and Colombia (71%) are above the Latin American average; Argentina (32%) and particularly Mexico (17%) are lagging behind.

Moreover, according to the International Energy Agency (IEA; 2021), the share of renewables in electricity needs to increase to 90% in 2050 to achieve net zero emissions. Also the Latin American countries thus need to step up their investments. This even includes the countries most advanced in the energy transition as noted above.

Figure 6 But even some major markets are lagging behind



More investments needed in wind and solar

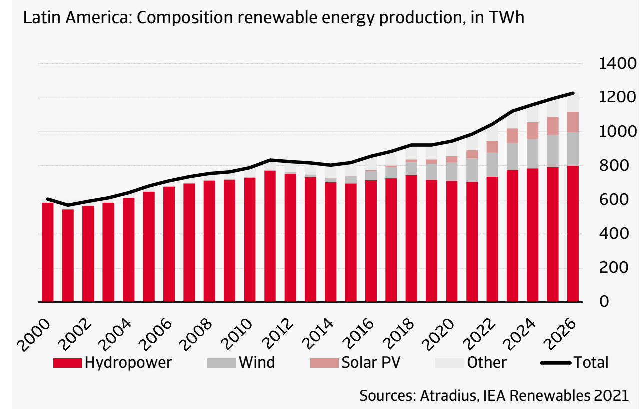
Hydropower is currently the main source of renewable electricity in Latin America, which is rich in fast-flowing rivers and whose governments catalysed green financing in an early stage. However, other forms of renewable energy need to supplement this energy source. By now, most of the suitable rivers have been exploited. As a result, hydro generation cannot keep up with the growing demand for clean energy. To illustrate: the share of renewables in electricity production gradually declined between the early 1990s and 2015 from two-thirds to 52%. Moreover, hydro generation is vulnerable to climate change. A recent (2021) study of the IEA shows that this is particularly true for Mexico, Central America and Southern South America. Last year's drought in Brazil and Paraguay illustrates this. Hydroelectric power plants in the Andean countries of Colombia, Ecuador and Peru are less vulnerable, because more rain is expected in these countries. But too much rain can pose challenges as well. A few years ago, landslides due to heavy rainfall hit for instance a hydroelectric power station in Colombia.

In Focus: Belize innovator in swapping debt for nature

Sustainable finance is more than issuing sustainable bonds. For lower income or highly indebted countries issuing bonds to finance climate-related projects is not an option. For these countries, debt-for-climate swaps could offer a solution. Such a swap allows the country to reduce its public debt by agreeing with the creditors to write-off or discount their debt and instead use the freed-up funds to finance agreed-upon climate projects. Debt-for-climate or debt-for-nature swaps as they used to be called, exist since 1987 when Bolivia introduced the first debt-for-nature swap. These swaps evolved from three-party transactions in which NGOs bought sovereign debt owed to commercial banks and redirected payments towards nature projects into bilateral deals between creditor and debtor governments.

In November 2022, debt-distressed Belize became an innovator in sustainable finance when it signed a debt-for nature swap with a subsidiary of The Nature Conservancy in Belize (TNC), a NGO. The deal created the world's largest blue bond, was complicated and innovative due to the involvement of bondholders, who provided the grant, and the US government's development bank DFC. The latter was crucial to enable the innovative structure as it provided the political risk insurance. Under the agreement, the Belizean government borrowed funds from The Nature Conservancy (TNC), a NGO, to buy back an USD 553 million (30% of GDP) 'Super Bond' – its only international bond - with a discount of 45%. TNC financed this by issuing USD364 million in 'blue bonds', arranged by the bank Credit Suisse, and insured by the US government's development bank DFC. This was crucial to bring private creditors on board given Belize's history of frequent defaults. The involvement of DFC also allowed the blue bond to have a low interest rate, a 10-year grace period and a long maturity of 19 years. In return, Belize will spend about USD 4 million annually on marine conservation until 2041. An endowment fund of USD 23.5 million will finance conservation thereafter. This swap restored the government's debt sustainability by cutting debt and debt-service costs and improved the country's resilience to natural disasters and climate change as the generated funds are being used for protecting Belize's marine environment which contains the world's second largest coral reef.

Figure 7 Energy transition needs more wind and solar



Countries in Latin America are therefore focusing on diversifying to other sources of green energy, such as wind and solar. From 2012, the share of these sources in renewable electricity production has steadily grown to approximately 19% in 2021 (see figure 7). As a result, the declining trend of clean energy in total electricity has been reversed. Since 2015 its share has increased, but only gradually, from 52% to 56%. According to the IEA, the share of wind and solar in renewable electricity production will increase to more than a quarter in the next five years, mainly due to significantly higher investments in solar energy.

The region is well positioned to remain a leader in the energy transition and achieve net zero emissions by 2050. Its vast deserts, long coastlines and volcanos offer huge potential in wind, solar and geothermal energy. But it needs to step up investments in these energy sources to achieve the regional ambition of 70% sustainably generated electricity by 2030 (up from the current 56%), let aside the 90% needed to reach net zero emissions by 2050. Uruguay shows this can be done. Investments in wind energy since the 2010s have lifted its share in total electricity production to 43%, surpassing that of hydro and the world's second highest after Denmark.

What is worrisome in this regard is that the region's largest markets are moving in the opposite direction. The IEA has revised downward its estimates for Argentina, Brazil and Mexico. Here, the energy transition has come to a halt as the current administrations favour support for their local fossil industry and have cut budgets for renewable energy. Additionally, Brazil's government is less active in organizing auctions, whereas a worsening business environment in Argentina and Mexico is making private investment in clean energy projects more challenging. As a result, the recent upward trend in the share of renewables in total electricity might stall or is even at risk of going into reverse once again.

Financing these investments will be challenging

Climate finance plays a crucial role in achieving climate ambitions. Latin America's development banks stand ready to support the countries in the region, not only financially, but also by setting standards and setting up platforms on climate change. Still, most of the financing will have to come from private sources. This will be challenging given Latin America's slow growth, uncertain political environment and rising interest rates. This will be particularly true for the region's higher indebted countries, High-income country Chile and debt-distressed lower-middle income country Belize became frontrunners in financing their climate ambitions (see In Focus). This offers hope for the rest of the region to finance investments in climate mitigation and adaptation measures, including the energy transition. But the examples of Chile and also Uruguay show that what ips needed most is a government with clear climate ambitions and a business environment conducive to – climate - investments. Absent such investments, the region is at risk of de-greening its electricity mix and even weaker productivity and economic growth.

In Focus: Chile a world leader in sustainable finance

Sustainable finance can help countries meet social, environmental and climate goals. In 2007, the European Investment Bank issued the first green bond, for which proceeds are specifically used to finance climate–related environmental projects. Until 2012, multilateral banks were the sole issuers of such bonds. Corporates followed suit and in 2017, Poland became the first sovereign to issue a green bond. Green bonds were followed by bonds to finance social projects in for instance health care, education and the small and medium enterprise sector. Such bonds are now called sustainable bonds (note that a universally agreed-on definition for green, social or sustainable bonds is missing).

This market is growing rapidly although its size remains small compared to the bond market as a whole. These bonds for instance account for less than 1% of the sovereign bonds market. Also, issuance is skewed to high income countries, which generally have more developed financial sectors and stronger macroeconomic fundamentals. World Bank data show that whereas 62% of sovereigns of high-income countries have issued sustainable bonds, none of the low-income sovereigns have; with upper-middle income countries at 25% and lower-middle income countries at 14%. It's therefore no surprise that Chile became Latin America's first sovereign to issue a green bond. By now, Chile is even the sovereign with the highest number (16) of green and social bonds issued in nonlocal markets, followed by Hong Kong and China. And on 2 March 2022 Chile issued the first-ever sovereign sustainability-linked bond. The terms of such bonds are linked to sustainability performance targets. For Chile, these targets include reductions in greenhouse gas emissions and the share of non-conventional renewable energy generation in the national electric system. The latter includes that 50% of electricity generation should be derived from non-conventional renewable sources such as wind and solar by 2028 and by 60% by 2032. If Chile misses a target, the bond's coupon rate will be raised. The USD 2 billion, 20-year sustainability-linked bond was met with strong demand and more than four times oversubscribed.

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