Shaping Latin America's Development Through Infrastructure

Key insights on investment, energy transition, and technological growth in 2024

REPORT

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GRI Club
INFRASTRUCTURE

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WELCOME TO GRI CLUB INFRA & ENERGY!

"Latin America stands at a critical juncture as it navigates complex economic landscapes and strives for growth amidst global uncertainties. This year, discussions underscore the region's potential due to its rich natural resources and strategic importance in the global supply chain.

Currently, countries like Brazil are capitalizing on their renewable energy capacity, with significant investments in hydro, wind, and solar power. Mexico, on the other hand, is poised to benefit from nearshoring trends, leveraging its proximity to the United States. Meanwhile, Argentina faces the challenge of stabilizing its economy.

Chile and Peru, despite political turbulence, demonstrate resilience through sound economic policies and strategic investments in mining and renewable energy. Finally, Colombia's ongoing efforts to enhance its fiscal stability and develop robust infrastructure are critical for sustaining growth.

Across the region, the integration of advanced technologies and the focus on ESG principles are driving a new wave of investments, particularly in infrastructure and energy projects. The macropolitical configuration and the slowdown of the Chinese economy are topics that add layers of complexity to the investment landscape.

At Latam GRI Infra & Energy 2024, we experienced a dynamic convergence of key infrastructure and energy leaders addressing critical issues and emerging opportunities across the region. These dialogues are invaluable in providing a comprehensive understanding of the opportunities and challenges ahead".

MOISÉS CONA

Executive Director, GRI Club Infra

INTRODUCTION

The Latin American region has been facing several structural changes in both political and economic spheres. This scenario, coupled with the imminent energy transition and the consequences of global conflicts, creates an unusual landscape for investments in infrastructure projects.

The **Latam GRI Infra & Energy 2024** conference, held in May in New York, brought together over 170 senior executives, investors, public sector representatives, and other infrastructure players to engage in 19 high-level debates about the region's future, presenting current data and projections.

Key discussions addressed the impact of rising interest rates on infrastructure financing, revealing how increased debt costs are pushing projects towards equity financing and short-term funding strategies. The regulatory environment's role in shaping project viability was also explored, emphasizing the challenges of inflation rates and the global cost of capital.

The conference also discussed energy transition, examining the decreasing levelized cost of energy (LCOE) for renewables and the challenges posed by decentralized generation. The significant potential for green and blue bonds was highlighted, showcasing their growing importance in sustainable investments.

There is a critical need for cross-sector collaborations, particularly with the energy and telecom sectors, to provide necessary infrastructure such as fiber optics and charging stations for electric vehicles.

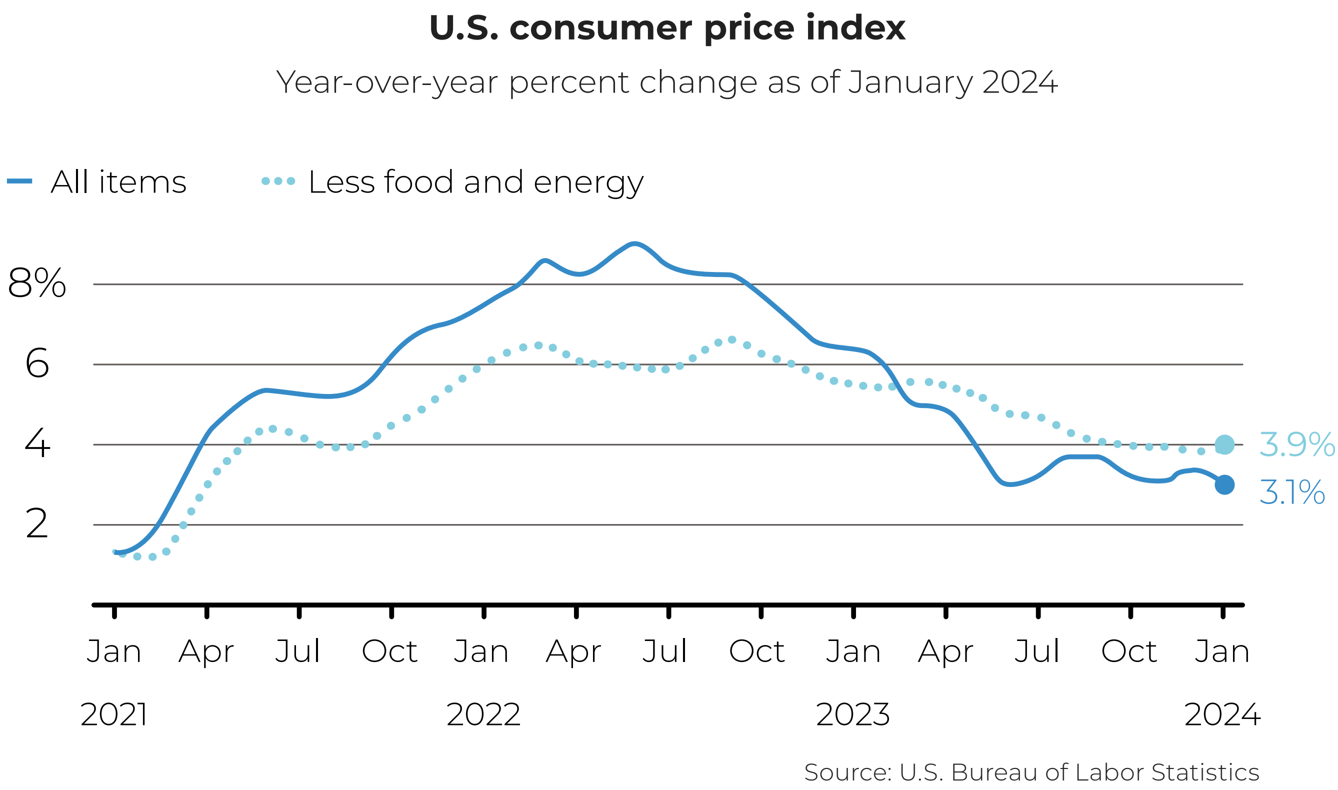
The integration of AI-driven tools to enhance efficiency in various sectors was a transversal topic of the conference.

This report provides a complete overview of the main discussions, aimed at understanding the evolving landscape of infrastructure and energy in Latin America, highlighting the key insights and projections that will shape the region's development in the coming years.

INVESTMENT CLIMATE: A MACROECONOMIC PICTURE

Despite ongoing global conflicts, attendees expressed cautious optimism about investments, suggesting that challenges could very well become opportunities for those who remain vigilant.

"I do think that Latin America offers a glass half full outlook in terms of being well positioned to take advantage of some of the opportunities in the turbulent times," stated an investor during the session's opening. However, the discussion quickly turned to a transversal concern: **US inflation.**



The worry about this issue doesn't arise from concern for the consumer *per se*, but because these rates determine the global cost of capital. Although the US inflation rate is lower than in previous years and the Federal Reserve aims to reduce it to 2%, it is not yet low enough to justify interest rate cuts. The forecast for cuts in this year has dropped from 3 to 1, making the current interest rate environment the most challenging in the past 20 years. Consequently, global investors prefer US Treasury bonds due to their attractive returns and lower risk.

This capital absorption from regions such as Latin America forces local investors to offer highly attractive risk-reward propositions to draw attention away from the safety of Treasuries. Attendees noted that this scenario has historically repeated itself.

As the discussion transitioned, the focus shifted to another related topic: the slowdown in China's growth. The Asian country faced numerous challenges over the past year, including real estate issues, demographic bottlenecks related to an ageing population, and a tense relationship between the public and private sectors.

"In our analysis, the days of China growing 6%, 7%, 8% are behind us. The new equilibrium is something closer to 4%, 4.5%, and likely even trending a little bit down."

This scenario results in a reduced appetite from Chinese investors for projects outside their borders, including Latin-American developments. While a systemic crisis in China is not expected, its capacity to drive global growth is no longer what it once was, according to the executives.

The world is shifting from a unipolar structure to a **multipolar** one, where geopolitical power is more evenly distributed among countries, and each bloc defends its own interests. In this context, the main geopolitical conflicts today are not isolated but interlinked, forming a scenario that must be understood as a whole. These changes, while increasing economic complexity, can also represent an opportunity for Latin America. The region may benefit from a heightened focus on energy independence and infrastructure projects, attracting more investors amid global turbulence.

However, nothing is set in stone. This year, over **80 elections** will take place worldwide, reshaping the political landscape, which remains chaotic and uncertain.

Among these, the US election is deemed the "mother of all battles," as its outcome will have significant implications for Latin America, particularly Mexico. For instance, Trump's more isolationist policies could create tensions and economic difficulties for Mexico, while Biden's more collaborative approach could facilitate relations and investments, continuing to develop nearshoring, an emerging trend in the region.

While navigating these complexities of a multipolar landscape and its interconnected conflicts, it becomes clear that these geopolitical dynamics directly influence the economic role of Latin America, due the region's strategic position and resources.

POTENTIAL SOLUTIONS FROM LATIN AMERICA TO GLOBAL PROBLEMS

Restructuring supply chains

After the instability of the COVID-19 pandemic and the increasing tensions between the US and China, American companies are seeking ways to reduce risks and diversify their production sources. In this scenario, the geographical proximity of Latin American countries offers cost and time advantages, enhancing efficiency. Aware of this advantage, some countries in the region are already offering government incentives and redefining their regulatory frameworks to attract more foreign investment.

Natural resources and commodities

Latin America is one of the richest regions in various natural resources, including oil, gas, lithium, gold, and other minerals essential for emerging technologies. In times of uncertainty, with gold prices rising 20% in the past year, countries like Brazil and Peru have the potential to become major reserves.

Energy transition

Latin America produces about 60% of all renewable energy in the world. With an abundance of wind, sun, and water, the region has a highly attractive energy mix compared to other regions. The growing demand for clean energy makes Latin American countries key players in the energy transition, which is already attracting investments.

"But it takes two to tango"

Despite these geopolitical and market opportunities, executives note that Latin America's stance on its privileged position remains uncertain. In countries like Mexico and Brazil, the landscape is somewhat simpler, and the advantages are already being leveraged. However, other regions need to work their way towards taking advantage of these key sources of opportunity.

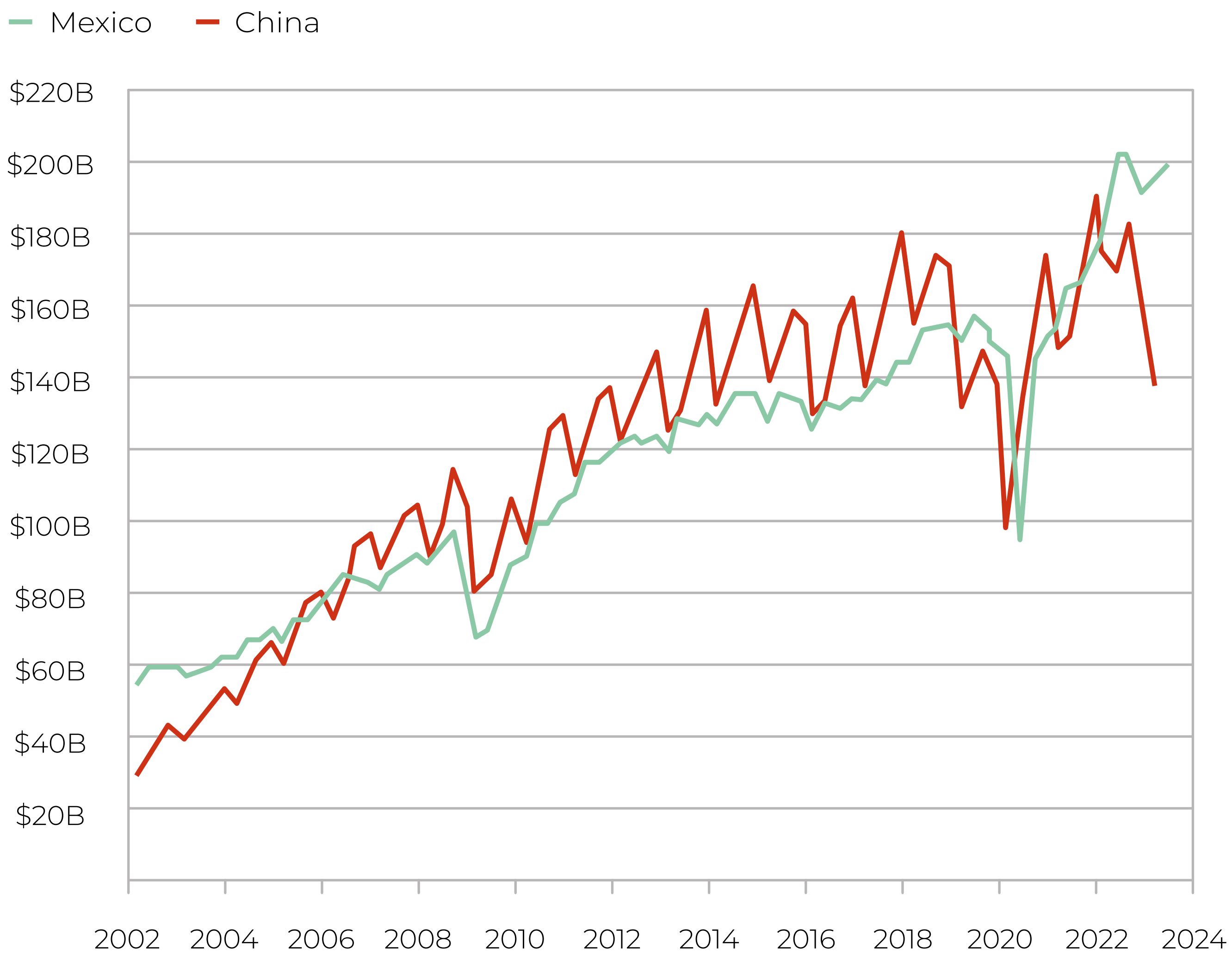
Let's see the key points of the discussion about each country:

China - Balancing opportunities and risks

The discussions highlighted the complex relationship between Latin America and China, focusing particularly on Mexico and Colombia. Executives debated the significant investments China is making in public utilities and infrastructure in Mexico, which have contributed to Mexico's GDP growth. These investments offer opportunities for Latin American countries to attract similar investments and compete in the global market.

However, there were concerns about the geopolitical risks associated with China's increasing presence. One executive warned that Mexico must be cautious about becoming too reliant on Chinese investments, suggesting that this could undermine the strategic advantage Mexico holds with the United States.

México overtakes China as top US trade partner



Source: Latinometrics.

The graph above underscores the shifting dynamics that favor Mexico as an alternative hub for manufacturing and investment. The panel agrees that the country stands out as a prime candidate for investment in the current global context.

For other Latin American countries, the approach can be more nuanced, as they are not immediately forced to pick sides. These countries can navigate relationships with both major powers, leveraging opportunities while managing sensitivities.

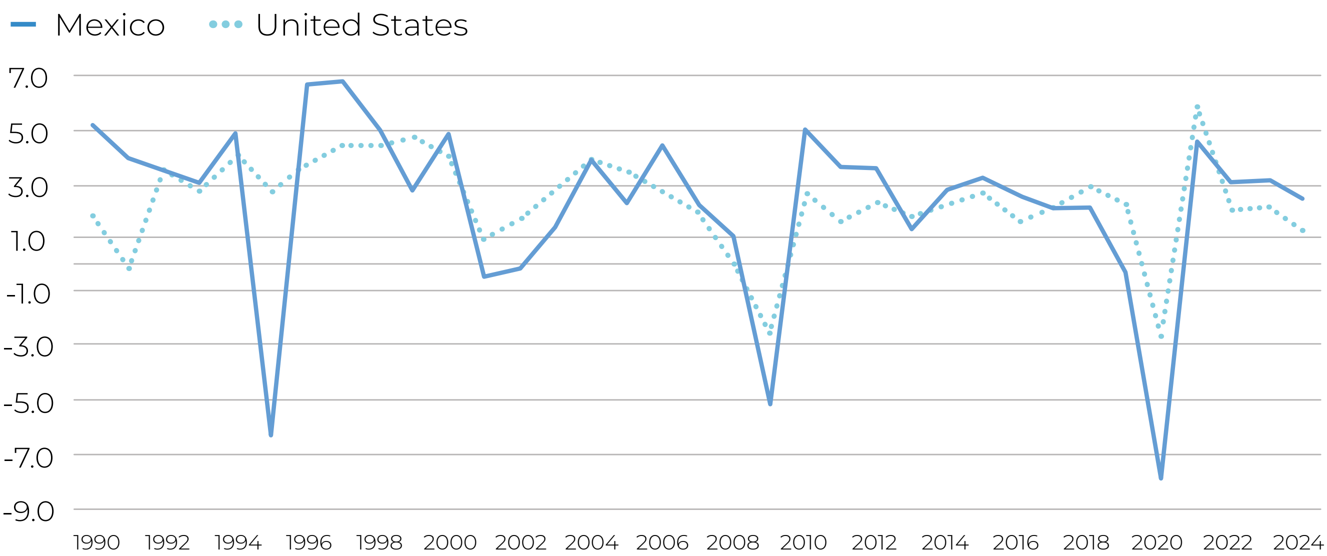
In Colombia, the focus was on maintaining momentum in infrastructure projects, like the successful 4G program, which has attracted significant investments. The challenge lies in continuing to generate a strong pipeline of projects and managing contract and permit issues effectively.

Mexico - Nearshoring

It was noted that Mexico has, at times, hindered investment opportunities through a lack of proactive measures. However, with the recent election of Claudia Sheinbaum, there is speculation that she might adopt a more proactive approach to attracting investments.

The global trend towards nearshoring presents a substantial opportunity for Mexico, offering a chance to capitalize on its proximity to the US.

GDP Growth Rates in the US and Mexico (1990-2024)



Source: World Bank.

For example, over the last four months, Mexico has received $60 billion in remittances from workers in the United States.

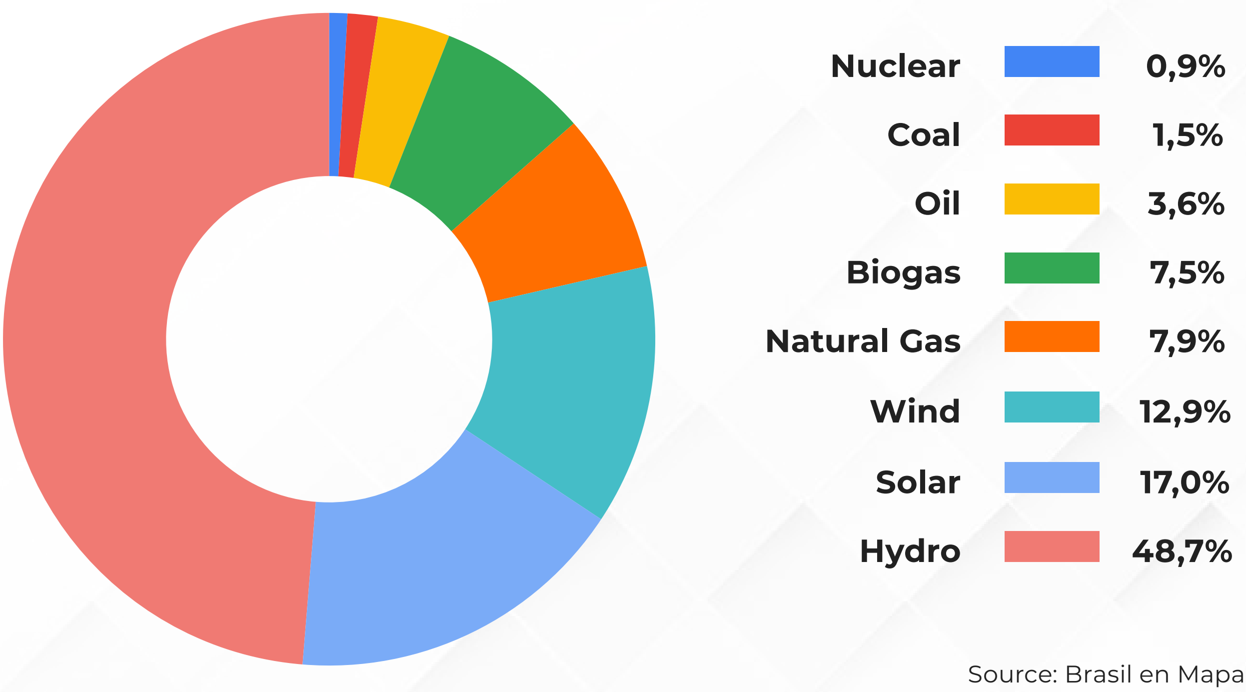
Nearshoring does not seem like a short-term phenomenon but rather a long-term structural change in global supply chains.

Brazil - Growing influence

With the geopolitical disruptions in Russia and Ukraine, Brazil has gained prominence as a stable source of essential commodities, like soybeans, iron ore, and coffee. Moreover, Brazil is on track to become a leading oil and gas producer in the coming years, a development that will further enhance its economic standing. This growing influence positions the country as a crucial player in meeting worldwide demand.

Additionally, Brazil's energy sector is a notable highlight. With 85% of its energy matrix composed of renewable sources, the country stands out in the global push for sustainable energy. Investments in hydro, solar, and wind energy have solidified the country's position as a leader in green energy production, attracting substantial foreign investments.

Brazilian energy sources in 2024

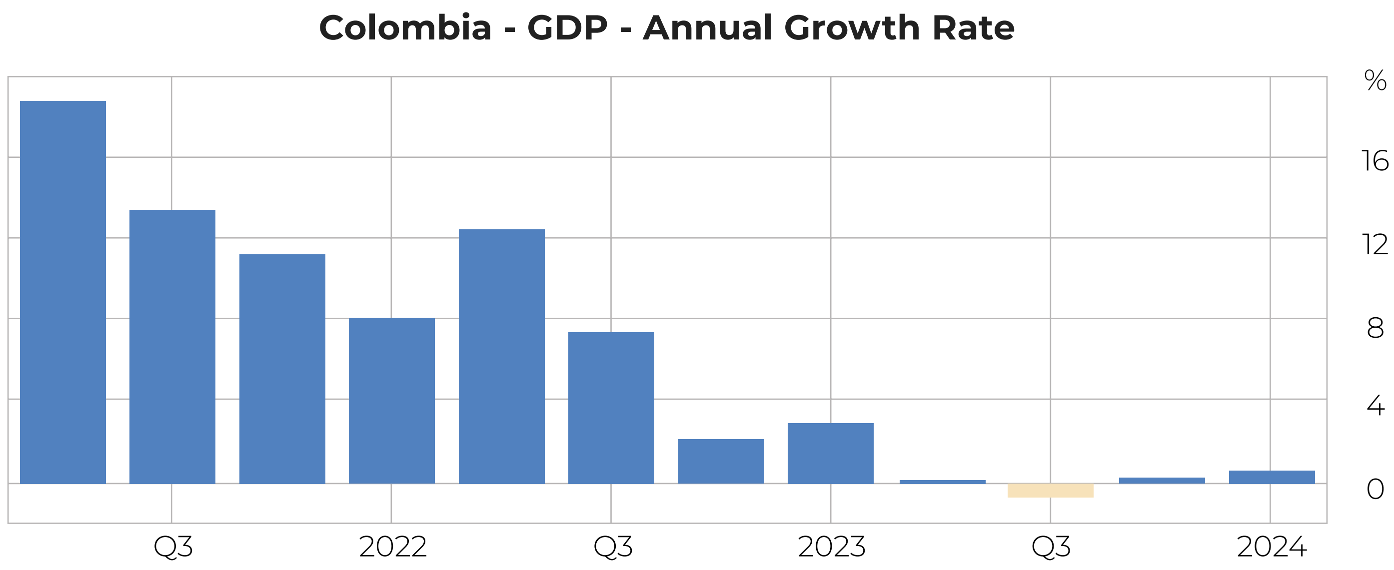


Source: Brasil en Mapas

Despite these advantages, the panel emphasized that Brazil must continue to build on its strengths and address any underlying challenges to fully capitalize on these trends. This includes ensuring political and economic stability, maintaining investor confidence, and continuing to develop its infrastructure to support further growth.

Colombia - Challenging environmental

Colombia was described as facing significant political and economic challenges. The current president has taken a controversial approach, but his limited power reduces the potential for extensive damage. However, the country's fiscal health is deteriorating, having lost its investment-grade rating, making recovery difficult. The graph below shows a sharp decline in growth rates, reflecting this situation.

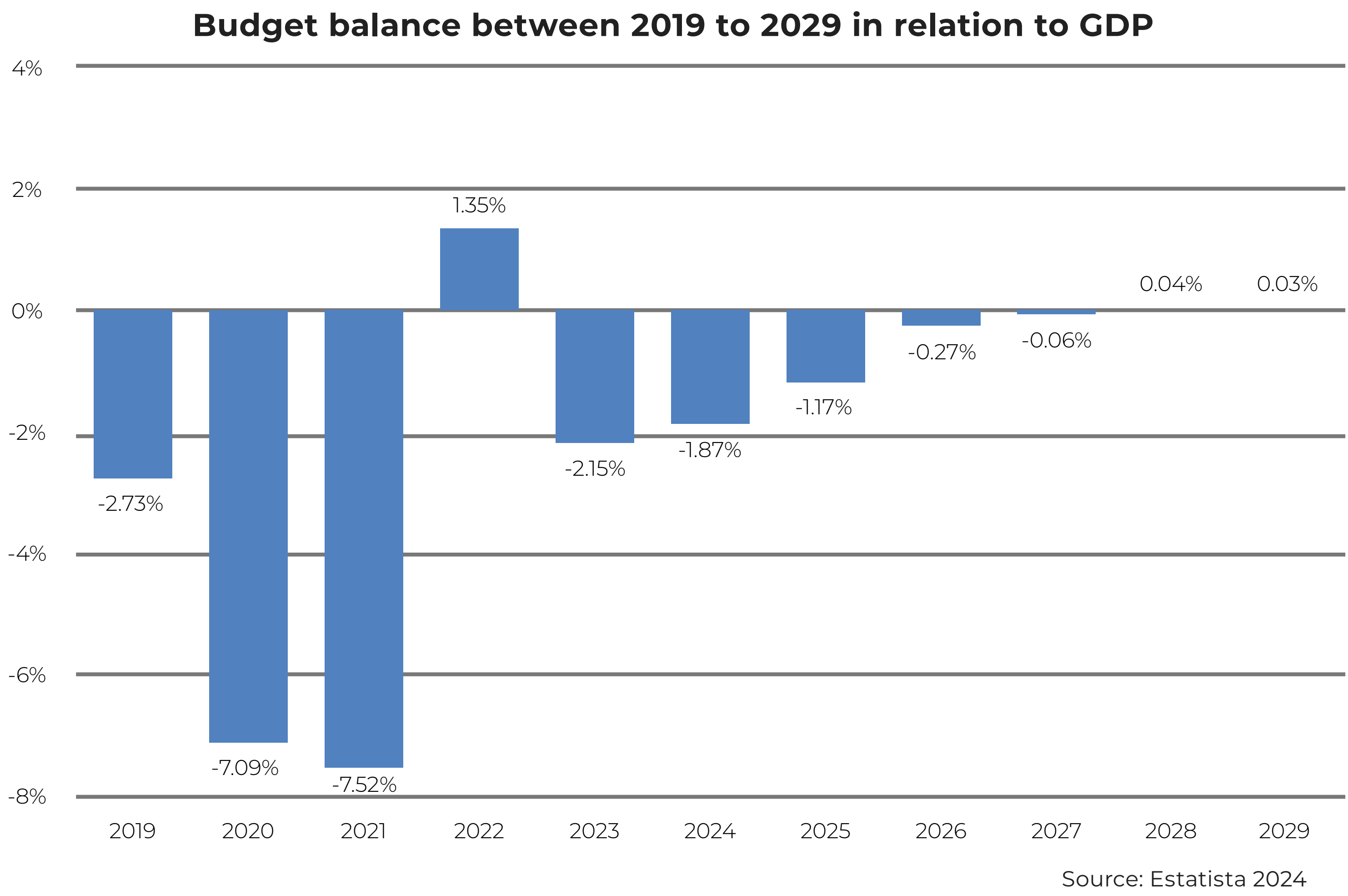


Source: Trending Economics

Despite these issues, a financial or economic crisis is not expected. Instead, Colombia faces a gradual erosion of economic fundamentals. The uphill battle to restore fiscal stability will require substantial efforts. The situation necessitates cautious optimism, with a focus on potential reforms to stabilize fiscal accounts and restore investor confidence.

Chile - Cautious optimism

Chile was described as a country striving to find a new equilibrium after experiencing a series of significant challenges: social upheaval, constitutional debates, and the pandemic. As illustrated in the budget balance graph between 2019 and 2029, Chile faced significant deficits during the pandemic but is projected to achieve equilibrium in the coming years.



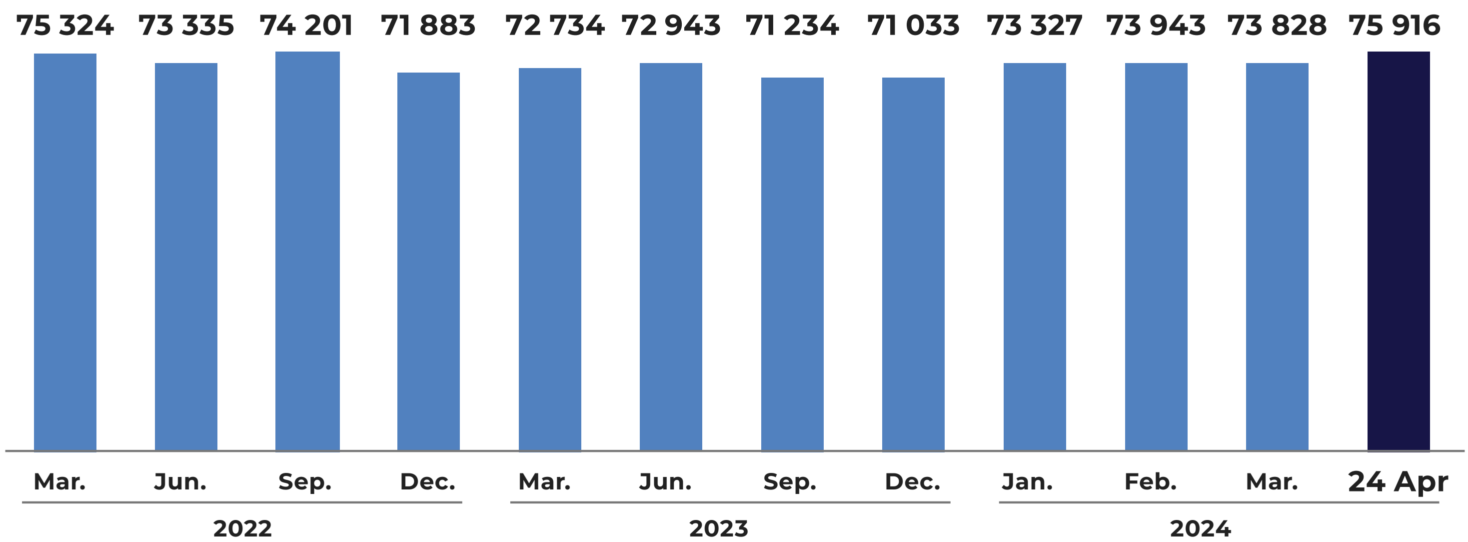
Now, with the constitutional issues hopefully behind, Chile can focus on macroeconomic fundamentals. The expected new growth equilibrium for Chile is projected to be between 2% and 2.5%, lower than in the past. Although current sentiment is very depressed, there is cautious optimism about the country's ability to stabilize and grow.

Peru - Resilient economy

Peru was highlighted as a complex yet resilient economy within Latin America. Despite its political instability, characterized by frequent corruption investigations and potential presidential impeachments, the country demonstrates economic strengths. Peru's Central Bank is noted for its professionalism and independence.

The country boasts international reserves equating to a quarter of its GDP and maintains very low and manageable debt levels.

Net International Reserves - Millions of USD



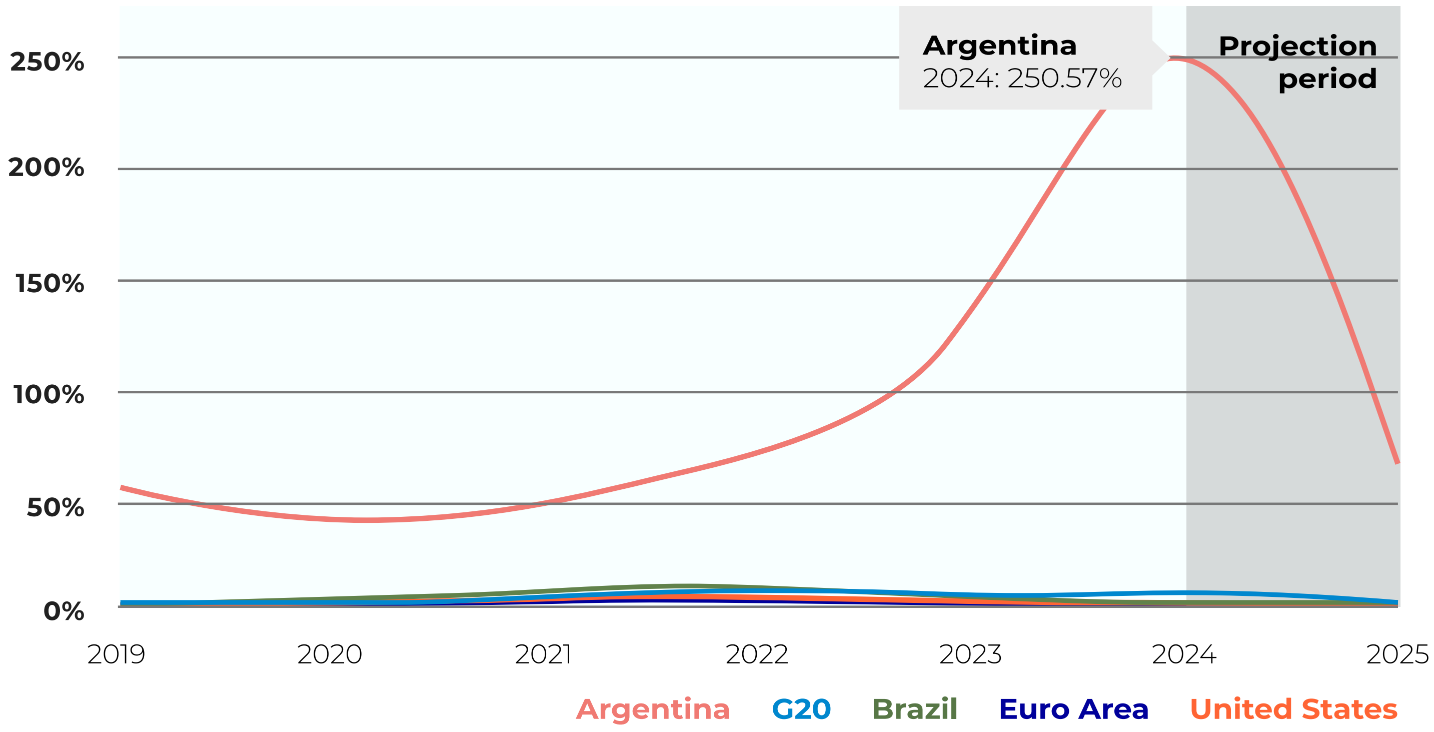
Source: BCRP

The majority of its debt is in local currency, providing stability against external economic shocks. While the world faces economic, political, and geopolitical turmoil, the country's robust financial management presents numerous investment opportunities, particularly in infrastructure.

Argentina - Excessive inflation

Argentina has been grappling with economic and financial instability for decades. Since 1960, the country has experienced 57 years of fiscal deficits and inflation (the highest rate in the world so far), making it challenging to conduct business due to excessive regulation, taxation, and unionization. The consensus is that these issues need to be addressed for any long-term or medium-term economic improvement, despite the short-term pain involved.

Argentina's current inflation



Source: OECD Economic Outlook Interim Report February 2024

In the current government, there has been a deliberate effort to implement promised reforms. In the first quarter of 2024, Argentina achieved a primary surplus for the first time in ten years, indicating some progress. However, the path to success remains rocky and highly binary. The country has just passed a package of structural reforms in Congress, which are crucial for stabilizing the critically distressed economy. Time will reveal whether Argentina can navigate this challenging period successfully. For now, it is considered a high-risk investment environment.

GLOBAL SUPPLY CHAINS: REDESIGNING IN A MULTIPOLAR WORLD

"I don't think we're seeing de-globalization as much as we're seeing re-globalization".

In a multipolar world marked by conflicts and increasing fragmentation of the global geopolitical and trade landscape, economic interactions between countries are being reshaped. As a result, the movement of capital, money, and goods is becoming less fluid than before.

Over the past 30 years, we've seen increasing freedom of movement for goods and capital. Now, however, we're facing more complexity, leading to higher inflation. This results in higher interest rates for longer periods, which in turn increases the cost of capital and goods, posing challenges for Latin America.

Despite these challenges, Latin America is now better prepared to deal with higher interest rates than it was in the past. There are significant opportunities for the region to leverage its human and environmental capital, as well as existing infrastructure, to become part of the solution in this new economic landscape.

"Things are being redesigned. And the world has moved from a just-in-time and cost prioritization to a just-in-case and resilience prioritization".

This structural change is a slow-moving train that Latin America can benefit from, especially as decisions involving billions of dollars in capacity shifts are made.

A recent example of these shifts is the significant tariff hikes proposed by the Biden administration on a range of Chinese products. While many of these are politically driven and may have limited economic impact, areas like batteries do hold economic relevance. Regardless of whether Trump or Biden wins, or if Xi Jinping remains in power, fragmentation appears to be the prevailing trend, creating opportunities for Latin America.

However, a critical point of concern is the lack of proactive leadership in the region. There is a need for aggressive promotion of trade and investment opportunities, especially in key sectors such as oil. The current efforts, such as those seen in Davos, are insufficient. Latin America must rise to the challenge by strengthening its infrastructure and ensuring that it can meet the demands of a re-globalized world.

INFRASTRUCTURE: IS LATIN AMERICA READY TO CLOSE THE GAP?

The discussion on infrastructure investments in Latin America highlighted a critical issue: **the region invests only about 2-2.1% of its GDP in infrastructure annually**, a figure that has remained consistent over the last decade. Executives noted that this rate is considerably lower than that of other regions, such as East Asia, which invests **around 6%**, and even some African countries, which invest **about 4%**. This low investment rate indicates that the infrastructure gap in Latin America is not being closed, presenting both a challenge and an opportunity.

This gap, combined with fiscal deficits and restrictions, provides a significant opportunity for the private sector. However, it requires supportive government policies to increase infrastructure expenditures. The discussion pointed out that resilience in supply networks and geopolitical dynamics, especially in countries like Mexico, further emphasize the need for robust infrastructure investments.

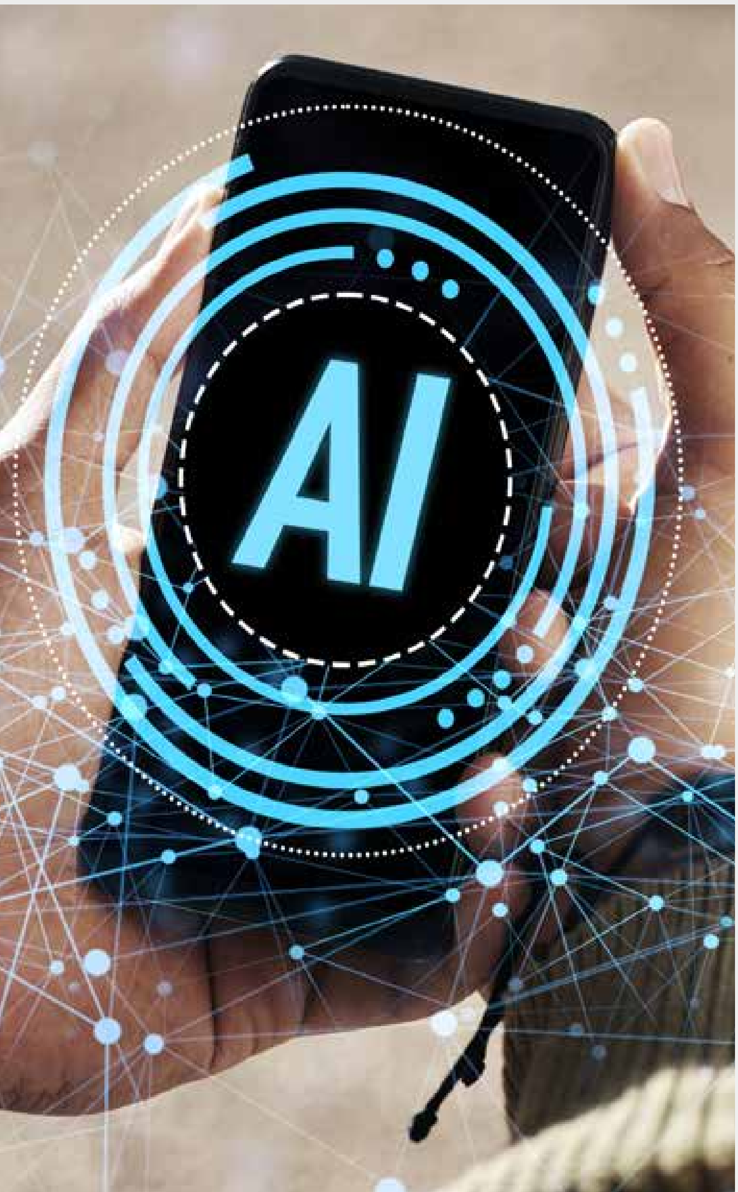
Participants raised concerns about specific sectors needing infrastructure investment, such as roads, digital technology, energy, and water. One particular bottleneck mentioned in the context of Mexico is energy. The forecasted nearshoring trends could necessitate approximately **$180 billion** in energy investments over the next ten years to support this shift.

In Brazil, the nearshoring trend began even before it became a widely recognized strategy. Brazil's unique dynamics and early start in this area provide certain advantages. However, each country in Latin America faces its own set of challenges and opportunities in addressing infrastructure needs.

INTEGRATING AI AND OTHER TECHNOLOGICAL ADVANCEMENTS

Artificial Intelligence (AI) and other technological advancements were key points of the discussion. These tools are poised to transform various sectors in Latin America, including healthcare, education, and finance. AI can significantly enhance healthcare services in remote areas by providing cost-effective solutions and increasing financial penetration, making services more accessible.

Despite this potential, AI has not been prioritized in the economic agendas of Latin American countries, raising concerns about the region falling behind areas like the UAE and the United States.



In the energy sector, AI-driven technology consumes considerably more energy than traditional ones, necessitating substantial investments in data centers. That's why companies like Mitsubishi Power in the United States are heavily investing in energy infrastructure to support these centers. AI tools also enable distribution companies to reduce losses and operate more efficiently, which is vital for addressing climate change.

Investments in smart grid technologies, such as advanced metering infrastructure and grid automation, can enhance transmission networks. These technologies enable real-time monitoring and control of the grid, allowing for better management of energy flows and reducing the risk of outages.

But IA is not the only card on the table. In terms of energy transition, advancements in battery storage technology are crucial for managing the intermittency of solar and wind power, ensuring a steady supply of electricity even when the sun isn't shining or the wind isn't blowing.

The transition to new technologies is pivotal to meeting net-zero targets by 2050 and reducing greenhouse gas emissions by 50% within the next decade.

"Without new technologies, we're not going to get there".

Natural catastrophes and infrastructure reconstruction are also critical areas where technology and experience play a vital role. Mobilizing private capital and leveraging technological expertise are necessary to support reconstruction.

The Inter-American Development Bank (IDB) has been instrumental in supporting major catastrophes and increasing private capital mobilization for capital construction projects. The IDB's comprehensive toolkit, which includes synergies from various sectors within the IDB group, addresses gaps in project availability and construction.

In response to natural disasters, entities like the United States Agency for International Development (USAID) and the Official Development Assistance (ODA) provide immediate and long-term support. These agencies bring bilateral assistance to affected markets, focusing on project preparation and financing facilitation. Their comprehensive approach ensures that projects are sustainable, with strong ESG profiles, enabling countries to better manage disasters independently.

ECONOMIC AND INVESTMENT FORECAST IN LATIN AMERICA

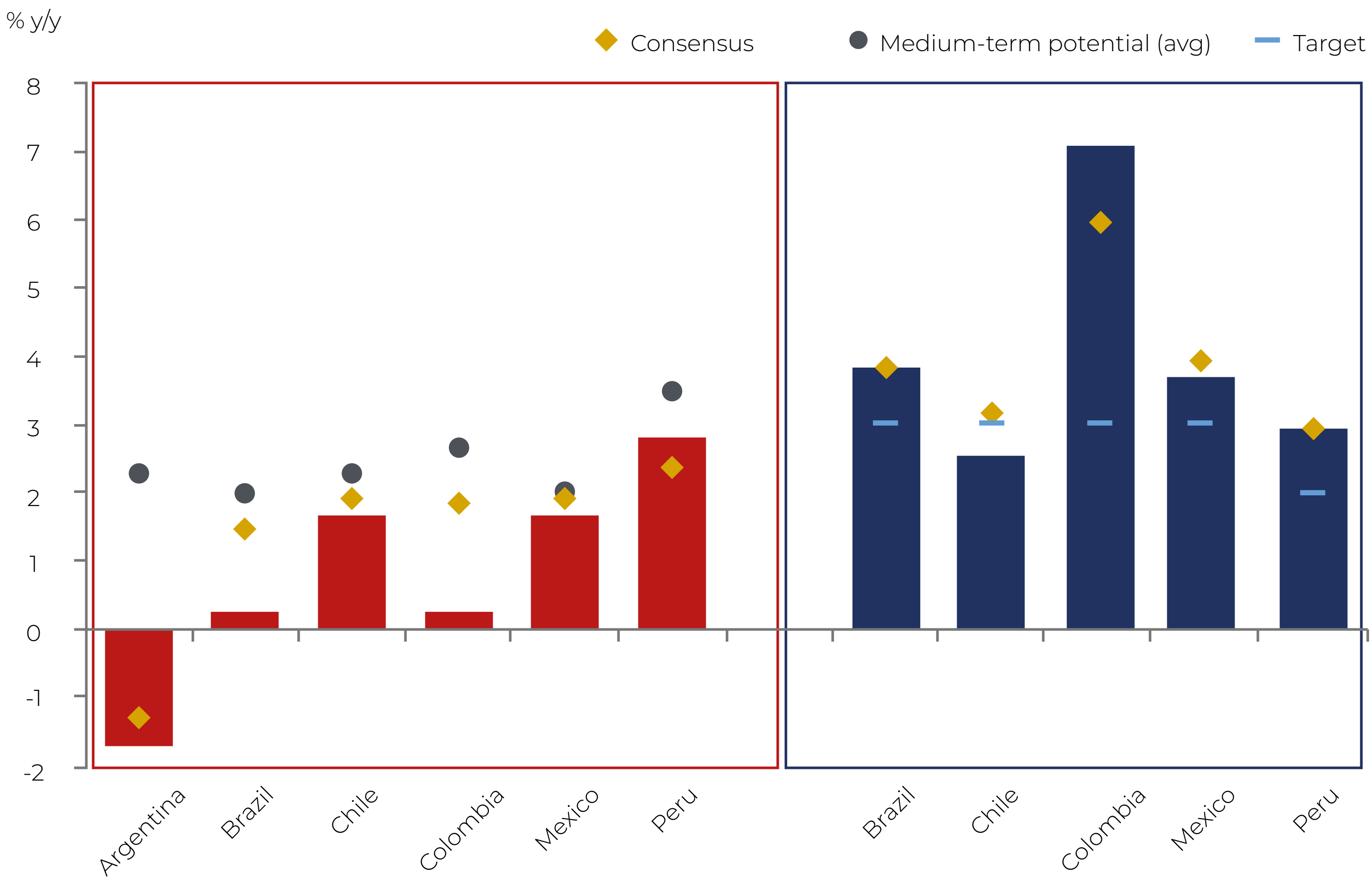
The macroeconomic landscape in the region has been significantly influenced by various global factors since the pandemic and is still reorganizing.

The extraordinary fiscal stimulus in the US, which was four times larger than the Marshall Plan, has had a lasting impact on the global economy. Additionally, geopolitical tensions, as well as technological advancements, have added layers of complexity.

Despite these challenges, Latin America has shown resilience. Analysts' forecasts predict a "soft landing" for the global economy, with a 60% probability. This scenario involves a slowdown in growth in both the US and Latin America in 2024.

"Good momentum for investment, for infrastructure, for the consumer, because you will have this inflation at the same time that you will have a reduction in rates. So, pretty constructive".

LatAm: 2024 GDP and average inflation forecasts



Source: Oxford Economics/Haver Analytics

Central banks in Latin America have already initiated easing cycles, and the Federal Reserve in the US is expected to follow suit in the second half of the year. This scenario is favorable for investment and economic stability in the region.

However, multiple scenarios remain possible. A **"hard landing"**, with a 1**5% probability**, could occur if the US economy faces significant downturns, leading to rapid interest rate cuts by the Federal Reserve.

Historical patterns suggest that hiking cycles by the Fed, especially with high inflation and low unemployment, often lead to recessions. This scenario could result in capital flight to quality, negatively impacting emerging markets and creating economic instability in the region.

A **"no landing"** scenario, with a **25% probability,** would see the US economy maintaining its current strength, preventing rate cuts in 2024. This would result in a strong dollar, creating headwinds for Latin American economies by putting pressure on their currencies and limiting the ability of central banks to cut rates.

An unusual scenario: "For the first time, elections don't worry the market"

Historically, elections in countries like Mexico, Colombia, Peru, and Chile have prompted worries about macroeconomic policy shifts, leading to substantial risk premiums being priced into currencies and rates markets.

However, this year is different. Despite the upcoming elections in several Latin American countries, including Mexico and possibly Venezuela, economic policies are not expected to undergo drastic changes regardless of the election outcomes. This unusual stability is partly due to the confidence of Latin American central banks, which have decoupled from the U.S. Federal Reserve and started reducing interest rates despite the Fed's ongoing cycle. **This move would have been unthinkable a decade ago.**

Interestingly, the focus of market concerns has shifted away from Latin American elections to the U.S. elections. The potential election of Trump or changes in U.S. trade and geopolitical policies are seen as having more significant implications for Latin America and emerging markets than local political changes. This shift in focus underscores a new dynamic in global investor sentiment, where local political risks in Latin America are overshadowed by larger global economic and geopolitical uncertainties.

On the other hand, while those within the region may be accustomed to the political landscape, external investors from Europe, US and Canada often view it as a higher risk, which impacts investment decisions.

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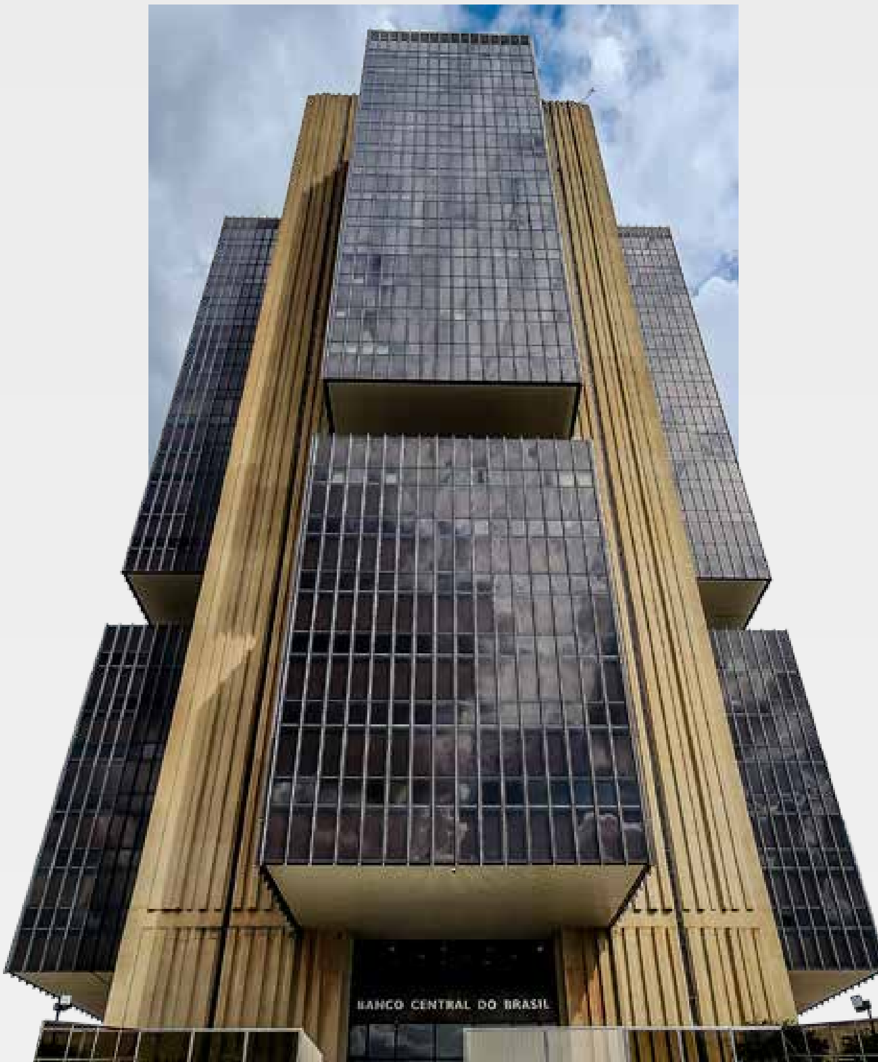
High rates and equity financing on infrastructure projects

The elevated rates have created significant challenges for financing, particularly in regulated sectors, such as renewables in Colombia. Fixed tariffs in these sectors cannot absorb the increased costs, leading many investors to shift from debt to **equity financing**. This shift is primarily driven by the prohibitive cost of debt, making equity a more attractive option.

Unlike debt, which requires regular interest payments regardless of project performance, equity does not impose such immediate financial burdens. This is crucial in the current economic climate, where unpredictable and often high interest rates make debt financing less attractive.

The situation is further complicated by the structure of most infrastructure loans, which are indexed to the Consumer Price Index (CPI). While this provides some adjustment for rising costs, it does not fully mitigate the impact of rapidly increasing interest rates. Fixed-rate loans are less common due to their higher initial costs, exacerbating financial strain when rates rise quickly.

In Brazil, the Central Bank's efforts to manage inflation and interest rates have created a relatively stable environment for infrastructure investments. However, high rates during construction phases pose substantial challenges, necessitating innovative solutions to ensure project viability. Some projects have turned to mini-perm financing structures, which offer a short-term solution until long-term rates become more favorable. There is also a need for flexibility in financial planning and preparation for fluctuations.



A growing trend: Thematic Bonds

Thematic bonds, very common in Europe, are being designed to fund projects with specific environmental and social benefits in Latin America, thereby appealing to a broad range of investors committed to sustainability.

Green bonds, in particular, have gained traction due to their alignment with global efforts to combat climate change. These bonds finance projects such as renewable energy installations, energy efficiency improvements, and sustainable agriculture. By issuing green bonds, governments and corporations can attract investors looking to support environmentally friendly initiatives.

Blue bonds, which are dedicated to marine and ocean-based projects, were also discussed. These bonds fund activities like marine conservation, sustainable fisheries, and ocean-based renewable energy projects. The appeal of blue bonds lies in their potential to address critical issues related to ocean health and biodiversity, which are increasingly gaining attention from the international community.

The discussion also underscored the importance of clear and transparent frameworks for issuing these bonds, since investors need assurance that their funds will be used as intended, which requires rigorous reporting and verification processes.

CLEAN ENERGY: CHALLENGES TO HARNESS GREEN POTENTIAL

The need for increased investments in green energy, aligning with the net zero targets for 2030 and 2050, was a key topic of the meeting.

"60% of the world's green energy is produced in Latin America, which is twice the global average."

However, there are three economic challenges: interest rates, cost of capital and liquidity. While debt funds for infrastructure projects can offer attractive returns of 8-10%, these returns may not be sufficient to compensate for the higher risk and lower liquidity compared to the safer 5-6% returns on U.S. Treasuries. Infrastructure investments also require long-term commitments, often 10-12 years, which can be a hurdle for investors seeking liquidity.

Furthermore, the cost of capital is a critical component in determining the feasibility and attractiveness of renewable energy projects. High financing costs can significantly increase the Levelized Cost of Energy (LCOE), making projects less competitive compared to traditional energy sources.

Generation cost and transmission

The LCOE for renewable energy sources, such as solar and wind, has seen a significant reduction over the past decade, making these sources more competitive with traditional fossil fuels. However, recent economic challenges, including inflation and global logistics issues, have caused cyclical price increases.

Material prices for distributed energy systems have generally decreased, but exchange rate volatility has impacted the actual costs in countries like Brazil. The fluctuations in Brazil's currency have led to increased prices for imported components essential for renewable energy projects.

In compensation, the country is making substantial investments in its transmission infrastructure to meet the current and future demands of its energy sector, including developing new transmission lines and enhancing existing ones.

Chile has announced ambitious plans for transmission infrastructure development but has yet to implement them effectively. In parallel, Mexico has invested very little in transmission infrastructure over the past six years, hampering its capacity to support the growing demand and ensure stable electricity supply.

The role of regulatory frameworks

Effective regulations are now crucial for attracting private investments in energy infrastructure projects. Clear and well-defined policies provide stability and predictability, which are essential for investors committing significant resources to long-term projects.

For **centralized generation**, the discussion underscored the necessity of streamlining approval processes for large renewable energy projects. This involves reducing bureaucratic barriers and simplifying licensing procedures to facilitate timely project development.

Decentralized generation, on the other hand, such as residential solar panels and small-scale wind turbines, also were discussed. The integration of these distributed energy systems into the main grid is vital for diversifying the energy matrix and enhancing system resilience.

The regulatory framework must address both centralized and decentralized generation to ensure a balanced and robust energy system. Centralized generation provides large-scale energy production, essential for meeting the base load demand, while decentralized generation enhances grid resilience and reduces transmission losses.

The session also highlighted the importance of financial and fiscal incentives to promote investments, which include feed-in tariffs, subsidies, and tax exemptions. Additionally, mechanisms for risk protection, such as power purchase agreements and long-term contracts, provide a stable financial foundation for these projects.

Risk management - Now more than ever

The renewable energy projects are often subject to various uncertainties, including weather conditions, natural disasters, and technological failures. These days, it appears that this perception is even more accurate.

For mitigating the risks and enhancing the attractiveness of the projects, insurance plays a vital role. A key point discussed was the rising rates, particularly for new technologies and projects in regions prone to natural disasters in Latin America.

The current hard cycle in the insurance market has led to increased premiums, impacting the overall project costs. The cost of insuring offshore wind projects or large-scale solar farms has escalated, reflecting the higher perceived risks associated with these projects.

Latin America and Caribbean composite insurance rate change

Source: Marsh Specialty and Global Placement

As the energy sector transitions to include more innovative solutions like green hydrogen and battery storage, the lack of historical data makes it difficult for insurers to accurately assess risks. This uncertainty results in higher premiums or, in some cases, limited availability of insurance coverage.

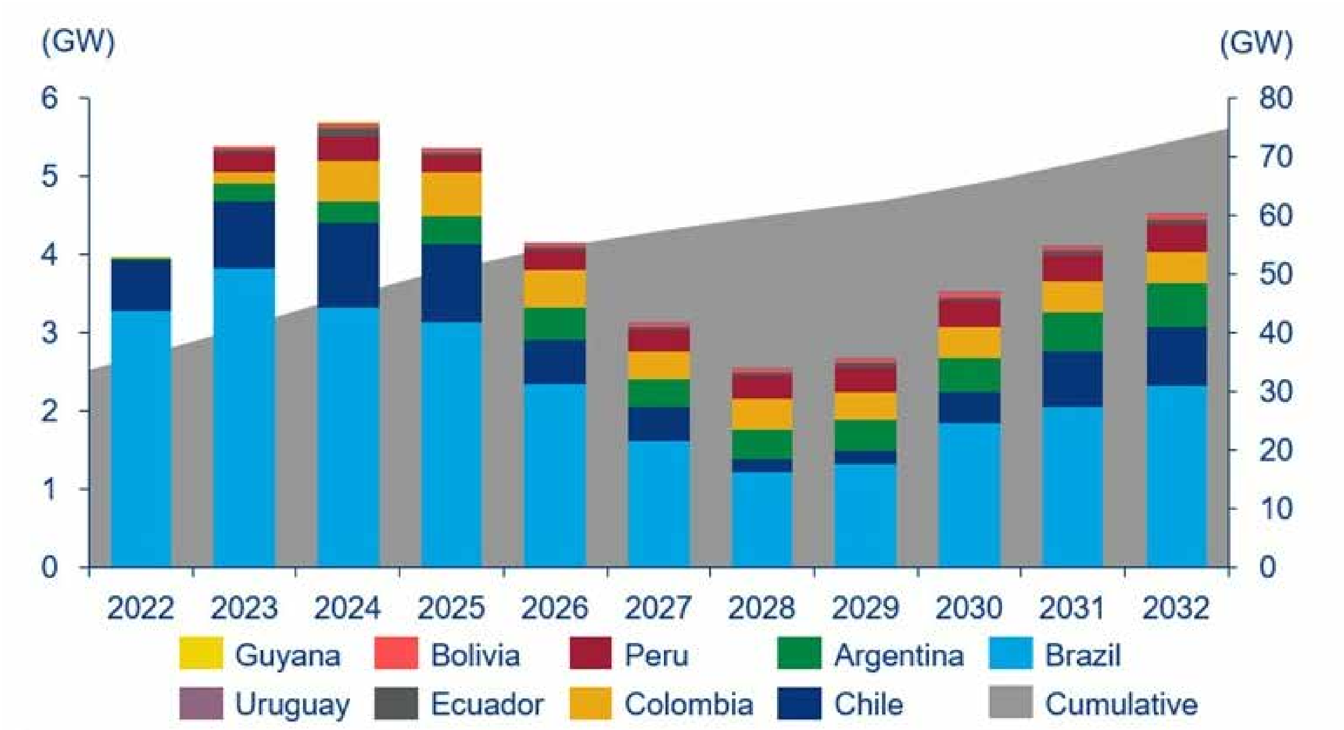
Players emphasized the need for the insurance industry to develop new models and approaches to better evaluate and manage the risks associated with cutting-edge technologies and natural disasters.

Offshore and onshore wind potential in the green hydrogen industry

Effective regulations are now crucial for attracting private investments in energy infrastructure projects. Clear and well-defined policies provide stability and predictability, which are essential for investors committing significant resources to long-term projects.

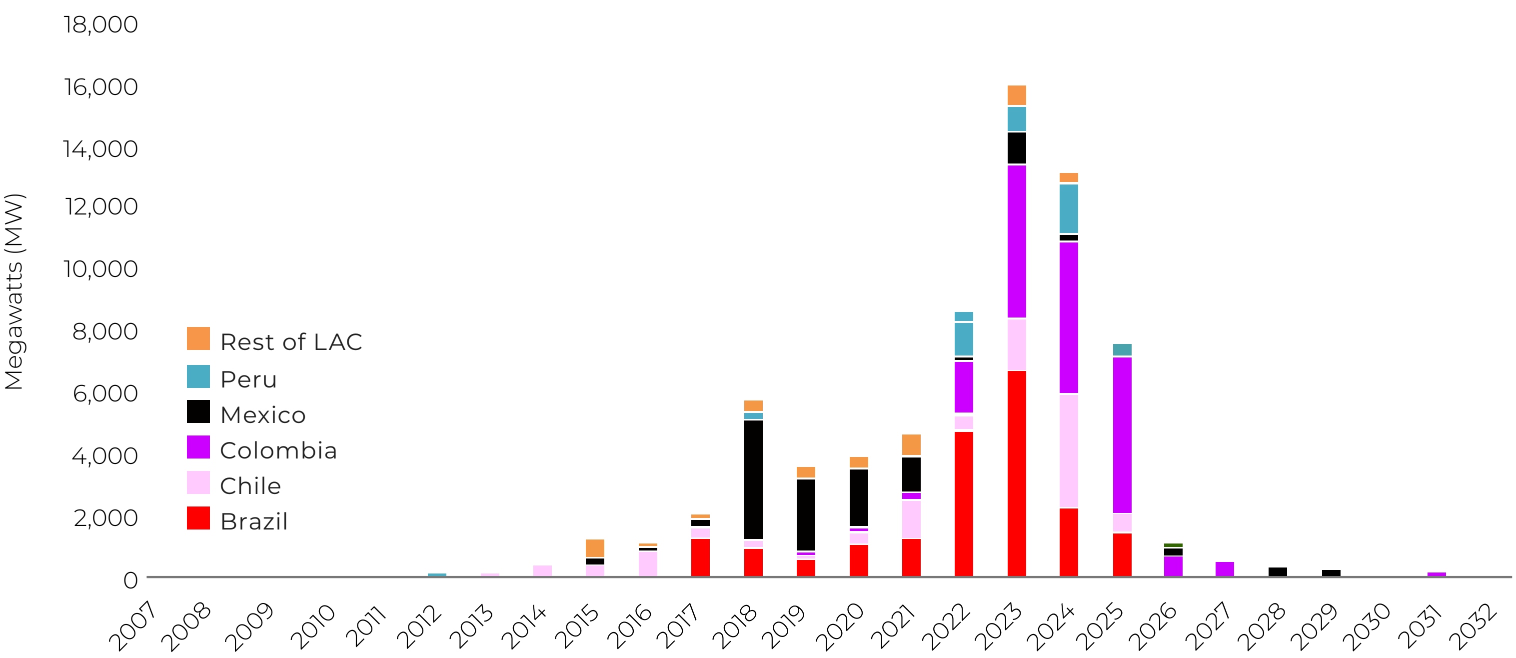
Offshore and onshore wind presents a significant opportunity for Latin America, particularly in countries like Brazil and Colombia. Mainly because green hydrogen, produced using renewable energy sources such as wind and solar, is seen as a key component of the future energy landscape. It offers a clean alternative to traditional fossil fuels and can significantly reduce carbon emissions.

Latin America Wind power outlook - 2022 to 2032



Source: Wood Mckenzie

Latin America & The Caribbean solar power capacity development



Source: Global Energy Monitor

For instance, **Brazil** has potential for offshore and onshore wind energy due to its vast coastline and favorable wind conditions. Currently, there is significant activity among stakeholders working on establishing regulations for these projects.

Offshore and onshore wind presents a significant opportunity for Latin America, particularly in countries like Brazil and Colombia. Mainly because green hydrogen, produced using renewable energy sources such as wind and solar, is seen as a key component of the future energy landscape. It offers a clean alternative to traditional fossil fuels and can significantly reduce carbon emissions.

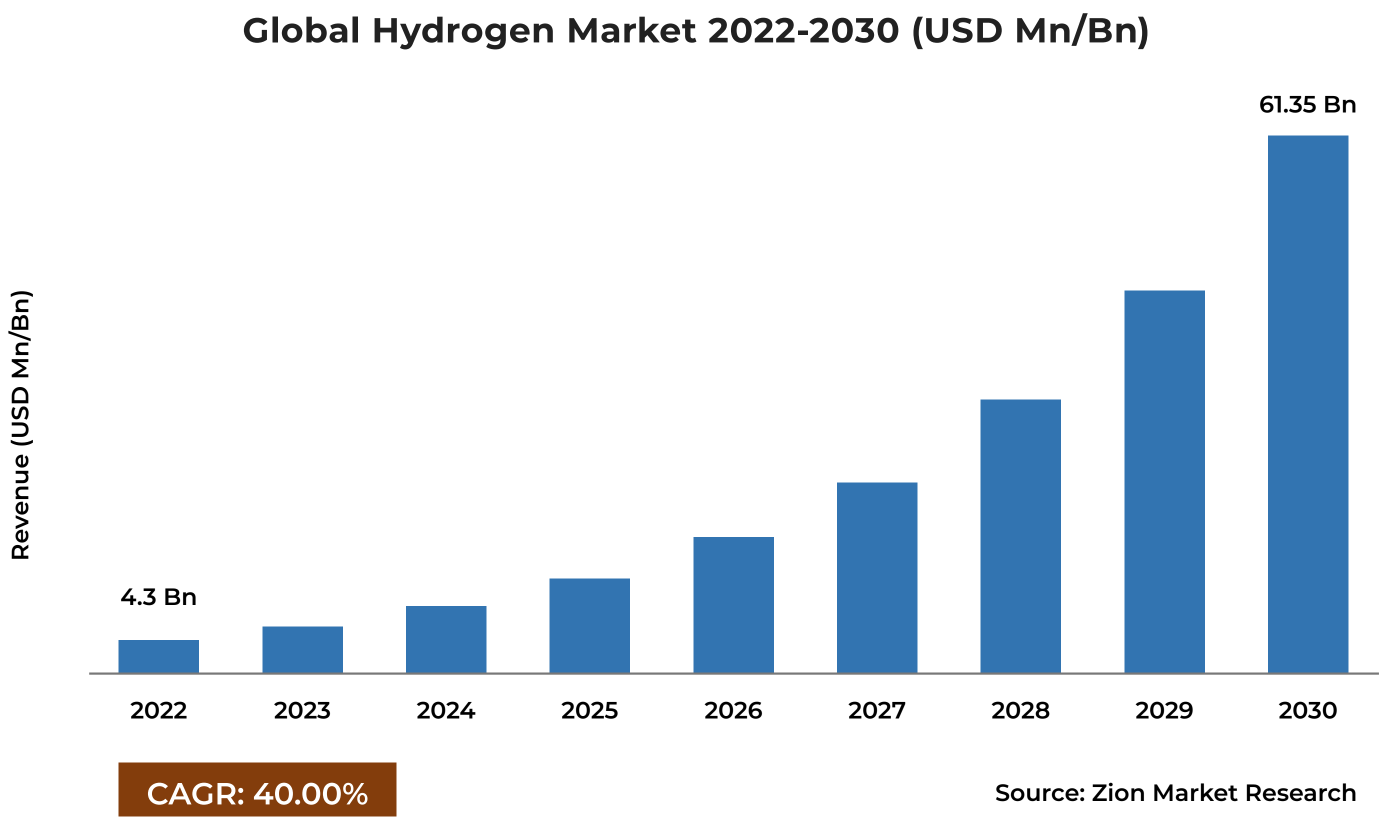
“However, today in Brazil, the LCOE of offshore wind will be much higher than onshore wind or solar.”

In the short term, Brazil’s energy matrix might not accommodate large-scale projects unless there is a substantial increase in demand, potentially driven by new industries or technologies that convert electricity into other forms of energy, such as hydrogen or synthetic fuels. Despite this, the country is planning to conduct auctions by the end of the year, signaling a move towards integrating offshore wind into its energy portfolio.

In addition, **Colombia** is also making strides, with plans to conduct offshore wind auctions. The session highlighted that while the cost remains high due to logistical challenges, there is potential for these projects to become competitive, particularly in shallow waters.

This scenario is seen as a viable option for both countries producing green hydrogen, which can be a valuable byproduct.

Green hydrogen production is expected to support major industries, including manufacturing, transportation, power generation and chemical sectors.



Exporting green hydrogen, Colombia and Brazil aims to create a sustainable supply chain that enhances both domestic and international energy markets.

Collaboration as a tool for development

Players agree that transition to renewable energy has significant social implications, including job creation and community development. Renewable energy projects can generate employment opportunities, particularly in construction, maintenance, and operation. Moreover, these projects can drive economic growth in local communities, providing a source of income and improving living standards.

Engaging with local communities and addressing their concerns is essential for gaining their support. Transparent communication about the benefits and potential impacts of renewable energy projects can help build trust and foster a positive public perception.

Furthermore, regional collaboration is essential for advancing renewable energy projects in the region. The session emphasized the importance of partnerships between countries to share knowledge, resources, and best practices. Collaborative efforts can lead to more efficient and cost-effective project implementation, leveraging the strengths of each country. Institutions such as IDB, IFC and the United Nations are instrumental in providing funding, technical assistance, and policy guidance, helping facilitate cross-border projects.

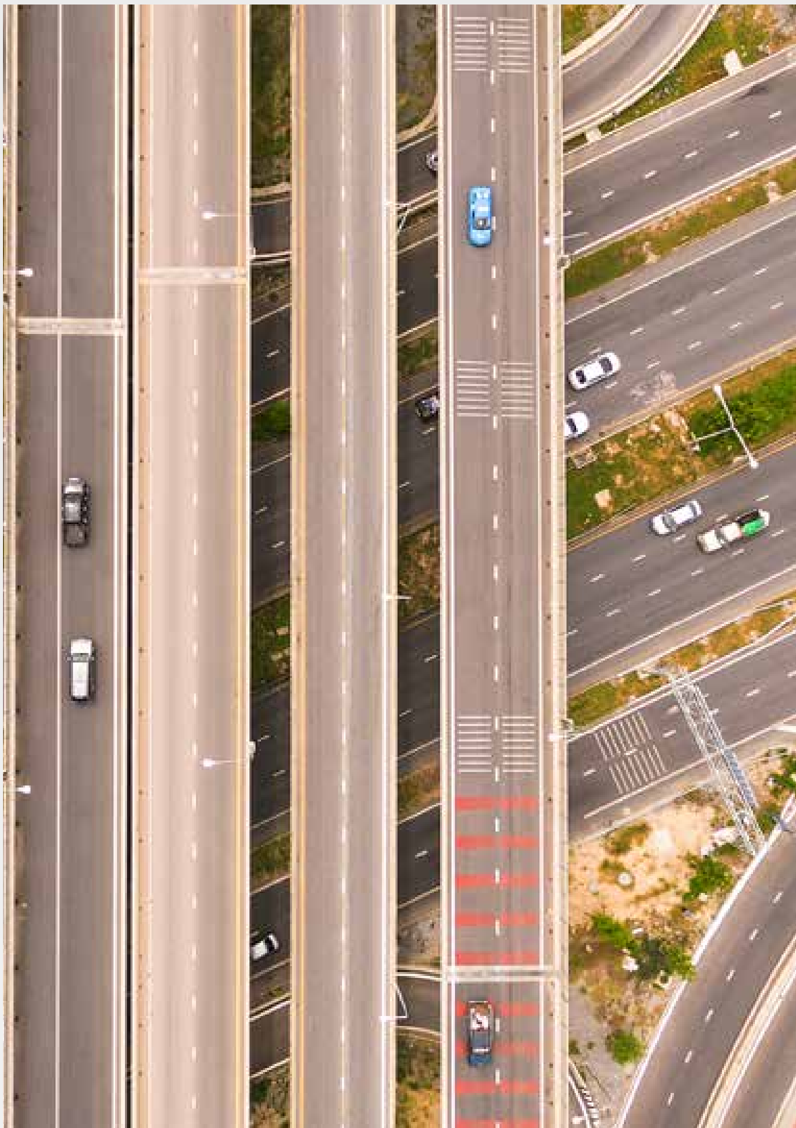
HIGHWAY CONCESSIONS - ON THE ROAD TO ENSURE A TECHNOLOGY-BASED OUTPERFORMANCE?

The session on “Highway Concessions” was marked by a robust discussion on the transformative potential of technological advancements, regulatory frameworks, and user-centric approaches in the infrastructure sector. Participants emphasized the critical role of technology in enhancing traffic efficiency, reducing carbon emissions, and ensuring the resilience of infrastructure against natural disasters.

Free Flow technology

“The good news, we’re just beginning. So first come, first serve. If I were you, if I were the ambassador here, I would really take a chance to come faster to this new field of opportunity”.

Free flow technology, which enables vehicles to move through toll points without stopping, is seen as a pivotal innovation for the future of road infrastructure. The implementation of free flow systems involves integrating advanced technologies such as high-speed cameras, sensors, and automatic license plate recognition systems.



Despite the main benefits, such as:

- Reducing carbon emissions;
- Improving traffic flow;
- Collecting data about drivers to improve services.

The adoption of free flow technology faces significant hurdles, since current regulatory frameworks in many regions are not yet equipped to handle the complexities of free flow operations, leading to delays and inefficiencies. Players called for a regulatory revolution, where streamlined approval processes and simplified licensing procedures could accelerate the adoption of free flow technology.

PPPs - Examples of success

Government support and financial incentives are crucial to overcoming the initial costs associated with free flow models and other innovations. The players discussed specific models of Public-Private Partnerships (PPPs) that could be leveraged to fund these projects:

- **Build-Operate-Transfer framework**, where private entities finance, build, and operate the toll infrastructure for a set period before transferring ownership back to the government. This model allows for the sharing of financial risks and responsibilities, making it more feasible for private investors to commit to free flow projects.
- **Availability payment mechanism,** where the government commits to regular payments to the private operator based on the availability and performance of the toll system rather than direct user fees.

For instance, in Peru, the integration of autonomous vehicle systems into highway operations represents a significant leap forward in modernizing the country's transportation infrastructure. Public-private partnerships have been instrumental in facilitating this transition, allowing for the pooling of resources, expertise, and technology.

San Jose, California, offers another compelling example of successful public-private partnerships in the realm of autonomous transportation. Although not from Latin America, this example was brought up at the conference because it serves as a model for the region. The city has been at the forefront of adopting autonomous vehicle technology, thanks to strategic collaborations with private tech companies.

Users in the center

The players also highlighted a paradigm shift in how road users are perceived, advocating for a transition from viewing them merely as taxpayers to treating them as clients, much like the approach taken in airport concessions.

"We need to move from a mindset of 'build it and they will come' to one where we actively engage with and understand our users. By treating them as clients, we can create new business opportunities and enhance the value proposition of our infrastructure projects".

Innovation: Brazil's regulatory sandbox framework

During the conference, there was a strong recognition of the significant market potential in Latin America, particularly in Brazil, for investment in highway concessions and related technologies.

Brazil's ambitious plan to expand its highway concession network is closely tied to the regulatory sandbox framework. This controlled environment enables the testing of new technologies and business models without the usual regulatory constraints, minimizing risks to society and facilitating the rapid adoption of innovations.

“We have about 30,000 kilometers of concessions in Brazil currently. We had to wait almost 30 years to achieve this number. And what we expect is to double this number in the upcoming five years”.

A major focus was on the implementation of the country’s first free flow operation on the Federal Highway 101, connecting Rio de Janeiro and Ubatuba in São Paulo. This project is currently being tested, and if it proves successful, it will be implemented on a larger scale across the country, reducing emissions and improving traffic flow.

Investment in research and development is another cornerstone of Brazil’s strategy. For 2024, the country has allocated R$ 4 million to support various technological advancements, like the high-speed wave motion technology used in Ecovias do Cerrado, which allows vehicles to weigh cargo without stopping, reducing emissions by 25% and enhancing highway safety.

The use of optical fiber technology in monitoring highways was also discussed. This technology allows for real-time monitoring of road conditions, detecting earthquakes, landslides, and accidents, thereby enhancing highway safety and maintenance. For this, the need for partnerships with the energy and telecom sectors to provide the necessary infrastructure was mentioned as an upcoming standard.

Finally, the implementation of climate models to predict and adapt infrastructure resilience to changing climate conditions was an interesting topic for the players, considering the current landscape.

"The regulatory sandbox is an environment where we allow the concession rules of the contracts in a specific location, in a specific time, measuring the kind of innovation that we probably will not be able to do with the regular contracts. Of course, the agents' monitoring is very close, avoiding risk to the society, risk to the contracts. But the results of this kind of initiative are really amazing."

All these technological ideas, including the regulatory sandbox, were praised as a replicable framework for other countries in Latin America. This approach showcases the highway market's potential to foster innovation and facilitate the adoption of new technologies in the coming years.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