



# Global Green Finance Index

## Case Study: São Paulo



April 2019



## Foreword

Sustainable finance has become mainstream. Presently, US\$ 31 trillion AUM (of a global total of US\$ 85 trillion) are managed considering environmental, social and corporate governance (ESG) criteria to generate long-term competitive financial returns and positive societal impact. The ESG market grew 34% since 2016 (2018 Global Sustainable Investment Review, 2019).

Green finance, an integral component of sustainable finance, plays an important part in this. With rising global energy demands, lower generating costs, technological improvements, and with the consequent growing interest by the investor community, clean energy and green finance indicators are on a positive path.

Brazil, with Sao Paolo at its core, has been a consistent leader in this arena. The country has one of the cleanest energy matrixes in the world (43% renewables) and the city is the financial heart of Latin America. This is the backdrop against which Sao Paolo was again appointed as the leading centre in the Latin America & the Caribbean region in the Global Green Finance Index (GGFI).

As indicated in this report, several players are providing significant contributions to the green finance ecosystem, from the Finance Innovation Lab (led by the Inter-American Development Bank, the Brazilian Association for Development and the Securities and Exchange Commission) to B3, the Brazilian stock exchange, pensions regulator (PREVIC) and the Brazilian Federation of Banks (FEBRABAN).

Although green finance initiatives are increasingly spearheaded by the private sector, the city government of Sao Paolo is in tune with the need to support a green agenda. In April 2019, Mayor Bruno Covas announced the immediate constitution of a working group to prepare a municipal action plan against climate change, in line with the Paris Agreement, to be launched in 2020.

Risks still exist. The federal government, which took office in 2019, has not yet delivered a unwavering public case in favor of green finance and the Sao Paolo finance industry is not fully protected against “green-washing” or “tick box initiatives”.

But the trend is positive as signaled by respondents who indicated that São Paulo’s performance on green finance will likely improve (48%). For that to happen cooperation between the private sector, federal and subnational governments, and civil society must be strengthened.

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*The Granito Group is a boutique financial group with the mission to transform the global economy into an impact economy by offering strategic consulting, financial advisory and policy & research (Granito Center for the Impact Economy). It works with governments, asset owners, asset managers and corporations to support their journey towards profit maximization and social/environmental responsibility. It operates in Europe, Latin America and Africa.*





## Introduction

São Paulo is seen by finance workers as the leading financial centre for green finance in Latin America, beating Rio de Janeiro and Mexico City. However, it has a high exposure to fossil fuel financing and faces tough regional competition.

The city's green and brown finance market data tell a mixed story about the country's involvement with bio-ethanol, renewable energy, and offshore oil fields.

This case study looks at how São Paulo can sustain its green finance lead by expanding private sector green finance initiatives and deepening its international network, and mitigating its fossil fuel and competition risks. It highlights steps that São Paulo has taken, which have led to it becoming the leading centre in the Latin America & the Caribbean region in the Global Green Finance Index (GGFI).

The Global Green Finance Index (GGFI) is an initiative sponsored by the MAVA Foundation, and delivered by Finance Watch and the Z/Yen Group (under its Long Finance Programme), that seeks to encourage financial centres to become greener and develop financial services in a way that enables society to live within planetary boundaries.

Green Finance refers to any financial instrument or financial services activity – including insurance, equity, bonds, commodity and derivatives trading, analytical or risk management tools – which results in positive change for the environment and society over the long term (sustainability). The most basic “greenness” criterion of a company or project is that it contributes to reduce Green House Gases emissions.

Over the last two decades, the rise of new financial instruments, such as Green Bonds, and environmental markets, such as carbon, forestry, or water services, along with increasing analytical investigation, have increased attention on green finance.

Green finance is no longer seen as a fringe activity, but a profitable and desirable activity, which drives financial markets, serves society and enhances the status of financial centres which demonstrate expertise. Financial services are an essential component of a sustainable economy, which meets the needs of stakeholders, enhances quality of life, protects the environment and addresses global issues such as climate change.

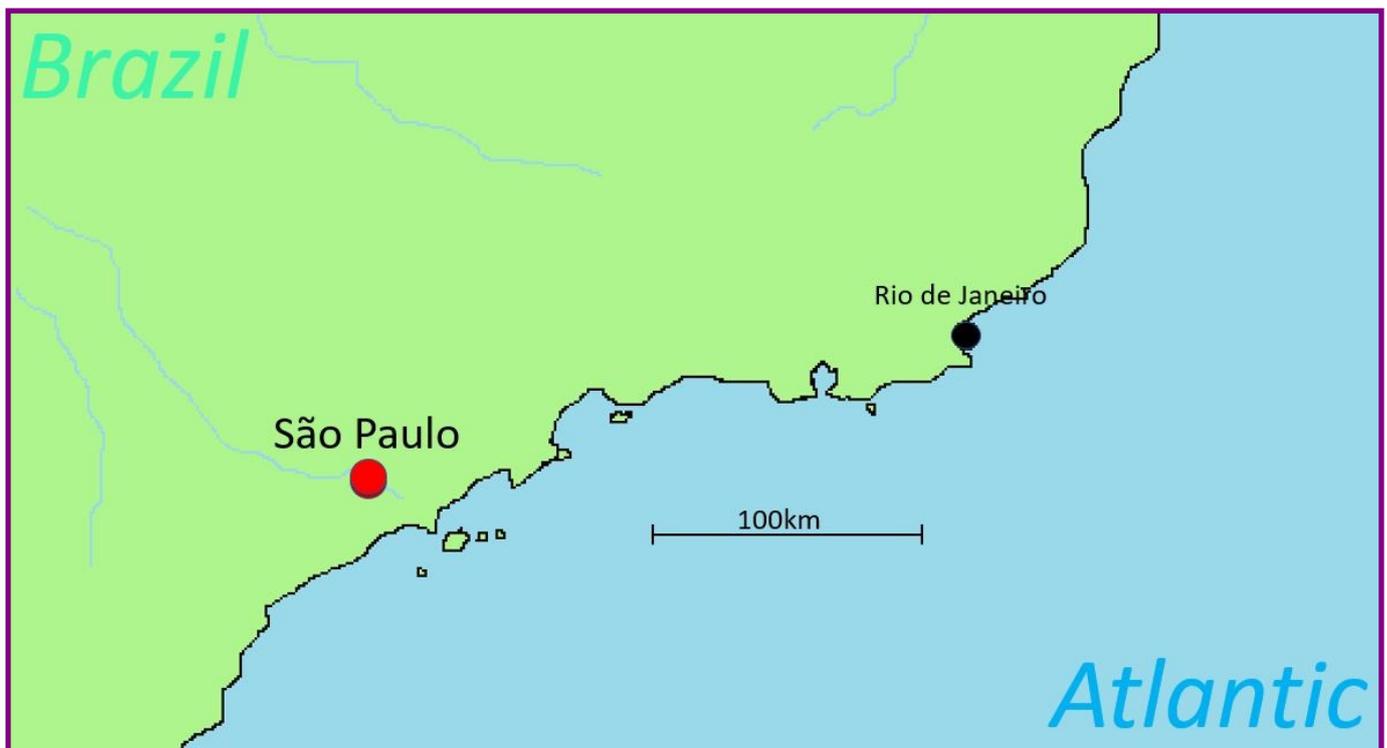
The Global Green Finance Index (GGFI) gives a measure of how financial centres are responding to this challenge. We hope that enabling centres to compare their performance with their peers, will improve policy makers’ understanding of the drivers of green growth, and assist them in shaping the financial system to support sustainability goals.

## Background

Located in south eastern Brazil, approximately halfway between Curitiba and Rio de Janeiro, São Paulo is the most populous city in Brazil, with over 12 million inhabitants (Instituto Brasileiro de Geografia e Estatística (IBGE) [Census](#)).

São Paulo has the highest GDP of any city in Brazil and, according to IBGE data, its gross domestic product in 2010 was R\$450 billion, approximately US\$220 billion - 12.26% of Brazilian GDP. [PwC forecast](#) that by 2025 São Paulo's projected urban economic growth rates and GDP rankings will make it the sixth wealthiest city on the planet.

São Paulo is considered the "financial capital of Latin America". It is the location for the headquarters of major corporations, commercial banks and financial institutions, and ranks in the top 3 of the [Global Financial Centres Index](#) for the region. Sao Paulo leads the Latin America & The Caribbean region for the [Global Green Finance Index](#).



# São Paulo's Performance In The Global Green Finance Index 3

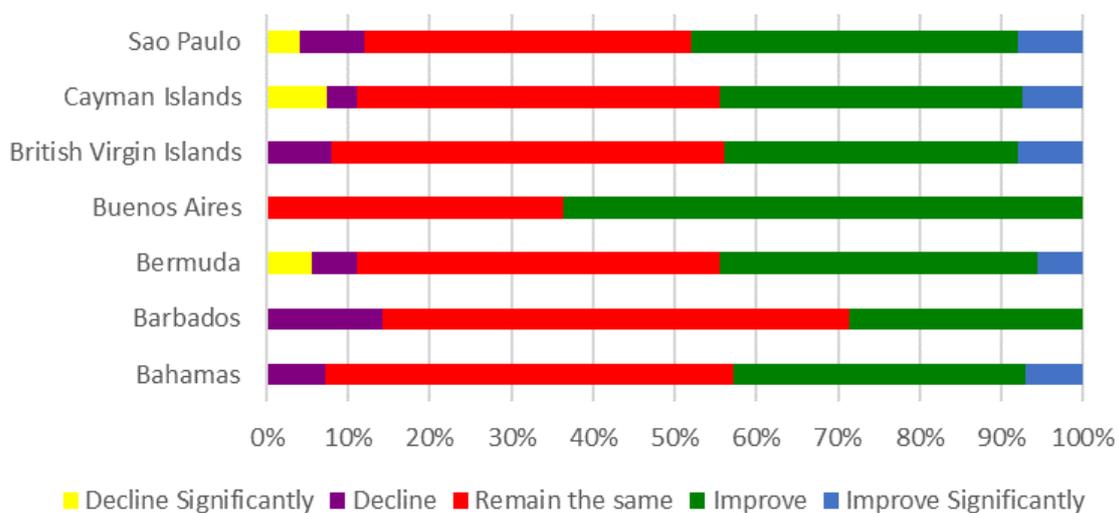
[São Paulo](#) performed exceptionally well in the third edition of the Global Green Finance Index (GGFI), dominating the Latin America and Caribbean region, with a significant lead in its ratings for both the depth and quality of its green finance offerings.

Depth			Quality		
Centre	Rank	Rating	Centre	Rank	Rating
<b>São Paulo</b>	<b>46</b>	<b>366</b>	<b>São Paulo</b>	<b>46=</b>	<b>369</b>
British Virgin Islands	53=	345	Cayman Islands	52=	346
Mexico City	53=	345	British Virgin Islands	54	342
Rio de Janeiro	55	344	Mexico City	55	340
Cayman Islands	56=	341	Rio de Janeiro	56	339
Bermuda	61	326	Bermuda	62	318

## A Strong Reputation

Respondents were asked to predict how São Paulo's performance on green finance may change in the future. 40% indicated they thought it would remain the same, and 48% thought it would improve.

Performance Summary



## Sectoral Strengths

Analysis of respondents to the GGFI 3 survey indicates that Sao Paolo is especially well regarded by the banking sector. If the index is run using solely respondents from the banking sector, São Paolo benefits from a 37 point rise in its ratings, which would lift it 10 places in the rankings.

## Green Versus Brown Finance

Brown finance is finance which supports the fossil fuel industry or carbon intensive activities. Whilst green finance is a particular strength for São Paolo, (see green bond data in table 1), as with all other centres within the GGFI, brown finance remains the major component of the centre's activity.

**Table 1 | Regional Green Finance Activity**

Centre	Green Bonds Issued	Green Bonds Issues/ Total Debt Securities	Green Bonds Listed
São Paolo	\$4,367,046,369	0.2%	\$183,655,122
Buenos Aires	£510,000,000	0.4%	\$236,666,667
Santiago	£566,791,100	0.2%	\$0
Mexico City	\$1,025,700,000	0.1%	\$447,080,000

Source: CBI, BIS

GGFI 3 featured the analysis of newly acquired data which examined the revenue of companies listed in financial centres, and enabled an examination of “carbon risk”.

The concept of “carbon risk” is associated with a piece of research carried out in 2011 by London-based financial services think tank Carbon Tracker. The report ‘Unburnable Carbon’<sup>1</sup> calculated that all proven fossil fuel reserves owned by governments, and public and private companies were equivalent to 2,795 gigatonnes of CO<sub>2</sub>. The report noted that if the world was to meet the objective of keeping global warming below 2°C, the total amount of CO<sub>2</sub> which could be released globally could not exceed 565 gigatonnes for the 40 years to 2050 – a fifth of this ‘carbon budget’.

The market valuation of fossil fuel company stocks is tied to their reserves. If 80 per cent of these reserves have to remain in the ground, the value of their stocks will require readjustment. With some of the world's leading stock exchanges having a significant fraction of their market capitalisation connected to fossil fuels, this raised the spectre of an unsustainable carbon bubble and billions of dollars-worth of fossil fuel assets becoming ‘stranded’.

1 Leaton J 2011 Unburnable Carbon – Are the world's financial markets carrying a carbon bubble? <https://www.longfinance.net/programmes/sustainable-futures/london-accord/reports/unburnable-carbon-are-the-worlds-financial-markets-carrying-a-carbon-bubble/>

Table 2 illustrates the extent of São Paulo's carbon risk in terms of corporate revenues and corporate disclosure rates for greenhouse gases (scope 1 and 2).

**Table 2 | Regional Carbon Risk (Centres For Which Data Is Available)**

Centre	Corporate Revenues From Fossil Fuels (2017 USD ppp)	Fossil/Total Corporate Revenues	Share Of Companies Disclosing GHGs
São Paulo	\$168,299,984,312	15.5%	25.9%
Buenos Aires	£23,523,766,671	30.1%	5.3%
Santiago	\$21,333,379,521	3.2%	15.9%
Mexico City	\$1,550,297,990	0.2%	26.2%

### Reputational Advantage

In the GGFI model, we look at reputation by examining the difference between the weighted average assessment given to a centre and its overall rating. The first measure reflects the average score a centre receives from finance professionals around the world. The second measure is the GGFI score itself, which represents the average assessment adjusted to reflect quantitative data factors.

If a centre has a higher average assessment than its GGFI rating, this indicates that respondents' perceptions of a centre are more favourable than the quantitative measures alone suggest. In GGFI 3 Casablanca had the highest reputational advantage for depth with a score of 99, whilst Calgary had the highest reputational disadvantage at -163.

The difference between São Paulo's weighted average assessment and its overall rating for depth is -1, indicating that the centre has no reputational advantage (or disadvantage).

Where a centre has a high reputational advantage, it can seek to advance its position in the GGFI by concentrating on fundamentals which will enhance its performance on quantitative measures. Where a centre has a reputational disadvantage, this can be improved through marketing and communication. In the case of centres such as São Paulo, the surest route to advancement in the index is to increase the number of assessments it receives.

### A Well-Connected Centre

Analysis of the three editions of the GGFI demonstrates that connected centres are successful centres. The index is compiled using 4,097 ratings from 646 individual respondents, combined with quantitative data from 131 sources.

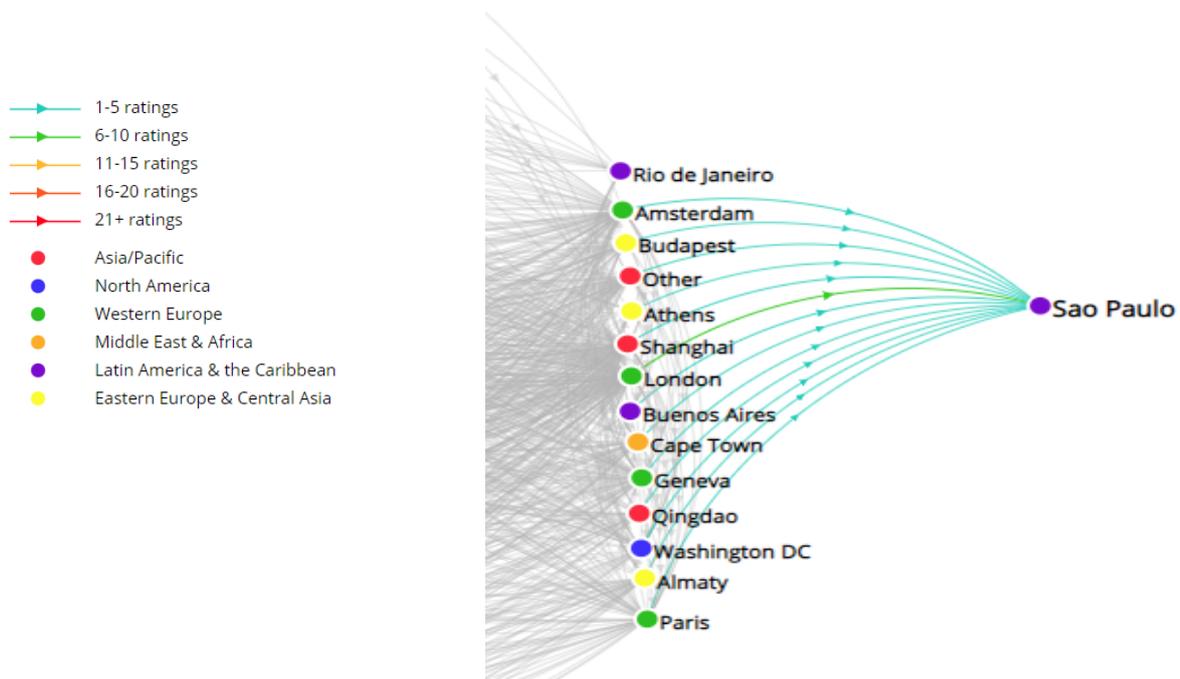
Currently, only 2% of respondents are from the Latin American & Caribbean region. Sao Paulo received 26 ratings from 13 different centres spread around the world, the highest number of ratings in the region.

**Table 3 | Number and Spread of Ratings For Latin American & Caribbean Centres**

Centre	Number of Ratings	Number of Centres
Mexico City	31	16
Cayman Islands	27	13
<b>Sao Paulo</b>	<b>26</b>	<b>13</b>
British Virgin Islands	25	13
Rio de Janeiro	23	16
Bermuda	18	11
Panama*	15	10
Santiago*	14	11
Barbados*	7	7
Trinidad and Tobago*	4	3

\*Centres with fewer than 18 ratings are not listed in the index

**Figure 1 | Sao Paulo's Connectivity**



For details see <https://www.longfinance.net/programmes/financial-centre-futures/global-green-finance-index/ggfi3-explore-data/ggfi-3-who-rated-who/>

## Policy Framework

Until recently green finance policy in Brazil has been driven at the federal and national level, with cities adopting and implementing policies formed at higher tiers of government. The spark which initiated Brazil's interest in green finance began with hosting of the highly successful [Earth Summit in Rio de Janeiro in 1992](#).

The build-up to the summit and its legacy (which saw the launch of the United Nations Environment Programme Finance Initiative ([UNEP FI](#))), were instrumental in changing views and putting green finance on the agenda for policymakers in Brazil.

In 1995, Brazil's Ministry of the Environment developed a set of voluntary guidelines committing five state-owned banks (The National Bank for Economic and Social Development (BNDES) and its subsidiaries) to consider green finance. The resulting [Protocolo Verde](#) (Green Finance Protocol) was the first commitment by a development bank anywhere in the world.

This leadership role prompted action in the private sector, which established a number of Socially Responsible Investment (SRI) focussed funds in the early 2000s. This was further catalysed by the establishment of the [São Paulo Stock Exchange Corporate Sustainability Index](#) (ISE) in 2005 – only the second in an emerging market, after South Africa.

The growth of interest in the green finance sector saw an associated expansion of Environmental Social and Governance (ESG) risk management competencies. Sustainable development became a particular issue in project finance - making good on the commitments of the Public Development Banks - and engendering a particular commitment to green finance in the wider Brazilian banking sector.

The Brazilian Federation of Banks ([FEBRABAN](#)), representing both state-owned and commercial banks, joined the Protocolo Verde in 2009. In 2014, following extensive lobbying by FEBRABAN, and a surge of political will following the [2012 Rio Earth Summit](#) (Rio + 20), the Central Bank of Brazil adopted [Resolution 4327/2014](#) on Social and Environmental Responsibility (Política de Responsabilidade Socioambiental – PRSA) which mandates that financial institutions must adopt systems which manage the possibility of loss to the institution arising from social and environmental damage. The social and environmental risk must be identified by the institution as a component of the various types of risk to which the institution is exposed.

Whilst progress in the banking sector was swift, the uptake of green finance in asset management and insurance proceeded at a slower pace. However, leadership was shown by the pensions regulator (PREVIC), which introduced voluntary comply or explain guidelines for pension fund managers on sustainable development in 2009, and strengthened these in 2018 with voluntary reporting requirements on material ESG risks ([Resolution CMN nr. 4.661](#)).

## The Rise Of Green Finance In São Paolo

Whilst Brazil's BNDES and many of its financial regulatory agencies are located over 400km away in Rio de Janeiro, São Paolo has been the main financial hub in Brazil since the 1980s. It has consolidated this position through its highly active stock exchange and the hosting of a wide variety of industry sector associations. FEBRABAN has been active on promoting green finance - and has been a major actor in mobilising member banks and delivering sustainability into the real economy.

### Green Bonds

Green bonds have been an area of particular interest in Brazil, assisted by the fact that [80% of Brazil's energy](#) comes from renewables. There are also very strong forestry and agriculture sectors which provide fertile ground for the issuance of this type of instrument, though major challenges remain in resolving trade-offs between agriculture, livestock & forestry, and conservation.

FEBRABAN issued green bond guidelines 2016 and the São Paolo stock exchange has just released a green bonds listing segment. Trading volumes are still low (US\$ 4.5 billion in 15 transactions), but green bonds are playing a critical role in bringing green finance in São Paolo into the mainstream as they provide tangible instruments for investment.

### Green Vs Brown Finance

São Paolo provides an excellent example of the tensions between green and brown investment. The discovery of significant reserves of oil off the coast of Brazil by Petrobras has refocused the national Government's attention on developing this resource. However, there are a number of factors which are slowing a rebalancing of São Paolo's financial services sector:

- São Paolo's rival, Rio de Janeiro, is geographically closer to the oil fields and is also the home to Brazil's development banks, which are underwriting the costs of oil exploration;
- A number of corruption scandals have dogged the petrochemical sector, which has raised governance risks;
- The marine oil reserves are very deep and are only economically viable if oil remains above US\$40 a barrel;
- Brazil is a major international centre for car manufacture: The Brazilian government recently renewed a tax regime designed to encourage this industry. This was however, linked to substantial increases in fuel efficiency and the production of electric cars;
- Brazil produced over [26 billion litres of bio-ethanol](#) fuel for domestic use from sugar cane in the 2017/18 crop season. The powerful farming lobby will strongly oppose any attempt to water down Brazil's RenovaBio biofuels policy, which aims to help the country meet greenhouse gas (GHG) reduction goals. Brazil currently aims to reduce its GHG emissions by 37 per cent by 2025 and by 43 per cent by 2030, when compared to a 2005 baseline.

As a result, whilst the new administration is more pro-market and is making brown more attractive, green finance is very much still seen as a growth sector and São Paulo is likely to increase the depth and quality of its green finance offering going forward.

## Civic Politics And Sustainability

São Paulo has seen rapid expansion over the last 30 years and, like many other thriving cities, has experienced significant challenges around air pollution, traffic congestion, waste management, energy and water infrastructure, green space, and public transport. As a result, the city has developed a series of [programmes](#) designed to make the City a more sustainable place to live, work and do business. Municipalities in Brazil are unable to issue green bonds, so initiatives to implement smart city infrastructure, overhaul public transport systems and climate-proof energy and water infrastructure are funded through green loans from the national development banks.

## Civil Society

Whilst Brazil has a strong and engaged civil society sector, its primary focus has been on social and environmental issues. There is a low level of understanding of, or expertise in the financial services sector. However, according to industry insiders, this is likely to change over the next few years.

## International Cooperation

Politically, there has not been a big push for international cooperation on financial services. Rather, the lead has emerged organically from the private sector (particularly around banking and initiatives such as the highly influential [Brazil Green Finance Initiative](#) and the [Financial Innovation Laboratory \(LAB\)](#)). This is likely to remain the case going forward, as strategic policy development rests at the federal level and currently there is no desire to pursue green finance at that level.

## The Future

Rio de Janeiro will remain a prominent financial centre due to its hosting of the headquarters of Brazil's BNDES and regulators. However, the current administration's rethinking of the role of development banks - particularly with respect to their role in leveraging private money, may reduce the importance of Rio over the long term, to the benefit of São Paulo. It is likely that this will have a positive impact on green finance, as the market for green financial instruments, such as green bonds and green loans, will increase.

Early indications are that the new administration led by Jair Bolsonaro is likely to look favourably on the expansion of Brazil's green finance market. The country remains committed to the Paris Agreement and the [new Minister of Environment](#) has stated that the ministry will work to consolidate Brazil's lead in green finance market, and to harmonize economic development and environmental preservation.

## Observations

The leadership role of policy makers is a vital component in creating a fertile environment for growth and innovation in this sector.

The initiatives taken in the wake of the 1992 Earth Summit - in particular the focus of national development banks on sustainability, through the Protocolo Verde, not only demonstrated national commitment, but also served as a forge in which to develop the skills needed for expansion throughout the commercial banking sector.

This skills transfer led to a focus on sustainability risk in project finance, which sent a strong message to fund managers and the stock market, that sustainability was not a “nice to have” but a core component of sound governance and fiduciary duty.

This resultant cultural shift has moved leadership from the public to the private sector, and is likely to insulate green finance from short term shifts in national policy focus, enabling São Paulo to strengthen its capacity and capabilities within this field.

São Paulo’s technical capabilities and strong track record on green finance has ensured that it has built an international reputation for expertise in this sector. This is reflected in the geographical spread of ratings in GGF3. However, other Latin American centres are keen to learn from São Paulo’s example so as to ensure that they get a share of this multi-billion dollar market.

As a result, in order to maintain its lead, São Paulo might consider:

- ◆ Examining opportunities to market itself as a green financial centre;
- ◆ Leveraging its international connections to enhance the number of ratings it receives for the Global Green Finance Index;
- ◆ continuing to innovate on policy issues associated with carbon disclosure and sustainability.

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