BRAZIL BUSINESS BRIEF

JUNE 2021

NEWS FROM THE BRAZILIAN CHAMBER OF COMMERCE IN GREAT BRITAIN



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LENA BERALDO lena@brazilianchamber.org.uk

Dear members and friends of the Brazilian Chamber,

Though no doubt we are all very keen to see the continued easing of Covid-19 restrictions here in the United Kingdom, it is of course unclear what the path back towards normality will look like in the coming months.

In the longer term, one of the few certainties is that a return to growth in the global economy will need to be achieved in an environmentally sustainable manner. Sustainability is one of the principal themes in this

LETTER FROM THE EDITOR

edition of the *Brazil Business Brief* – for example in our interview with the head of International Policy and UK Government Relations at Anglo American, Jonathan Dunn. The company has been present in Brazil and elsewhere in South America for many years, and has been one of the principal supporters of the Chamber's activities.

Elsewhere in the magazine, Fernanda Horta and Luiz Horta Nogueira explain how Brazil has been a pioneer in the transition towards the use of renewable energy sources. In our King's Brazil Institute section, Ana Borges Pinho describes how environmental issues can be tackled through philanthropy. Winston Fritsch, an entrepreneur and consultant who was Secretary of Economic Policy in Brazil's Ministry of Finance during the Real Plan, gives us his perspective on the fiscal policy of President

Joe Biden in the United States and its potential repercussions for the global economy. Fernanda Zago tells us how a new regulatory framework in Brazil has facilitated the expansion and consolidation of fintech companies in the cross-border-payments sector. Eliza Massi and Jojo Nem Singh explain how Brazil is one of the major players in the global supply of rare metals, described as the 'vitamins of the modern economy'.

We wish to express our gratitude for your support through this difficult period, and we will be delighted if it proves possible to see some of you at face-to-face events in the not-too-distant future.

With best wishes,

Lena Beraldo

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<u>ARTICLES</u>

BRAZIL: A COUNTRY THAT HAS ALREADY MADE THE ENERGY TRANSITION

BY FERNANDA DELGADO AND LUIZ HORTA NOGUEIRA



ince prehistoric times, society has evolved essentially in two ways: continuously, by progressively improving patterns of production and access to goods and services; or more intensely, by significantly altering those patterns and causing more profound changes in much shorter periods of time. The industrial revolution, when human history took a new turn, is of

course a prime example of the latter.

In recent decades there has been another relatively sudden change with the move away from the energy-production model dominant since the 18th century, based on underground carbon deposits, towards the much greater use of renewable sources. One of the milestones in this process came in 2010 with the formal adoption by the German parliament of the policy of Energiewende ('energy

transition'), which set out a path away from both fossil fuels and nuclear energy towards renewable sources, establishing a commitment to energy efficiency and sustainability.

Similar policies are currently being adopted by most countries. Meanwhile, the more agile energy companies are redirecting their investments towards renewable energy – Shell and BP, for example, are among the largest producers of bioenergy in

Brazil – and investment funds are adopting criteria reducing the former dominance of fossil-fuel sources in relation to renewable energy sources, where falling costs of production are consolidating and accelerating the transition. The oil companies' own projections of future oil consumption make clear that the contraction of the market is fast approaching.

In Brazil, the broad base of renewable natural resources (and the fact that large hydrocarbon reserves were discovered only recently) led to the early creation of an energy-production system based on hydroelectric plants (with a marginal contribution from thermoelectric plants), while biofuel use has been mandatory since 1931. The oil crisis of the 1970s served to consolidate a model in which renewables accounted for an almost uniquely high share of the energy matrix: 83% of electricity production and 25% of transport energy, corresponding to 46% of Brazil's total energy consumption in 2019. In terms of how it sources its energy, Brazil has long been what other countries now aspire to become.

Even in transport (the sector that has generally been slowest, worldwide, to adopt the energy transition), about 50% of the energy consumed by light-

IN BRAZIL, THE BROAD BASE OF RENEWABLE NATURAL RESOURCES LED TO THE EARLY CREATION OF AN ENERGY-PRODUCTION SYSTEM BASED ON HYDROELECTRIC PLANTS

duty vehicles and motorbikes in Brazil is either pure ethanol (E100) or a petrol-ethanol mixture (E27). Indeed, pure petrol is not available at Brazilian petrol stations. New engines with variable compression rates allow vehicles to use high-octane ethanol, which achieves greater efficiency compared to petrol. Based on a Brazilian patent, Stellantis is expected to begin production in Brazil of a new kind of ethanoldriven engine, the E4, with a superior performance (in terms of both economy and power) to that achieved by petrol engines. There is also a high degree of compatibility between bioenergy and fuel cells, enabling the rapid adoption of hydrogen by motor vehicles in Brazil, since through catalytic reforming it will be possible to produce hydrogen from ethanol either at petrol stations or within (on board)

the motor vehicle. This technology has been tested by automakers such as Nissan, with positive results in terms of logistics and final cost.

It is also important to consider that continuing the energy transition brings significant socioeconomic and strategic benefits, such as decentralisation, diversification and energy security, in addition to ensuring the leading role that gives Brazil a privileged position in the market for goods and services in energy systems. Brazil's national biofuels policy, RenovaBio, is an example of how a well-designed governmental initiative can play a major role in fulfilling Brazil's nationally determined contributions (NDCs) to the 2015 Paris Agreement on climate change. It also promotes the use of biofuels within the national energy matrix and generates income and employment while fostering gains in energy efficiency.

Overall, with appropriate policies, adequate regulation, and well-oriented investments in research, development and innovation, it will be possible to continue the energy transition in which Brazil has already been a pioneer, and thereby achieve a more sustainable future for all.

This article is based on one published in December 2020 in *Conjuntura Econômica* magazine, IBRE, FGV, Rio

JUNE 2021

BRAZIL'S MINING INDUSTRY AND THE SCRAMBLE FOR RARE METALS

BY JOJO NEM SINGH AND ELIZA MASSI



he mining sector is changing rapidly. The energy transition and modern technology have put a new focus on control of key mineral resources and participation in global value chains. Rare metals – a group of around 30 strategic minerals deemed critical for their role in producing modern, hightech products - present an opportunity to participate in emerging future industries and value chains. 1 Brazil is endowed with rich mineral resources including reserves of rare metals estimated by the US Geological Survey at

22 million tonnes, which would place the country third in the world in terms of commercially viable reserves. For example, Brazil currently holds 85% of the known reserves of niobium and provides almost 90% of the current world supply. Its anticorrosive properties and resistance to heat and wear make niobium extremely important to aerospace and defence manufacturers.

THE RARE-METALS MARKET AND CONSUMER COUNTRIES' STRATEGIES

Rare metals have been described as the 'vitamins of the modern

economy', alluding to their importance in producing various high-tech goods. Lithium, for example, is used to produce ion batteries, which consequently become intermediate goods for hybrid electric vehicles. Neodymium and praseodymium are vital in the production of permanent magnets, which are subsequently used as inputs to replace copper-based generators for wind turbines. Rare metals used in the high tech manufacturing in the renewables sector is also a potential growth sector, with estimates of demands for wind turbines, EV cars, and solar panels to steadily increase as countries attempt to meet their targets for the reduction of carbon emissions.

However, there is growing global concern regarding the supply of such metals. China controls about 50-60% of the reserves of critical metals. Although China used to be considered a reliable supplier, a decision by the Chinese government in 2010 to reduce its export quotas sent market prices soaring elsewhere in the world, prompting consuming countries and major industries to rethink their dependence on Chinese supplies. The dangers of such dependence have been further emphasised by the Covid-19 pandemic, which has shown that sourcing an input

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that is vital to several industries from one single country can have cascade effects onto the supply chains, even impacting on companies and sectors which only indirectly source inputs or materials from the dominant supplier.

An important policy shift is therefore taking place across resourceconsuming countries. For example, since China blocked shipments of crucial minerals to Japan in the late 2010s, Japanese companies have been funding new projects in Kazakhstan, Mongolia and Brazil to create an alternative primary supply chain in the future. Taiwan, Singapore and South

Korea are also seeking other policy options as their semi-conductor and automotive industries are exposed to supply vulnerability from China. The United States, in turn, is reviewing its policy and pushing for a revival of rare-metals processing. In fact, President Joe Biden has asked for a national review of the US's critical raw materials supply in order to gauge the level of supply criticality vis-à-vis China. Furthermore, in 2020 the US development bank announced that it is to invest US\$25 million to develop a nickel and cobalt project in the Brazilian northeast, aimed at reducing dependence on supply chains dominated by China.

In the European Union, the raremetals strategy is focused on improving technology to expand the recycling of industrial products, such as wind turbines, and to push the innovation frontier towards substituting rare metals. Instead of relying on the primary supply chain, the medium- to longterm policy is moving towards creat-

1. Rare metals, also known as critical metals or technology metals, include gold (Au), beryllium (Be), bismuth (Bi), cadmium (Cd), chrome (Cr), cobalt (Co), gallium (Ga), germanium (Gr), mercury (Hg), indium (In), lithium (Li), magnesium (Mg), molybdenum (Mo), niobium (Nb), osmium (Os), palladium (Pd), platinum (Pt), rhenium (Re), rhodium (Rh), ruthenium (Ru), antimony (Sb), silicon (Si), tantalum (Ta), tellurium (Te), titanium (Ti), uranium (U), vanadium (v) and tungsten (W).

ing a secondary supply chain based on raw materials. The EU, however, faces several hurdles in achieving its goals. Rare metals are often used in small quantities and in the form of alloys, which increases the difficulty and costs of recycling. Crucially, no substitutes have yet been found for certain minerals – niobium is one example.

FUTURE OPPORTUNITIES

Growing tensions between China and the US are likely to push resource consumers to reduce their dependence on Chinese supply chains. This means that in the medium and long-term, consuming countries and companies will be required to think about how to create a supply chain of rare metals outside China. This will involve mapping the global supply chain and identifying the risks of not only tier-one suppliers, but also of lower-tier suppliers.

Brazil is well positioned to take advantage of global opportunities and take part in global supply chains of rare metals. The country has one of the world's largest and most sophisticated mining industries, with a number BRAZIL IS WELL
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of well-established companies extracting and exporting over 70 mineral commodities. Many of those companies are based in the United Kingdom. Some are already implementing new strategies to respond to the apparent transition towards a low-carbon economy. Brazil's huge mineral endowment and the high productive capacity of its domestic firms provide a secure future and an array of opportunities for the mining industry.

WILL BIDEN'S FISCAL POLICY CHANGE THE WORLD ECONOMIC OUTLOOK?

BY WINSTON FRITSCH



he fiscal policy of the
Biden government in the
United States – with its
approval of a gigantic
US\$1.9-trillion fiscal stimulus (only partly aimed at offsetting
the financial impact of the Covid-19
pandemic on the poor) combined with
an ambitious US\$3tn public-infrastructure programme to be implemented
over the coming years – has revived the
debate about the possibility of the era
of extremely low international interest

rates coming to an end. Equivalent to about 25% of US GDP considering just the approved fiscal stimulus package, it will be the biggest expenditure boost the American economy has received in peace time and will raise the US rate of economic growth to 6.5% over the course of 2021 according to the Organisation for Economic Co-operation and Development. Even Larry Summers – the influential American economist who has been proposing the thesis of 'secular stagnation' in devel-

oped economies for several years, and advocating expansionary fiscal policies – regards the stimulus as excessive and has warned of 'the risk of inflation expectations rising sharply' as a result.

The discussion about the future of inflation and interest rates in the US has enormous implications for the world economy and is clearly important as it radically changes the fiscal environment in which the Federal Reserve (Fed) has operated in recent years. However, there is still a deep-



seated optimism about the ability of monetary policy to continue to anchor inflation expectations.

Graph 1 helps us to understand this optimistic consensus: aside from some severe but short-lived crises, the last 40 years have been marked by an inexorable tendency for interest rates to fall, as measured by the yields on ten-year US Treasury bonds. It has

taken decades of continuous disinflation and increasing independence for central banks to bring about the finetuning of inflation-targeting policies. Why should the new normal change?

Firstly, because the world has not always been like this. As Graph 1 also shows, before inflation started to fall in the early 1980s, inflation expectations, and therefore interest rates, had risen

steadily for decades. This is because monetary policies do not operate in a vacuum. During this period, macroeconomic policies were largely driven by politicians and economists who had lived through the horrors of the Great Depression and its aftermath and, as Keynes had shown to be possible, were expected to implement active fiscal policies that almost permanently

raised employment beyond the level of non-inflationary balance. On the other hand, the power of trade unions and the growing concentration of the global industrial structure ended up reducing the disinflationary effectiveness of monetary policy, leading to the erroneous adoption of policies to control wages and prices in response to unexpected shocks, which were almost always unable to anchor inflationary expectations, especially in the face of the two huge oil-price shocks of the 1970s.

With inflation reaching double digits

in the US after the second oil-price shock in 1979, these policies were abandoned almost simultaneously on both sides of the Atlantic in the conservative revival of the 1980s, symbolised by the long duration of the Volcker-Greenspan era at the Fed. The new macroeconomic policy was marked by the use of monetary policy as the main instrument of demand management, first through Volcker's shock treatment to reverse the long trajectory of rising inflation, in the early 80s, then through the new orthodoxy of inflationtargeting, conducted by central banks that now enjoyed a significant degree of independence. The success of these policies in anchoring inflation expectations was impressive.

WHEREAS IN 2020 THE
AVERAGE WAGE IN THE US
WAS 35 TIMES HIGHER
THAN IN CHINA, IT IS NOW
ONLY FIVE TIMES HIGHER.
AND THE INCREASE
IN PROTECTIONIST
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GLOBALISATION MAY START
TO PLAY A LESSER ROLE
IN THE DISINFLATIONARY
PROCESS

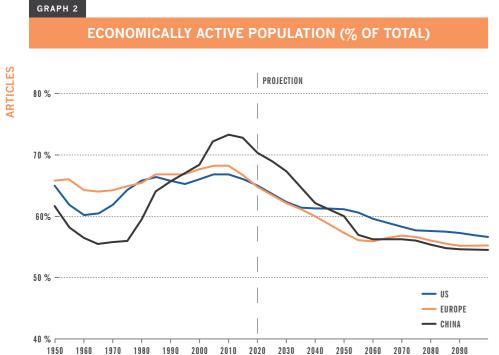
But as with the failure of Keynesian orthodoxy before 1980, the success of these policies cannot be explained by monetary policy alone. As shown by Charles Goodhart and Manoj Pradhan in their recent book *The Great Demographic Reversal*, we cannot ignore that the effectiveness of those policies was largely due to the fact that they operated under the cumulative effect of disinflationary forces resulting from two global economic phenomena.

The first was the transfer of a substantial part of the global industrial capacity of US and Western European companies to areas where real wages were much lower – such as Eastern Europe and Southeast Asia, but above all China. This was made possible by trade and investment liberalisation.

The second phenomenon was the increase in the working population in Western countries, with the arrival of the baby boomers in the labour market and the surge in the number of working women.

However, as Goodhart and Pradhan argue, these disinflationary trends are now going into reverse. The difference in wages between the US and its competitors in developing countries has narrowed dramatically – whereas in 2020 the average wage in the US was 35 times higher than in China, it is now only five times higher. And the increase in protectionist policies is a sign that globalisation may start to play a lesser role in the disinflationary process.

On the other hand, the decrease in the proportion of the young population is reducing the rate of growth of the labour supply in the leading economies, as can be seen in Graph 2. In other words, the 'disinflationary bonus' of the demographic trends of the last four decades is coming to an end, and unless there is an unexpected surge in productivity in these



economies in the coming years, inflationary pressures are set to continue.

Source: United Nations

The rapid aging of the American population will also have a dramatic fiscal effect. Added to the shock of the emergency spending during the pandemic, and the tax policy inherited from the Trump administration, this long-term fiscal imbalance will cause explosive growth in public debt, as shown in Graph 3.

Against this fiscal outlook, inflation expectations in the United States are

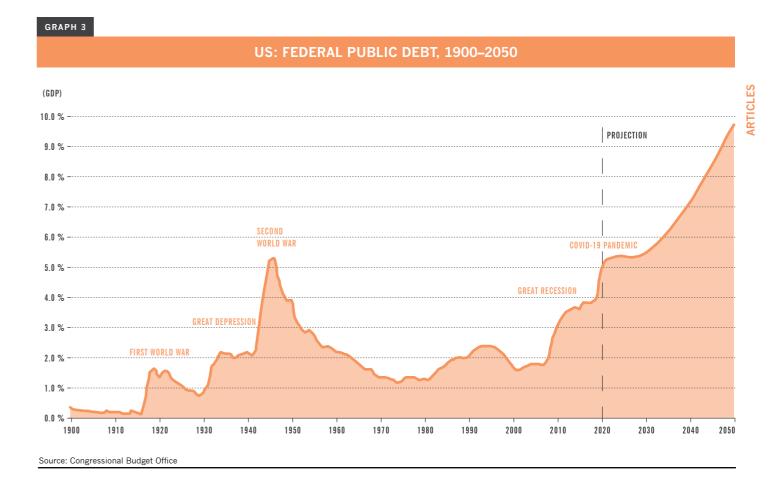
bound to reflect the expected sharp rise in public expenditure. The short-term scenario is not a cause for great concern. The projected acceleration of output growth with the end of the pandemic and the fiscal stimulus of the newly approved package, will be positive as it will make possible a reduced role for monetary policy in sustaining demand, reducing the excess liquidity caused by the financing of the still-unbalanced public budgets and private balance sheets

stemming from the Great Recession of 2008–09.

However, as recovery sets in, inflation expectations in the US are likely to change, reflecting market perceptions of the impact of the new fiscal policy announced by the Biden government, especially if the new government fails to reverse the impact of the Trump administration's tax cuts on the budget.

Since the fiscal boost of the infrastructure package will be felt only after the expansion expected to take place at the end of the pandemic, the Fed may be more lenient in the short term with regard to small increases in inflation, as they will contribute to reducing the real value of the mountain of US public and corporate debt. In fact, this more lenient view has already prevailed in the first decision taken by the US central bank since the change in fiscal policy. However, looking further in the future, the new expansionary fiscal policy creates a binary scenario for the future of interest rates.

A unilateral acceleration of American growth is dangerous because, at a given level of exchange rates relative to its main trading partners, the growth of the American economy in relation to them determines the evolu-



tion of its current account deficit. As the US is no longer the locomotive of the world economy, a significant increase in the growth differential would put the dollar under pressure, generate expectations of higher inflation and force the American monetary authorities to accelerate the pace of liquidity reduction to avoid a rapid shift in inflation expectations. This

scenario would probably take interest rates to levels even higher than the so-called 'taper tantrum' of 2013.

There is also an alternative and more optimistic scenario, but it depends on the ability of the Biden government to combine its bold fiscal action in the domestic arena with economic diplomacy that encourages its partners' expansionist policies

- especially in Europe, Japan and China – and promotes the deepening of globalisation. If well designed and implemented, and perhaps complemented by a parallel and collective commitment to protecting the environment and coordinating efforts to prevent and combat future global pandemics, this economic diplomacy would see the US regain, under Biden,

the leadership role it has lost in the international arena. If successful, it would allow for greater growth in the world economy and minimise expectations of pressure on US interest rates.

A positive outcome is therefore not impossible. The problem is to estimate how much time the markets would allow to policymakers before they react and force interest rates to rise. But it is very likely that in the coming months the currently "dovish" Fed will have to struggle not to lose its almost mythical credibility – consolidated by the highly successful responses to the 2008–09 crises and the pandemic – as its independence begins to be questioned in a political context that is still radicalised.

Unfortunately, only one thing is certain. We are experiencing a profound change to a world where, for the last 40 years, orthodoxy in monetary policy – benefiting from the favourable winds of globalisation and the demographic bonus – has operated as a basic instrument of demand management in the absence of expansionary fiscal policies. In my opinion we are on the threshold of a new world in which the fiscal regime in the US is going to change radically and new structural inflationary pressures – very

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difficult to reverse in the short term – begin to be felt in the global economy.

The next few years, therefore, promise to bring strong emotions. Interest rates are unlikely to remain at their historic low for much longer. For Brazil, the optimistic scenario is that our exports will perform extremely well and, even with slightly higher interest rates in the United States, with political will we can get our public finances in order following the end of the pandemic. The pessimistic scenario, of a devaluation of the dollar and a rapid rise in interest rates, would certainly be very challenging for Brazil in its current fragile fiscal situation.

POSITIVE DEVELOPMENTS FOR THE CROSS-BORDER-PAYMENTS INDUSTRY

BY FERNANDA ZAGO



ross-border payments
between consumers and
suppliers used to be a
challenge for both parties. In the case of the
Brazilian market, however, the situation
has changed dramatically in recent
years and is continuing to evolve.

According to the Fintech Report 2020, Brazil had about 750 fintech companies last year, of which 122 (15%) were in payments and only 15 (2%) in foreign-exchange markets.

The sector boomed in Brazil between 2015 and 2017, which was a period when we also saw a consolida-

tion of the few companies processing cross-border payments.

WHY DID CROSS-BORDER COMPANIES BEGIN TO CONSOLIDATE?

Before 2017, the regulation of cross-border payments was not very well defined for this business model. It was not uncommon for the few companies operating in the sector to need to be supported by legal opinions, or to be forced to wait for the banks to accommodate and homogenise the model they were willing to promote.

In 2013 the Central Bank of Brazil established the concept of payment fa-

cilitator in the regulation of payments, and in 2017 it implemented the model of international-payment facilitator in foreign-exchange regulation.

With changes in regulations, payments and foreign exchange, the companies operating in the sector could now start working in a regulated environment, which made it possible to expand and consolidate their businesses.

WHAT IS THE CURRENT SITUATION?

The past few years have undoubtedly brought many advances for the cross-border-payments industry, and

the current situation is very positive.

The Central Bank is still highly vigilant and active in the payments and foreign-exchange sectors.

Through several working groups, the Central Bank has invited associations, legal bodies, foreign-exchange banks and companies to gain a better understanding how this market is evolving.

It has made significant changes in the regulation of payment institutions, allowing companies to act as payment providers, processors and initiators, thereby operating in a more transparent, smooth and professional manner.

The responsibilities and duties introduced by the regulatory changes have allowed the sector's players to grow according to their capacities and to what is determined by law. This sets out their rights and duties, limits on volume and number of transactions. They can therefore operate without generating systemic risk, and can become licensed once the volume or quantity processed reaches certain thresholds.

PIX

While transparent regulation has boosted the development and competitiveness of the sector, the launch of new, ultra-modern and fast

THE LAUNCH OF THE PIX,
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WITH ITS OWN CLEARING
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(DICT), IN NOVEMBER
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REVOLUTION IN PAYMENT
METHODS IN BRAZIL

payment methods has principally benefited the consumer.

The launch of the PIX, an instantpayment system developed by the Central Bank with its own clearing house, the Directory of Transactional Account Identifiers (DICT), in November 2020, constitutes a revolution in payment methods in Brazil. It is a development as important as the creation of credit cards or the breaking of the duopoly of payment acquirers.

Instant payments – taking as little as ten seconds to process – can now occur at any time of day and on any

day of the week, including weekends and bank holidays.

Take-up by the public has been impressive, with a recent survey indicating that after PIX had been in operation for only three months, almost two-thirds of people with bank accounts in Brazil had adopted the new payment method.

Once again, clear rules for the use and provision of the method have allowed for new and exclusive services to be offered. Cross-border-payments operators (many of whom are still adapting) can now provide the instant method to customers previously accustomed to paying by bank slip and to companies used to long processes when paying their Brazilian suppliers or the employees of their Brazilian branches.

WHAT'S NEXT?

Though the payments and foreignexchange segments have already evolved greatly, much is still to come.

The Central Bank has plans to globalise the PIX system. As yet there is no information on which countries would be the first partners, but the United Kingdom and Chile, for example, have instant-payment systems of their own (albeit with less capacity

than PIX, and less widely used by the public) and would be good candidates to participate in pilot schemes.

But for the Brazilian cross-borderpayments companies, the most important development on the horizon is the implementation of the e-FX.

In short, e-FX are international-payment facilitators that can act autonomously in foreign exchange operations. The new regulation establishes the rights and obligations of regulated and non-regulated payment institutions in foreign-exchange operations within pre-established limits and in using payment accounts (currently the regulations deal only with deposit accounts, the traditional bank accounts).

The regulatory changes will allow international payment facilitators to combine payment-processing and foreign-exchange operations, both in the commercial segment of cross-border products and services. Moreover, these companies can also operate in one of the most traditional foreign-exchange markets, the remittance market (maintenance of family members and transfers between the same holders).

In the recent Fintouch 2021 event organised by ABFintechs, a renowned Brazilian association of fintech com-

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panies, sponsored panels discussing the regulatory changes featured players and experts in the segment including representatives from Wise (Pedro Barreiro), Bacen (Lucio Holanda) and Pinheiro Neto Advogados (Bruno Balduccini).

It is a common opinion among them that the regulatory changes and the creation of e-FX will bring about innovations and new business models and payment services, leading to an increase in competition. This should ultimately favour the consumer, who will have more options, and lead to

greater customisation, cost reduction, improved services, and faster communication between parties.

CONCLUSION

The cross-border-payments sector is booming, and that will benefit all parties involved in this ecosystem: the end consumer, the national IPs, the e-FX, the exchange banks, and ancillary services such as money-laundering prevention and Know Your Customer (KYC).

In the coming years we will see an increase in competition and the creation of new business models and forms of service delivery.

Those who take advantage of the changes in the regulations will have a competitive advantage, as will those who understand that we are moving towards an increasingly niche market. Cross-border service providers will need to specialise in order to ensure that their target clients are aware of the benefits of using one model and service rather than another.

Segmentation and specialisation will promote greater collaboration between the various market players, making room for all those offering quality services and products, and creating an ecosystem of win-win relationships.

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FUNDING THE ENVIRONMENT: INTERNATIONAL PHILANTHROPY IN BRAZIL

BY ANA BORGES PINHO





ince the start of the new millennium, international development cooperation has undergone significant changes, marked by a stronger sustainable-development agenda and the rise to prominence of private actors. Although philanthropic organisations had been transnational actors for decades – the Rockefeller Founda-

tion's role in the Green Revolution

and the Ford Foundation's promotion of civil rights in Latin America in the 1960s and 1970s are two prominent examples – the early 2000s provided the ideal setting for their arrival in the development arena.

Philanthropic organisations, spearheaded by the Bill & Melinda Gates Foundation, were put in the spotlight when the international-development field turned its attention to finding new funding sources, increasing and strengthening partnerships, and improving (as well as proving) efficiency. Foundations are seen as a bridge between the public and private sectors, helping foster blended finance, and their expertise in impact measurement is regarded as a valuable asset that can boost the new drive towards effectiveness in development spending. Another important trait attributed to philanthropy is its ability to fund new or niche issues, putting it in a good position to face the global sustainable- development challenges brought about by man-made changes to the environment.

focusing its efforts on tackling environmental issues, pooling resources to address them more strategically through organisations such as the Climate Works Foundation, the European Climate Foundation and the Climate and Land Use Alliance. In order to understand philanthropic behaviour in this area of work, it is helpful to analyse those organisations' past activities in a specific context. Brazil provides a good example not only because it has been a major global player in environmental governance and its territory contains one of the most important ecosystems in the world, but also

Philanthropy has been increasingly

PHILANTHROPY HAS BEEN INCREASINGLY FOCUSING ITS EFFORTS ON TACKLING ENVIRONMENTAL ISSUES, POOLING RESOURCES TO ADDRESS THEM MORE STRATEGICALLY THROUGH ORGANISATIONS SUCH AS THE CLIMATE WORKS FOUNDATION, THE EUROPEAN CLIMATE FOUNDATION AND THE CLIMATE AND LAND USE ALLIANCE

because it has long been a recipient of donations by international foundations. Foundations, especially in the United States, have played an important role in financing civil society in Brazil since the 1970s. According to estimates by the former Foundation Center (now Candid), between 2006 and 2018 Brazil received about US\$1 billion from US private foundations and almost half of that amount went to environmental causes. That is a yearly average of over US\$83 million. To put this amount in perspective, the Brazilian government's total overseas-aid spending in 2009,

during one of its most prolific periods, amounted to an estimated US\$92.4m.

Despite the important role played by private foundations in international aid, gathering data on their practices can be a herculean task. Despite recent efforts towards transparency (some foundations now report their donations to the Organisation for Economic Cooperation and Development, for instance), foundations tend not to make their records public or to provide complete data on their grantmaking. To gain a deeper understanding of the behaviour of those organisations, I systematised the information available on their websites and matched it with tax records and analysed the giving patterns of three of the largest environmental funders in Brazil: the Charles Stewart Mott Foundation, the Gordon and Betty Moore Foundation, and the William and Flora Hewlett Foundation.

Between 2000 and 2020, those three foundations donated over US\$172m dollars to Brazilian organisations working on environmental issues in three main areas. The first is environmental conservation, which is probably the chief issue that comes to mind in the Brazilian context, considering the need to protect the Amazon

and other endangered areas and species. The second area is energy and climate, financing projects on clean energy, public transport systems and air pollution. The third, and perhaps least obvious, area of work is development finance, fostering transparency, accountability and environmental standards in the financing of energy and infrastructure projects. Unlike governments, foundations tend to make donations directly to civil society organisations (CSOs), mostly funding specific projects or, to a lesser extent, their general operations. Additionally, a substantial amount has been directed to research institutions, embodying a long-established philanthropic tradition.

Philanthropic organisations fund vital issues and are a crucial resource for strengthening civil society. There is, however, room for improvement in their practices. Grantees can be divided into two groups: those who occasionally receive one grant or a few small grants, and those who have a long-term relationship with the donor.

HELPING THE
ESTABLISHMENT
AND FUNDING OF
LOCAL RE-GRANTING
ORGANISATIONS COULD
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WHOM TO FUND

Nonetheless, even when a CSO has established the second type of relationship, it is still marked by uncertainty. The average grant duration is two years, which is too short a timeframe to produce social change and provide organisations with the stability necessary to carry out their work. The provision of more general operating grants, in lieu of the ones tied to a project, would also go a long way towards building organisational capacity.

Finally, anecdotal evidence by CSOs point to an exodus of foundations from Brazil, starting in the early 2000s, leaving a funding gap that has affected environmental and human-rights issues in particular. Helping the establishment and funding of local re-granting organisations could be an exit strategy, as long as they have freedom to choose whom to fund. Organisations such as Fundo CASA and Instituto Clima e Sociedade make local grants and conduct their work in Portuguese, a crucial step towards the inclusion and financing of historically excluded groups. Tackling environmental problems is not only a necessity to save the planet for future generations but a precondition for development, as demonstrated by the centrality of those issues in the current trade-agreement negotiations between the European Union and Mercosur. With the implementation of the Paris Agreement underway and the sustainable-development agenda deadline in 2030 approaching, private funding for the environment is more important than ever.



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JONATHAN DUNN

BY IEDA GOMES BRAZIL BUSINESS BRIEF

HEAD OF INTERNATIONAL POLICY AND UK GOVERNMENT RELATIONS, ANGLO AMERICAN

ased in Anglo American's head office in London, Jonathan Dunn has responsibility for public policy positioning and advocacy on climate change, leads on UK government relations, and provides governmentrelations support to the group's operations in Brazil. Prior to joining Anglo American in 2018, he served as a British diplomat for 21 years, including eight years in Brazil (five in Brasilia and three in Rio de Janeiro). During his time in Rio he led the UK government's work on 2016 Olympic and Paralympic Games, receiving an OBE for his contribution.

Anglo American ranks among the 10 largest mining companies in the world by market capitalisation. Can you tell us more about Anglo's activities in Brazil and elsewhere in Latin America?

We have a long history in South America, which began when we opened an office in Rio de Janeiro in 1973 – we've had a growing presence in Brazil and the wider region since then. Today, we have operations in Brazil and Chile, and we'll soon open a major new copper mine in the south of Peru. In Brazil we produce high-quality iron ore from our Minas-Rio operation. Minas-Rio is an integrated export operation which combines a mine and beneficiation plant in Minas Gerais, a dedicated export terminal at Porto do Açu in Rio de Janeiro state, and a pipeline which transports the iron ore between the two. In Goias state we produce nickel from our Barro Alto and Codemin operations. In Chile we operate two

copper mines, Los Bronces and El Soldado, and a smelter – all in the central belt – and have a major share in a third mine, Collahuasi, in the north of the country. Our Quellaveco project in Peru will also produce copper, and we expect first production in 2022. The US\$5.3-billion investment in the project makes it the largest mining investment in Peru. We also have a small exploration office in Ecuador.

The combination of the nature of the metals and minerals we are producing, which are fundamental to the transition to a low-carbon economy, and the long life of our assets, means the region will remain of real significance to Anglo American for decades to come.

Taking into account the significant environmental and social footprint

of mining companies, can you tell us more about your sustainability programmes?

Sustainability – providing for the well-being of future generations while protecting our natural resources – is in our DNA and at the heart of our business strategy, intrinsically bound together with technology. We believe deeply that one enables the other, most obviously in relation to our environmental footprint, and it is at the heart of the company's purpose to re-imagine mining to improve people's lives.

Our FutureSmart Mining™ programme ensures this bond, recognising the synergy of operational productivity improvements with numerous safety, social and environmental benefits. Our Sustainable Mining Plan, which we introduced in 2018, has three pillars: Healthy Environment, Thriving Communities and Trusted Corporate Leader. This structure embeds sustainability into every operation through detailed and stage-gated five-year plans to drive environmental, social and governance performance. Crucially, the Sustainable Mining Plan is global in its ambitions and localcontext-specific in its implementation.

To give you a sense of some of the targets we are setting ourselves: in

SUSTAINABILITY –
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WELL-BEING OF FUTURE
GENERATIONS WHILE
PROTECTING OUR
NATURAL RESOURCES –
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BUSINESS STRATEGY

climate change we have committed to all of our operations being carbon neutral by 2040, to create five jobs off site for every job we create on site, and for a net positive impact on biodiversity across our portfolio by 2030. This isn't the place to go into significant detail about any one of these or any of the other stretch targets we have covering the full span of sustainability – but our annual sustainability report covers these issues in full and can be found on our website.

With regard to the energy transition, where renewable energy, hydrogen and electric mobility will play a key role, is Anglo's mineral portfolio suited to supply the new energy economy?

We actively manage our asset portfolio to improve its overall competitive position, continuing our trajectory towards products that enable a cleaner, greener, more sustainable world and support a fast-growing global population.

BRAZIL BUSINESS BRIEF

It's clear that the low-carbon world of the future will require large volumes of metals and minerals, such as the copper, platinum-group metals, nickel and premium-quality iron ore that we produce. In fact, the International Energy Agency has just published 'The Role of Critical Minerals in Clean Energy Transitions' [May 2021], which lays out some possible trajectories for demand. But taking road transport as just one example, battery electric and hybrid vehicles contain more copper and nickel than the equivalent internal-combustion-engine vehicles, and steel will remain the backbone of the global economy.

Anglo American has been active in the development of the hydrogen economy for some time. We believe that hydrogen can establish itself as a clean and reliable energy source over the next decade. Platinum is the essential catalyst in both the production and use of hydrogen, and proton exchange membrane (PEM) electrolyst

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ers contain both platinum and iridium and can be used in the production of hydrogen using only renewable energy and water, known as 'green hydrogen'.

Recycling and other circular-economy business practices will play a role in providing these metals and minerals – a significant proportion of the platinum-group metals in use today is already recycled, for example, and our smelters in South Africa are an important part of that value chain. But mining also has a critical role too in sustainably producing the virgin metals and minerals needed for a low-carbon world.

Finally, the latest evolution of our portfolio was the addition in 2020 of the Woodsmith polyhalite project, which is situated in North Yorkshire and Teesside here in the UK. Polyhalite is an organic, multi-nutrient fertiliser and will help support more effective, efficient and sustainable farming methods, to feed the world's growing population without increasing the need for land and with a far lower carbon footprint than most traditional fertilisers.

Is the mining industry, and Anglo in particular, taking advantage of technology and digitalisation to become more agile and competitive?

FUTURESMART MINING™
IS OUR BLUEPRINT FOR THE
FUTURE OF OUR BUSINESS.
THE INTRINSIC LINKS
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DIGITALISATION AND MANY
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WILL TRANSFORM THE
NATURE OF MINING AND
HOW OUR STAKEHOLDERS
EXPERIENCE OUR
BUSINESS

As I mentioned before, Anglo American's purpose is to re-imagine mining to improve people's lives. And in re-imagining mining we aim to use less energy and less water, and to have a smaller environmental footprint for every ounce, carat and kilogram of precious metal or mineral that we produce, using more precise technologies. This innovation-led approach to sustainable mining is what we call FutureSmart MiningTM.

FutureSmart Mining™ is our blueprint for the future of our business. The intrinsic links between technology, digitalisation and many of our sustainability outcomes are driving the innovations that will transform the nature of mining and how our stakeholders experience our business. A future in which broad, innovative thinking, enabling technologies, and collaborative partnerships will shape an industry that is safer, more sustainable and efficient, and better harmonised with the needs of our host communities and society. This is about transforming our physical and societal footprint.

The framework for our approach to technology and digitalisations has four pillars: first, 'Concentrating the Mine', where we are introducing technologies and processes to mine more precisely, reducing waste and increasing efficiency; second, 'Water-less Mine', where we are reducing the use of fresh water and aiming for a closed loop and ultimately dry processing in our operations; third, 'Modern Mine', where our focus is on safety, by introducing remotely operated machinery to remove people from harm's way; and fourth, 'Intelligent Mine', where we are transforming our use of data to allow us to help people make data-driven decisions in the most efficient manner.

What is the role of joint ventures and partnerships in Anglo's business model?

Partnerships are common in the

mining sector and beyond, and will,

I believe, become more prevalent, as many of the world's challenges are simply too big for any individual company or any one sector to solve. Those partnerships already take on many different forms. Let me give you four current examples of partnerships that Anglo American is a part of. We are developing the world's first hydrogenfuel-cell-powered mining haul truck in South Africa. To do so we needed to draw together a research-and-development-focused consortium made up of regular suppliers to the mining sector, alongside others with expertise in battery technology, electrical supply systems and, of course, hydrogen fuel cells. Also linked to the hydrogen economy, we recently announced a partnership with Umicore with the aim of developing ground-breaking technology that has the potential to transform the way hydrogen can be stored and used to power fuel-cell electric vehicles. The technology would help to avoid the need for the extensive hydrogen infrastructure and refuelling networks which currently represent

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a real barrier to widespread adoption of hydrogen. Thirdly, in developing the US\$5.3-billion Quellaveco project in Peru, we have partnered with Mitsubishi in a model which is common across our sector. And finally, we are part of a less formal partnership convened by the Inter Institutional Group on Climate Change, which brings together investors with actors along the steel value chain to identify tangible, achievable, collaborative steps that can be taken to decarbonise that value chain. In short, we use partnerships a great deal, but are not dogmatic about the structure they take. Each partnership has its own characteristics, based on the issue it is formed to address.

What has been the impact of the Covid-19 pandemic on the mining sector operations, and what actions have been taken to mitigate that impact?

It is very clear that the pandemic is still with us around the world, and while we can now see how vaccines give us a path out, it is clear that Covid-19 and its challenges are not going away quickly.

During the intense first wave of Covid in early-to-mid-2020, we quickly adjusted our operations to allow for social distancing, engaged our workforce in adopting all the right health and hygiene measures, and put in place numerous controls around health screening. There were different challenges in different geographies and in respect to the nature of individual operations, but we were able to get back to production relatively quickly around the world, meaning our 2020 earnings were only very marginally lower than 2019.

In addition, our supply chain team began quickly procuring all the equipment and materials required for a network of laboratories that we set up to support our operations and the wider communities where possible, in their testing programmes.

We also put together a programme called WeCare in response to the

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challenges posed by Covid-19 for our employees and our host communities. The aims of the programme were to protect physical health and mental health of our workforce; to support lives and livelihoods in our communities; and to help tackle the scourge of gender-based and domestic violence.

To date, we have carried out over 300,000 Covid tests, representing more than three times our workforce, and we are health screening up to 90,000 every day.

We are pleased to see Covid vaccines starting to be rolled out around the world. We have committed US\$30 million to support vaccination in our host countries.

Taking advantage of its vast territory, Brazil is betting on carbon-offset mechanisms (reforestation, land restoration) for companies which are pledging net-zero emissions. Is the mining sector getting ready to use carbon-offset products post COP-26?

Mining, along with every other sector, needs to decarbonise if we are to achieve the goals of the Paris Agreement and constrain global temperature increases to 1.5oC. To achieve the targets we have set ourselves of carbon neutrality across our opera-

BY 2022 ALL OF OUR SOUTH AMERICAN OPERATIONS WILL BE POWERED FROM RENEWABLE SOURCES OF ELECTRICITY

tions by 2040, we focus first on improving the efficiency of processes, including through the application of FutureSmart Mining™. We believe, for example, that the technologies we are deploying could reduce the energy intensity of the communition [crushing and grinding of rock] process by as much as 50%. The second step is to decarbonise the sources of the energy we use. That means transitioning to renewable electricity, and this year we announced the signing of a contract for provision of such power to Quellaveco in Peru, meaning that by 2022 all of our South American operations will be powered from renewable sources of electricity. This can reduce the carbon emissions related to an operation by up to 70%. We are developing a plan for our southern African and Australian operations too. Displacing

diesel is more challenging. To tackle this, as I mentioned before, we are developing the world's first hydrogenfuel-cell-powered 250-tonne haul truck in one of our South African operations. When operational towards the end of the year, the combination of an on-site photovoltaic plant, electrolyser and a battery/hydrogen-fuel-cell hybrid truck will result in a haul truck powered from entirely decarbonised sources.

We believe that this combination will deliver the vast majority of the reductions we need to achieve carbon neutrality. There may be small amounts of residual emissions for which there is no technological solution. In such circumstances we are not ruling out the use of some form of compensation through nature-based solutions or other means of sequestration, but this is not central to our approach.

You've had a distinguished career in government and the private sector. Can you tell us a little about it, and the challenges and opportunities you've had?

I enjoyed enormously my 20-plus years as a British diplomat and was lucky enough to work on issues as diverse as human rights, the global financial crisis and the Doha round of

negotiations at the World Trade Organization. From 2009 to 2017 I was based in Brazil and followed the montanha russa [roller coaster] of Brazilian politics and economics during that time. Some of you may remember the iconic front cover of The Economist in 2010, of Christ the Redeemer taking off from Corcovado with the heading 'Brazil Takes Off'. Growth was 7.5% that year, Brazil was about to host the World Cup, and it had been chosen to host the first ever Olympic Games in South America. There was huge optimism. By the time I was in Rio as Consul General for the Olympic and Paralympic Games in 2016, the backdrop couldn't have been more different. The commodities super-cycle was over, Lava Jato was in full swing and President Dilma [Rousseff] had been impeached. Against that backdrop, it was both a challenge and a real privilege to work hard to build links between the UK and Brazil, especially between businesses. I'm particularly proud of the links we built on between the organisers of London 2012 and of Rio 2016. We used sport up to and during the Olympics and Paralympics as a basis to bring together Brazilians and Britons in the private, public and non-governmental sectors. Business was done, partnerships made and there was fantastic sport to watch

– Team GB and Paralympics GB had
their best games ever.

After leaving Rio it felt like the ideal time for me to take the next step in my career and I was delighted to have the chance to join Anglo American, a company I had got to know and admire in Brazil. In government I spent a lot of my time supporting business; in business I'm now looking for opportunities to work with governments, and always on major long-term challenges such as trade, climate change and human rights.

What is the mining sector doing to attract young talent?

I think we're doing better at attracting young talent to the industry in some countries than in others. In countries where there is an active, vibrant mining sector, the hugely important work that mining does is perhaps more apparent, and young people want to be part of ensuring this crucial industry provides sustainable economic growth for the long term.

In places where mining is less well known, or the image of mining is an historical one, we need to make young people aware of the opportunity that they have for a career that makes a real difference in an industry which is crucial to the sustainable development of the planet. We also need to continue to demonstrate how diverse the opportunities in mining are – for example, when talking of our Woodsmith project in North Yorkshire, I regularly point to our need for cyber expertise in relation to supporting our increasingly autonomous equipment.

Finally, we believe that purpose is an important determining factor for potential employees. So, in 're-imagining mining to improve people's lives', we are providing clear purpose for our current employees and, we hope, inspiring future ones.

BRAZIL BUSINESS BRIEF

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