New Development Bank

Annual Report 2019

Investing for Innovation

Contents

Investing for Innovation

This Annual Report sets out the progress made by the New Development Bank (NDB or the Bank) in 2019 in delivering on its core mandate of mobilising resources for infrastructure and sustainable development projects to achieve growth and development.

NDB's operating landscape is characterised by ever-changing technological advancements that continuously bring new challenges as well as opportunities. It is within this context that the Bank, since its establishment, has been devising innovative approaches to meet the evolving development needs of its member countries, incorporating speed and technology in everything it does.

Message from the President

Mr. K.V. Kamath

NDB deeply regrets the loss of life and economic and social distress being caused by the ongoing COVID-19 pandemic. The Bank stands in solidarity with its members and the global community in the fight against this pandemic and is devoting a significant portion of its human and financial resources to assist its members.

In April 2020, the Bank disbursed a USD 1 billion emergency loan to China and approved an emergency loan for the same amount to India. The Bank is also in discussions with Brazil and South Africa for emergency loans of similar sizes. The Bank is gearing up to significantly increase its lending to a total of up to USD 10 billion in COVID-19 related assistance to its members to deal with the immediate health impacts as well as medium-term economic recovery challenges. I believe that together we can overcome this enormous unanticipated global shock and continue to move forward on the path of progress.

Now in the fifth year of its operations, the Bank is a fully functioning institution in all respects. It is also an institution that has the strategic agility and strong execution capability to shift gears and refocus as required by emerging challenges and opportunities as well as the evolving environment, taking into account its conservative risk appetite. It has been an exciting time setting up a brand-new institution from the ground up. I would like to use this message to share with the Bank's stakeholders a brief recap of the journey thus far, as well as the opportunities for the institution going forward.

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Mr. K.V. Kamath
President of NDB

> The Bank has embraced the concept of 'impact investing' in building its project portfolio. The strategic objective is to channel our funds to those projects that generate positive economic, social and environmental benefits for society.

Mr. K.V. Kamath
President of NDB

Our strategy to set up the Bank was underpinned by the vision of our founding members as enshrined in our Articles of Agreement (AoA). Our founders envisaged that NDB should be a new-age multilateral development bank (MDB) that would be fit-for-purpose for the changes that the 21st century would continue to bring, exhibit sustainability as its core value, and demonstrate the ability of developing countries to stand on their own feet. Our founders asked us to embark on a journey to change the way business was being done in the development finance world.

I believe that in many ways, we have succeeded in doing so. By now, we have developed a sustainable long-term value proposition for our member countries. We have ingrained several critical institutional elements, such as emphasis on developing young talent in our human capital, leveraging modern technology, building internal capacity to work at speed while maintaining quality, avoiding the traditional donor-donee mindset, establishing robust systems, policies and processes, and setting the right platforms for achieving our short, medium, and long-term goals.

We have also approved projects across a wider spectrum of infrastructure sectors. Starting with renewable energy projects, the Bank's financing now covers transport, urban development, complex environmental rehabilitation and restoration, and social infrastructure. The Bank's move up the learning curve has been made possible by our focus on developing in-house skills in project origination and in project appraisal. On-the-job learning, regular training, and mentoring provided by senior staff have equipped our younger staff with skills relevant to the Bank's evolving work.

We have also been able to deliver on our promise to do things at speed, while relying on country systems for environmental and social aspects of projects with a risk-based approach. In consonance with our growing emphasis on contributing to the achievement of the Sustainable Development Goals (SDGs), the Bank has embraced the concept of "impact investing" in building its project portfolio. The strategic objective is to channel our funds to those projects that generate positive economic, social and environmental benefits for society.

Local currency financing is at the heart of the Bank's long-term growth strategy, as it improves the creditworthiness of projects where the cash flows are in domestic currency. This enables the Bank to meet demand for infrastructure financing irrespective of macro-economic volatility. Our local currency operations have continued to gain pace as we aim to achieve our own growth aspirations while delivering value to our stakeholders.

Another key differentiator for the Bank has been its internal information technology (IT) architecture. We firmly believe that large-scale use of technology that is fit-for-purpose, plug-and-play, good value-for-money and leverages new developments is the key to bringing agility to the Bank. We recognise technology's ability to provide a multiplier effect to human resources and to dramatically improve operational

> We will continue to innovate and support all our initiatives with appropriate resources – financial, technical and human.

efficiency. Therefore, since inception, we have made investments in developing a robust, cloud-based IT platform for the Bank. It is heartening to note that in 2019 we became the first MDB to run fully on the cloud at a fraction of the IT costs of our peers.

NDB's performance in 2019 is a further testament to its progress on this journey. In 2019, we approved 22 projects amounting to USD 7.2 billion, including our first equity investment, in Brazil. Our cumulative project approvals crossed USD 15 billion in the fifth year of operation, a considerably shorter period of time than it took some other established MDBs to reach this milestone.

In 2019, NDB approved loans denominated in Euro, Renminbi (RMB), South African Rand, and Swiss Franc – moving beyond the traditional USD funding and signalling the Bank's ability to meet our clients' expectations. The Bank issued its second local currency bond and raised RMB 3 billion in the China Interbank Bond Market. The issuance saw considerable interest from overseas investors and witnessed an oversubscription three times its offer book. The Bank also established borrowing programmes in South Africa and in Russia and is in the process of setting up programmes in Brazil and in India.

We now are a full-fledged operating bank in terms of people, processes, platforms and products. We have demonstrated our capabilities across functions, geographies and sectors. All our business verticals have internal capacity to sustain robust growth in the coming year and the period thereafter.

With the Bank's proposed COVID-19 pandemic-related assistance, incremental approvals in 2020 are likely to be above USD 10 billion. In future years, with the pandemic hopefully behind us, we expect to continue to sustain similar levels of annual project-related financing. We will continue to innovate and support all our initiatives with appropriate resources – financial, technical and human.

In the coming decade, technology-led accelerated changes will challenge the existing paradigm of the development finance business. Our operating landscape will fundamentally change with technology disruptions, altering the scope, size and complexities involved in financing future infrastructure requirements.

Take for example the requirements for efficient transport systems. The ongoing innovations in network connectivity and autonomous vehicles, along with widespread access to smartphones, cheap mobile data storage cost and unprecedented increase in processing power of devices are changing the entire service, payment, and delivery models. It is now clear that artificial intelligence (AI), with performance doubling every 3.4 months for a given price, will underpin technological disruption in the immediate future. Newer technologies that leverage AI, such as predictive analysis, real-time vehicle tracking and control, virtual service aggregators, vehicle-to-vehicle communication and self-driving cars, will challenge the existing norms. At the same time, there is electrification of the

USD 7.2 bn

Total project approvals in 2019

USD 15 bn

Cumulative project approvals as at December 31, 2019

Lingang Distributed Solar Power Project in China

transportation sector, which is currently responsible for a quarter of direct carbon dioxide (CO_2) emissions from fuel combustion. Projections show that by 2030, nearly a third of all vehicles sold will be electric. All of this in conjunction, will make transport systems safer, efficient and greener. These newer systems also have the potential to leapfrog as well as integrate quickly with the existing structures. On the flip side, they will disrupt the demand for automobiles and traditional business models like auto insurance.

Similarly, in many parts of the world, renewable energy is now cheaper to produce than energy from fossil fuels. As time progresses, a combination of energy from renewable sources along with affordable and enhanced battery storage, will cause a fundamental shift in energy use and will necessitate a rethink of traditional utility businesses.

Given the scale of opportunity, new technologies will unlock massive economic value in our member countries. Demand for smart infrastructure should create self-sustaining growth momentum and opportunities for NDB. We are well positioned to leverage the emerging and untapped opportunities in smart infrastructure financing.

In addition to taking advantage of technology, it is also equally important that we crowd-in other investors, particularly from the private sector. Currently, over USD 10 trillion of assets worldwide are earning negative returns. To put things in perspective, the combined gross domestic product (GDP) of our five member countries is about USD 21 trillion. As an inexorably aging global population increasingly demands retirement investments with higher yields, long-term positive returns offered by well-structured infrastructure projects should be attractive to global investors. To achieve this, however, MDBs need to innovate and design new financial products that are appropriate for a broad spectrum of investors. The creation of robust secondary markets for MDB-financed projects in our member countries will help meet their demand. MDBs could act as originators of projects, play their important role in de-risking such projects, and offer these projects to private investors, thereby enabling better use of their capital with leaner balance sheets.use of their capital with leaner balance sheets.

For NDB itself, there are interesting financial innovations that can be adopted to mobilise equity-like instruments from the markets. This will require, most critically, the support of our members. I believe that adoption of these innovations can help the Bank grow its assets to nearly USD 120 billion with just USD 10 billion of initial capital provided by the founding members. This would place the Bank in the top tier of MDBs globally and, I believe, could be a vision of the Bank for the future.

Mr. K.V. Kamath
President of NDB

2019 in Numbers[1]

Total approvals[2]

	Within the year ended 31 Dec 2019	Cumulative as at 31 Dec 2019
Number of total approvals	**22**	53[3]
Amount of total approvals	**USD 7,192 m**	USD 15,252 m
Number of cancellations	**1**[4]	2[5]
Amount of cancellations	**USD 69 m**	USD 319 m
Number of approvals net of cancellations as at December 31, 2019		51
Amount of approvals net of cancellations as at December 31, 2019		USD 14,933 m

Approvals by key area of operation

	Within the year ended 31 Dec 2019		Cumulative as at 31 Dec 2019	
	Number	USD m	Number	USD m
Clean energy	**5**	**1,589**	14	3,519
Transport infrastructure	**6**	**2,322**	13	4,421
Irrigation, water resource management and sanitation	**3**	**658**	7	2,080
Urban development	**5**	**1,523**	10	2,653
Environmental efficiency	**1**	**500**	4	1,200
Social infrastructure	**1**	**500**	2	960
Multi-theme[6]	**1**	**100**	1	100
Total	22	7,192	51	14,933

Disbursements

	Within the year ended 31 Dec 2019 USD m	Cumulative as at 31 Dec 2019 USD m
Amount of disbursements	**915**	**1,539**[7]
Number of operations to which disbursements were made	**23**	**26**

1 Unless otherwise stated, all amounts related to approvals and disbursements in this report have been translated using exchange rates as at the end of the relevant reporting period. As a result, the incremental amount for 2019 may deviate from the difference between the cumulative amounts as at end of 2019 and 2018.

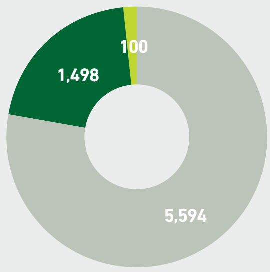
2 Total approvals include cancelled projects. Unless otherwise stated, discussions on NDB's operations are based on the Bank's portfolio net of cancellations.

3 The two loans to Eurasian Development Bank (EDB) and International Investment Bank (IIB) for on-lending to the Nord-Hydro project in Russia are counted as two separate approvals in this Annual Report, instead of one as in the previous reports.

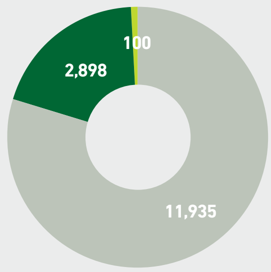
4 Relates to the USD 69 million loan to the Russian Federation for the Ufa Eastern Exit Project, which was approved in 2017 and cancelled in 2019.

Approvals by type of operation

Within the year ended 31 Dec 2019
USD m



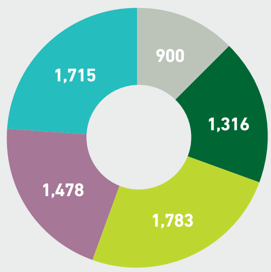
Cumulative as at 31 Dec 2019
USD m



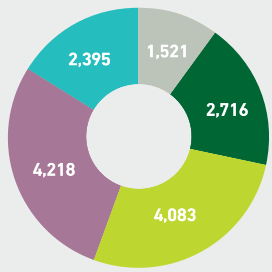
- Sovereign loans
- Non-sovereign loans
- Equity investments

Approvals by country

Within the year ended 31 Dec 2019
USD m



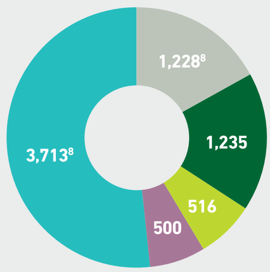
Cumulative as at 31 Dec 2019
USD m



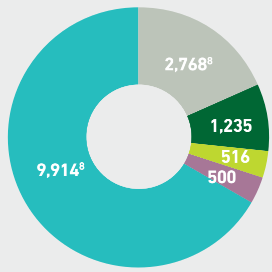
- Brazil
- Russia
- India
- China
- South Africa

Approvals by currency

Within the year ended 31 Dec 2019
USD m



Cumulative as at 31 Dec 2019
USD m



- RMB
- ZAR
- CHF
- EUR
- USD

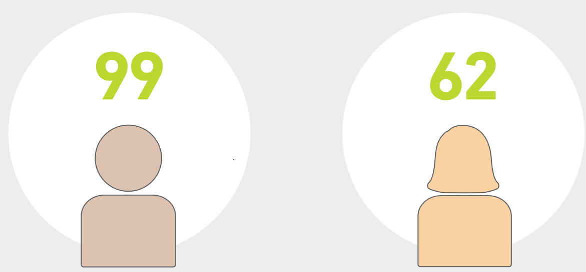
Bond issuances[9]

	Within the year ended 31 Dec 2019	Cumulative as at 31 Dec 2019
Number of bonds issued	1	2
Amount of bonds issued	**RMB 3 bn**	RMB 6 bn

Credit ratings[10]

	Credit Rating	Outlook
International		
Standard & Poor's	**AA+**	Stable
Fitch	**AA+**	Stable
Japan Credit Rating Agency	**AAA**	Stable
Domestic		
China Chengxin International Credit Rating	**AAA**	Stable
China Lianhe Credit Rating	**AAA**	Stable

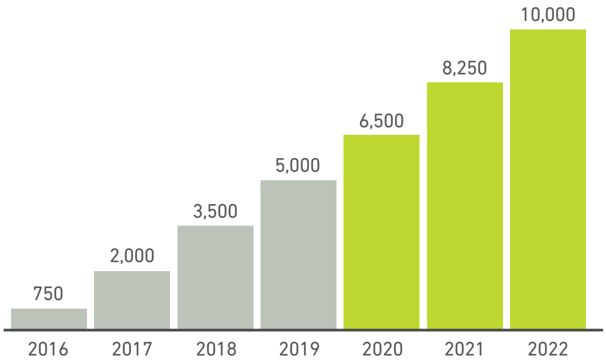
Human Resources



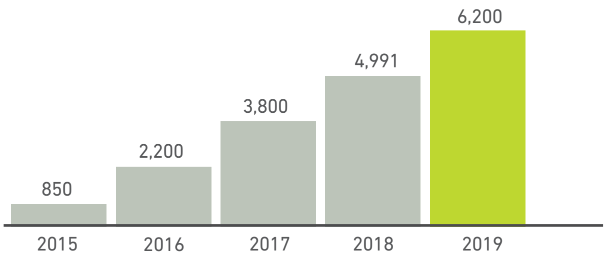
Male employees
2019: 99 or 61%
2018: 88 or 61%

Female employees
2019: 62 or 39%
2018: 56 or 39%

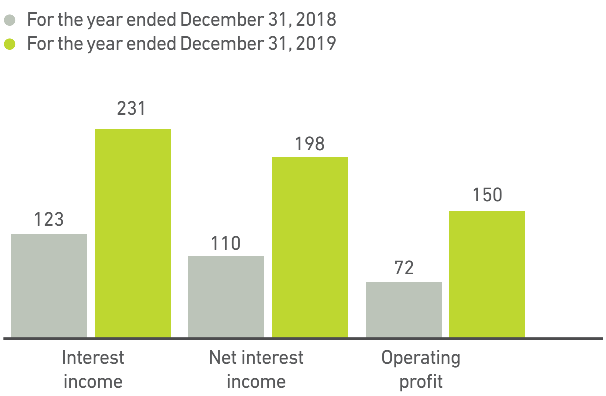
Cumulative paid-in capital due (as at January 3)
USD m



Cumulative paid-in capital contributions received[11] (as at December 31)
USD m



Financial performance
USD m

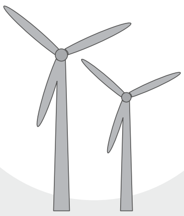


5 Relates to the project cancelled in 2019 and the USD 250 million sovereign-guaranteed loan to Canara Bank (India) for its Renewable Energy Financing Scheme, which was approved in 2016 and cancelled in 2018.
6 Relates to the USD 100 million equity investment in a private equity fund, which will invest in multiple sub-projects in various key areas of NDB's operation.
7 Includes repayments.
8 The USD 300 million loan to Vale S.A. includes a USD 50 million portion which could be delivered in RMB. This USD 50 million portion is included in the amount of approvals in RMB and excluded from the amount of approvals in USD.
9 On April 3, 2020, NDB issued a RMB 5 billion Coronavirus Combating Bond in the China Interbank Bond Market.
10 On January 23, 2020, NDB obtained a AAA international credit rating from Analytical Credit Rating Agency.
11 Subsequently, NDB received USD 300 million from India on January 2, 2020, relating to the fifth instalment of paid-in capital contribution, which was due on January 3, 2020. The Bank also received USD 35 million from Russia on January 10, 2020, and USD 350 million from China on March 2, 2020, as advance payments towards the sixth instalment of paid-in capital contribution due on January 3, 2021.

Highlights of expected development results of selected projects financed by NDB[12]

From projects approved within the year ended December 31, 2019

970 MW

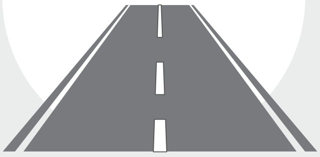


Renewable and clean energy generation capacity to be installed

2.4 million tons/year

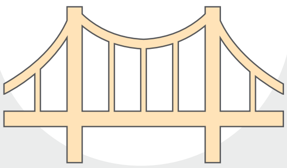
CO_2 emissions to be avoided

3,500 km



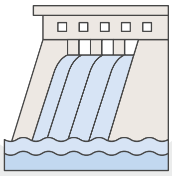
Roads to be built or upgraded

470



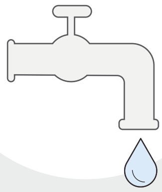
Bridges to be built or upgraded

2,300 million m^3



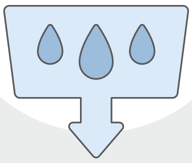
Water storage capacity to be created

159,000 m^3/day



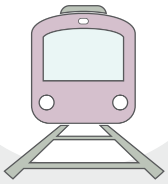
Drinking water supply capacity to be increased

3.4 million



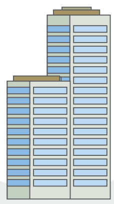
People to benefit from improved access to water and sanitation services

60 km



Metro and tram networks to be built

5



Cities to benefit from NDB's urban development projects

12 Expected development results are presented for selected projects that NDB financed in collaboration with partners, irrespective of the share of the Bank's financial contribution. The numbers are rounded, and are based on the information available at the time of approval.

Overview

NDB is an international financial institution established by Brazil, Russia, India, China and South Africa (BRICS) to mobilise resources for infrastructure and sustainable development projects in BRICS and other emerging market economies and developing countries (EMDCs) for global growth and development.

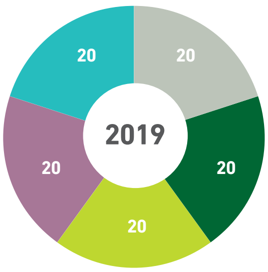
In order to deliver on its mandate, the Bank continuously leverages technological capability, financial resources, human capital and partnerships. As one of the youngest institutions in the multilateral development banking industry and the first global MDB established only by EMDCs, NDB has the advantage of learning from past experience of its peers, and is well positioned to offer innovative solutions and incorporate leading practices onto its operations.

Capital Structure

In accordance with the AoA, the initial authorised capital of NDB is USD 100 billion, of which USD 50 million has been subscribed equally by the five founding members. The Bank's initial subscribed capital is composed of paid-in capital of USD 10 billion and callable capital of USD 40 billion. The voting power of each member is equal to the proportion of its subscribed shares in the capital stock of the Bank. Therefore, NDB has a unique governance structure, in which the five founding members have equal voting power and none of them has veto power over any matter.

Founding members have been making contributions to the paid-in capital in accordance with the seven-year payment schedule set out in the AoA. This reflects their strong commitment to NDB and high propensity to support the Bank in case of need. By the end of 2019, the Bank had cumulatively received paid-in capital amounting to USD 6.2 billion.[13]

Shareholding structure of NDB
%



Country	%
Brazil	20
Russia	20
India	20
China	20
South Africa	20

13 Subsequently, NDB received USD 300 million from India on January 2, 2020, relating to the fifth instalment of paid-in capital contribution, which was due on January 3, 2020. The Bank also received USD 35 million from Russia on January 10, 2020, and USD 350 million from China on March 2, 2020, as advance payments towards the sixth instalment of paid-in capital contribution due on January 3, 2021.

Membership

Membership of NDB is open to members of the United Nations. Expansion of membership to include other EMDCs as well as advanced countries is a strategic focus of the Bank, and will be conducted with a view to ensuring geographic diversity as well as a reasonable mix of countries of different sizes and at different stages of development. Recognising this, in April 2017, the Board of Governors (BoG) approved the Terms, Conditions and Procedures for the Admission of New Members.

At the 11th BRICS Summit held in November 2019 in Brasília, Brazil, Leaders of the five founding members stated in the Brasília Declaration that they "look forward to the Board of Governors concluding the preparatory work with the aim of taking timely and considered decisions on the expansion of the membership in due course".

The Heads of State in the 11th BRICS Summit

NDB in 2019

2019 was an exciting year for NDB. Thanks to the strong commitment and continuous support of its founding members, clear guidance and effective oversight of Governors and Directors, leadership of the Management[14] and the steadfast dedication of staff, the Bank has successfully consolidated itself as a dynamic, innovative and reliable partner, providing long-lasting contributions to the development efforts of its member countries.

In 2019, NDB continued to mobilise resources for high-quality infrastructure and sustainable development projects in an agile and efficient way. The Bank is now reaching a steady state of operations, with USD 7.2 billion in approvals in 2019, a 53% increase over the year before, while annual disbursements increased by 52% compared to the previous year. Significant progress has also been made in terms of portfolio composition. The share of non-sovereign operations, including equity investments, increased from 18% to 20% of cumulative approvals over the year, and the share of financing denominated in local currencies rose from 20% to 27% over the same period. The Bank has also introduced new operation modalities, such as multi-currency loans and equity investments, and improved the balance in distribution of operations across member countries.

Recognising NDB's strong business and financial profile as well as prudent risk management framework, Japan Credit Rating Agency assigned the Bank a AAA rating, and both Standard & Poor's and Fitch reaffirmed the Bank's AA+ ratings.[15] Leveraging its high credit ratings, the Bank has made

South African Deputy President Mr. David Mabuza's visit to NDB on November 1, 2019


NDB's new headquarters under construction

significant strides in implementing its funding strategy. As detailed in the Treasury section of this report[16], NDB issued an additional RMB-denominated bond in 2019. In order to further diversify its funding sources, the Bank registered its debut ZAR bond programme in South Africa and its RUB bond programme in Russia. Later in the year, the Bank launched its Euro Medium Term Note (EMTN) programme, opening the way for it to establish a presence in international capital markets. Furthermore, to enhance its liquidity management, NDB established its debut Euro Commercial Paper (ECP) programme in April 2019.

During 2019, NDB enhanced the monitoring and reporting of its strategy implementation and strengthened its development results framework, with the objective to better measure and account for its impact. In line with its General Strategy: 2017–2021, the Bank has been paying due regard to the alignment of its operations with the SDGs as well as the goals of the Paris Agreement on Climate Change (Paris Agreement). NDB also continued to develop and implement its partnership agreements and increased the number of operations with other developmental institutions through on-lending, co-financing and parallel financing.

As a 21st-century institution, NDB embeds technology into all aspects of its activities. Continuous investments in cloud-based IT solutions have contributed to the integration of the Bank's core systems, paving the way for NDB to become a fully digitalised institution.


Investment in cloud-based IT solutions

14 NDB's Management team is composed of the President and four Vice Presidents.
15 On January 23, 2020, Analytical Credit Rating Agency also assigned a AAA international credit rating to NDB.
16 See pages 53 to 58.

Key Events in 2019

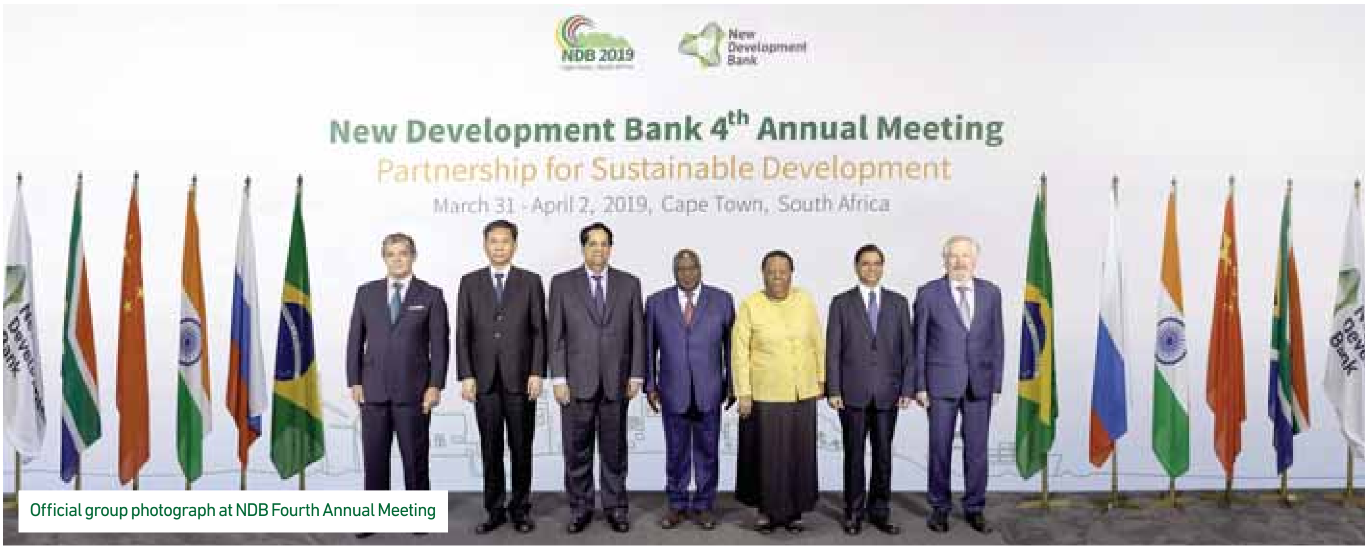
NDB Fourth Annual Meeting

The Fourth Annual Meeting of NDB was held in Cape Town, South Africa, on March 31 and April 2, 2019 under the theme of Successful Partnerships for Sustainable Development.

During the Annual Meeting, the Governer for Brazil was elected as Chairperson of the BoG, to serve in this position until the fifth Annual Meeting of the Bank in 2020. Governors noted the achievements of the Bank, including expansion of its business, significant growth of loan portfolio as well as the ramp-up of NDB's borrowings. The BoG also provided guidance for the Bank's future work, promoting alignment of NDB's operations with member countries' development goals.

The Annual Meeting brought together senior government officials from BRICS countries, leaders of multilateral and national development institutions, distinguished scholars, prominent commercial bankers, captains of industry and representatives of civil society organizations. Three seminars were held during the meeting under the following themes:

- Leveraging International Financial Infrastructure for Sustainable Development;
- Financing Sustainable Infrastructure; and
- Sustainable Infrastructure for a Better Future.



Official group photograph at NDB Fourth Annual Meeting

Paul Romer, 2018 Nobel Laureate, at the NDB Fourth Annual Meeting

President Mr. K.V. Kamath at the NDB Fourth Annual Meeting

A meeting with civil society organizations was held to discuss topics related to NDB's institutional development and operations, including the Bank's approach to assessing and monitoring the development impact of its operations. In addition, several knowledge events were also held on the sidelines of the Annual Meeting, focusing on the following topics:

- Legal and Regulatory Aspects of Private-Public Partnerships for Sustainable Development Projects;
- Building Sustainable Credit History; and
- Partnerships and Sustainable Support for Municipal Infrastructure.

NDB participation at the 11th BRICS Summit

NDB participated actively in the 11th BRICS Summit held in Brasília, Brazil on November 13 and 14, 2019.

During the official dialogue session of BRICS Leaders' with NDB and the BRICS Business Council, President Kamath, reported to the Heads of State on the progress made by the Bank over the past year and shared the strategic vision for the Bank going forward. President Kamath highlighted NDB's gradual transformation from an incipient institution into a fully functioning MDB in all respects, capable of effectively leveraging capital for development purposes as envisioned by the founding members.

The Summit also provided an opportunity for NDB to hold close interactions with the BRICS business community as well as with Brazilian partners and counterparts in infrastructure and sustainable development. The Ministries of Economy and Foreign Affairs of Brazil co-hosted a Seminar with NDB on the sidelines of the Summit to discuss the Bank's role in financing projects in the country. The discussions highlighted NDB's unique value proposition for working across the public and private sectors, while focusing on borrowers' needs. Among the distinguished panellists were the Minister of Economy of Brazil and NDB Governor, Mr. Paulo Guedes, the President of the Brazilian Development Bank (BNDES), Mr. Gustavo Montezano, President Kamath, and other members of NDB's Management.

NDB President Kamath reported to the Heads of State during the 11th BRICS Summit

At the BRICS Summit, President Kamath highlighted NDB's gradual transformation from an incipient institution into a fully functioning MDB in all respects.

NDB interacted closely with the BRICS business community during the 11th BRICS Summit

The Brasília Declaration

Signed by the Leaders of BRICS countries in Brasília, Brazil, on November 14, 2019, at the conclusion of the 11th BRICS Summit, the Brasília Declaration outlines the outcomes of recent cooperation between the BRICS countries and reaffirms the group's fundamental commitment to the principles of sovereignty, mutual respect and equality, as well as to the shared goal of building a peaceful, stable and prosperous world.

In the Declaration, the Heads of State noted with pride the fifth anniversary of the signing of NDB's AoA in Fortaleza and acknowledged the progress made towards expanding the Bank's membership. They welcomed the establishment of NDB's regional offices, as well as the mid-term review of NDB's General Strategy: 2017–2021. The Declaration also noted with appreciation the role of NDB in infrastructure and sustainable development financing, stressing the need for enhanced efforts to continue building a strong, balanced and high-quality portfolio of projects.

The Heads of State noted with pride the fifth anniversary of the signing of NDB's AoA in Fortaleza and acknowledged the progress made towards expanding the Bank's membership.

Governance

NDB functions under the strategic guidance of the BoG, whilst oversight is provided by the provided by the Board of Directors (BoD). The Bank is managed operationally by the President and four Vice Presidents.

NDB's lean governance structure supports the Bank's commitment to conduct its business in a prudent manner, with the highest standards of corporate governance, operational effectiveness and oversight. At the same time, it allows the Bank to operate in an environment of rapidly changing technological innovation, responding in a flexible, agile and cost-effective manner to the evolving developmental needs of its member countries.

Board of Governors

The BoG is the highest decision-making authority of NDB, consisting of one Governor at ministerial level and one alternate appointed by each member country. The BoG is responsible for deciding on the increase or decrease of the capital stock, approving the annual accounts, determining the distribution of net income, electing the President, admitting new members, approving the General Strategy of the Bank every five years, authorising the conclusion of general agreements for cooperation with other international organisations, among other duties.

BoG meetings take place at least annually. The Fourth Annual Meeting of the BoG was held in Cape Town, South Africa, on April 1, 2019. The current Chairperson of the BoG is the Governor for Brazil, Mr. Paulo Guedes.

Mr. Paulo Guedes[17]
Governor of NDB
Chairperson of the BoG
starting April 1, 2019[18]

Minister of Economy
Federative Republic of Brazil

Mr. Guedes has been the Minister of Economy of Brazil since January 2019. He has a career in both the Brazilian financial market and education sector.

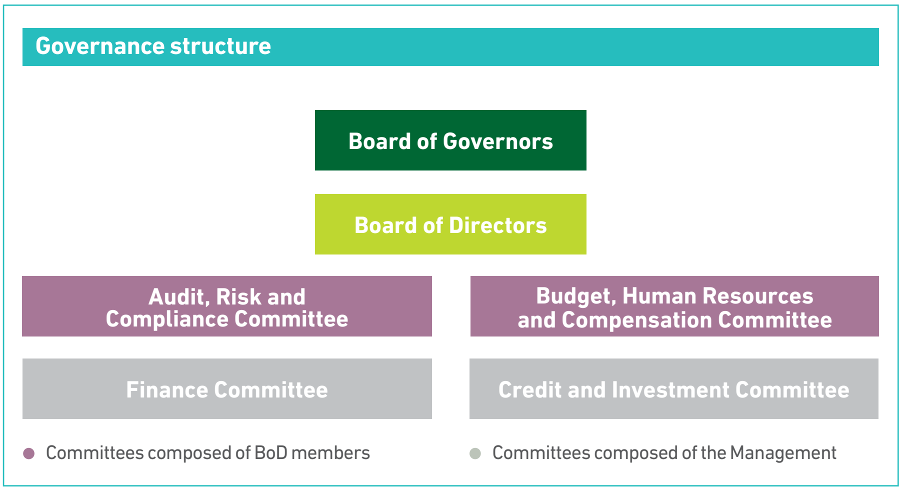
Mr. Guedes was founder of Banco Pactual, which became the largest Brazilian investment bank, and the Chief Executive Officer and majority shareholder of Instituto Brasileiro de Mercado de Capitais, one of Brazil's leading business schools. Mr. Guedes was also the founder of Abril Educação and the think tank Instituto Millenium. Mr. Guedes was a professor at The Pontifical Catholic University of Rio de Janeiro, Getúlio Vargas Foundation and the Institute of Pure and Applied Mathematics.

Mr. Anton Siluanov
Governor of NDB

Minister of Finance
Russian Federation

Mr. Siluanov was appointed as Finance Minister in Russia from September 2011 to December 2011 and was reappointed in May 2012.

Mr. Siluanov has a long history of working at the Russian Finance Ministry starting as an economist in August 1985 to becoming a member of the Board on March 22, 2001. From July 2003 to December 2011, Mr. Siluanov served in various positions including Director of the Department of Intergovernmental Fiscal Relations at the Finance Ministry; Deputy Finance Minister of the Russian Federation; and Acting Finance Minister of the Russian Federation.



Mrs. Nirmala Sitharaman[19]
Governor of NDB

Minister of Finance,
Republic of India

Mrs. Sitharaman has been Finance Minister of India since May 31, 2019.

From 2003 to 2005, Mrs. Sitharaman served as a member of the National Commission for Women. She has been actively involved with the Bharatiya Janata Party since 2008, when she was invited to become a member of the party's National Executive. In 2014, Mrs. Sitharaman was inducted into the Council of Ministers and held the charge of Minister of State (Independent charge) for Commerce and Industry. On September 3, 2017, she became the first full-time woman Defence Minister of India.

Mr. Kun Liu
Governor of NDB

Minister of Finance
People's Republic of China

Mr. Liu has been Finance Minister of China since March 2018.

Mr. Liu has extensive experience in fiscal and tax reform as well as fiscal policies. From 1988 to 1997, he was Deputy Director and then Director of the General Office of Guangdong Provincial Government. From 1997 to 2001, he was Deputy Director General of the General Office of Guangdong Provincial Government, and from 2001 to 2002, he served as Deputy Secretary General of Guangdong Provincial Government (Director General-level). From 2002 to 2010, Mr. Liu was Director General of the Finance Department of Guangdong Province. From July 2010 to May 2013, he was Deputy Governor of Guangdong Province and appointed as Vice Minister of the Ministry of Finance from May 2013 to December 2016. From December 2016 to March 2018, Mr. Liu served as Director of the Budgetary Affairs Commission of the National People's Congress Standing Committee, and also served as Deputy Chairman of the Financial and Economic Affairs Committee of the 12th National People's Congress.

Mr. Tito Mboweni
Governor of NDB
Chairperson of the BoG
until April 1, 2019

Minister of Finance
Republic of South Africa

Mr. Mboweni has been Finance Minister of South Africa since October 2018. Mr. Mboweni was the eighth Governor of the South African Reserve Bank from 1999 to 2009.

Mr. Mboweni joined the Reserve Bank in July 1998 as Advisor to the Governor. Prior to this, Mr. Mboweni was Minister of Labour from May 1994 to July 1998 in President Nelson Mandela's cabinet. Prior to his appointment as Minister of Labour, he was Deputy Head of the Department of Economic Policy in the African National Congress. Mr. Mboweni also represented the African National Congress on several domestic and international platforms.

17 Mr. Paulo Guedes was appointed as the Governor for Brazil in January 2019 replacing Mr. Eduardo Refinetti Guardia.
18 Mr. Paulo Guedes was elected as the BoG Chairperson on April 1, 2019 and will hold this office until the end of the Fifth Annual Meeting of the BoG.
19 Mrs. Nirmala Sitharaman was appointed as the Governor for India in June 2019 replacing Mr. Arun Jaitley. Mr. Arun Jaitley passed away in August 2019. His contribution to NDB was invaluable, especially in the formative stages of setting up the Bank.

Board of Directors

The BoD is responsible for the conduct of the general operations of NDB, including decisions on business and country strategy, loans, guarantees, equity investments, borrowing, operational policies and procedures, technical assistance as well as budget review and approval. In addition to general operations of the Bank, the BoD provides strategic direction to the Management to achieve the Bank's organisational objectives and oversees the development of its operations.

Each of the founding members appoints one Director and one alternate for a term of two years. As per the AoA, Directors may be re-elected. The Chairperson of the BoD is appointed by the Directors for a period of four years. The Director for Russia, Mr. Sergei Storchak, was appointed as the Chairperson from July 21, 2019. The President is also a member of the BoD, but has no vote except for a deciding vote in case of a tie among the Directors.

The Bank's BoD functions as a non-resident body. This innovative format enables a swift, flexible and cost-effective decision-making process. According to the AoA, the BoD meets at least quarterly and, according to the Rules of Procedures of the Board of Directors, the BoD may convene meetings electronically as needed. In 2019, the BoD held five meetings, including four physical meetings and one videoconference. In line with best practice, NDB's Corporate Secretary reports directly to the BoD.

Ms. Yana Dumaresq[20]
Director of NDB

Assistant Deputy Minister for Foreign Trade and International Affairs, Ministry of Economy
Federative Republic of Brazil

Ms. Dumaresq is the Assistant Deputy Minister for Foreign Trade and International Affairs, Ministry of Economy in Brazil from January 2019.

She joined the Brazilian Civil Service in January 2009, at the former Ministry of Industry, Foreign Trade and Services, where she served as Deputy Minister (2018), Undersecretary of Strategy and Competitiveness (2016 to 2017), Chief of Staff (2015) and Chief Advisor (2010 to 2011). In the years of 2013 and 2014, Ms. Dumaresq joined the World Economic Forum´s team in Geneva, as Associate Director for Latin America. Ms. Dumaresq has also a strong background in sustainable development. In this field, she served as Deputy Head of Brazil´s Office for the United Nations Conference on Sustainable Development and worked as a consultant for both bilateral and multilateral cooperation agencies.

Mr. Sergei Storchak
Director of NDB
Chairperson of the BoD

Deputy Minister of Finance
Russian Federation

Mr. Storchak has been the Deputy Finance Minister of the Russian Federation since November 2005. Mr. Storchak served in the Soviet Army from November 1972 to November 1974.

Mr. Storchak held various positions at the Institute of World Economy and Foreign Affairs of the Academy of Sciences of the Union of Soviet Socialist Republics (USSR) from August 1981 to November 1988. From December 1988 to October 2005, Mr. Storchak served in various positions in government and other international organisations including the Second Secretary of the USSR Permanent Mission to the United Nations Office, Director of Division of the Foreign Credit and External Debt Department, Deputy Chairman of the Bank for Foreign Economic Affairs of the USSR and Director of the International Finance Relations, State Debt and State Financial Assets Department of the Finance Ministry of the Russian Federation.

Mr. K. Rajaraman
Director of NDB

Additional Secretary, Department of Economic Affairs, Ministry of Finance Republic of India

Mr. Rajaraman was appointed as Additional Secretary, Investment and International Economic Relations in the Department of Economic Affairs, Ministry of Finance in September 2018.

Mr. Rajaraman started his career as a Design Engineer in Bharat Heavy Electricals Limited, Trichy in 1986. After joining the Indian Administrative Service in 1989, Mr. Rajaraman has held administrative positions in the areas of Investment Promotion, Public Sector Undertakings, Industrial Infrastructure, Urban Transportation, VAT Administration, among others. Mr. Rajaraman was previously the Managing Director of Chennai Metro Railways for approximately four years, during its construction phase, Commissioner for Commercial Taxes in State Government of Tamil Nadu and Joint Secretary Expenditure in Government of India in the recent past.

Mr. Wencai Zhang[21]
Director of NDB

Director General of the Department of International Economic and Financial Cooperation, Ministry of Finance People's Republic of China

Mr. Zhang was appointed as the Director General of the Department of International Economic and Financial Cooperation, Ministry of Finance of China in August 2016 and also represents China as Alternate Governor at the International Fund for Agricultural Development.

Mr. Zhang has rich experience in the public sector, including with international financial institutions and the Ministry of Finance of China. Mr. Zhang previously served at the Ministry of Finance of China in various senior capacities since 1989, including as the Director General of the Department of External Economic Cooperation from 2012 to 2013, and as the Deputy Director General for the International Department from 2004 to 2012, where he worked on various bilateral dialogues, multilateral initiatives and cooperation with international financial institutions, including the Strategic and Economic Dialogue between China and the US, the G20, the ASEAN+3, the Asia Pacific Economic Cooperation, the World Bank, and the Asian Development Bank. In the field of international financial institutions, Mr. Zhang served as Vice President of the Asian Development Bank from 2013 to 2018 and as Director for China at the Asian Development Bank from 2007 to 2009. From 1993 to 1996, he was Advisor to the Executive Director for China at the World Bank.

Mr. Enoch Godongwana[22]
Director of NDB

Head of the African National Congress' Economic Transformation Committee Republic of South Africa

Mr. Godongwana is currently the Chair of the Development Bank of Southern Africa and the Head of the African National Congress' Economic Transformation Committee.

Prior to this, he was the Deputy Minister of Economic Development from 2010 to 2012, and the Deputy Minister of Public Enterprises from 2009 to 2010. Mr. Godongwana was a member of Provincial Legislature in the Eastern Cape Provincial Government from 1994 to 2009 and a member of the Executive Council for the Eastern Cape Provincial Treasury, Economic Affairs, Environment and Tourism from 1994 to 1998 and from 1998 to 2004.

Mr. K. V. Kamath
Member of the BoD and President of NDB

Mr. Kamath has over 40 years' experience in the banking sector, including project finance, credit and venture capital.

Among his many roles, Mr. Kamath served as Managing Director and Chief Executive Officer and subsequently then as the non-executive Chairman of ICICI Bank and worked at the Asian Development Bank. He also served as a board member of Schlumberger Ltd and as Chairman of Infosys Ltd., India's largest software company.

20 Ms. Yana Dumaresq was appointed as the Director for Brazil, effective from October 12, 2019, replacing Mr. Marcos Troyjo, who was appointed as the Director for Brazil in January 2019, replacing Mr. Marcello de Moura Estevão Filho.
21 Mr. Wencai Zhang was appointed as the Director for China in January, 2019, replacing Mr. Shixin Chen.
22 Mr. Enoch Godongwana was appointed as the Director for South Africa in April 2019, replacing Mr. Dondo Mogajane.

Committees

NDB's processes are set up to ensure that all its activities are carefully and independently evaluated.

The AoA stipulates that the BoD shall appoint any committee it deems advisable for carrying out the general operations of NDB. Consequently, the BoD has approved the establishment of four committees to assist it in discharging its oversight and decision-making responsibilities.

Audit, Risk and Compliance Committee (ARC Committee)

Chairperson

Mr. Enoch Godongwana,
Director for South Africa

Composition

All members of the BoD

Meeting frequency

At least four times a year

Purpose

The ARC Committee assists the BoD to fulfil its corporate governance responsibilities including, amongst others, assessing the integrity of the financial statements and reporting procedures, reviewing reports from the internal and external auditors, ensuring the existence of adequate and effective internal controls and approving the risk management framework. It comprises all members of the BoD and meets at least four times a year.

Duties undertaken

Among other matters, the following duties have been undertaken by the ARC Committee:

- The ARC Committee has reviewed the audited financial statements with the Management, including a discussion of the quality of the accounting principles as applied, and significant judgments affecting the Bank's financial statements.
- The independent auditors have discussed with the ARC Committee their judgments of the quality of those principles as applied and judgments referred to above under the circumstances.
- The members of the ARC Committee have discussed among themselves, without the Management or the independent auditors being present, the information disclosed to the ARC Committee as described above.

Audit, Risk and Compliance Committee (ARC Committee)

- The ARC Committee, in reliance on the review and discussions conducted with the Management and the independent auditors pursuant to the requirements above, believes that the Bank's financial statements are fairly presented in conformity with International Financial Reporting Standards (IFRSs) in all material respects.

In 2019, the ARC Committee held four meetings and has satisfied its responsibilities in compliance with its terms of reference.

Budget, Human Resources and Compensation Committee (BHRC Committee)

Chairperson
Mr. Wencai Zhang, Director for China

Composition
All members of the BoD

Meeting frequency
At least quarterly, or as needed

Purpose
The purpose of the BHRC Committee is to assess the approval of the budget and human resources and compensation-related activities.

In 2019, the BHRC Committee held four meetings and has satisfied its responsibilities in compliance with its terms of reference.

Credit and Investment Committee (CIC)

Chairperson
Mr. K.V. Kamath, President of NDB

Composition
The President and the four Vice Presidents

Meeting frequency
Monthly, or as needed

Purpose
The purpose of the CIC is to assist the BoD in fulfilling its responsibilities regarding the credit and investment activities of the Bank and make appropriate project recommendations to the BoD.

In 2019, the CIC held seven meetings and has satisfied its responsibilities in compliance with its terms of reference.

Finance Committee

Chairperson
Mr. K.V. Kamath, President of NDB

Composition
The President and the four Vice Presidents

Meeting frequency
Monthly, or as needed

Purpose
The purpose of the Finance Committee is to provide oversight responsibility on financial and risk related matters pertaining to operations and treasury. The committee is also responsible for the oversight of and recommendations to the BoD in the areas of financial policies and guidelines, financial operations including loan loss provisioning, asset and liability management and financial risk management.

In 2019, the Finance Committee held four meetings and has satisfied its responsibilities in compliance with its terms of reference.

Management

NDB's Management team is composed of the President and four Vice Presidents. In 2015, the BoG elected Mr. Kamath from India as the first President of NDB.

The Vice Presidents, from each of the founding members except the country represented by the President, are appointed by the BoG, based on the recommendation of the President. The President and each Vice President shall serve for a non-renewable, five-year term, except for the first Vice Presidents, whose mandate shall be for six years.

Mr. K.V. Kamath
President

Mr. Kamath has over 40 years' experience in the banking sector, including project finance, credit and venture capital.

Among his many roles, Mr. Kamath served as Managing Director and Chief Executive Officer and subsequently then as the non-executive Chairman of ICICI Bank and worked at the Asian Development Bank. He also served as a board member of Schlumberger Ltd and as Chairman of Infosys Ltd., India's largest software company.

Mr. Sarquis José Buainain Sarquis
Vice President and
Chief Risk Officer

Mr. Sarquis has over 20 years of public sector experience.

He has held several positions at the Ministry of External Relations in Brazil, including Head of International Economic Organisations and advisor on international finance, investment, trade and development. Before joining NDB, Mr. Sarquis served as Minister-Counsellor at the Embassy in Paris and Deputy Chief of Mission at the Brazilian Embassy in Tokyo. Mr. Sarquis has accumulated extensive experience in working with multilateral organizations, including the Organisation for Economic Co-operation and Development (OECD), the International Monetary Fund (IMF), the World Bank Group, the World Trade Organization and the United Nations. He received his MSc and PhD in Economics from the London School of Economics and has researched, published and taught in the areas of macroeconomics, growth, trade and international finance.

Mr. Vladimir Kazbekov
Vice President and Chief Administrative Officer

Mr. Kazbekov has over 20 years' experience in public sector and development finance.

Before his appointment at NDB he served at Vnesheconombank – Russia's National Development Bank, as an executive and at the Russian Ministry of Foreign Affairs, as the Deputy Director of the Foreign Policy Department of the Presidential Executive Office of the Russian Federation.

Mr. Xian Zhu
Vice President and Chief Operating Officer

Mr. Zhu has over three decades of experience in senior management roles in the Chinese public sector and other MDBs.

Before his appointment at NDB, Mr. Zhu served as Vice President and Chief Ethics Officer at the World Bank Group. Mr. Zhu has also held other positions in the World Bank Group, including Strategy and Operations Director for South Asia, Country Director for Bangladesh and Country Director for the Pacific Islands, Papua New Guinea and Timor-Leste.

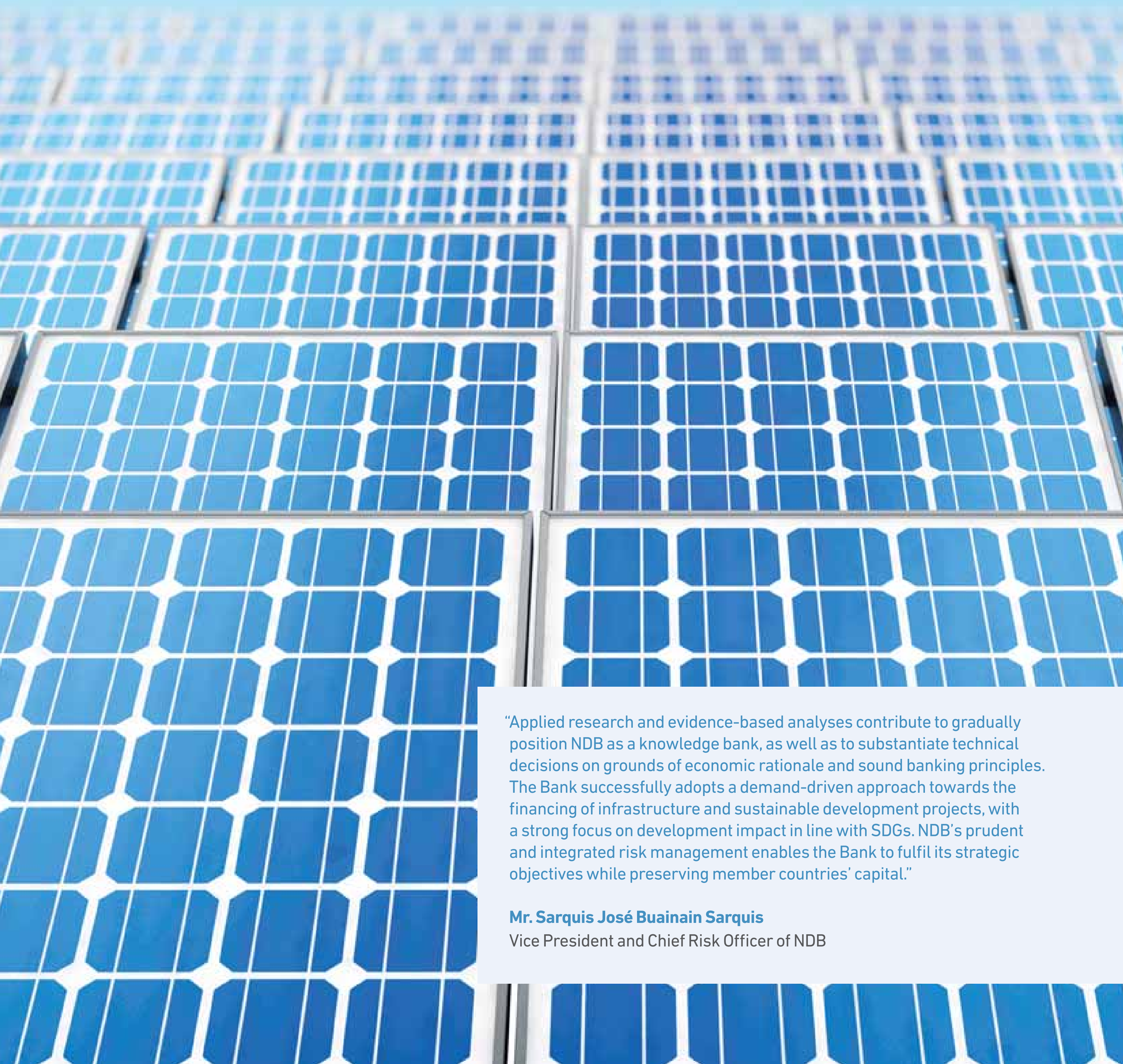
Mr. Leslie Maasdorp
Vice President and Chief Financial Officer

Mr. Maasdorp has over 25 years' experience in senior leadership roles in the private and public sectors in South Africa.

In 1994, he was appointed special advisor to the Minister of Labour and in 1999 was appointed as Deputy Director General of the Department of Public Enterprises. Before joining NDB, Mr. Maasdorp served as President of Bank of America Merrill Lynch for Southern Africa and prior to that he served in a dual role as Vice Chairperson of Barclays Capital and ABSA Capital. He is a former International Adviser to Goldman Sachs.

Putian Pinghai Bay Offshore Wind Power Project in China

Operating Context and Strategy



"Applied research and evidence-based analyses contribute to gradually position NDB as a knowledge bank, as well as to substantiate technical decisions on grounds of economic rationale and sound banking principles. The Bank successfully adopts a demand-driven approach towards the financing of infrastructure and sustainable development projects, with a strong focus on development impact in line with SDGs. NDB's prudent and integrated risk management enables the Bank to fulfil its strategic objectives while preserving member countries' capital."

Mr. Sarquis José Buainain Sarquis
Vice President and Chief Risk Officer of NDB

Operating Context

Economic growth softened across most regions

Global economic growth softened from 3.6% in 2018 to 2.9% in 2019, the lowest level since the global financial crisis of 2008-2009.[23]

While low productivity growth and aging demographics have been posing structural constraints to potential output, the slowdown this year was further intensified by rising trade policy and other international uncertainties.

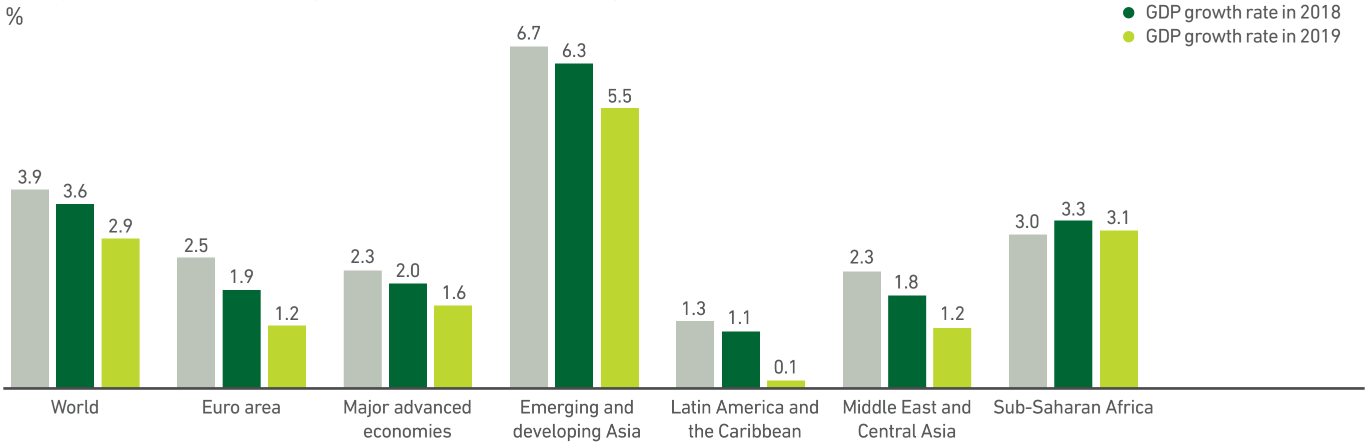
Global trade volume growth decelerated from 3.7% in 2018 to 1.0% in 2019. Meanwhile, global manufacturing output has also been steadily decelerating from a growth of 3.4% in 2018 to 1.4% in 2019.[24]

The growth deceleration was broad-based across most major regions. GDP growth in the Euro Area slowed from 1.9% in 2018 to 1.2% in 2019, while growth in major advanced economies (G7) moderated from 2.0% in 2018 to 1.6% in 2019. Emerging and developing Asia remained the fastest growing region in the world, but its expansion decelerated from 6.3% in 2018 to 5.5% in 2019. Growth in Latin America and the Caribbean decreased from 1.1% in 2018 to 0.1% in 2019, while the Middle East and Central Asia slowed from 1.8% in 2018 to 1.2% in 2019. Finally, growth in Sub-Saharan Africa marginally decelerated from 3.3% to 3.1%.

The global economy faced a dramatic shock caused by the COVID-19 pandemic after the closure of the 2019 financial year. Containment measures to curb the spread of the virus halted most economic activities, causing an immediate impact on the real economy and financial markets. Many economic activity and financial market indicators experienced a comparable or even larger decline in the first quarter of 2020 than during the global financial crisis of 2008–2009. The effects of the pandemic will propagate to the next quarters, further constraining growth and employment, through supply chain disruptions, trade channels, subdued confidence, risk aversion and more cautious consumption and investment patterns.

GDP growth across most regions has been decelerating

%



Authorities around the world were fast to respond with unprecedented (and unconventional) monetary, financial and fiscal stimulus policies. The global development community, including MDBs and other international organisations, are also devising emergency measures to protect lives and jobs, as well as to support economic activities. Despite this needed support, most institutions project that the global economy in 2020 will experience its worst recession since the Great Depression, exceeding the slowdown seen in the global financial crisis experienced about a decade ago. However, significant uncertainty remains over the duration and intensity of the current crisis.

BRICS countries remain an important source of economic growth

BRICS countries remain important drivers of global economic dynamism with a weighted average GDP growth of 5.1% in 2019, compared to 5.8% in 2018. Despite this deceleration, the five countries increased their contribution to global GDP expansion from 43% in 2018 to 45% in 2019, mainly supported by China and India. Furthermore, BRICS countries as a group have been striving to increase their integration in global value chains, thereby supporting trade and investment flows amongst themselves and globally. The crisis caused by the Covid-19 outbreak will significantly impact the GDP growth of BRICS countries in 2020 as the global economy will experience a large contraction in output, investment and trade.

The pace of economic recovery in **Brazil** slowed from a GDP growth of 1.3% in 2018 to 1.1% in 2019, as businesses and consumers put their investment and consumption decisions on hold, waiting for indications on the approval of structural reforms.[25] Low levels of investment and limited fiscal space remain key constraints for the Brazilian economy. The country is progressing with an agenda of reforms that is expected to promote fiscal consolidation, trade liberalisation and increased investments from the private sector, aimed at enhancing productivity and economic growth. The approval of the pension reform in November 2019 was an important step to support a moderation of fiscal pressures and to increase perceptions over the prospect of other structural reforms being approved.

Economic growth in **Russia** moderated from 2.5% in 2018 to 1.3% in 2019[26], dragged by lower oil prices and the impact of a higher value-added tax rate on private consumption. Despite the international sanctions sound macroeconomic policies have been helping to build fiscal buffers to increase the country's resilience against external shocks. Over the medium term, growth prospects are supported by an expected increase in public and private sector spending, particularly in core infrastructure projects, in the context of the national projects announced in 2018. A continuation of the government's ambitious structural reforms could further support economic acceleration and sustained growth.

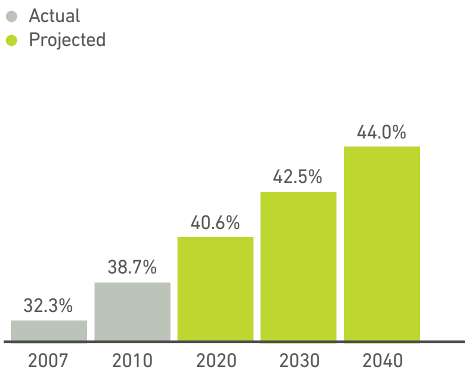
India's economic growth slowed down from 6.8% in 2018 to 5.3% in 2019,[27] as investments were limited by pressures faced by the non-banking financial sector and private demand declined in key industries, such as automobile and real estate. Ongoing reforms and stimulus measures are expected to support investment and consumption in the coming years. The implementation of structural reforms in the financial sector, including bankruptcy rules such as the Insolvency and Bankruptcy Code, are expected to continue enhancing the efficiency of credit provision to improve the business climate. In addition, reductions in consumption and income tax as well as programmes to support rural consumption are expected to benefit private demand, further supporting growth recovery.

Economic growth in **China** decelerated from 6.7% in 2018 to 6.1% in 2019,[28] as the country continued its longer-term transition to more sustainable and balanced growth patterns. Authorities implemented necessary adjustments under the framework of a proactive fiscal policy and a prudent monetary policy to offset the negative impact from trade tensions and reduced external demand. At the same time, reforms and opening-up progressed in important areas. Tighter control over off-budget local government activities and strengthened financial regulations moderated risks in the financial sector. Policies to enhance market accessibility and improve the business environment for foreign corporations continued, including through lower tariffs and more flexibility for foreign investments in the country. Such reform efforts are part of the measures to support the country's transition from high-speed growth to high-quality development.

Growth in **South Africa** slowed from 0.8% in 2018 to 0.2% in 2019.[29] While household and government consumption remained relatively strong, weak external demand and subdued gross fixed capital formation were the main drivers of the slowdown. Challenges in electricity supply further constrained the country's recovery. Low levels of private investment, declining productivity and deteriorating fiscal conditions constitute challenges to potential output. The government is designing and implementing reforms to moderate the pace of debt accumulation, increase the efficiency of state-owned enterprises (SOEs) and to tackle unemployment, a long-lasting problem in the country. Effective implementation of such reforms could help improve business confidence and create the conditions for growth acceleration in the medium term.

23 Unless otherwise stated, all data in this section is from the IMF World Economic Outlook, April 2020.
24 World manufacturing production data is from the United Nations Industrial Development Organization. Growth rates were calculated as the average year-on-year quarterly growth of each year.
25 Data from the Brazilian Institute of Geography and Statistics.
26 Data from Russia's Federal State Statistics Service.
27 Data from the Central Statistics Office of India for the calendar years of 2018 and 2019.
28 Data from China's National Bureau of Statistics.
29 Data from the Department of Statistics of South Africa for the calendar years of 2018 and 2019.

Share of BRICS countries in global infrastructure investments[30]



Over the long term, BRICS countries are expected to play an increasingly prominent role in the global economy.

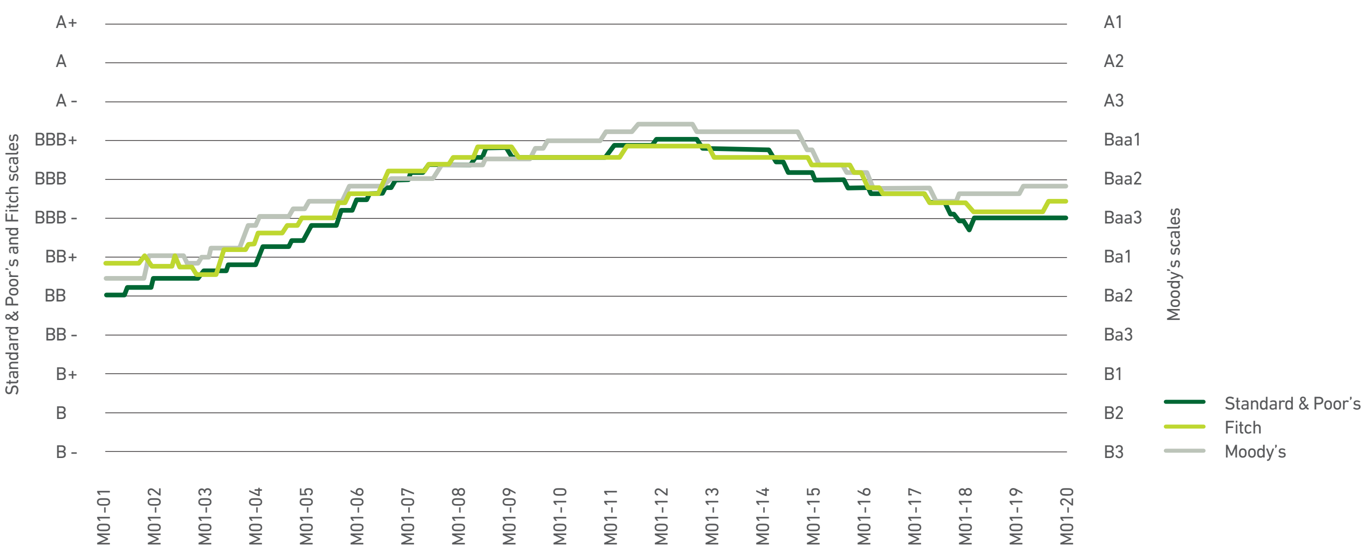
NDB is operating in an environment with ample investment opportunities

NDB's operating environment provides ample infrastructure and sustainable development investment opportunities, given its member countries' growing economies, deep and liquid financial markets and relatively high credit quality. Over the long term, BRICS countries are expected to play an increasingly prominent role in the global economy. According to the OECD[31], their combined economies are expected to rise from about 20% of global GDP in purchasing power parity terms in 2000 to nearly 50% by 2040. By that time, EMDCs are expected to account for over 60% of global GDP.

In line with the increasing importance of the BRICS in the global economy, infrastructure investments in these countries are expected to account for a growing share of global investments in infrastructure – from 32.3% in 2007 to 44.0% in 2040.[31] Accordingly, the BRICS are also gradually becoming important sources of capital to fund such investments, including through the development of their domestic capital markets and establishment of new development finance institutions, such as NDB.

Besides ample infrastructure investment opportunities in BRICS countries, NDB has an operating environment of relatively sound credit quality. The average credit rating of BRICS countries is close to BBB- according to Standard & Poor's and Fitch and Baa2 according to Moody's, allowing NDB to have a loan portfolio with a weighted average credit rating higher than those of peer MDBs. The credit quality of BRICS countries has proven to be generally resilient even throughout crises and periods of financial distress. For instance, the average credit rating of BRICS countries remained relatively stable during the financial crisis

Credit rating of BRICS countries over the past two decades[32]



Financing of Renewable Energy Projects and associated Transmission thereof (BNDES) in Brazil

Infrastructure investments could be an important driver of growth

The slowing global growth prompted a notable shift to monetary policy accommodation in major advanced and emerging economies by late 2019. This trend was further intensified to support economies in face of the crisis caused by the COVID-19 pandemic. As a result, interest rates reached historical lows in many countries, with long-term rates declining into negative territory in some advanced countries.

However, monetary policy was only able to partially offset the slowing growth. This prompted growing discussions on the need of fiscal support, particularly of infrastructure investment. In fact, the low interest rate environment potentially makes investments in infrastructure more appealing for countries.

The BRICS countries are making progress in expanding infrastructure investment as a means to reduce bottlenecks, enhance potential growth, increase employment opportunities and provide their citizens with adequate infrastructure.

Brazil has been focusing on concessions, privatisations and public-private partnerships to scale up investment. Russia articulated the National Goals and Strategic Objectives through 2024, which places infrastructure development as a core priority. India set up a task force to promote INR 100 trillion in infrastructure investments over the next five years. China remained the country with the largest infrastructure investments globally, further supporting nationwide strategies such as promoting high-quality development and regional connectivity. South Africa is committed to contribute ZAR 100 billion over the next ten years to seed an infrastructure fund, which is a cornerstone of the country's economic stimulus and recovery plan.

Despite efforts of BRICS countries to scale up infrastructure investments, NDB's preliminary research shows that their infrastructure capital stock as a share of GDP is on a downtrend and significantly below the optimal levels that would enhance GDP growth. The Bank's research also provides evidence that infrastructure investment can raise economic output in the medium and long runs, as well as crowd-in private investment to other productive sectors, while also contributing to the achievement of the SDGs.[33]

30 Data from G20 Global Infrastructure Hub.

31 OECD (2020), "Long-term baseline projections, No. 103", OECD Economic Outlook: Statistics and Projections (database), (accessed on 25 February 2020).

32 Information from Standard & Poor's, Fitch and Moody's via Bloomberg. BRICS average refers to a simple average. Data up to December 31, 2019. Subsequently, Moody's downgraded South Africa from Baa3 to Ba1 in March 2020, and Fitch downgraded South Africa from BB+ to BB in April 2020.

33 Based on the preliminary results of econometric and other economic modelling techniques utilized by the NDB's research team. This research is work in progress and will be published in due time.

During a relatively short period of time, NDB has managed to establish itself as a solid, dynamic, trustworthy and fit-for-purpose MDB, in line with the vision of the founding members as elaborated in the General Strategy.

NDB's key areas of operation[34]

- **Clean Energy**
- **Transport Infrastructure**
- **Irrigation, Water Resource Management and Sanitation**
- **Urban Development**
- **Environmental Efficiency**
- **Social Infrastructure**
- **Multi-theme**

Strategy implementation and review

Throughout 2019, NDB continued to implement its General Strategy: 2017–2021. In order to deliver on its mandate and achieve its strategic objectives, the Bank sharpened its focus on financing infrastructure and sustainable development projects that contribute directly to member countries' development priorities, especially those in line with their commitments under the United Nations 2030 Agenda for Sustainable Development (2030 Agenda) and the 2015 Paris Agreement. Development impact considerations, such as projects' alignment with member countries' SDG commitments and contributions to climate change adaptation and mitigation, have become increasingly mainstreamed into the preparation and implementation of NDB's operations.

2019 marked the halfway point of implementing NDB's General Strategy: 2017–2021. A review of the strategy implementation revealed that considerable progress has been made by the Bank over the first half of the strategy period along four main dimensions – operational, financial, institutional, and development impact – that collectively represent the full strategic imperative for the Bank. During a relatively short period of time, NDB has managed to establish itself as a solid, dynamic, trustworthy and fit-for-purpose MDB, in line with the vision of the founding members as elaborated in the General Strategy.

Going forward, NDB is committed to working towards the full implementation of its General Strategy: 2017–2021, further consolidating and leveraging its expertise in mobilising resources for infrastructure and sustainable development projects. Within the broad spectrum of investment opportunities, the Bank will continue placing a special focus on projects within its key areas of operation, which are strategically selected to address some critical development challenges faced by its member countries.

In response to the urgent needs of its member countries caused by the COVID-19 pandemic, the Bank is acting with increasing agility, speed and flexibility, as guided by its General Strategy: 2017–2021. The Bank will leverage its demand-driven approach to provide tailor-made solutions to deal with the immediate challenges posed by the pandemic, as well as to address its long-term social and economic consequences.

34 Based on NDB's experience since the approval of the General Strategy: 2017–2021, economic cooperation and integration is viewed as a feature of some projects rather than a separate key area. The Bank has expanded its operations into two additional key areas, namely environmental efficiency and social infrastructure, and approved operations with multiple sub-projects in various key areas, i.e. multi-theme operations.

Operations

"As the first global MDB established initially by EMDCs, NDB highly respects member countries' national sovereignty as well as their domestic policies and procedures, and intends to adopt equal partnerships with clients and a demand-driven business model. NDB has been providing mostly long-term debt financing both in hard and local currencies, primarily focusing on the priority infrastructure sectors as identified by member countries, particularly where the private sector would be less interested or unable to participate, so as to support member countries in enhancing the provision of key infrastructure services critically needed for the public. NDB also puts innovation and support of technological transformation as its emerging priority and is willing to work with different stakeholders, both public and private, in exploring new practices, approaches and financial products."

Mr. Xian Zhu
Vice President and Chief Operating Officer of NDB

Overview of the Portfolio

Building a robust and diversified portfolio of operations is imperative for NDB to fulfil its mandate and achieve its strategic objectives. Throughout 2019, 22 new operations with a total amount of USD 7.2 billion were approved, bringing the Bank's cumulative approvals to 53 operations totalling USD 15.3 billion. At the end of 2019, NDB's portfolio net of cancellations stood at 51 operations totalling USD 14.9 billion.[35] The Bank also stepped up efforts to accelerate disbursements, which brought cumulative disbursements to USD 1.5 billion as at December 31, 2019, a 146% year-on-year increase.

Cumulative operations results

	As at Dec 31, 2019		As at Dec 31,2018	
	Number	USD m	Number	USD m
Total approvals	**53[36]**	**15,252**	31[36]	8,078
Cancellations	**2[37]**	**319**	1[38]	250
Approvals net of cancellations	**51**	**14,933**	30	7,828
Disbursements	**26[39]**	**1,539[40]**	9[39]	625

Cumulative approvals by type of operation

	As at Dec 31, 2019		As at Dec 31,2018	
	Number	USD m	Number	USD m
Sovereign loans	**38**	**11,935**	23	6,428
Non-sovereign loans	**11**	**2,898**	7	1,400
Equity investments	**1**	**100**	–	–
Total	**51**	**14,933**	30	7,828

The Bank's portfolio remains concentrated on sovereign and sovereign-guaranteed operations, which represented approximately 80% of cumulative approvals at the end of 2019. The share of non-sovereign operations increased gradually from 18% to 20% over 2019 in response to the growing demand from member countries for financing without sovereign backing. In 2019, NDB made its first equity investment, a concrete step forward to move beyond traditional loans and to offer diversified financing instruments to meet clients' needs, as envisioned by NDB's founding members.

USD 15 bn

Cumulative project approvals as at December 31, 2019

USD 100 m

NDB's first equity investment

35 Unless otherwise stated, discussions on NDB's operations are based on the Bank's portfolio net of cancellations.
36 The two loans to EDB and IIB for on-lending to the Nord-Hydro project in Russia are counted as two separate approvals in this Annual Report, instead of one as in the previous reports.
37 Relates to the USD 250 million sovereign-guaranteed loan to Canara Bank (India) for its Renewable Energy Financing Scheme approved in 2016 and cancelled in 2018, and the USD 68.8 million loan to the Government of the Russian Federation for the Ufa Eastern Exit Project, approved in 2017 and cancelled in 2019.

Geographic Distribution

On November 14, 2019, NDB President Mr. Kamath and NDB Vice Presidents visited the Bank's Americas Regional Office: sub-office in Brasília

The geographic distribution of NDB's operations is becoming increasingly balanced as the Bank develops its capacity to identify and prepare projects in all member countries. Country concentration of the Bank's portfolio, as measured using a Herfindahl-Hirschman index, reduced to 0.22 at the end of 2019 from 0.26 in 2018 and 0.28 in 2017, indicating continuous improvements in geographic diversification.

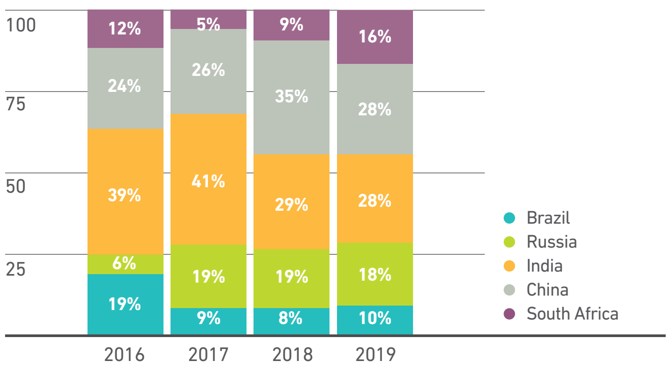
The share of financing to clients in South Africa and Brazil, representing 9% and 8% of the Bank's cumulative approvals at the end of 2018, increased to 16% and 10% by the end of 2019, respectively. Regional offices played a critical role in scaling up the identification and preparation of bankable projects in their respective countries of operations, which helped to bring the distribution of the Bank's operations across member countries closer to a broad equilibrium.

Cumulative approvals by country

	As at Dec 31, 2019		As at Dec 31,2018	
	Number	USD m	Number	USD m
Brazil	**7**	**1,521**	4	621
Russia	**9**	**2,716**	7	1,469
India	**13**	**4,083**	7	2,300
China	**14**	**4,218**	9	2,758
South Africa	**8**	**2,395**	3	680
Total	**51**	**14,933**	30	7,828

Geographic distribution of cumulative approvals by year

As at December 31



38 Relates to the USD 250 million sovereign-guaranteed loan to Canara Bank (India) for its Renewable Energy Financing Scheme approved in 2016 and cancelled in 2018.
39 Number of operations to which disbursements were made.
40 Includes repayments.

Financing in Local Currencies

A key component of NDB's value proposition is the commitment to provide local currency financing, which now represents a significant share of the portfolio. Overall, 27% of the Bank's cumulative approvals are in its borrowing member countries' currencies, higher than that of other major MDBs.

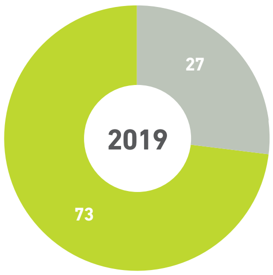
Since the beginning of its operations, NDB has been offering loans denominated in RMB, and in 2019, the Bank started lending in ZAR. By the end of the year, around two-thirds of the Bank's cumulative approvals for projects located in China were denominated in RMB, and about half of the lending to South African borrowers were made in ZAR.

In 2019, NDB also started providing tailor-made facilities in various currencies to satisfy the diverse needs of its clients, such as the CHF 500 million loan to Joint Stock Company Russian Railways, the EUR-denominated loan of equivalent to USD 500 million to the Government of the Russian Federation, and the USD 300 million loan to Vale S.A. in Brazil, of which up to USD 50 million equivalent may be delivered in RMB while the remaining balance would be provided in USD.

Cumulative approvals by currency

	As at Dec 31, 2019		As at Dec 31, 2018	
	Number	USD m	Number	USD m
RMB	**9**	**2,768**[41]	5	1,558
ZAR	**4**	**1,235**	–	–
CHF	**1**	**516**	–	–
EUR	**1**	**500**	–	–
USD	**36**	**9,914**[39]	25	6,270
Total	**51**	**14,933**	30	7,828

Cumulative approvals by currency
%



Type of currency	%
Borrowing member countries' currencies	27
Hard currencies	73

41 The USD 300 million loan to Vale S.A. includes a USD 50 million portion which could be delivered in RMB. This USD 50 million portion is included in the amount of approvals in RMB and excluded from the amount of approvals in USD.

NDB's Operations through the Lens of Key Areas

Within the infrastructure and sustainable development space, NDB has successfully diversified its portfolio across a set of key areas of operation. As detailed in the section on Impact of NDB's Operations[42], these strategically selected key areas are closely aligned with the spirit of the 2030 Agenda. Projects prepared and implemented by the Bank in these key areas can help advance member countries' progress in achieving a variety of SDGs, either directly through intended project outputs and outcomes or indirectly through their cascading effects.

Cumulative approvals by area of operation

	As at Dec 31, 2019	USD m	As at Dec 31, 2018	USD m
Clean energy	**14**	**3,519**	9	1,937
Transport infrastructure	**13**	**4,421**	8	2,175
Irrigation, water resource management and sanitation	**7**	**2,080**	4	1,426
Urban development	**10**	**2,653**	5	1,130
Environmental efficiency	**4**	**1,200**	3	700
Social infrastructure	**2**	**960**	1	460
Multi-theme[43]	**1**	**100**	–	–
Total	**51**	**14,933**	30	7,828

Reviewing NDB's operations through the lens of these strategic areas offers additional insights into the Bank's contribution to infrastructure and sustainable development as well as to the achievement of the SDGs in its member countries, as intended by its General Strategy: 2017–2021.

ZapSibNefteKhim polyolefin complex

42 See pages 46 to 50.
43 Relates to the USD 100 million equity investment in a private equity fund that will invest in multiple sub-projects in various key areas of NDB's operation.

Clean Energy

NDB is fully committed to supporting its member countries' development efforts to embark on a more sustainable energy path. In order to facilitate the structural transformation of the energy sector, the Bank places special emphasis on the adoption of innovative technologies in its operations. This includes the use of emerging renewable energy technologies, such as offshore wind and distributed solar energy generation, but also the upgrade of existing energy facilities using state-of-the-art technologies to achieve greater efficiency and reduce pollution.

In 2019, NDB approved five loans totalling USD 1.6 billion to support clean energy projects in its member countries, both directly and through financial intermediaries.

- In South Africa, where the energy sector is at the heart of the country's development strategy, the Bank approved two additional loans to Eskom Holdings SOC Ltd (Eskom), a state-owned electricity utility that generates approximately 95% of the electricity used in the country.[44]

  A loan of USD 480 million was approved to support the retrofit of flue gas desulphurisation equipment on an existing thermal power plant of Eskom. The main objective of the project is to reduce the power plant's sulphur dioxide (SO2) emissions from the current level of 3,500 mg/m3 to below 500 mg/m3 by 2026 to be in compliance with national environmental regulations.

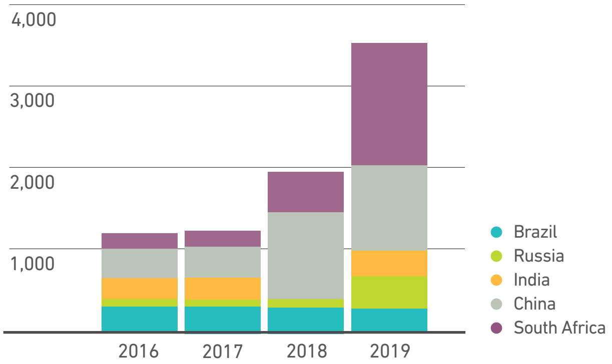
  Another loan of ZAR 6 billion was approved for setting up Eskom's battery energy storage system, comprising 360 MW/1,440 MWh of distributed battery storage sites across four provinces in South Africa. This innovative battery energy storage system, the first of its kind in the African continent, can help address South Africa's electricity supply-demand mismatch by allowing energy to be stored during off-peak periods and released during peak periods.

SDG alignment of clean energy projects (As at December 31, 2019)

Primary SDG alignment

Direct contribution to additional SDGs

Cumulative approvals for clean energy projects (As at December 31)
USD m



USD 1.6 bn

Approved by NDB in 2019 for clean energy projects.

44 These loans are a continuation of NDB's engagement with Eskom, which includes a USD 180 million loan approved by the Bank in 2016.


Battery energy storage system

Over the year, NDB continued to support the development of the renewable energy sector in its member countries by leveraging financial institutions of various types:

- In **Russia**, the Bank is committed, through a USD 300 million loan to the Eurasian Development Bank (EDB), to support the installation of renewable energy generation capacity, using wind, solar, and small hydropower energy technologies to improve the country's energy mix and avoid CO_2 emissions.

- In **India**, NDB approved USD 300 million to REC Limited to finance the construction of renewable energy power plants and associated evacuation transmission lines. This will help reduce the country's reliance on thermal power, which is a main contributor to carbon emissions and air pollution.

- In **South Africa**, the Bank approved a ZAR 1.15 billion loan to the Industrial Development Corporation (IDC) for on-lending to renewable energy power projects, including independent power producers, which will support the country's efforts to diversify the energy mix away from coal, shifting towards a less carbon-intensive and more resilient development trajectory.

By the end of 2019, NDB had cumulatively approved USD 3.5 billion through 14 operations to support clean energy projects across all member countries. These operations, accounting for 24% of the Bank's cumulative approvals, are aligned primarily with SDG 7 on Affordable and Clean Energy, and may also contribute directly to SDGs 9, 11, 12 and 13.

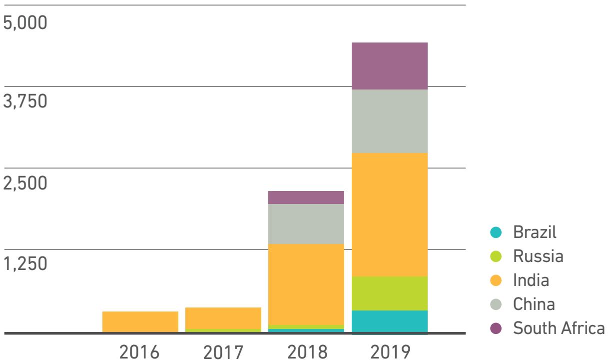
Transport Infrastructure

SDG alignment of transport infrastructure projects (As at December 31, 2019)

Primary SDG alignment

Direct contribution to additional SDGs

Cumulative approvals for transport infrastructure projects (As at December 31)
USD m



USD 2.3 bn

Approved by NDB in 2019 for transport infrastructure projects

High-quality and efficient transport infrastructure can enhance the mobility of people and goods and unlock accessibility to markets and services, bringing about a wide range of socio-economic opportunities and benefits with positive multiplier effects. Within the broad spectrum of transport infrastructure, NDB prioritises projects that promote accessible transport modes with lower emissions of greenhouse gases (GHGs) and greater efficiency, as well as projects that enable inclusive development by providing improved connectivity for populations in underserved areas.

In 2019 alone, NDB approved six loans totalling USD 2.3 billion for the development of transport infrastructure of different types across all member countries.

- In **Brazil**, the Bank extended a USD 300 million corporate loan to Vale S.A., the largest mining company and a major logistics operator in the country, to develop its transportation system in the country's northern region. The project, which encompasses railway and port infrastructure improvements, will help Vale S.A. enhance its cargo capacity and strengthen its operational efficiency. To meet the borrower's demand, the NDB loan was tailor-made to be a multiple currency facility. Up to USD 50 million of the loan can be delivered in RMB equivalent, while the remaining balance would be provided in USD.

- In **Russia**, NDB provided CHF 500 million to the Joint Stock Company Russian Railways for its locomotive fleet renewal programme. Under this large-scale programme with a total cost of RUB 501 billion, 3,576 new locomotives equipped with the latest technologies will be acquired to replace the outdated and inefficient fleet. The programme will contribute to the modernisation of Russia's railway system, increasing its traction power and productivity while reducing its energy consumption and the associated GHG emissions.

- In **India**, the Bank approved two loans of USD 323 million each to support two separate but complementary road projects in the state of Andhra Pradesh. These were the Andhra Pradesh Roads and Bridges Reconstruction Project and the Andhra Pradesh Mandal Connectivity and Rural Connectivity Improvement Project. Both projects are aimed at improving mobility and accessibility to socio-economic centres, increasing transport efficiency, and enhancing road safety within the state. Together, these two projects will entail the upgrade of about 3,000 km of roads and the reconstruction of over 470 bridges, providing support to India's efforts to build resilient transport infrastructure.

Pará Sustainable Municipalities Project

- In **China**, the Bank provided RMB 2.5 billion to finance the Lanzhou New Area Regional Hub Multimodal Logistics and Transport Infrastructure Demonstration Project. Located in the landlocked province of Gansu in northwest China, the project will provide multimodal logistics options, such as rail, road and air freight, by building and upgrading transport infrastructure and relevant auxiliary facilities. A multimodal logistics information platform will also be installed to enhance the overall logistics efficiency, enable real-time information sharing and provide online logistics solutions. Successful implementation of the project is expected to have a strong spill-over effect on industrial development and economic growth in northwest China.

- In **South Africa**, the Bank approved ZAR 7 billion, through a sovereign-guaranteed loan, to South African National Roads Agency SOC Ltd (SANRAL) for a programme aimed at strengthening and improving the national toll roads, as a way to reduce transportation costs in the country. To that end, 240 lane-km of new toll roads will be constructed, while another 240 lane-km of existing key toll road sections will be rehabilitated. Auxiliary infrastructure, such as bridges, intersections and safety measures, will also be built or upgraded.

As at December 31, 2019, NDB had cumulative approvals of 13 projects in transport infrastructure, with a total amount of USD 4.4 billion, which represented the largest share (30%) of the Bank's portfolio. These projects are aligned primarily with SDG 9 on Industry, Innovation and Infrastructure, and also contribute directly to SDGs 3 and 11.

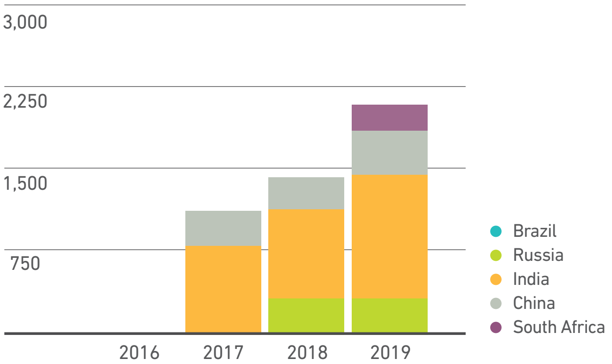
Irrigation, Water Resource Management and Sanitation

SDG alignment of irrigation, water resource management and sanitation projects (As at December 31, 2019)

Primary SDG alignment

Direct contribution to additional SDGs

Cumulative approvals for irrigation, water resource management and sanitation projects (As at December 31)
USD m



USD 658 m

Approved by NDB in 2019 for water resource management, water supply and sanitation projects

Access to clean drinking water and adequate sanitation is paramount to socio-economic development, especially in underserved rural and peri-urban areas. A modernised agricultural sector that requires advanced and efficient irrigation systems, and sound and environmentally friendly management of water resources, is also critical to help achieve sustained growth of countries. Within the wide range of water-related sectors, NDB prioritises financing to support irrigation infrastructure, clean drinking water supply and sanitation, and technology to enable efficient water resource management.

In 2019, NDB approved three loans totalling USD 658 million to projects aiming to improve water resource management, water supply and sanitation across three member countries.

- In **South Africa**, the Bank provided a ZAR 3.2 billion sovereign guaranteed loan to the Trans-Caledon Tunnel Authority (TCTA), a government agency, for the implementation of the second phase of the Lesotho Highlands Water Project. Financing from NDB will be used for the construction of water transfer infrastructure in Lesotho designed to augment water supply in the Vaal River Basin, home to South Africa's most economically important province, Gauteng. The project aims to support economic growth and foster sustainable livelihoods of people by increasing water yield of the Vaal River System by almost 15% in the long run, thus reducing the need for water usage restrictions and promoting South Africa's resilience to drought.

- In **China**, NDB extended a RMB 825 million sovereign loan for financing of the second phase of the Shengzhou Urban and Rural Integrated Water Supply and Sanitation Project. The project aims at fostering socio-economic development by supporting the effectiveness of Shengzhou's water management system, improving water quality and enhancing the economic efficiency of local water resources. The project's main components include the construction of four water supply plants, three sewage treatment plants, associated pipelines and a smart water management centre.

- In **India**, the Bank approved a USD 312 million sovereign loan to the Government of the Republic of India for the Manipur Water Supply Project. NDB financing will be on-lent to the State Government of Manipur to construct and upgrade drinking water supply systems. The project is expected to improve access to safe drinking water for about 3.1 million people in Manipur by 2025, thereby contributing to a reduction in water-borne diseases and associated financial burdens on local families.

As at December 31, 2019, NDB had cumulatively approved seven loans with a total amount of USD 2.1 billion to irrigation, water resource management and sanitation projects, accounting for 14% of the Bank's cumulative net approvals. These operations cover a diverse range of sub-areas, and thus are aligned with different SDGs. Projects focused on water resource management and sanitation are primarily aligned with SDG 6 on Clean Water and Sanitation. One irrigation project is primarily aligned with SDG 2 on Zero Hunger. Projects in this key area of operation may also contribute directly to SDGs 3, 11 and 13.

Urban Development

NDB considers sustainable urbanisation initiatives to be increasingly important as a rapidly growing share of the population of EMDCs live in urban areas. More efficient and sustainable urban environments have multiple positive spin-off effects on living quality, energy use, economic productivity and inclusive access to opportunities. NDB seeks to support sustainable urbanisation in its member countries, with a focus on projects that improve urban water and electricity supply, sanitation, transport, climate resilience, integration of information technology and associated social infrastructure and services.

In 2019, NDB approved five loans for urban development projects in India and China amounting to more than USD 1.5 billion. Four of the loans approved address urban transport and connectivity, aiming to improve productivity, accessibility to social services and climate-resilience of cities.

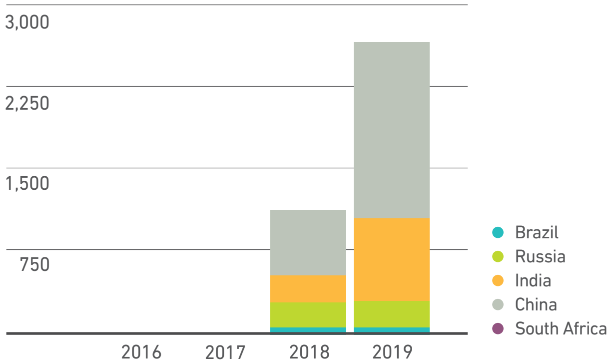
- In **China**, the Bank provided a sovereign loan of RMB 2.1 billion for the Yinchuan Green Transport Project. Located in the capital city of the Ningxia Hui Autonomous Region, the project will improve the efficiency and reach of public transport services by developing a green bus system. On an annual basis, the project is expected to help reduce CO_2 emissions by around 45,000 tons, save around 30 million m3 of natural gas and lower the operating costs for Yinchuan's bus system by around RMB 60 million.
- Also in **China**, the Bank approved a RMB 2.76 billion sovereign loan for the Huangshi Modern Tram project. The project, which will be implemented by the Municipality of Huangshi, entails the construction of a modern tram network with a total length of about 28 km. The tram line is expected to help better integrate key areas of economic activity across the city and spur socio-economic development by improving connectivity in a sustainable way.
- In **India**, NDB provided a sovereign loan amounting to USD 225 million for the Indore Metro Project. The project will entail the construction of a new metro line of about 31 kilometres in the city of Indore, the commercial capital of the state of Madhya Pradesh. Upon completion, the metro line is expected to handle around 126 million passenger trips per year, contributing to the reduction of vehicle congestion and pollution while delivering better connectivity for local residents.

SDG alignment of urban development projects (As at December 31, 2019)

Primary SDG alignment

Direct contribution to additional SDGs

Cumulative approvals for urban development projects projects (As at December 31)
USD m



USD 1.5 bn

Approved by NDB in 2019 for urban development projects


Guangxi Chongzuo Water Resource Rehabilitation and Ecological Conservation Project in China

- Also in **India**, a sovereign loan of USD 300 million was provided by the Bank for the Assam Bridge Project. The project includes the construction of a major bridge with the total length of approximately 8.3 km in the city of Guwahati, the regional hub of trade, commerce and services in north-eastern India. Providing essential connectivity across the north and south banks of the Brahmaputra River, the project is expected to improve access to economic, health and educational centres and contribute to improved socio-economic conditions for residents of Guwahati and its surrounding region.

Loan approvals for urban development projects by the Bank in 2019 also included one project related to integration of water and waste-water management into sustainable urbanisation plans.

- In **China**, the Bank approved a USD 300 million sovereign loan for the Guangxi Chongzuo Water Project. Over recent decades, the rapid urbanisation of Chongzuo – a city located in the Guangxi Zhuang Autonomous Region in southwest China – has resulted in the degradation of water quality and ecological resources. The project seeks to improve the urban water environment and enhance flood protection in Chongzuo mainly by rehabilitating and connecting water bodies and developing a smart water management system to promote the sustainable use of local resources.

As at December 31, 2019, NDB had cumulatively approved ten loans for urban development projects with a total amount of USD 2.7 billion, accounting for 18% of the Bank's cumulative approvals. These projects are primarily aligned with SDG 11 on Sustainable Cities and Communities, and may also contribute to achieving SDGs 6, 9 and 13.

Environmental Efficiency

NDB is committed to facilitating member countries' transition to a development path with a lower environmental footprint. The Bank attaches importance to "achieving more and better with less", that is, to provide more and better quality socio-economic benefits with less environmental impact.
NDB also finances projects that help reverse some negative environmental impacts brought by economic development in the past.

- In 2019, NDB approved a loan of USD 500 million to **Brazil** to support Fundo Clima, the National Climate Fund. Through Fundo Clima, the loan proceeds will be on-lent to climate change mitigation and adaptation projects in various sectors that facilitate the fulfilment of the country's Intended Nationally Determined Contribution. Fundo Clima will also target projects that promote innovative technical and financial solutions aimed at addressing climate-related challenges.

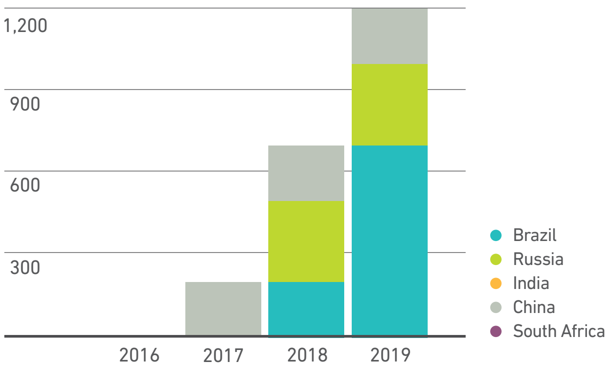
By the end of 2019, the Bank had cumulatively approved USD 1.2 billion through four operations to support environmental efficiency projects in Brazil, Russia and China. These projects are aligned primarily to SDG 9 on Industry, Innovation and Infrastructure and SDG 13 on Climate Action. At the same time, they may also contribute directly to SDGs 6 and 12.

SDG alignment of environmental efficiency projects (As at December 31, 2019)

Primary SDG alignment

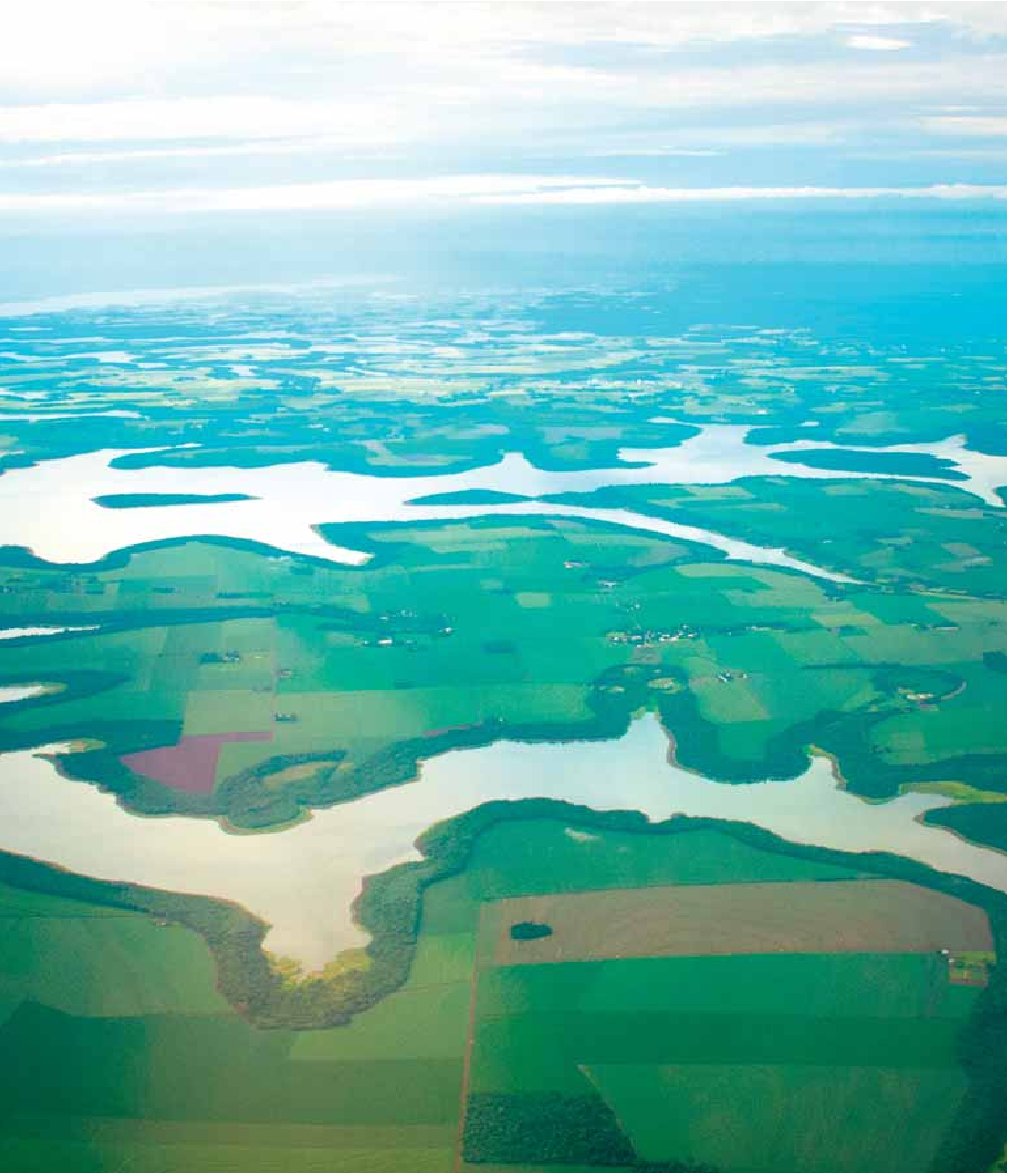
Direct contribution to additional SDGs

Cumulative approvals for environmental efficiency projects (As at December 31)
USD m



USD 500 m

Approved by NDB in 2019 for environmental efficiency projects.



Social Infrastructure

NDB considers investment in social infrastructure as one of the effective means to deliver social services, develop human capital and improve institutional systems. The Bank strives to capture and accelerate technological innovation to provide quality and relevant social infrastructure in response to the changes precipitated by the Fourth Industrial Revolution.

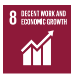
- In 2019, NDB approved a EUR-denominated loan of equivalent to USD 500 million to support the establishment of advanced engineering schools at about 30 higher education institutions in **Russia**. The project involves creation or redesign of education programmes with necessary equipment and infrastructure. It aims to prepare highly skilled graduates in engineering in urgent demand by an increasingly digitalised economy.

By the end of 2019, the Bank had cumulatively approved USD 960 million to support two social infrastructure projects, both of which are located in Russia. These two projects are primarily aligned with SDG 16 on Peace, Justice and Strong Institutions, and SDG 4 on Quality Education, respectively. The latter will also contribute directly to SDG 8.

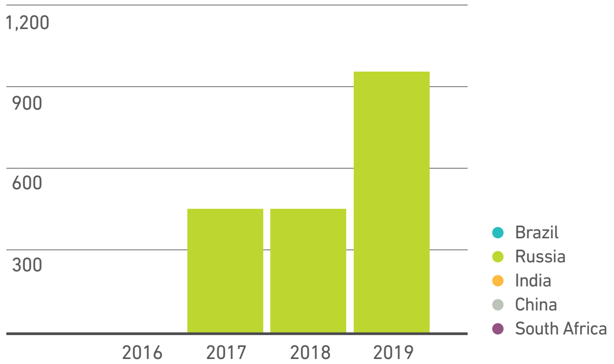
SDG alignment of social infrastructure projects (As at December 31, 2019)

Primary SDG alignment

Direct contribution to additional SDGs



Cumulative approvals for social infrastructure projects (As at December 31)
USD m



USD 500 m

EUR-denominated loan equivalent to USD 500 million was approved by NDB in 2019 for social infrastructure.

Multi-theme

In addition to financing projects designed to address development challenges within a specific key area of operation, NDB also supports projects with stand-alone sub-projects that could be mapped to different key areas. These types of projects hold the potential to offer a wider range of development benefits. The Bank's inaugural equity investment is an example of such operations.

- In 2019, NDB approved an equity investment of up to USD 100 million in Patria Infrastructure Fund IV, a private equity fund pursuing investments in infrastructure and infrastructure-related assets in **Brazil** and other selected Latin American countries.[45]

  By leveraging this infrastructure-focused fund, whose investment strategy is well aligned with NDB's mandate, the Bank will provide much-needed equity financing to a number of investments across Brazil's key infrastructure sectors, such as power and energy, transport and logistics, information and communications technology, as well as water and sanitation. More importantly, NDB's equity participation in the fund could help crowd-in additional capital, especially from the private sector, for infrastructure investments, contributing to closing the financing gap.

This equity investment was the only multi-theme operation of the Bank as at December 31, 2019. It is primarily aligned with SDG 9 on Industry, Innovation and Infrastructure, and may contribute to many other SDGs, depending on the final selection of sub-projects that will benefit from the fund's investment.

SDG alignment of multi-territory investment projects (As at December 31, 2019)

Primary SDG alignment

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

USD 100 m

Equity investment in Patria Infrastructure Fund IV, a private equity fund pursuing investments in infrastructure investments

Project Preparation Fund

The Project Preparation Fund (PPF) is NDB's multi-donor fund designed to support preparation of bankable projects in the Bank's member countries through the provision of technical assistance. Providing support for project preparation and helping member countries to develop quality projects that can attract financing from NDB and other financiers is an essential component of NDB's mandate, reflected in its AoA.

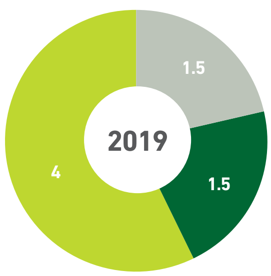
The PPF was established by the BoG in January 2017, and contribution to the fund is open to all member countries of the Bank. To date, agreements have been signed with China and Russia in 2017 for commitments of USD 4 million and USD 1.5 million, respectively, and with India in 2018 for a commitment of USD 1.5 million.

As at December 31, 2019, total contributions of USD 7 million to the PPF had been received in full. In 2019, the Bank approved its first two projects under the PPF:

- In **Russia**, NDB provided USD 400,000 to support preparation of the Krasnodar Cable Car Project up to the stage when the project can be considered by external financiers. The technical assistance facility will fund consulting services for key activities, including an in-depth evaluation of the project's feasibility. The project envisages the construction of a cable car network in the most densely populated areas in the northern part of Krasnodar to reduce the excessive load on the existing transport network and to ensure transport coverage in areas that currently lack accessibility.

- In **India**, the Bank approved the provision of a USD 300,000 technical assistance facility for the Mizoram Tuirini Small Hydro Project. The objective of the facility is to fund key project preparation components, including the environmental and social assessment, as well as technical, financial and economic feasibility studies. Following adequate preparation, the project will be ready to attract financing to build a small hydropower plant with an installed capacity of 24 MW on the Tuirini river, located about 60 km from the state capital of Mizoram, Aizawl.

Contributions to PPF
USD m



	USD m
Russia	1.5
India	1.5
China	4

USD 7 m

Contribution to PPF received as at December 31, 2019 (2018: USD 6.5 m)

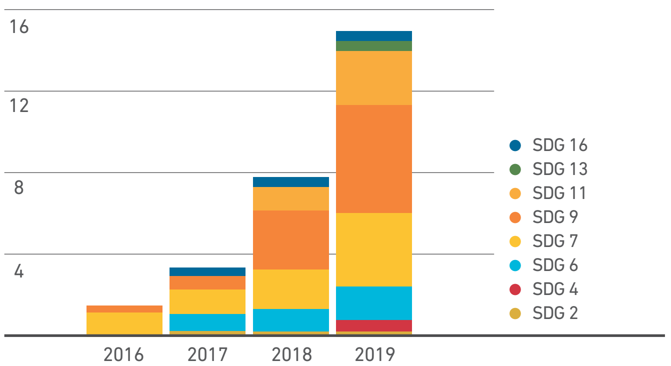
Impact of NDB's Operations

NDB seeks to support BRICS and other EMDCs to achieve their development goals.

Summary of NDB's operations by primary SDG alignment
(As at December 31, 2019)

Primary SDG alignment	Number of projects	Cumulative approvals USD m	% of total approvals	Direct contribution to additional SDGs
2 ZERO HUNGER	1	500	3	6 CLEAN WATER AND SANITATION
4 QUALITY EDUCATION	1	500	3	8 DECENT WORK AND ECONOMIC GROWTH
6 CLEAN WATER AND SANITATION	6	1,735	12	3 GOOD HEALTH AND WELL-BEING; 11 SUSTAINABLE CITIES AND COMMUNITIES; 13 CLIMATE ACTION
7 AFFORDABLE AND CLEAN ENERGY	14	3,519	24	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE; 11 SUSTAINABLE CITIES AND COMMUNITIES; 12 RESPONSIBLE CONSUMPTION AND PRODUCTION; 13 CLIMATE ACTION
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	17	5,221	35	3 GOOD HEALTH AND WELL-BEING; 6 CLEAN WATER AND SANITATION; 11 SUSTAINABLE CITIES AND COMMUNITIES; 12 RESPONSIBLE CONSUMPTION AND PRODUCTION; 13 CLIMATE ACTION
11 SUSTAINABLE CITIES AND COMMUNITIES	10	2,653	18	6 CLEAN WATER AND SANITATION; 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE; 13 CLIMATE ACTION
13 CLIMATE ACTION	1	500	3	
16 PEACE, JUSTICE AND STRONG INSTITUTIONS	1	460	3	

Evolution of NDB's operations by primary SDG alignment (As at December 31)
USD bn



Alignment with the SDGs

The Bank's General Strategy: 2017–2021 was approved less than two years after the adoption of the 17 SDGs and the Paris Agreement by all United Nations' member states, and it is closely aligned with the spirits of these international agreements.

As set out in the General Strategy: 2017-2021, NDB seeks to support BRICS and other EMDCs to achieve their development goals, by focusing its investments on a set of key areas of operation. The strategic selection of these sectors as NDB's priority areas has facilitated the alignment of the Bank's operations with its member countries' efforts to achieve specific SDGs.

In 2019, NDB developed and tested an evidence-based method to document and report on the alignment of the Bank's operations with the SDGs. Each project is mapped, through quantifiable development outputs and outcomes, to a primary SDG to which the project is most directly and closely related. The project may also be mapped to one or more additional SDGs through quantitative or qualitative analysis of the project's intervention logic.[46]

By applying the evidence-based SDG alignment method, all projects in the Bank's portfolio as at the end of 2019 were mapped to the relevant SDGs. The mapping exercise revealed that eight out of the 17 SDGs have been targeted by the Bank's projects as primary SDGs. The mapping results also suggested that most of the projects in the Bank's portfolio are expected to have direct alignment with one or two additional SDGs, on top of their respective primary SDGs. Taking into account both primary and additional SDGs, the projects in the Bank's current portfolio are expected to contribute directly to achieving 11 out of the 17 SDGs.

NDB's portfolio has evolved over time in terms of SDG alignment. The number of SDGs that the Bank's projects are primarily aligned with, increased gradually from two in 2016 to eight in 2019. This reflects the Bank's growing capacity to meet the diverse development needs of its member countries. Furthermore, all NDB's projects are prepared and implemented in collaboration with other development partners, in the spirit of SDG 17 on Partnerships for the Goals.

46 The method for SDG alignment of NDB's operations is based on the understanding of and accounting for their positive development results, and therefore does not include considerations of potential adverse impacts of projects. Management of environmental and social risks and adverse impacts of projects is undertaken with guidance by NDB's Environment and Social Framework (ESF).

Highlights of expected development results of selected projects financed by NDB[48]
(As at December 31, 2019)

Development indicator	Development result	SDG alignment
Renewable and clean energy generation capacity to be installed	**2,800 MW**	7 AFFORDABLE AND CLEAN ENERGY
CO_2 emissions to be avoided	**5.2 million tons/year**	13 CLIMATE ACTION
Roads to be built or upgraded	**11,500 km**	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
Bridges to be built or upgraded	**820**	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
Water storage capacity to be created	**2,300 million m^3**	6 CLEAN WATER AND SANITATION
Drinking water supply capacity to be increased	**159,000 m^3/day**	6 CLEAN WATER AND SANITATION
People to benefit from improved access to water and sanitation services	**6.8 million**	6 CLEAN WATER AND SANITATION
Metro and tram networks to be built	**140 km**	11 SUSTAINABLE CITIES AND COMMUNITIES
Cities to benefit from NDB's sustainable development projects	**35**	11 SUSTAINABLE CITIES AND COMMUNITIES

48 Expected development results are presented for selected projects that NDB financed in collaboration with partners, irrespective of the share of the Bank's financial contribution. The numbers are rounded and are based on the information available at the time of approval.

Expected development results

To deliver on its mandate, the Bank seeks to maximise the development results of the projects it supports. Setting development objectives, selecting performance indicators, monitoring and reporting on development results, and evaluating development impacts are core elements of the Bank's operations.

At the project preparation stage, the Bank assesses potential development contributions of each project, and documents specific development outputs, outcomes and impacts the project expects to deliver. Each project considered for financing by NDB undergoes screening for positive development contributions, which goes beyond direct financial calculations to a longer-term and broader assessment of economic, environmental and social impacts. Indicators to monitor and evaluate development results, including baseline and target levels, are set in results framework at the project level.

Since its inception, NDB has been building and enhancing its ability to design and implement projects with clearly defined development objectives and quantifiable development results. The Bank is building comprehensive systems to be able to collect information, monitor results and measure impacts of its operations throughout their life cycle, ensuring that real development benefits are delivered on the ground.

Environment and social framework

NDB incorporates the principles of sustainability in its policies and operations to ensure that projects financed by the Bank are economically viable, environmentally sound and socially responsible. The Bank's ESF contains an overarching policy and environmental and social standards that require its projects to be prepared and implemented in a way that avoids, minimises, mitigates and compensates for adverse impacts on the environment and people, while enhancing positive impacts.

In the management of projects' environmental and social risks and impacts, NDB takes country systems as the starting point, and engages clients to put in place additional measures to meet the Bank's requirements, if weaknesses are identified in those systems. To better evaluate the adequacy of country systems in its member countries and identify areas that require further intervention by NDB to ensure compliance with its ESF, the Bank has been conducting systematic and detailed gap assessments.

Throughout the entire project life cycle, the Bank adopts a risk-based and outcome-focused approach to manage projects' environmental and social performance. This allows the Bank to keep track of projects' environmental and social risks, both individually and collectively, and to take timely remedial actions to ensure projects' compliance with the ESF's requirements.

Treasury Business

"NDB has taken a significant leap forward in its capital market programmes. In 2019, the Bank successfully registered a global EMTN programme which will enable us to raise short-, medium- and long-term funding in all BRICS currencies as well as hard currencies. Armed with our AA+ international credit rating from Standard & Poor's and Fitch, as well as a AAA credit rating from Japan Credit Rating Agency, the Bank is able to raise capital at competitive rates and meet the increased funding requirements from our member countries."

Mr. Leslie Maasdorp
Vice President and Chief Financial Officer of NDB

Funding Strategy and Activities

Funding strategy

NDB's funding strategy aims to ensure that sufficient resources are available to meet the Bank's liquidity needs, driven primarily by the Bank's expanding project portfolio as well as its operating and other expenses. NDB finances its operations from its own capital, which includes paid-in capital provided by shareholders and accumulated retained earnings, as well as from funds borrowed in the capital markets through the issuance of securities. NDB's strong international and domestic credit ratings enable the Bank to access funding at favourable market terms and to pass the benefits on to the borrowers, which is a key purpose of its intermediary role in providing development finance.

NDB aims to utilise a diversified array of funding instruments in local currencies of member countries and other currencies, based on the parameters of the Bank's project portfolio and the demand from its clients. To achieve this, the Bank intends to raise funds regularly in global capital markets as well as in domestic capital markets of member countries, with due regard to appropriate hedging mechanisms, in line with its policies and risk management framework. In accordance with a strong focus on sustainability, the Bank is also committed to actively explore opportunities in green bonds and other green finance instruments, taking into account market conditions and trends.

Focus of NDB's funding strategy

- Diversification of funding portfolio in terms of currencies, tenors and types of interest rates;
- Access to international capital markets;
- Domestic borrowing programmes in member countries;
- Benchmark size transactions;
- Regular issuances; and
- Green bonds and other green finance instruments.

Timeline of NDB's funding activities in 2019

January	February	April	April	November	December
A RMB 10 billion bond programme in China established	A RMB 3 billion bond issued under the RMB bond programme	A USD 2 billion ECP programme established	A ZAR 10 billion domestic bond programme in South Africa established	A RUB 100 billion domestic bond programme in Russia established	A USD 50 billion EMTN programme established

Funding activities

As its operations grow, NDB has established a number of funding platforms to raise funds in various currencies. **In January 2019**, NDB became the first issuer to establish an onshore RMB bond programme under the country's new legislation on bond issuances by overseas institutions.

Soon after, the Bank successfully placed a RMB 3 billion bond, its second issuance in that currency. The bond had two tranches, including a RMB 2 billion tranche with a tenor of three years and a coupon rate of 3%, and a RMB 1 billion tranche with a tenor of five years and a coupon rate of 3.32%. The issuance attracted considerable interest from overseas investors and the final order book was more than three times oversubscribed.[50]

Bonds issued by NDB[52]

	February 2019		July 2016
Amount	RMB 2 billion	RMB 1 billion	RMB 3 billion
Tenor	3 years	5 years	5 years
Coupon rate	3.0%	3.32%	3.07%

52 On April 3, 2020, NDB issued a RMB 5 billion Coronavirus Combating Bond with a 3-year tenor and an annual fixed coupon rate of 2.43%.

- **In April 2019**, NDB established its debut ECP programme for liquidity management purposes with the maximum size of USD 2 billion.[50] It is rated F1+ by Fitch and A-1+ by Standard & Poor's.
- **Also in April 2019**, NDB registered a ZAR 10 billion bond programme in South Africa. The programme with unlimited validity is listed on Johannesburg Stock Exchange.
- **In November 2019**, the Bank registered RUB 100 billion bond programme in Russia. The programme with unlimited validity is listed on Moscow Exchange.
- **In December 2019**, NDB registered its inaugural USD 50 billion EMTN programme in international capital markets. The programme has been rated AA+ by Fitch, and it has been assigned AA+ long-term and A-1+ short-term issue ratings by Standard & Poor's. The notes issued under the programme may be denominated in hard currencies, as well as local currencies of the Bank's member countries and hard currencies.
- **By the end of 2019**, the Bank had accumulatively issued two bonds in China Interbank Bond Market and raised RMB 6 billion while a series of short-term notes had been issued under the ECP programme.

The issuance ceremony of the NDB 2019 Renminbi Bond

Use of green bond proceeds

NDB is the first international financial institution to issue a green bond in China's Interbank Bond Market. The Bank issued a RMB 3 billion bond in 2016 with a five-year tenor and a coupon rate of 3.07%. The bond was rated AAA by leading domestic rating agencies in China.

The bond is compliant with International Capital Market Association Green Bond Principles and Green Bond regulation in China, which was confirmed by the independent third-party certification agency prior to the issuance. The same certification agency also confirms on an annual basis the green bond's compliance with the standards with regard to the use of proceeds, process for project evaluation and selection, management of proceeds, and reporting. NDB publicly discloses information on the use of green bond proceeds each quarter, and releases an audit report on an annual basis.

By the end of 2019, the bond proceeds had been fully utilised to finance five green projects in two key areas of NDB's operation. This includes four clean energy project and one environmental efficiency project. The four renewable energy projects, which collectively entail the installation of 400 MW generation capacity, are expected to generate the following environmental benefits on an annual basis:

- to generate electricity from clean and renewable sources in the amount of over 950 GWh;
- to reduce carbon emissions by close to one million tonnes; and
- to reduce SO_2 emissions by over 7,500 tonnes.

NDB is committed to being green on both the lending and funding sides, and will continue to develop its funding activities to promote sustainable development in member countries.

Treasury system development

NDB continues to enhance its treasury infrastructure.
In 2019, the Bank:

- implemented a cloud-based system for portfolio management,
- proceeded with the registration of custodians to facilitate local currency investments, and
- further upgraded its settlement and clearing mechanism.

In May 2019, NDB received the 2019 Asian Banker Financial Technology Innovation Award for the best treasury management initiative together with Tata Consultancy Services. The award is designed to recognise annual achievement as well as identify emerging best practices in the implementation of technology in banking operations. NDB was recognised for implementing an integrated software-as-a-service treasury system that supports the full life cycle of trades and processes, allowing for a significant growth in portfolio.

Treasury Portfolio Management

NDB's treasury portfolio strategy focuses on maintaining high liquidity, minimising risk and achieving reasonably good returns. As founding members' contributions to capital continue to flow in, the Bank has increased the scope of its treasury activities much beyond the management of USD and RMB-denominated deposits that characterised the early days of operations.

NDB began investment activities in its member countries' currencies to support the development of their domestic capital markets and to diversify the Bank's treasury investment portfolio beyond hard currencies. To date, the Bank has built its treasury infrastructure with adequate capacity to actively participate in the RMB market, including:

- corporate bonds,
- interest rate derivatives, and
- repo transactions along with deposits.

In 2019, the Bank initiated investments in INR Government Securities through the Reserve Bank of India's Scheme for Rupee Investments by Foreign Central Banks. Since the establishment of its domestic bond programme in South Africa, NDB has also started investment activities in South African money market instruments.

Treasury and Portfolio Management team engaged with investors during a seminar at the NDB Fourth Annual Meeting

Credit Ratings

Operating with favourable ratings from international credit rating agencies and establishing itself as a reliable borrower in international and domestic capital markets are imperatives of NDB's strategy. During its first five years of operation, the Bank has proved its capacity to successfully apply the financial model of MDBs, leveraging public resources for development finance by obtaining international credit ratings which are higher than the sovereign credit ratings of its member countries.

NDB has long-term AA+ international credit ratings from Standard & Poor's and Fitch. The Bank also obtained a AAA international rating from Japan Credit Rating Agency in August 2019.[53] In China, NDB received AAA domestic credit ratings from China Chengxin Credit Rating and China Lianhe Credit Rating.[39]

Strong credit ratings were granted to NDB based on the quality of its loan portfolio, sound management practices and governance standards, as well as its prudent risk management framework. The rating agencies also highlighted strong shareholders' support as a key driver for NDB's high credit ratings.

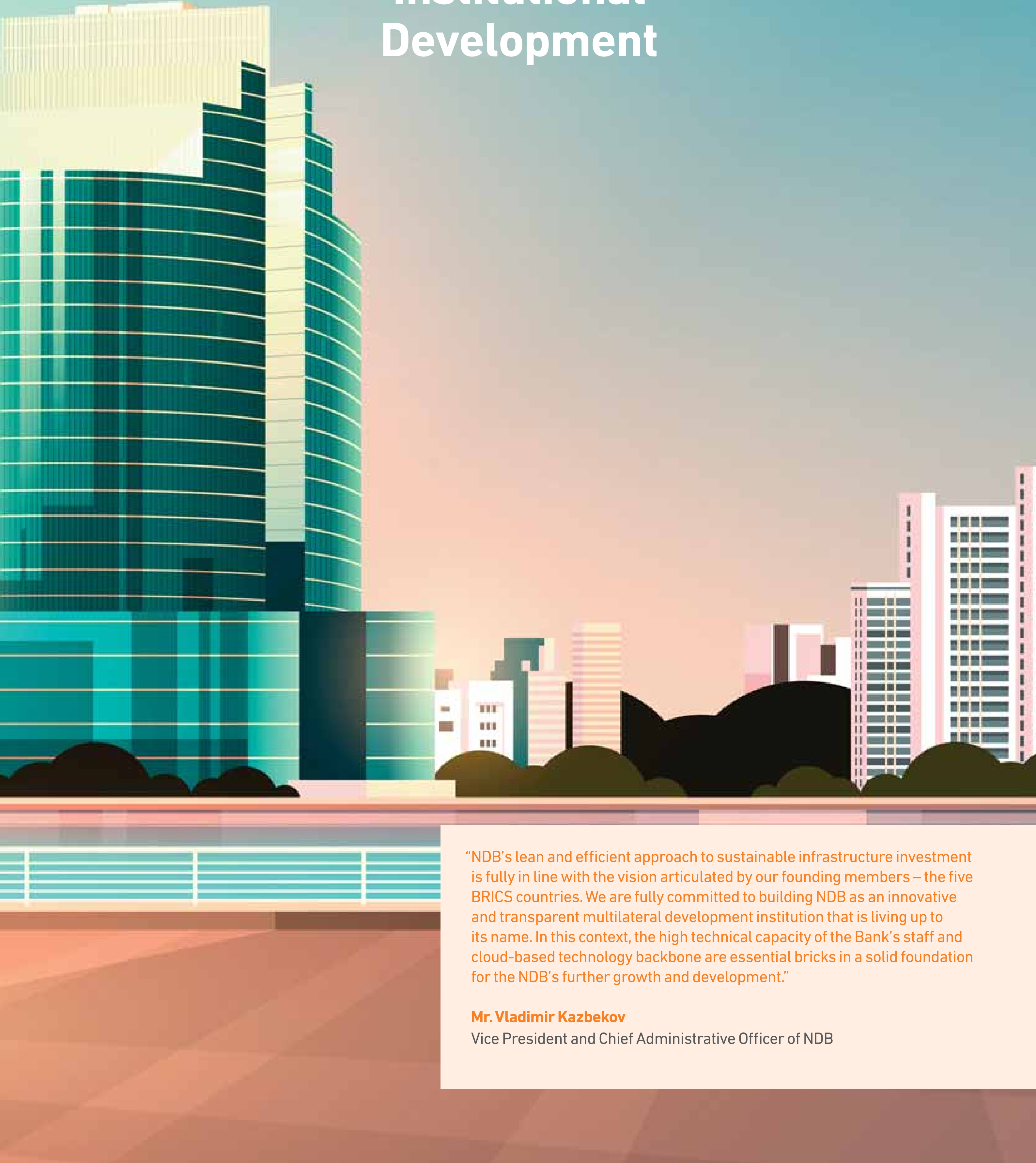
High credit ratings allow NDB to raise funds in the capital markets at low rates, which helps the Bank offer the best long-term value for its borrowers. Strong ratings also give the Bank access to a wider investor base, and serve as an important indicator for NDB's public profile and market positioning, which is of particular importance for a relatively new debt issuer. High international credit ratings also facilitate the Bank's broader access to financial services and products, including hedging and swap transactions.

Credit ratings[53]

	Credit Rating	Outlook
International		
Standard & Poor's	**AA+**	Stable
Fitch	**AA+**	Stable
Japan Credit Rating Agency	**AAA**	Stable
Domestic		
China Chengxin International Credit Rating	**AAA**	Stable
China Lianhe Credit Rating	**AAA**	Stable

53 On January 23, 2020, NDB also obtained a AAA international credit rating from Analytical Credit Rating Agency, a rating agency based in Russia.

Institutional Development

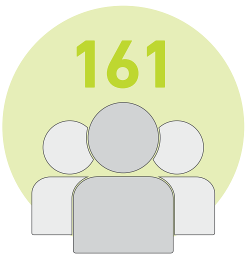


"NDB's lean and efficient approach to sustainable infrastructure investment is fully in line with the vision articulated by our founding members – the five BRICS countries. We are fully committed to building NDB as an innovative and transparent multilateral development institution that is living up to its name. In this context, the high technical capacity of the Bank's staff and cloud-based technology backbone are essential bricks in a solid foundation for the NDB's further growth and development."

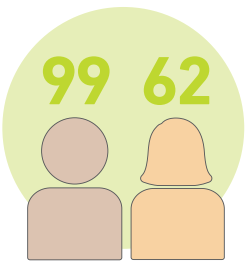
Mr. Vladimir Kazbekov
Vice President and Chief Administrative Officer of NDB

Enhancing Human Resources

Throughout 2019, NDB continued to build an international team of professionals with extensive experience, knowledge and skills.



Employees by category (as at December 31, 2019
President and Vice Presidents: 5
Full-time staff: 149
Short-term consultants and outsourced staff: 12



Gender Diversity
Male 2019: 99 (61%)
2018: 88 (61%)

Female 2019: 62 (39%)
2018: 56 (39%)

NDB's human resources strategy seeks to ensure that the Bank attracts, nurtures and retains motivated talents who are committed to the Bank's mandate and strategic goals, and add value to the Bank's day-to-day work.

Attracting talent

NDB's total headcount increased by 12% in 2019. This positive dynamic is mainly attributable to the continuous efforts towards staff recruitment and retention. Recruitment of key personnel for NDB's Americas Regional Centre (ARO) was completed within the year, while the staff recruitment process for the Bank's Eurasian Regional Centre (ERC) was initiated in late 2019.

NDB commits to offering a competitive staff compensation and benefits package. In 2019, the Bank conducted a comprehensive review of its compensation and benefits structure, which resulted in an upward adjustment of the salary ranges and the introduction of a home travel benefit. The Bank also enhanced a number of other benefits, including those related to staff members' settlement and resettlement as well as their children's education assistance.

NDB continues to place an emphasis on gender balance, recruiting and retaining female employees at all levels. As at the end of 2019, women accounted for 39% of the Bank's headcount. In addition, the Bank also endeavours to provide valuable career opportunities for young professionals, and conducted a round of entry-level staff recruitment in 2019. As at the end of 2019, NDB's young workforce, aged 32 or under, accounted for almost 30% of the Bank's staff.

Developing talents

NDB strives to support professional development of staff through on-the-job skill transfer and role-specific technical training. NDB's employees participated in various training sessions designed to improve their professional competences in relevant fields, including financial and economic due diligence, deal structuring, environmental and social impact assessment, among others. Regular in-house sessions are held to update staff on changes in the Bank's guidelines and practices, as well as the operating environment in member countries.

Placing special focus on staff training and capacity building allows NDB to benefit from the application of up-to-date international practices and technologies in its activities, contributing to enhancing the Bank's operational efficiency and business procedures.

Leveraging Information Technology

Leveraging current and emerging information technology is a cornerstone of NDB's strategy. The Bank develops its IT infrastructure to better serve its clients, to manage internal risks and increase operational efficiency and productivity. Investment in IT, including selection and implementation of appropriate solutions, is driven by NDB's operational plans and verified on an ongoing basis.

Following the "cloud-first" approach, NDB continued to invest in its IT systems in 2019, striving to integrate digital innovation into its activities and services.[54] The Bank implemented a loan management system, which automates back-end processes, minimising operational risks. An electronic data interchange solution with built-in digital cloud signature was also initiated for online submission of loan drawdown requests and straight-through processing in the Bank's back-end systems. Meanwhile, the Bank's e-procurement system was upgraded with additional functions to improve internal process management and external vendor accession. In order to enable centralised management of key documents, NDB purchased a system to digitalise physical documents and facilitate archive tracking.

Focus of NDB's IT strategy

1. **Enabling end-user capabilities through access to data and services anywhere and anytime**

   NDB uses cutting-edge technologies to provide the right information to the right people, at the right time, for greater efficiency and productivity of its employees.

2. **Developing or acquiring agile and mission-based information sharing platforms and applications**

   Following a "cloud-first" approach, NDB has chosen to acquire services rather than assets, which means that IT applications used at the Bank are delivered as a cloud solution. This approach allows the Bank to improve service delivery, while at the same time controlling costs. NDB ensures strong governance, including standards and policies, for the cloud services it employs.

3. **Enhancing information security and increasing resilience through cyber security capabilities**

   NDB pays particular attention to information security as new digital imperatives result in new risks that need to be actively managed.

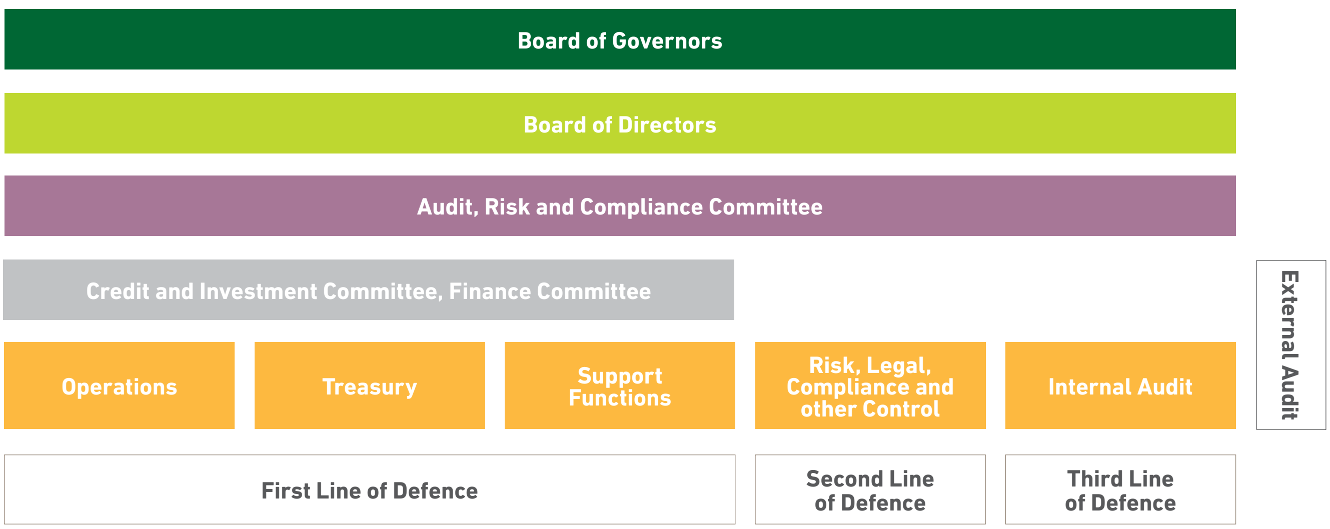
Managing Risks

NDB adopts a conservative and integrated approach to managing risks, both financial and non-financial, as established in the Enterprise Risk Management and Risk Appetite Framework approved by the BoD. This framework provides guidance to strategic planning and day-to-day operational decision-making, to ensure effective, consistent, transparent and accountable management of all types of risks.

According to the framework, the Bank's risk governance structure is based on the "Three Lines of Defence" model. The roles and responsibilities, risk ownership and segregation of duties among NDB's functions have been clearly articulated as part of the overall risk governance architecture.

Within the three lines of defence, frontline business decision makers working on individual projects, transactions, investments and fundraising activities along with supporting functions, such as IT and administration, are the first line of defence. They are responsible for managing risks within their respective areas on an ongoing basis. Functions within the second line of defence have an oversight on the effectiveness of the first line of defence. To further strengthen NDB's second line of defence, relevant teams of the Bank spearheaded a number of initiatives in 2019.

NDB's risk governance structure



- The Bank's independent risk management team manages risks related to NDB's activities, including credit, market, liquidity and operational risks, following leading practices that are aligned with international standards. In 2019, sophisticated bank-wide sensitivity and macroeconomic stress tests were introduced to complement the Bank's regular value-at-risk and capital calculations. Comprehensive risk and capital adequacy metrics were also implemented bank-wide to support decision-making processes, based on solid economic rationale.

- NDB's legal team provides counsel to the BoD, Management and staff on legal aspects of the Bank's policies, operations, finance and administration. In 2019, the legal team contributed to the development of key policies and guidelines of the Bank, and continued to promote, in consultation with other divisions, improvements in the key legal documents and working procedures within NDB, in line with the Bank's commitment to operational precision and efficiency. To promote a strong legal culture and share relevant knowledge, legal seminars were offered to all Bank staff throughout the year.

- The compliance team at NDB has the responsibility of administering policies approved by the BoD in the areas of compliance management, anti-corruption, anti-fraud and anti-money laundering (AML) as well as the code of business conduct and ethics. To implement these policies, specific procedures for integrity due diligence, debarment and handling of whistleblowing complaints have been formulated. Bank-wide trainings and awareness programmes on these topics have been offered on a regular basis.

In 2019, the Bank strengthened its collaboration with the Financial Intelligence Units of the BRICS countries, thereby engaging with a wider AML policy community globally. The engagement was further formalised with the Bank receiving the observer status at the Eurasian Group, a regional body of the Financial Action Task Force.

As the third line of defence, the Bank's internal audit team works to independently evaluate and improve the effectiveness of NDB's risk management, internal control and governance processes through a systematic and disciplined approach. Following a risk-based audit plan, the internal audit team audited 20 key functions across the Bank in 2019. To further increase operational efficiency, a web-based and cloud-optimised audit management software has been rolled out across the Bank to streamline audit planning, documentation and reporting.

New Headquarters

NDB has witnessed considerable progress in the construction of its new headquarters since works began at the building site along the Huangpu River in Shanghai, China in September 2017.

By the end of 2019, 60% of the mechanical and engineering, and 80% of façade glass installation were completed. The finished building is expected for full delivery by August 2021, which will mark a milestone in the Bank's institutional development.

Reflecting the Bank's focus on sustainability, the new headquarters are designed to be green and efficient, incorporating environmentally friendly technologies such as:

- solar photovoltaic technology,
- rainwater harvesting system,
- green drip irrigation system,
- automatic sun tracking system, and
- automatic wind extraction.

The building is designed to achieve China's three-star green and health building ratings and Leadership in Energy and Environmental Design-New Construction (LEED-NC) platinum rating.

As the host city for NDB's headquarters, the Shanghai Municipal People's Government has been providing the Bank with committed support to ensure the successful completion of the new headquarters building project.

New headquarters under construction, in Shanghai,

Installing the façade glass in NDB's new headquarters

Strengthening Regional Presence

Establishing regional offices across NDB's member countries is a strategic priority for expanding the Bank's operations and strengthening their alignment with the development priorities of member countries.

As outlined in NDB's General Strategy: 2017–2021, regional offices are supposed to play a core role of identification and preparation of bankable projects across the Bank's member countries. They will also be a physical presence of the Bank in the regions where it operates, facilitating cooperation with strategic partners and enhancing the Bank's overall impact.

In 2019, NDB made notable progress in maximising the capacity of the regional office in South Africa and laying essential groundwork for the official opening of offices in Brazil, Russia and India.

NDB's regional presence

Africa Regional Centre

The first regional office of NDB – the Africa Regional Centre (ARC) – was opened in Johannesburg, South Africa, on August 17, 2017. The ARC has been instrumental in enabling the Bank to scale up lending in South Africa. Since the opening of the ARC, the share of financing commitments by the Bank to clients in South Africa increased significantly from 5% of the Bank's cumulative approvals at the end of 2017 to 16% at the end of 2019. Insights from the Bank's experience of establishing and setting up the operations of the ARC will provide key lessons for the Bank's offices in its other member countries.

Americas Regional Office

The agreement on the hosting of the second regional office of the NDB – the ARO in São Paulo, Brazil with a sub-office in Brasília – was signed on July 26, 2018 during the Tenth BRICS Summit in Johannesburg. In July 2019, NDB began to build the ARO team, hiring its Director General, as well as senior and support staff based in São Paulo and Brasília. In a short period of time, NDB's team in Brazil has fully performing the functions of NDB's representative unit in Brazil and contributed significantly to building a strong pipeline and healthy portfolio of projects in the country.

NDB Eurasian Regional Centre

NDB and the Government of Russia signed the Agreement on the Hosting of the NDB ERC in Moscow, Russia on the sidelines of the 11th BRICS Summit in Brasília on November 14, 2019. The signing was presided over by NDB's President Kamath and Deputy Minister of Finance of Russia, Chairman of the NDB's BoD, Mr. Sergei Storchak. Opening of the ERC will help strengthen the Bank's presence in the region and create new opportunities for NDB's project pipeline development, knowledge sharing and capacity building. Preparations for the ERC are at an advanced stage and the office in Moscow is expected to open in 2020.

The opening of the ERC is expected to be followed by the launch of NDB's office in India later in 2020. The offices in Russia and India will learn from the preparation for and establishment of the ARC and the ARO to support a swift opening and undertaking of operations.

President Kamath and Mr. Sergei Storchak, Deputy Minister of Finance of Russia, signed the agreement on the hosting of the NDB Eurasian Regional Centre in November 2019.

Building and Implementing Partnerships

As envisioned by the AoA, NDB seeks to complement the efforts of multilateral and regional financial institutions to support global growth and development. The Bank places a strong emphasis on building and implementing effective partnerships, as promoted by SDG 17 on Partnerships for the Goals, to accelerate member countries' endeavours dedicated to sustainable development.

NDB's operations are facilitated by cooperation agreements with a wide range of development partners. To date, NDB has signed a total of 31 memoranda of understandings for general cooperation, out of which three were signed in 2019.

Food and Agriculture Organization of the United Nations (FAO)

Strengthening the collaboration among countries, United Nations agencies and development finance institutions is of paramount importance to mobilise the resources needed to achieve the SDGs. To this end, NDB and FAO established a memorandum of understanding on June 17, 2019, aiming to drive progress on achieving the institutions' shared objectives of growth and development, and in particular to strengthen the alignment of their respective activities related to water, land and agriculture in support of the 2030 Agenda.

African Development Bank (AfDB)

NDB and AfDB signed a memorandum of understanding on October 18, 2019, to formalise the partnership and promote general cooperation between the two institutions. Among other modalities of collaboration, the agreement facilitates cooperation between NDB and AfDB to jointly identify, prepare and co-finance projects in countries of mutual interest.

NDB President Kamath and AfDB President Mr. Akinwumi Adesina, at the MoU signing

Brazilian Development Bank (BNDES)

On November 13, 2019, NDB and BNDES signed a renewed memorandum of understanding to continue and enhance the existing cooperation between the two institutions. As a continuation of the three-year memorandum signed in 2015, the new agreement aims to expand the cooperation framework between the two institutions and promote joint initiatives across a wide range of areas of mutual interest.

NDB also entered into agreements and joint declarations with development partners. On September 22, 2019, NDB, together with eight other MDBs, issued the "High Level MDB Statement" at the United Nations Secretary-General's Climate Action Summit held at the headquarters of the United Nations. The statement outlines the commitment by MDBs to increase financing for climate-related projects in low and middle income economies to help them attain goals under the Paris Agreement.

NDB President Kamath, addressed the joint workshop with FAO in February. To his left is Mr. Eduardo Mansur, Director of the Land and Water Division of FAO

Dr. Sarquis J.B. Sarquis, Vice President and CRO met with Mr. Dongyu Qu, Director-General of the Food and Agriculture Organization of the United Nations, in December 2019. (image credit: FAO)

Workshops on Development Impact and the SDGs by NDB and FAO

In 2019, NDB and FAO co-hosted two Workshops on Development Impact and the SDGs, focused on technical knowledge sharing to strengthen alignment of efforts among development partners with SDGs across the sectors of irrigation, water resource management and sanitation.

The first workshop, held in February 2019 at NDB's headquarters in Shanghai, China, revealed unique perspectives from different spheres of the global development community on how to address the challenges related to SDG 6 on Clean Water and Sanitation by promoting interventions that go beyond business-as-usual. The second workshop, held at FAO's headquarters in Rome, Italy in December 2019, built on the lessons learned in Shanghai and addressed how practically to design and implement such interventions through effective partnerships in the spirit of SDG 17 on Partnerships for the Goals, and drive progress toward achieving the targets of SDG 6 on Clean Water and Sanitation and SDG 2 on Zero Hunger.

Together, the workshops convened over 100 participants including government representatives from each of the BRICS nations and other developing countries, specialised United Nations agencies and programmes, international organisations, development finance institutions and civil society.

The Year Ahead

Building on the solid foundation that the Bank has laid to date, NDB's Management and staff will continue striving to provide innovative solutions to support the development agendas of its member countries. Despite the challenging operating environment caused by the COVID-19 pandemic, the Bank is starting off 2020 as a fully-fledged development institution, having set ambitious goals in its main lines of work.

The Year Ahead

NDB new headquarters in Shanghai, China

Sustainable expansion of operations

The Bank is getting closer to a steady state of operations, and is targeting incremental approvals of USD 10 billion in 2020, another significant contribution to its member countries' development efforts in line with their commitments to the 2030 Agenda and the Paris Agreement. As NDB develops in its ability to prepare and implement complex projects, the Bank will continue to expand its portfolio by offering increasingly sophisticated and innovative financial instruments that can satisfy its clients' diverse financing needs.

Aligned with its mandate, the Bank is fully committed to leverage its demand-driven approach and provide tailor-made solutions to its member countries to address the immediate challenges posed by the COVID-19 pandemic as well as the associated adverse impacts on their long-term social and economic development. A RMB 7 billion emergency assistance programme loan to China in combating COVID-19 has already been fully disbursed in April 2020, and a USD 1 billion emergency loan was approved for India. Similar facilities are being processed to provide similar facilities are being processed to provide timely support to other member countries.

Despite the growing size of its operations, NDB will remain a lean organisation, committed to operating at speed, without compromising quality. Whenever possible, the Bank will continue to use its member countries' own systems to manage projects' environment and social impacts and risks as well as to ensure the best use of public resources. NDB will also enhance the provision of financing in its member countries' local currencies and is ready to expand these operations according to demand.

NDB will continue to expand its network of regional offices. This will reinforce its engagement with clients, improve its understanding of each market's specific needs and conditions and strengthen its project sourcing and identification capabilities. Having an on-the-ground presence has proven to be effective in scaling up NDB's operations in South Africa and Brazil, and the Bank seeks to expand this network further in 2020.

Increasing diversification of treasury products and investment

With the receipt of new instalments of founding members' contribution to paid-in capital and the issuance of additional debt securities, NDB will further deploy its treasury investment strategy and make the treasury function a profit centre without adding any significant risk. In 2020, NDB plans to invest in money market funds to strengthen its liquidity management capabilities while generating returns.

NDB will also broaden its funding activities, both geographically and in terms of currency denomination. As part of its risk diversification strategy in the face of interest rate volatility, the Bank intends to continue issuing securities denominated in its member countries' currencies in 2020. This is also in line with the Bank's strategy to promote the development of domestic capital markets in its member countries. A RMB 5 billion Coronavirus Combating Bond has been issued in the China Interbank Bond Market. The Bank will actively participate in both onshore and offshore markets in pursuit of cost-effective sources of funding and with the aim to meet the requirements and demand from investors.

NDB will strive to attain and maintain high credit ratings and focus on keeping operational costs low in order to provide highly competitive lending rates. The Bank will also explore the use of different instruments, such as guaranteed products as a way to mobilise the participation of other financial institutions in infrastructure financing.

Generating and disseminating knowledge

NDB's General Strategy envisages that research and knowledge dissemination will be important aspects of the Bank's activities. In this regard, the Bank has been carrying out applied research on development issues connected to its mandate and business model. The Bank will also continue to advance its knowledge on the economies of its member countries. As NDB's capacities evolve, the Bank will generate innovative research and disseminate knowledge that can benefit its operations, its member countries, partner institutions and the society as a whole.

Investing in human resources

The Bank will continue to scale up human resources in line with its growth plan and business volume. In 2020, steady and controlled headcount growth is expected in areas of strategic priority and in NDB's regional offices. Talent acquisition will target at highly specialised skills and technical competencies along with young professionals in selected business areas, to complement the skills mix of the current workforce and better serve emerging business needs.

NDB's organisation structure will remain adaptive and lean to enable the Bank to fulfil its objectives in the most efficient manner. The Bank will continue to review its key human resources policies and work towards the formulation of a human resources strategy to remain a competitive and attractive employer for global talent. The Bank will also lay out a more focused approach to learning and development of its staff members and embark on new technology solutions for all activities related to human resources.

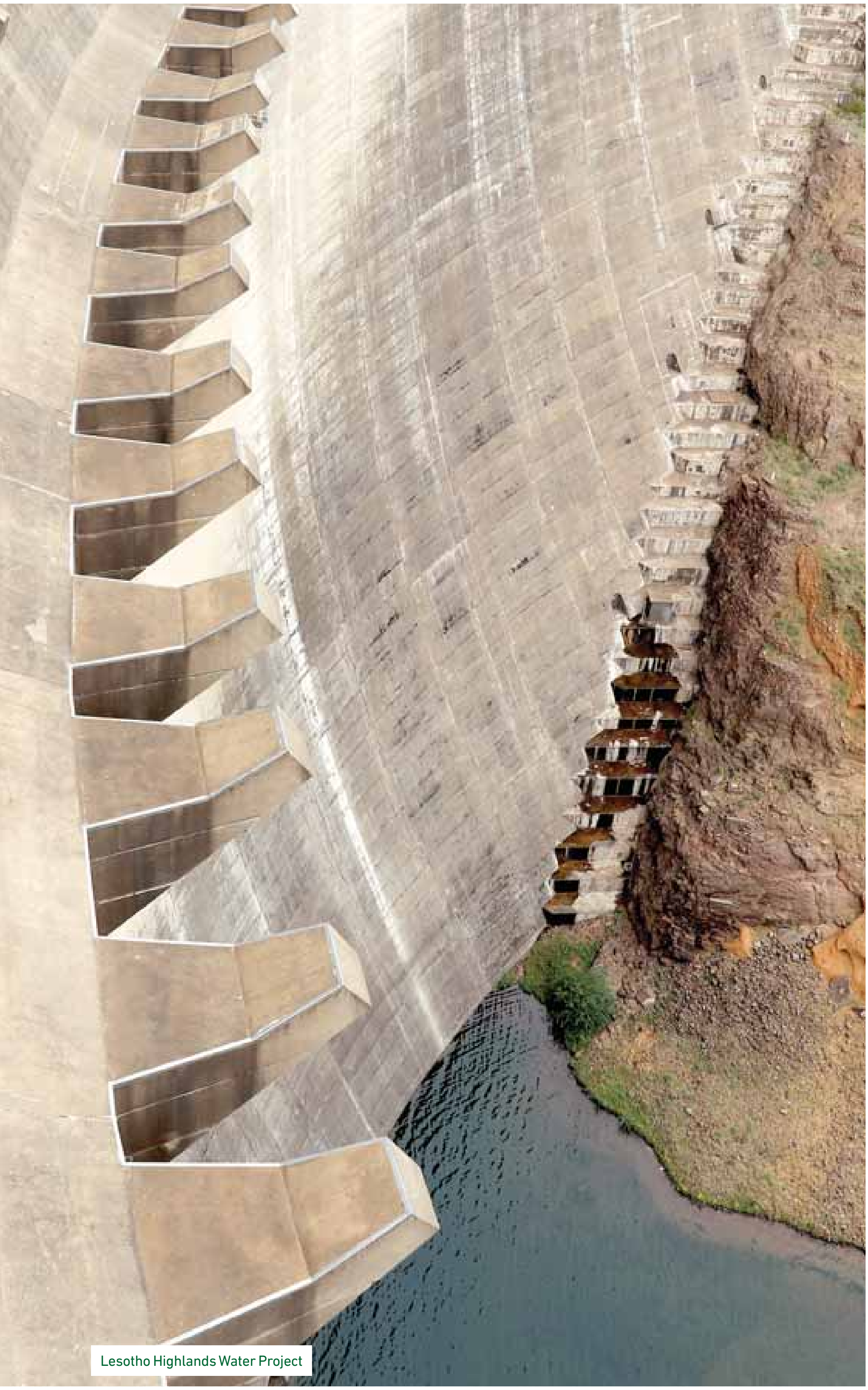
Expansion of membership

In 2020, NDB will take major steps towards expanding its membership, which will allow the Bank to extend its development efforts, knowledge and technological capacity to the benefit of a larger number of countries and their citizens.

Discussions and negotiations with the first batch of potential new members are expected to take place gradually, in consultation with the BoD, until a request for admission is submitted for the BoG's approval.

Continuous progress in strategy implementation and monitoring

Following the strategy implementation review conducted in 2019, NDB will continue to implement its General Strategy: 2017–2021. At the same time, it will monitor progress made along its main lines of work and gather information on its ever-evolving operating environment, including on the challenges caused by the COVID-19 pandemic and the opportunities brought by the digital economy and new technologies embedded in infrastructure and sustainable development. Lessons learnt will enable the Bank to fully assess the implementation of its current strategy by 2021, as well as formulate and approve a fit-for-purpose strategy for the second five-year period from 2022 to 2026, in line with the Bank's mandate and member countries' aspirations. NDB also seeks to strengthen its evidence-based development results management framework in order to fully account for and report on the development impact of its activities, including on their alignment with the SDGs and the Paris Agreement.



Lesotho Highlands Water Project

Management Discussion and Analysis

This report should be read together with NDB's financial statements. The Bank undertakes no obligation to update any forward-looking statements.

Executive summary

Financial highlights

Net operating profit

The 2019 financial year was the fourth full year of NDB's operations. For the year ended December 31, 2019, the Bank reported an operating profit of USD 150.5 million (2018: USD 72.0 million). To support the Bank's growth and development, salaries related to an expanding employee headcount was a predominant driver in the increase of operating costs. Additionally, operating costs increased in line with NDB's focus on implementing technological enhancements across the Bank, such as its loan management system, to support lean and agile operations.

Net interest income

For the year ended December 31, 2019, the Bank reported net interest income of USD 197.7 million (2018: USD 109.8 million). This increase was driven by USD 194.8 million of interest income from banks and debt interests measured at amortised cost (2018: USD 113.2 million) and USD 35.7 million interest income from loans and advances (2018: USD 10.2 million). NDB's larger treasury investment portfolio can be attributed to the additional capital contributions received, as well as proceeds from the Panda Bond received during the year. Interest expense on bonds issued amounted to USD 24.7 million (2018: USD 13.6 million); the main contributor to interest expenses for the year. This figure was approximately doubled compared to the previous year in light of the Panda Bond issuance.

56 Relates to the USD 250 million loan to Canara Bank (India) for its Renewable Energy Financing Scheme, approved in 2016 and cancelled in 2018 and the USD 68.8 million loan to the Russian Federation for its Ufa Eastern Exit Project, approved in 2017 and cancelled in 2019.

57 Relates to the USD 250 million loan to Canara Bank (India) for its Renewable Energy Financing Scheme, approved in 2016 and cancelled in 2018.

58 The two loans to EDB and IIB for on-lending to the Nord-Hydro project in Russia are counted as two separate approvals in this Annual Report, instead of one as in the previous reports.

59 As per RMB/USD exchange rate prevailing on February 22, 2019 – the date of issuance.

Portfolio Performance

Approved project portfolio

In 2019, the Bank continued to deliver on its mandate to contribute to the growth and development of its member countries by investing in infrastructure and sustainable development projects. NDB increased its cumulative project approvals to USD 15.3 billion (CY2018: USD 8.1 billion) by the end of 2019, almost doubling its approved project portfolio compared to the prior year. The project approvals for the year included the Bank's inaugural equity fund investments of up to USD 100.0 million in Brazil – a key milestone in the development of the Bank's financial products.

The Bank maintained a balanced distribution of its approved project portfolio across its key areas of operation with a marginal increase in urban development and transport infrastructure projects. The total number of projects approved until December 31, 2019 were 53 (of which two are cancelled)[56]; a 71% increase from the 31 projects (of which one was cancelled)[57] approved till 2018[58]. Net of cancellations, NDB's approved project portfolio amounted to USD 14.9 billion (51 projects) by the end of the 2019 financial year (2018: USD 7.8 billion; 30 projects). Unless otherwise stated, further discussions on the Bank's operations are based on the approved project portfolio net of cancellations.

Treasury investment portfolio

At December 31, 2019, the total investment portfolio amounted to USD 6.3 billion (2018: USD 4.8 billion), an increase of USD 1.5 billion during the 2019 financial year. The investment portfolio is aligned with the liquidity requirements of the Bank such that sufficient cash resources are available to fund the operational needs of the Bank and meet anticipated disbursement requirements. Throughout its four and a half years of operations, NDB has been investing only with highly rated counterparty banks and has established sound working relationships with them during this time.

Borrowings

The Bank is predominantly financed through its members' paid-in capital and from borrowings raised in the capital markets. During the 2019 financial year, NDB successfully issued a RMB 3.0 billion (USD 448.01 million[59]) bond under the Panda Bond programme. As at December 31, 2019, RMB 434.4 million (USD 62.4 million) of the Panda Bond proceeds had been utilised to fund various projects denominated in RMB and the remainder invested in high-quality investments. In addition to this bond, NDB's borrowing portfolio as at December 31, 2019 included its RMB-denominated Green Bond, which was issued in 2016, unsecured short-term borrowings from banks and zero-coupon note issuances.

At the end of the financial year 2019, the total fair value of the Bank's bond portfolio was USD 882.8 million (2018: USD 443.8 million) which was an almost 100% increase as a result of the RMB-denominated Panda Bond issuance. NDB's bond portfolio value at the end of 2019 included a net gains of USD 20.3 million (2018: USD 5.2 million) which can be attributed to the weakening in CNY/USD exchange rate and changes in market interest rates during the financial year.

Additionally, in 2019, NDB established its debut ECP programme which granted the Bank access to short-term funding in the capital markets to cover liquidity management requirements. At the end of the year, the outstanding borrowing amounted to USD 627.0 million.

In direct alignment with the funding strategy to access both international and its member countries' capital markets, NDB registered a ZAR 10.0 billion and RUB 100.0 billion bond programme in South Africa and Russia respectively as well as a USD 50.0 EMTN programme.

Equity

As at December 31, 2019, USD 6.2 billion (2018: USD 5.0 billion) in total paid-in capital had been received by the Bank from its member countries in accordance with the payment schedule set out in the AoA. The timely receipt of capital contributions demonstrates the commitment and support NDB receives from its members.

Moreover, the Bank has been consistently profitable since its inception and, as at December 31, 2019, had built up a reserve of retained earnings of USD 257.8 million. These reserves will be used to support the Bank's operation in its execution of the General Strategy: 2017-2021.

Development impact and sustainability

NDB's mandate is to mobilise resources for infrastructure and sustainable development projects in BRICS and other EMDCs. The Bank appraises and selects the investment projects it finances based on a range of criteria that go beyond financial considerations, including sustainability credentials such as the economic, environmental and social impacts of the project.

NDB's Strategy

The 2019 financial year witnessed NDB's continuous efforts to achieve its strategic goals, building on the strong foundation that had been laid since its inception in 2015. As envisaged by its founding members, the Bank has now become a fully fledged, dynamic and trustworthy institution. Against the backdrop of the changing development landscape of the 21st century, NDB is strongly set to deliver on its mandate of mobilising resources for infrastructure and sustainable development projects for global growth and development.

2019 marked the halfway point in the implementation of NDB's General Strategy: 2017-2021. Its main orientations have been integrated into all aspects of NDB's policies, processes and activities. The Bank's business has become increasingly mature and diversified, evolving from financing mainly sovereign and sovereign-guaranteed operations to supporting private sector operations; from offering largely hard currency funding to providing a more substantial share of funds in local currencies; from making only traditional loans to utilising other financial instruments such as equity investments; and from providing corporate loans to considering project finance in the private sector space.

In 2019, successful efforts were made to diversify the Bank's operations among its member countries as well as across the key areas of operation outlined in the General Strategy: 2017-2021. The Bank continued to base its lending on a long-term and broad assessment of economic, environmental and social returns, which goes beyond direct financial calculations. By investing in the strategically selected key areas, the Bank helps bridge the huge infrastructure financing gap in its member countries. This is expected to deliver positive transformative impacts that contribute to member countries' efforts to achieving the SDGs as well as the goals of the Paris Agreement.

As set in the General Strategy: 2017-2021, the Bank has been continuously employing a demand-driven approach and working in partnership with countries towards achieving their development priorities. Over the years, the Bank demonstrated that the use of country systems to protect vulnerable people and the environment, as well as to ensure the optimal use of public resources, is feasible in NDB's operating context. By using the national systems of the member countries, the Bank was also able to strengthen their capacity and achieve better long-term development results.

In 2019, as in the earlier years, the Bank collaborated with peer MDBs, as well as international organizations and national development institutions of member countries, to deliver its operations, exchange knowledge and build capacity in areas such as project preparation and development results reporting. NDB's efforts to implement its partnership agreements can be illustrated by the increasing number of operations with other developmental institutions through on-lending, co-financing and parallel financing.

Within its institutional framework, NDB ingrained several critical elements such as focus on developing young talent in its human capital, harnessing the power of new technology and learning from peers, as well as building internal capacity to work at speed without sacrificing quality. Going forward, this institutional mindset will enable NDB to evolve within the business environment in which it operates, and will help bring a stronger development impact for the benefit of member countries and their citizens.

Financial results

Approved project portfolio

Approved project portfolio: sovereign and non-sovereign (net of cancellations)

USD m	As at Dec 31 2019	As at Dec 31 2018	Movement	% changes
Sovereign loans	**11,935**	6,428	5,507	86
Non-sovereign loans	**2,898**	1,400	1,498	107
Equity investments	**100**	–	–	–
Approved projects	**14,933**	7,828	7,105	91
disbursements	**1,539**[60]	625	914	146

As at December 31, 2019, NDB's approved project portfolio amounted to USD 14.9 billion (2018: USD 7.8 billion), a year-on-year increase of USD 7.1 billion. This 91% increase includes approvals for sovereign and non-sovereign loans, as well as the Bank's first equity investment approval.

Approved loan portfolio

The number of non-sovereign loans grew by 71% (2019: 12 loans; 2018: 7 loans), however, by value, the portfolio more than doubled (107% year-on-year increase) to USD 2.9 billion from USD 1.4 billion in 2018. This is illustrative of NDB's target to expand its non-sovereign lending having established sound operational capacity by creating a solid foundation based on sovereign lending.

The sovereign loan portfolio continued its expansion from USD 6.4 billion in 2018 to USD 11.9 billion in 2019 (an 86% year-on-year increase). During 2019, a strong focus was placed on distributing the portfolio of loan approvals more equitably across all five member countries; which was achieved successfully.

Brazil and South Africa's share in the total loan portfolio grew by 2% (CY2019: 10%; CY2018: 8%) and 7% (CY2019: 16%; CY2018: 9%) respectively while Russia's, India's and China's portfolios reduced to 18% (CY2018: 19%), 28% (CY2018: 29%) and 28% (CY2018: 35%) respectively compared to 2018.

Disbursements

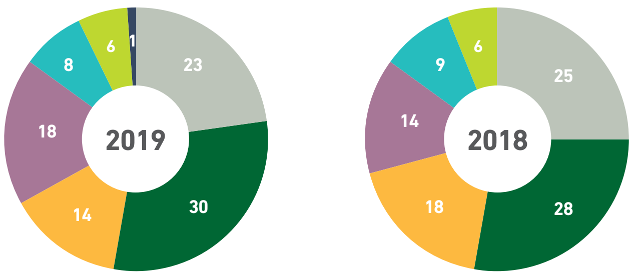
Supported by paid-in capital from its member countries and access to capital markets through its successful RMB3.0 billion Panda Bond issuance, the Bank effectively mobilised funds for its disbursements during 2019. As at December 31, 2019, cumulative loan disbursements were USD 1.5 billion (2018: USD 624.6 million), which is a 146% year-on-year increase. This can be attributed to 17 additional loans disbursing for the first time; which brought the total number of disbursing and disbursed loans to 26. NDB expects this trend to continue in the year 2020 as borrowers make disbursement requests to meet funding requirements through the project cycle.

Equity fund investments

On December 16, 2019, NDB received its maiden approval from its BoD to invest up to USD 100.0 million in equity investments in Brazil. This project demonstrates NDB's responsiveness to the development objectives of its member nations, and how the Bank is continually evolving its financial products to meet these needs. It is expected that other equity investments in funds with strategies to support and catalyse investments, which align with NDB's strategic objectives, will be explored in all of the Bank's member countries. Through these funds, NDB hopes to encourage greater investment in infrastructure and sustainable development projects by investing alongside other investors and encourage crowding-in of the private sector.

Approved project portfolio by key area of operation

%



%	As at Dec 31 2019	As at Dec 31 2018
Clean energy	**23**	25
Transport infrastructure	**30**	28
Irrigation, water resource management and sanitation	**14**	18
Urban development	**18**	14
Environmental efficiency	**8**	9
Social infrastructure	**6**	6
Multiple areas	**1**	–

The key areas of operations, as set out in NDB's General Strategy: 2017-2020, are carefully considered during the Bank's initial project assessment, leading to the final submission to the BoD for approval. While approved projects increased by USD 7.1 billion between 2018 and 2019, the split between the key areas of operation remained similar at the end of each year. The equity investment project has been classified as covering multiple key areas as, under the fund's investment strategy, a range of projects is expected to be covered. At the same time, NDB embraced the concept of impact investment, bringing a range of positive and broad-based benefits to its member countries and their people.

Approved project portfolio by area of operation

USD m	As at Dec 31 2019	As at Dec 31 2018
Clean energy	**3,519**	1,937
Environmental efficiency	**1,200**	700
Irrigation, water resource		
Management and sanitation	**2,080**	1,426
Social infrastructure	**960**	460
Transport infrastructure	**4,421**	2,175
Urban development	**2,653**	1,130
Multi-theme	**100**	–
Total	**14,933**	**7,828**

Highlights of statement of profit or loss

Financial information of statement of profit or loss

USD '000	As at Dec 31 2019	As at Dec 31 2018	Movement	% changes
Interest income from banks	**194,079**	113,191	80,888	71
Interest income from loans and advances	**35,719**	10,209	25,510	250
Interest income from debt instrument measured at amortised cost	**757**	–	757	–
Total interest income	**230,555**	123,400	107,155	87
Interest expense on short-term borrowings	**(53)**	(7)	(46)	657
Interest expense on bonds issued	**(24,664)**	(13,590)	(11,074)	81
Interest expense on note payables	**(8,091)**	–	(8,091)	–
Interest expense on lease liabilities	**(4)**	–	(4)	–
Net interest income	**197,743**	109,803	87,940	80
Net fee income	**1,567**	418	1,149	275
Net interest income after fees	**199,310**	110,221	89,089	81
Operating costs	**(51,271)**	(37,246)	(14,025)	38
Impairment provision	**(2,073)**	(3,758)	1,685	(45)
Foreign exchange and fair value gains/(losses)	**4,511**	2,820	1,691	60
Operating profit for the year	**150,477**	72,037	78,440	109

Interest income from loans and advances

Interest income from loans and advances has increased from USD 10.2 million in 2018 to USD 35.7 million in 2019 due to higher disbursements during the year. This increase in the interest income on loans is attributable to NDB disbursing on an additional 17 loans during the 2019 financial year (2019: 26 loans; 2018: 9 loans). Cumulative disbursements increased to USD 1.5 billion from USD 625.0 million in 2018.

In 2019, 19 loans became effective (all conditions precedent were met to qualify for loan drawdown) bringing the total number of effective loans to 32 (2018: 13 loans effective).

Interest expense on bonds issued

The interest expense on the RMB 3.0 billion Green Bond amounted to USD 13.4 million for the current year, marginally down from the USD 13.6 million bond expenses incurred in 2018. The year-on-year difference was due to the weakening of RMB against the USD. Further, the interest expense related to the Panda Bond amounted to USD 11.3 million.

Net fee income

Net fee income of the Bank comprises front-end fees and commitment fees.

NDB charges a front-end fee to the borrowers on the date of the first drawdown and the income for the same is recognised over the life of the loan. The increase in front-end fees income during the year from USD 0.2 million to USD 0.5 million is attributable to the 17 projects which saw their first drawdowns during 2019. Commitment fees are levied on the accrued portion of the undisbursed loan balance to cover the cost of keeping adequate liquidity to meet the disbursement needs of the Bank's borrowers. Commitment fees recognised during the year were USD 1.0 million compared to USD 0.3 million recognised in the financial year 2018.

Operating expenses

The growth of NDB in the 2019 financial year has resulted in operating expenses increasing to USD 51.3 million compared to USD 37.2 million the year before. The expansion of the scope and scale of the Bank's operations is the primary reason for the concomitant increase in staff, technology and other operating expenses.

Employee headcount increased by 21 additional full-time employees during the 2019 financial year. Accordingly, the total increase in staff costs of USD 7.9 million is attributable to the following:

- an increase of USD 6.4 million in salaries and allowances (2019: USD 25.8 million; 2018: USD 19.4 million); and
- an increase of USD 1.6 million in other benefits (2019: USD 7.5 million; 2018: USD 5.9 million)

The year-on-year increase in technology costs from USD 1.8 million in 2018 to USD 4.0 million in 2019 was a result of the implementation of the loan management system, expansion of the virtual desktop infrastructure, IT set up costs for the Bank's ARO in São Paulo with a sub-office in Brasília and the procurement of other risk management tools.

Impairment provision

The Bank recognises a loss allowance against loans and other exposures to reflect any expected credit losses (ECL) in accordance with IFRS 9. As at December 31, 2019, the Bank had an accumulated ECL provision for losses on loans and other exposures of USD 5.9 million (2018: USD 3.8 million). The increase in impairment allowance reflects the higher number of disbursements in 2019, particularly related to non-sovereign projects loans, as well as the changes in projected drawdown for the financial year 2020. Furthermore, the impairment provision took into consideration the probability of default primarily due to changes regarding forward-looking information.

Foreign exchange losses and net gains on financial instruments at fair value through profit or loss

At the end of the 2019 financial year, foreign exchange losses and fair value gains amounted to USD 4.5 million (2018: USD 2.8 million). This movement predominantly relates to the following:

- Foreign exchange losses of USD 17.4 million (2018: USD 5.0 million loss) primarily reflects a weakening RMB/USD exchange rate and increase in the foreign currency exposures primarily in the form of loans and deposits, and
- Net gains on financial instruments at fair value through profit or loss of USD 21.9 million in 2019 (2018: USD 7.8 million gain) which was driven by fair value adjustments on the liabilities of the Green Bond, the Panda Bond and derivatives (which is reported at fair value through profit and loss).

To manage and limit the effects of risks associated with fluctuating exchange and interest rates, NDB has entered into derivative contracts with highly rated counterparties to hedge the interest rate and foreign exchange risks arising from the Green Bond and Panda Bond issuance.

Treasury investment activities

Interest income from investment portfolio

The Bank's interest income generated from its treasury portfolio, i.e. interest income from banks and debt instruments measured at amortised cost, amounted to USD 194.8 million for the financial year 2019, compared to USD 113.2 million earned in 2018. The movement of USD 81.6 million represents a 72% year-on-year increase, which can be attributed to an increase in yields on investments and an overall increase in the investment portfolio due to additional paid-in capital received and undisbursed proceeds of the RMB 3.0 billion Panda Bond.

Investment portfolio

Treasury activities are conducted with the primary objective of protecting the capital invested and ensuring that the Bank can meet its payment obligations on time and in full. As at December 31, 2019, the net investment portfolio of the Bank totalled USD 6.3 billion (2018: USD 4.8 billion). The USD 1.5 billion year-on-year growth of the portfolio value can largely be explained by the following cash inflows and outflows for the 2019 financial year:

Cash inflows:

- Receipt of USD 1.2 billion paid-in capital received for the year;
- Proceeds of RMB Panda Bond amounting to RMB 3.0 billion (USD 0.4 billion[61]); and
- Proceeds from issuance of note payables amounting to USD 1.1 billion; and
- Proceeds from issuance of short-term borrowings amounting to USD 0.1 billion.

Cash outflows:

- Disbursements amounting to USD 0.9 billion; and
- Repayment of note payables of USD 0.5 billion.

The Bank places investments with highly rated counterparty banks in Mainland China, Hong Kong and Singapore and maintains a sufficient level of liquidity to meet anticipated cash flow requirements.

Borrowing activities

NDB seeks to be a regular issuer in both international and local markets of its member countries with a view to establishing a strong credit history and ensure better liquidity and diversification opportunities for investors. Seeking funding in USD-denominated instruments and other hard currencies is an important facet of NDB's funding toolkit, however, so is local currency borrowing. Raising funding in the domestic markets of its member countries allows NDB to reduce its currency mismatch risks, and also obtain funding at attractive costs using a wide range of fundraising instruments in different markets. Thus, during the 2019 financial year, NDB registered several borrowing programmes which is summarised in the table below:

Month	Name of the Programme	Size
January 2019	Panda bond programme	RMB 10.0 billion
April 2019	ECP programme	USD 2.0 billion
April 2019	ZAR bond programme	ZAR 10.0 billion
November 2019	RUB bond programme	RUB 100.0 billion
December 2019	EMTN programme	USD 50.0 billion

On January 9, 2019, NDB became the first overseas entity to establish an onshore RMB bond programme according to the Interim Measures for the Administration of Bond Issuance by Overseas Institutions in the National Interbank Bond Market (the Measures[62]). Subsequently, on February 22, 2019, the Bank became the first international financial institution to issue bonds under the Measures with a RMB 3.0 billion issue divided into two tranches of 3-year (RMB 2.0 billion) and 5-year (RMB 1.0 billion) tenors. Leveraging its strong international and domestic Chinese credit ratings, NDB was able to achieve highly favourable pricing to which the benefit would be passed onto the Bank's borrowers. The proceeds of RMB 3.0 billion (USD 448.01 million[63]) from the issuance of Panda Bonds have been utilised to the extent of RMB 434.4 million (USD 62.4 million) to fund various projects denominated in RMB.

In April 2019, NDB established its debut ECP programme for liquidity management purposes where it can raise short-term funding up to USD 2.0 billion. As at December 30, 2019, the nominal value of the outstanding borrowing on this programme totalled USD 627.0 million with an average maturity of 3.3 months. The ECP programme allows the Bank to access short-term funding in capital markets in different currencies with the low cost of funds and low roll-over risk associated with the high ratings. Furthermore, the ECP assists the Bank in establishing an international presence with the international investor community which will be useful for future funding programmes.

As a result of the above borrowing initiatives, as at December 31, 2019, the borrowing portfolio of the Bank comprised unsecured bank borrowings, note payables (including notes issued through the ECP programme), RMB Green Bond and RMB Panda Bond totalling USD 1.6 billion (2018: USD 0.4 billion); a 264% year-on-year increase.

Local currency financing is a key focus area of the Bank and intends to be a regular issuer in the local markets of its member countries. This is with a view to establishing a strong credit history and ensuring better liquidity and diversification opportunities for investors. Within this context NDB registered a ZAR 10.0 billion and RUB 100.0 billion bond programme in South Africa and Russia respectively and intends to register similar programmes in India and Brazil.

Equity / capital contributions

As at December 31, 2019, all the instalments due in respect of paid-in capital had been received in accordance with the schedule in the AoA. Total paid-in capital received by the end of the 2019 financial year amounted to USD 6.2 billion. Furthermore, receipts in respect of the fifth instalment, due by January 3, 2020, had been received from all member countries ahead of schedule. Brazil, Russia, China and South Africa's respective fifth instalments of USD 300.0 million was received before the close of the 2019 financial year and India's instalment received on January 2, 2020. The Bank will ensure these contributions are utilised to support bankable projects and the development agendas of member countries according to the Bank's mandate and strategy.

Members' contributions received to date

USD m December 31, 2019	Cumulative paid-in capital due by[64]	Cumulative paid-in capital received as at	Difference	Remarks
Brazil	**1,000**	**1,300**	300	Note 1
Russia	**1,000**	**1,300**	300	Note 1
India	**1,000**	**1,000**	–	Note 2
China	**1,000**	**1,300**	300	Note 1
South Africa	**1,000**	**1,300**	300	Note 1
Total	**5,000**	**6,200**	**1,200**	

Note 1:
Fifth instalment of USD 300.0 million, due January 3, 2020, received in advance during the 2019 financial year.
Note 2:
Fifth instalment of USD 300.0 million, due January 3, 2020, received in advance on January 2, 2020.

61 As per RMB/USD exchange rate prevailing on February 22, 2019 – the date of issuance.
62 As per the People's Bank of China and Ministry of Finance Announcement [2018] No.16 issued on September 25, 2018.

Risk management

Risk governance

NDB adopts a conservative and integrated approach to risk management, which supports the strategic decision-making process of the institution. The Bank consistently conducts its activities within an 'Enterprise Risk Management and Risk Appetite Framework' (the Framework) established by its BoD during 2019. This Framework consolidates and reveals the risk preference of NDB, fostering consistency, accountability and transparency of the business decisions in the Bank, institutionalising a strong risk culture across the institution.

In order to safeguard its capital base, NDB follows international standards to actively manage all inherent risks in its activities, including credit, market (exchange rate and interest rate risks), liquidity and operational risks. The risk governance structure of the Bank is based on the 'Three Lines of Defence' model, which is specified in the Framework. The Framework provides a comprehensive summary of the Bank-wide risk management principles and risk appetite parameters guiding the operations of the Bank. The risk appetite parameters guide both strategic planning and day-to-day tactical decision making, thereby avoiding excessive risk taking and encouraging the development of effective controls to protect the key resources of the Bank.

While the Framework defines various risk categories, bank-level appetite and limits, respective risk policies define risk limits at a granular level. Roles and responsibilities, ownership for each category of risk have been clearly defined in the Framework and respective policies. A consolidated risk reporting mechanism providing portfolio view and individual category of risk view has been established. The risk report is submitted to the ARC via the Finance Committee, Vice President and Chief Risk Officer.

Capital adequacy

The main objective of the Capital management framework is to ensure that the Bank maintains capital sufficiency and flexibility against the inherent risks in daily business and can withstand unexpected potential losses given a certain risk preference. The Bank's management has established appropriate policies and procedures to manage the capital adequacy from a risk-based perspective.

Thus, the Bank monitors capital adequacy within a Capital management framework. This seeks to ensure that the Bank's capital is aligned with the overall strategy of the Bank, as laid down by the BoG, budgets and financial risk associated with its business and that sufficient capital exists to cover the risks arising from the business.

64 Includes ZAR 3,200 million (equivalent to USD 227.8 million) to Republic of South Africa for Lesotho Highlands Water Project Phase II, where the actual project would be implemented in the Kingdom of Lesotho.

Capital adequacy ratios

Ratio	Metric	As at Dec 31 2019	As at Dec 31 2018
Equity to assets	%	**80**	92
Limitations on operations	%	**23.8**	21
Capital utilization ratio	%	**4.30**	4.77

Equity-to-asset ratio

The equity-to-asset ratio serves as a key capital metric for the Bank from an operational perspective. The absolute minimum level is set at 25%, however, the Bank sets 30% as the early warning indicator.

The equity-to-asset ratio as at December 31, 2019 is 80% (2018: 92%); well above the limit of 25%.

The decrease in the ratio relates to the increase in loan and other exposures, partially offset by the receipt in paid-in capital. As the Bank begins to reach steady state, this ratio will stabilise above the limit.

Limitations on operations

The limitations on ordinary operations ratio is 23.80% for 2019, which is well within the Bank's limit level of 95% and has not fluctuated since 2018.

Capital utilisation ratio

Capital utilisation ratio (CUR) measures the required risk capital, based on Basel standardised (credit risk, market risk and operational risk) over capital (received paid-in capital, reserves and surplus). The CUR is 4.3% in 2019, lower than 4.8% observed in 2018, and well within the Bank's limit level of 85%. The decrease is due to the increase in paid-in capital.

Interest rate risk

The Bank strives to minimise its exposure to losses resulting from interest rate risk by matching the tenor and interest rates of its assets with those of the corresponding funding sources, and the Bank uses derivatives to offset interest rate mismatches.

Interest rate risk results from interest rate variations that affect all balance sheet items whose valuation is dependent on interest rates, whether they are fixed or variable.

The Bank applies a duration limit as its primary measure to contain financial risk from interest rate risk exposure, and uses Value-at-Risk (VaR) calculations to monitor interest rate risk volatility. The duration gap as of end of 2019 was 0.35 year (2018: 0.54 year).

Exchange rate risk

NDB strives to minimise its exposure to losses resulting from exchange rate risk by matching the currency of its assets with the currency of the corresponding funding sources, and also uses derivatives to offset currency mismatches. The Bank measures the net open position of aggregated non-USD currencies against a limit of USD 20.0 million. As at the end of 2019, the net aggregate exposure, based on the Bank's internal risk monitoring model, was USD 7.3 million or 36.5% of the limit (2018: USD 0.2 million or 1% of the limit). The Bank uses VaR calculations to monitor exchange rate risk volatility.

In the forthcoming period, the Bank will continue to register bond programmes in off-shore and in its member countries' markets in order to raise funding in its member countries' local currency. This will meet the demand for local currency financing of NDB's member countries and assist the Bank in managing exchange rate risk by observing currency matching principles.

Liquidity risk

The Bank has a prudent approach to liquidity management and maintains an extremely strong liquidity position in very high-quality investments both in the short and long term.

Expected USD cash outflows relating to project loan disbursements in the period following the financial year 2019 were sufficiently covered by cash inflows from deposits.

The Bank is characterised by conservative compliance with its targeted liquidity ratios, reflecting the high level of short-term deposits. As at the end of the 2019 financial year, the weighted average maturity of 0.3 years is slightly shorter than the maturity at the end of the previous reporting period of 0.4 years.

Liquidity ratios

Ratio As at December 31	Metric	As at Dec 31 2019	As at Dec 31 2018
Liquidity ratio (30-day)	%	**650**	4,719
Liquidity ratio (90-day)	%	**510**	774
Overall liquidity ratio	%	**163**	626

All liquidity ratios have been well above the Bank's target and limit levels. This is characteristic of the predominantly short-term nature of deposits and of the future disbursements that are expected to be moderate. The year-on-year decrease in the liquidity ratios signals a positive trend that is indicative of the Bank's increase in forecasted disbursements, which will also result in these ratios moderating in the future.

Further, the Bank's access to capital markets provides an additional protection in circumstances of extreme liquidity stress.

Credit risk

Sovereign and non-sovereign credit risk measurement

The credit quality of the Bank's loan portfolio remains investment grade. To measure sovereign credit risk, the Bank uses a combination of credit risk data from rating agencies and its own internal credit assessment, which is based on both financial and non-financial factors. During the course of 2019, Russia was upgraded by Moody's and Fitch each by one notch to Baa3 and BBB respectively. All other sovereign ratings were affirmed though the outlook for South Africa is negative among all rating agencies as is Moody's outlook for India. As at December 31, 2019, the Weighted Average Risk Rating (WARR) of the sovereign loan portfolio has marginally come down to BBB+ as against A- at the end of the financial year 2018 and remains within the investment grade band. The WARR is among the highest compared to the Bank's MDB peers.

Total approved sovereign projects by country

	As at Dec 31 2019		As at Dec 31 2018	
USD m Member country	Approved sovereign projects	WARR	Approved sovereign projects	WARR
Brazil	**621**	**BB-**	121	BB
Russia	**1,500**	**BBB-**	1,069	BBB-
India	**3,783**	**BBB-**	2,300	BBB
China	**4,218**	**A+**	2,758	A+
South Africa	**1,813**	**BBB-**	180	BBB-
Total approved Sovereign projects:	**11,935**	**BBB+**	6,428	A-

Total approved non-sovereign projects by country

	As at Dec 31 2019		As at Dec 31 2018	
USD m Member country	Approved non-sovereign projects	WARR	Approved non-sovereign projects	WARR
Brazil	**900**[65]	BB+	500	BB
Russia	**1,216**	BBB	400	BBB
India	**300**	BBB-	–	–
South Africa	**582**	BBB-	500	BBB-
Total approved non-sovereign projects:	**2,998**	**BBB-**	1,400	A-

To measure non-sovereign credit risk, the Bank uses a combination of credit risk data from rating agencies and its own internal credit assessment, which is based on both financial and non-financial factors. As at 31 December 2019, the WARR of the non-sovereign project portfolio remained unchanged at BBB- as compared to the previous financial year.

Given the developing and emerging nature of these projects and the absence of a sovereign-backed guarantee, these ratings are expected to be lower than sovereign-guaranteed loans. For the 2019 financial year, the non-sovereign portfolio consists of approved loans to financial institutions (2019: USD 1.1 billion; 2018: USD 700.0 million), and private sector, including SOEs (2019: USD 1.9 billion; 2018: USD 700.0 million).

Risk analysis of total project portfolio

Total approved projects by country

	As at Dec 31 2019		As at Dec 31 2018	
USD m Member country	Total approved projects	WARR	Total approved projects	WARR
Brazil	**1,521**	**BB**	621	BB
Russia	**2,716**	**BBB**	1,469	BBB-
India	**4,083**	**BBB**	2,300	BBB
China	**4,218**	**A+**	2,758	A+
South Africa[45]	**2,395**	**BBB-**	680	BBB-
Total approved loans	**14,933**	**BBB+**	7,828	BBB+

The WARR of the total project portfolio for the 2019 financial year remains within investment grade at BBB+; unchanged from the previous year's rating. As at the end of the 2019 financial year, none of the loans or group of loans had been put into the watch list.

Operational risk and internal control

Operational risk is the risk of loss arising from failure or inadequacy of systems and controls, human error, fraud or external events. When controls fail to operate effectively, operational risks can cause damage to reputation, have legal or regulatory implications, or lead to financial loss.

The Bank cannot expect to eliminate all operational risks, but it endeavours to manage these risks through a control framework and by monitoring and responding to potential risks. This comprises governance structures, policies, processes and systems used to identify, measure, monitor, control and mitigate operational risk. NDB's approach includes

- self-assessments
- loss data management and periodic monitoring, and
- reporting of key risk indicators

The Bank is currently following a basic indicator approach for the computation of operational risk capital charge.

The Internal Control Framework of the Bank includes the roles and responsibilities of various divisions within the three-lines of defence, internal checks embedded in payments and decision-making process, documentation of risks and controls. The Bank has established a mechanism for documentation of processes and controls in a structured manner. The Policies are reviewed and recommended by the Board Level Committees and approved by the BoD.

NDB has established a Business Continuity Management and Disaster Recovery Framework, in line with its risk profile, criticality of activities and the cloud-based computing approach adopted by the Bank[66].

Treasury business credit risk management

As at December 31, 2019, no breaches of treasury credit limits (concentration limits and counterparty limits) had been observed nor had there been any cancelled or amended transactions.

The credit quality of the Bank's treasury investment portfolio as at December 31, 2019 of USD 6.3 billion (2018: USD 4.8 billion) remained concentrated in the upper end of the credit spectrum since the counterparties for investments (i.e. deposits and bonds) are highly rated banks in Mainland China, Hong Kong and Singapore with ratings no lower than A-.

The WARR for the investment portfolio is A+. The weighted average remaining maturity is 4.1 months.

None of the counterparties exceeded the concentration threshold that aims to prevent excessive concentration of the Bank's investments with any individual counterparty. None of the counterparties exceeded the counterparty exposure threshold that aims to limit the investment exposure to any one counterparty relative to its balance sheet capacity.

As of December 31, 2019 all swap transactions are transacted with well rated counterparties (above A-).

66 Within the context of the global onset of COVID-19 in early 2020, NDB's cloud-first computing approach facilitated staff of the Bank to connect and work remotely from home. All business activities and transactions were uninterrupted, while ensuring the safety and security of the Bank's staff.

Annual Financial Statements

For the year ended December 31, 2019