2022

ERF Working Papers Series

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Economic Research Forum
منتدى البحوث الاقتصادية

Working Paper No. 1594
November 2022

PUBLIC BANKS AND DEVELOPMENT IN EGYPT: OVERVIEW, ISSUES, AND THE WAY FORWARD[1]

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November 2022

We are grateful to Mohamed Afifi for excellent research assistance.

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[1] This paper is supported by the Agence Française du Développement to be presented in the framework of its engagement under the Finance in Common summits. The paper represents the opinions of the authors. It is not meant to represent the position or opinions neither of the Agence Française du Développement nor the Economic Research Forum. Any errors are the responsibility of the authors.
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First published in 2022 by
The Economic Research Forum (ERF)
21 Al-Sad Al-Aaly Street
Dokki, Giza
Egypt
www.erf.org.eg

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Abstract

A public development bank (PDB), like any other bank, serves as a financial intermediary, but with a strong developmental role. This paper provides an overview of PDBs in Egypt. The latter is of particular interest for two reasons. First, while PDBs have a long history in the Egyptian economy, their roles and interventions are rather limited. This applies to banks that were created during the socialist era of Former Egyptian President Gamal Abdel Nasser. Second, the largest share of PDB-related projects implemented in Egypt is undertaken by government-owned commercial banks, namely the National Bank of Egypt, Banque Misr, and Banque du Caire. Thus, the objective of this paper is twofold: first, to analyze how and why the role of PDBs can be played by public banks; and second, to highlight the lessons that can be learned from the resilience of the Egyptian financial systems to the succession of crises/disruptions.

Keywords: Public development banks, commercial banks, Egypt.
JEL Classifications: E50, G21, O10.

ملخص

تعمل بنوك التنمية العامة، حالها حال أي بنك آخر، كوسيط مالي، ولكنها تلعب دورا تنمويا قويا. تقدم هذه الورقة البحثية لمحة عامة عن بنوك التنمية المستدامة في مصر، لما لها من أهمية خاصة لسببين. أولا، في حين أن بنوك التنمية العامة لها تاريخ طويل في الاقتصاد المصري، فإن دورها وتدخلها محدودان إلى حد ما. وهذا ينطبق على البنوك التي تم إنشاؤها خلال الحقبة الاشتراكية لعبد الناصر. ثانيا، يتم تنفيذ أكبر حصة من المشروعات المتعلقة ببنوك التنمية العامة المنفذة في مصر من قبل البنوك التجارية المملوكة للحكومة، وهي البنك الأهلي المصري وبنك مصر وبنك القاهرة. وبالتالي، فإن الهدف من هذه الورقة ذو شقين: أولا، تحليل كيف ولماذا يمكن للمصارف العامة أن تضطلع بدور بنوك التنمية؛ وثانيا، تحليل الكيفية التي يمكن أن تؤديها المصارف العامة كبنوك تنمية عامة، وثانيا تسليط الضوء على الدروس التي يمكن تعلمها من مرونة الأنظمة المالية المصرية أمام تعاقب الأزمات/الاضطرابات.

1. Introduction

Although a public development bank (PDB) serves as a financial intermediary like any other bank, its main goal is to promote development. Indeed, many development banks focus on a limited specific number of sectors of the economy according to the needs of the country, such as agriculture, industry, housing, health, or education. In this case, the PDB will be specialized in one sector and hence entirely dedicated to its development. At the global level, such banks represent 10 percent of global financial flows.

Development banking will always be a risky endeavor, but it can help achieve development objectives with efficient and proper management (Thorne and du Toit, 2009). The most celebrated role of PDBs since the outbreak of global financial crises has been their countercyclical function. During crises, PDBs were able to provide liquidity to financial markets, which enabled them to avoid the downtrend. The financial sector operates pro-cyclically, so the behavior of private banks tends to aggravate crises by decreasing the flow of liquidity to the system when it is most necessary (Minsky, 1986). It is therefore crucial that PDBs play this proactive role to protect the economy and correct market failure (Wray, 2009). This is the main argument that justifies public intervention in the credit market. PDBs can play this important role through various channels (Mazzucato and Penna, 2015): (1) ensuring the security and soundness of the financial system through managing liquidity in times of crises; (2) creating an information base to combat the negative effects of asymmetric information on the financial market; (3) financing socially important projects; and (4) promoting financial development (Stiglitz, 1994). This is very important in developing countries where market imperfections or failures exist, such as asymmetry of information, imperfect competition, and an underdeveloped and fragile capital market. In this context, and when private banks are not able to achieve these objectives, then public banks emerge as the second-best alternative (Feijo, Horn, and Feil, 2020).

The Egyptian case is of particular interest for several reasons. First, while PDBs have a long history in the Egyptian economy, their roles and interventions are rather limited. This applies to banks that were created during the socialist era of Former Egyptian President Gamal Abdel Nasser. The declining role of these banks can be explained by four main reasons. On the one hand, Moheildin and Nasr (2003) argue that the Egyptianization[6] and nationalization measures in the 1950 and 1960s led the banking sector to become highly concentrated with the application of sectoral and functional specialization, thereby resulting in a sector-based, mono-bank system (with mandatory public ownership/governance). This led to less competition and less innovation. On the other hand, most of these banks were always backed up and sponsored by the government. Yet, with the lack of incentives, political interference, poor governance, complicated bureaucratic procedures for the processing of loans, and overstaffing, their performance deteriorated and their profits decreased. This affected their interventions and financing capabilities. Moreover, with the privatization of the banking sector that took place in the early 2000s, the majority of the banks that remained public

[6] The term 'Egyptianization' refers to the act or process of transforming foreign assets into Egyptian ones.

were the largest commercial ones. Second, the lion's share of the development project implemented in Egypt is undertaken by government-owned commercial banks, namely the National Bank of Egypt (NBE), Banque Misr (BM), and Banque du Caire (BdC). These three banks are of interest for three reasons. First, their mission statement is aligned with the concept of a development bank. For instance, NBE's mission statement is as follows: "NBE believes that it has a significant role to play in improving the quality of life of Egyptians. Such contributions were vigorously engaged in supporting healthcare, education, slums development, combating poverty, alleviating the distress of imprisoned indebted persons, and empowering people with disabilities, as well as supporting culture and maintaining heritage." In the case of BM, the mission statement is: "Banque Misr was established in 1920 by the pioneer economist and financial expert Mohamed Talaat Harb Pasha, who spearheaded the concept of investing in national savings and directing them towards economic and social development." Moreover, BdC operates as a subsidiary of BM and is largely known for its comparative advantage in microfinance, which is highly correlated to development activities. The third reason for choosing these three banks is their large market share. While NBE has the highest market share (total assets accounted for 31.5 percent of Egyptian banks' total assets in 2020), the market shares of BM and BdC are EGP 967.3 billion and EGP 211 billion, respectively. The third reason is related to their public ownership, making them more likely to implement the development agenda of the government. Finally, it is important to note that law no. 88-2003 of the Central Bank of Egypt (CBE) did not include a particular definition of development banks. This partially explains why commercial banks were able to have a developmental role given that the latter was neither limited nor exclusive to banks specialized in development. Thus, the objective of this report is twofold: first, to analyze why and how public banks can play the PDB role; and second, to highlight the lessons that can be learned from the resilience of the Egyptian financial systems to the succession of crises/disruptions.

Against this background, *Agence Française du Développement* (AFD) co-organized the first edition of the "Finance in Common" summit in November 2020. Its objective is to boost the commitment of all PDBs to support a more sustainable financial trajectory and to help the governments respond to crises. This is particularly important in the context of the COVID-19 pandemic and its subsequent socioeconomic crisis that negatively affected the global economy. Indeed, with the increase of firm and household vulnerabilities, the role of PDBs must be reconsidered in order to make their interventions more effective and curb the negative effects of the pandemic. Hence, the second summit will chiefly focus on the Egyptian case in order to examine the determinants of their resilience and analyze why commercial (public) banks have substituted classic PDBs.

The remainder of the paper is structured as follows. Section 2 presents a mapping and general overview of the banking system in Egypt. Section 3 reviews the literature on the role and structure of PDBs. Section 4 provides an analysis of PDBs in Egypt. Section 5 analyzes the regulatory framework and governance of PDBs in Egypt. Section 6 presents the lessons learned from the

Egyptian experience during the pandemic and beyond, and section 7 concludes and provides some policy recommendations.

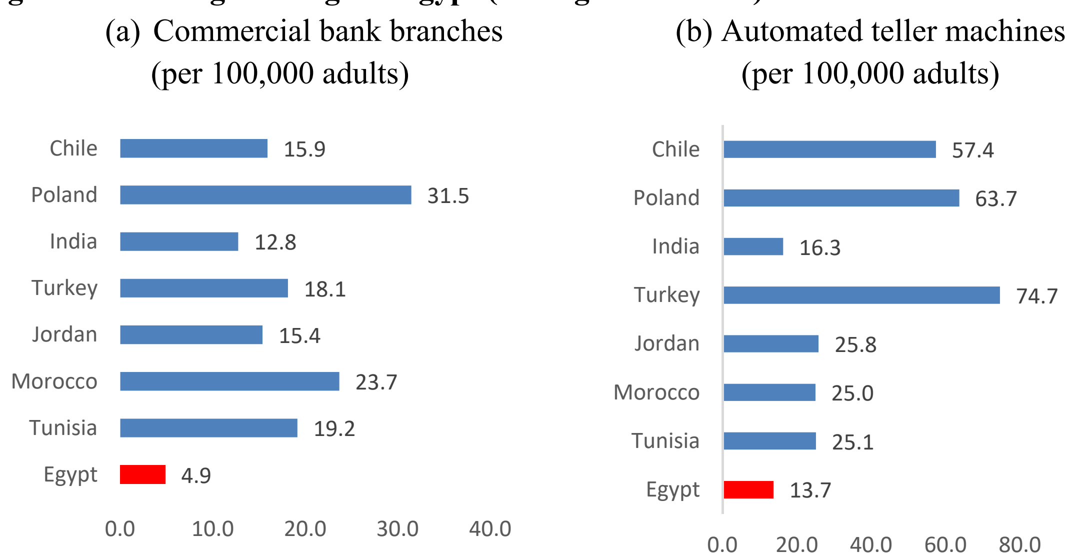
2. Mapping the banking sector in Egypt

Before presenting the characteristics of the Egyptian banking sector, it is important to position Egypt with respect to other comparator economies in order to compare the extent to which its banking sector is developed. These countries include Tunisia, Morocco, and Jordan (Arab and diversified economies), Turkey, Poland, Chile, and India (emerging markets). All these countries offer interesting cases either because they belong to the same geographic region or the same income group, have been established as successful transition economies, or are simply providing fascinating examples of economic success.

Among the measures used to measure financial development (Beck et al., 2000), Figure 1 shows banking coverage in Egypt through the number of commercial bank branches (1a) and automated teller machines (1b) per 100 thousand adults. For the two indices, Egypt has lower figures, thereby pointing out the need to improve the infrastructure of the banking system (measured by the number of branches and ATMs) to increase access to finance and its role in development. A similar observation holds for the number of borrowers and depositors (Figures 2a and 2b) and for the share of credit going to the private sector (Figures 3a and 3b). Therefore, from a development perspective, it is crucial to implement deeper reforms to increase access to finance and make liquidity more available for the private sector (Herrera et al., 2013) to boost private investment and development.

Figure 1. Banking coverage in Egypt (average of 2010-19)

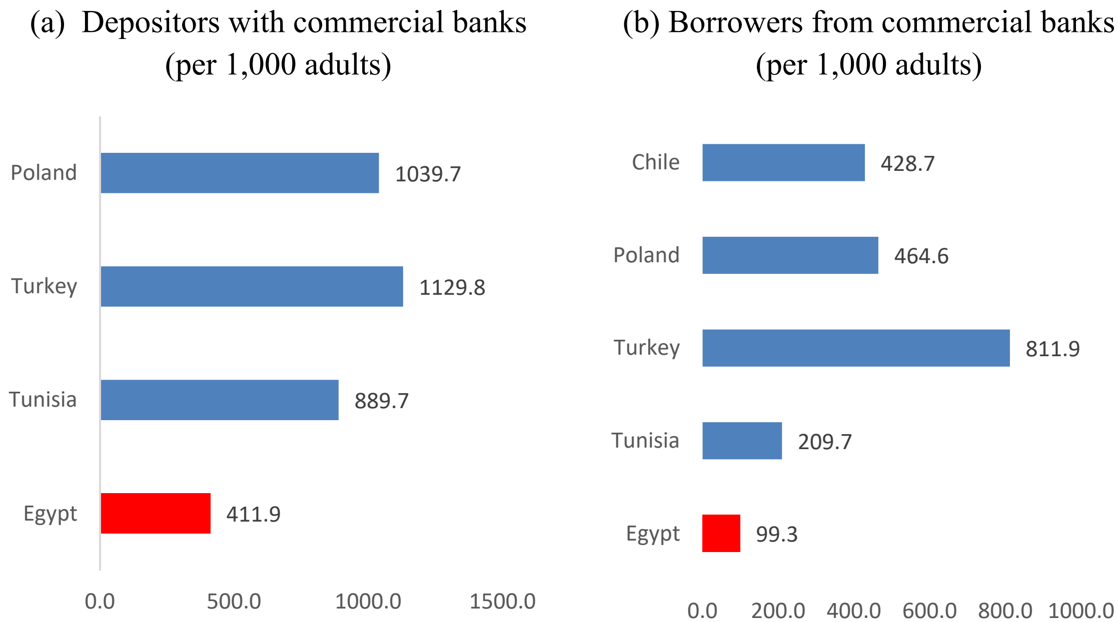
(a) Commercial bank branches (per 100,000 adults) (b) Automated teller machines (per 100,000 adults)



Source: Authors' elaboration using the World Development Indicators online dataset.

Figure 2. Depositors, borrowers, and commercial banks (average of 2010-19)

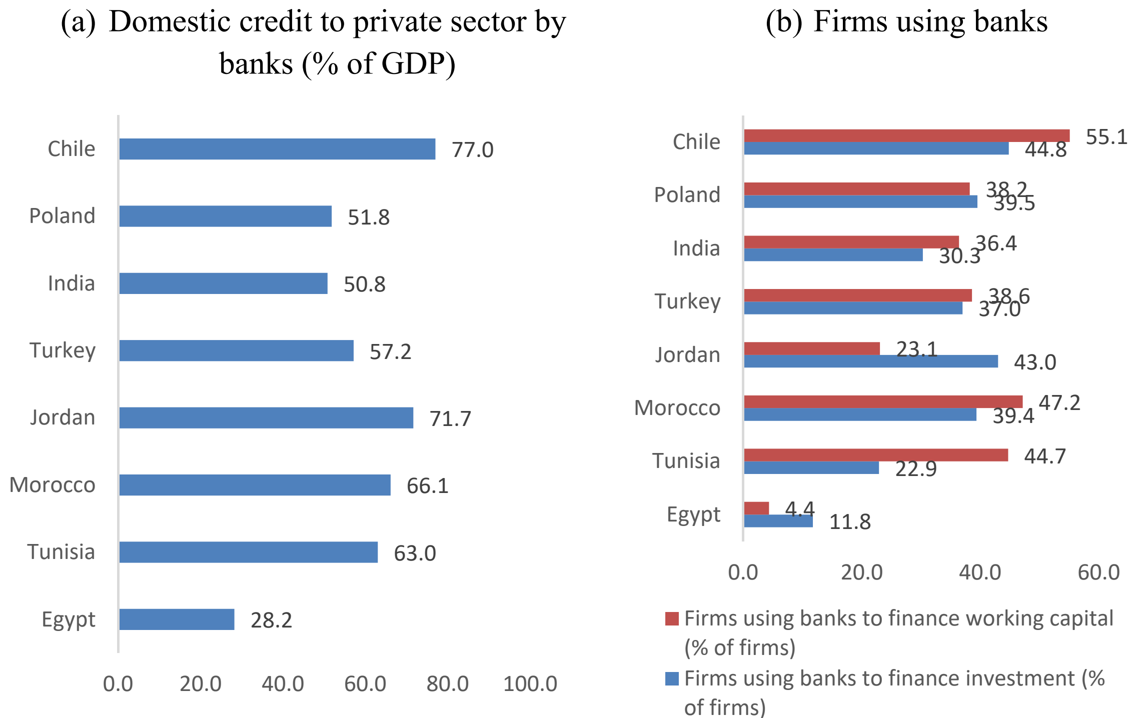
(a) Depositors with commercial banks (per 1,000 adults) | (b) Borrowers from commercial banks (per 1,000 adults)



Source: Authors' elaboration using the World Development Indicators online dataset.

Figure 3. Firms and credit in Egypt, 2013

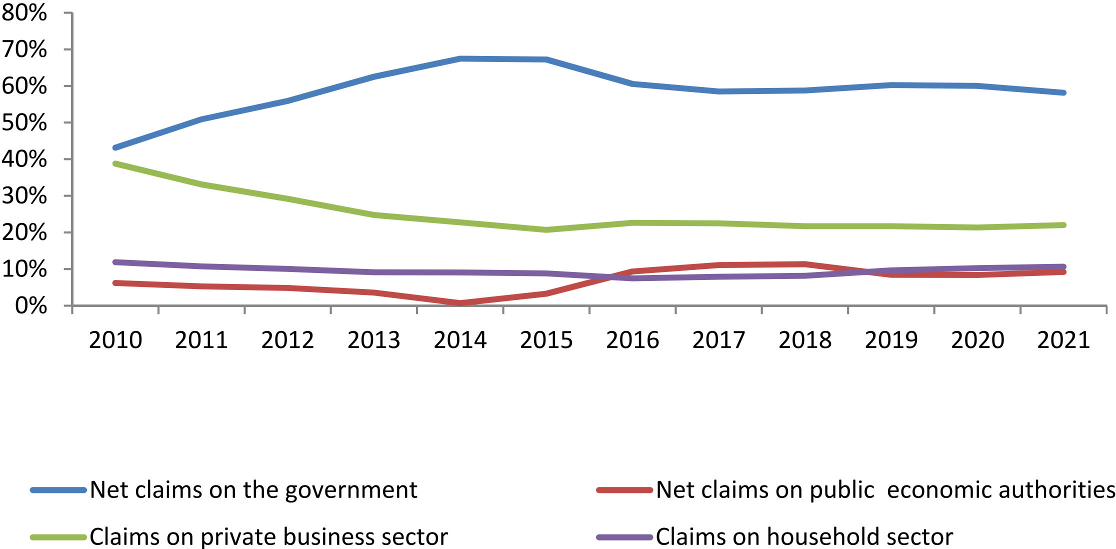
(a) Domestic credit to private sector by banks (% of GDP) | (b) Firms using banks



Source: Authors' elaboration using the World Development Indicators online dataset.

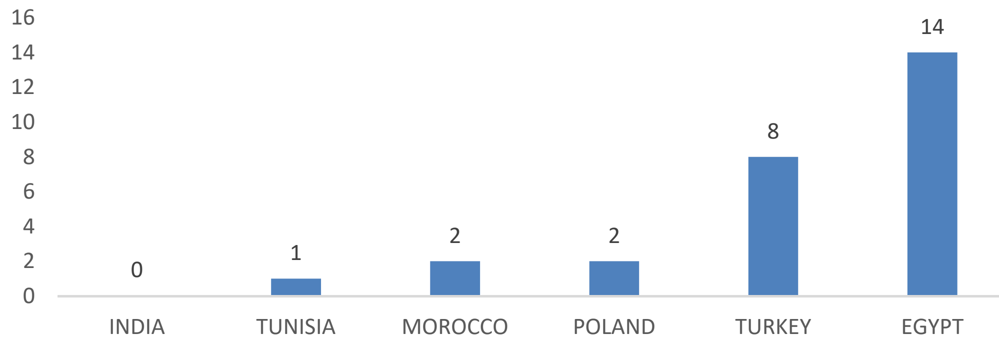
Such a low level of credit to the private sector can also be explained by the low level of liquidity and financial repression. First, Figure 4 shows that 58 percent of the domestic credit was allocated to the government and nine percent was allocated to public economic authorities and the public business sector in 2021, with only 22 percent of the claims allocated to the private sector. Second, the required reserve ratio in Egypt is higher compared to several emerging markets as it reached 14 percent in 2021 compared to Turkey (eight percent), Morocco (two percent), or Tunisia (one percent) as shown in Figure 5. This is also confirmed by the high level of the bank liquid reserves to bank assets ratio (Figure 6). Indeed, this indicator shows the ratio of domestic currency holdings and deposits with the monetary authorities to claims on other governments, nonfinancial public enterprises, the private sector, and other banking institutions. This ratio reaches 34.6 percent in Egypt, whereas it is 25 percent in Jordan, 14.5 percent in Turkey, and six percent in Tunisia; pointing out the fact that lending activities in Egypt are lower than those in comparator economies. Third, Figure 7 shows that Egypt is characterized by high interest compared to other emerging markets (with the exception of Turkey), which further negatively affects the private sector and deters investment.

Figure 4. Domestic credit by agent (%)



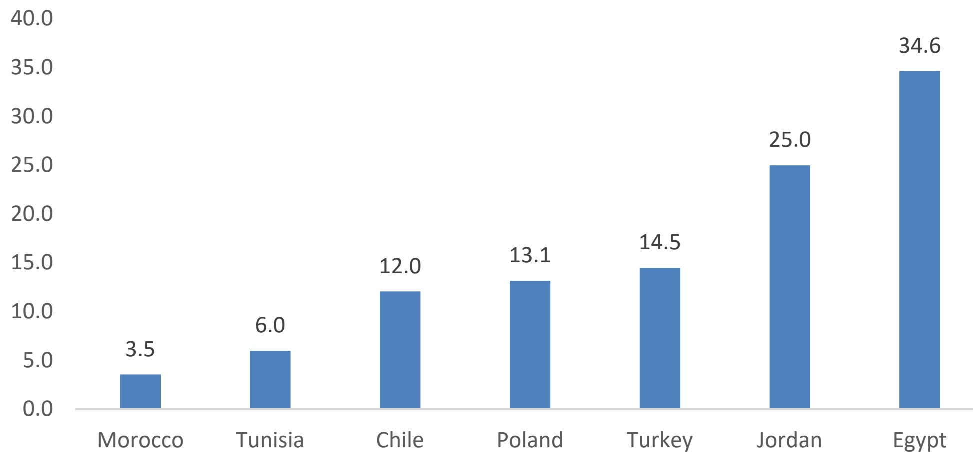
Source: Central Bank online dataset.

Figure 5. Required reserve ratios, 2021 (%)



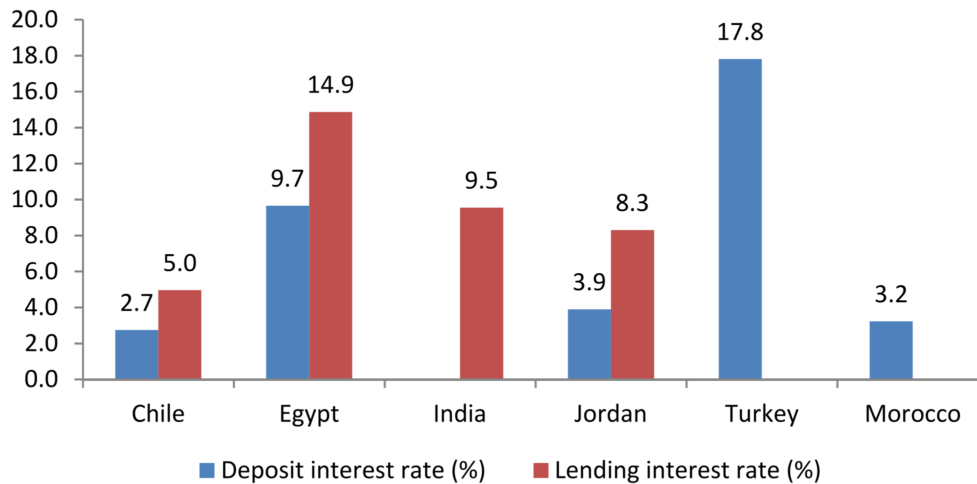
Source: Central Bank News (http://www.centralbanknews.info/p/reserve-ratios.html).

Figure 6. Bank liquid reserves to bank assets ratio (%)



Source: World Development Indicators.

Figure 7. Interest rates (%, average of 2015-19)



Source: World Development Indicators.

Like many emerging markets, banks in Egypt are the dominant financial institutions as they control most of the financial flows and possess most of the financial assets (almost 95 percent of total financial system assets). It is noteworthy that, over several decades, different economic reforms have directed more bank ownership and activity toward the private sector and have activated a long-dormant securities market.

Banks operating in Egypt can be classified as public, private and joint venture, or foreign, according to ownership. Public sector commercial banks have a volume of business that constitutes a significant share in total bank transactions. Private and joint venture as well as foreign banks (operating through branches) are private sector institutions established under investment law and law no. 88 of the year 2003 of the Central Bank, the Banking Sector and Money promulgated by presidential decree no. 101 of 2004. Foreign banks are all registered as business and investment banks as their envisaged role is to raise long-term funds in the international financial markets and to promote investment. The banking industry is highly concentrated since the three public sector commercial banks are the largest operating banks in Egypt in terms of balance sheet size, accounting for more than 50 percent of total bank assets. While they have a close relationship with state-owned companies, they are also major participants in the equity capital of most joint-venture banks. By contrast, private banks play a less dominant role in the market for loanable funds and focus on trade-related financial services to the private business sector; they have recently diversified their financial services by widening their retail services (personal loans, mortgages, insurance products, individual retirement plans, and credit cards).

In order to improve the efficiency of the banking system, in 2004, the CBE adopted a reform program that aims to build a solid infrastructure and a more efficient and sound banking sector. Although the global financial crisis led to many negative repercussions on several world economies, the Egyptian banking sector weathered the negative repercussions due to the successful reform program launched in 2004. This reform was implemented in two phases. The first phase had three main pillars: first, strengthening the legal, regulatory, and supervisory framework; second, consolidating the banking sector and increasing private participation within banking assets; and, finally, the financial, operational, and institutional restructuring of public sector banks. Those reforms led to robust, solid, and well-capitalized banks (Table 1), as banks decreased from 61 in 2004 to 40 in 2008, while assets increased by 88 percent to reach EGP 1.1 billion in 2008 up from EGP 0.57 billion in 2003. In addition, total deposits increased by 85 percent over the same period, and the capital adequacy ratio increased from 12.2 percent to reach 15.1 percent. In addition, the flow of new capital through mergers and acquisitions in the banking system reached EGP 24.24 billion in 2008. Moreover, as shown in Figure 8, the banking reform plan reduced the number of operating banks in Egypt from 61 banks to 38 banks while increasing the number of branches by 50 percent to reach 4,258 branches in 2019, up from 2,783 branches in 2004. This was mainly due to the significant decrease in the number of private and foreign banks that ended

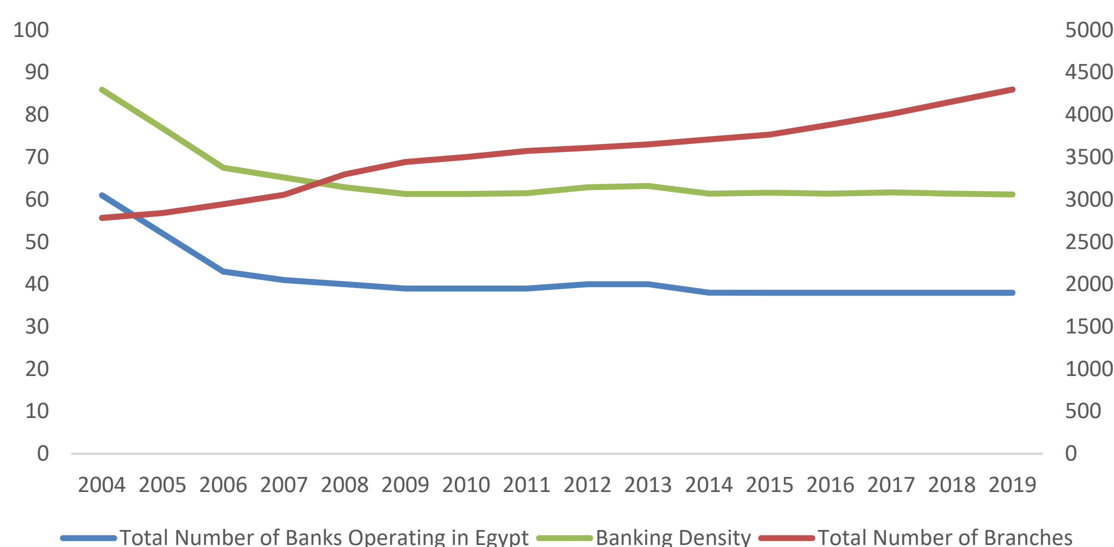
their business. Furthermore, banking density slightly decreased from 24.9 to 23.2 thanks to this increase in the total number of branches (Figure 7).

Table 1. Banking aggregates

EGP million (end of June)	2003	2008	2020
Total assets (in EGP)	577,938	1,083,311	7,022,145
Total deposits (in EGP)	403,144	747,199	5,133,648
Capital adequacy ratio	12.20%	15.10%	19.5%

Source: Central Bank of Egypt.

Figure 8. Number of banks and banking density



Source: Authors' own elaborations using the Central Bank of Egypt Economic Reviews.

The second phase of the banking sector reform program that started in 2009 aimed to deepen the Egyptian banking sector and enhance its efficiency and competitiveness by improving access to financial services, continuing the strengthening of the regulatory and supervisory framework through the implementation of Basel II/III, and enhancing the implementation of corporate governance rules and regulations.

Yet, in light of the global technological developments that affected the financial systems, a new law was promulgated in 2020 to cope with such changes: the Central Bank and banking system law no. 194 of 2020 (published in the Official Gazette on September 24, 2020). It includes 235 provisions (while that of 2003 includes 135) related to the CBE, the banking system, electronic payment services, foreign exchange, protection of customer rights, and competition and dispute settlement, with a special focus on financial technology and the governance of commercial banks. The law also introduces a chapter that regulates banks in financial distress instead of bankruptcy law no. 11 of 2018.

All these different reforms made the banking sector more resilient in Egypt, especially in the aftermath of the financial crisis of 2008 and the period of political instability of 2011-13. After presenting an overview of the banking sector in Egypt, the following sections analyze the role of PBDs in Egypt more thoroughly by analyzing the literature and providing an overview of their role, structure, and mandate.

3. PDBs, economic growth, and SDGs: A literature review

3.1. What is a development bank?

PDBs are "financial institutions initiated and steered by governments with the official mission to proactively orient their operations to pursue public policy objectives… PDBs… lie at the intersection of state and market; because they are aimed at using market means to achieve development goals" (Xu et al., 2021, p.274). The following criteria should be met in PDBs:
1. They should have a separate legal personality and financial account.
2. They should deploy financial instruments, such as loans, equity, guarantee, or insurance, and should ensure the financial discipline of clients to sustain the PDB operations.
3. Their funding sources go beyond periodical budgetary transfers.
4. They have a proactive public policy orientation. They are initiated by governments to address market failures and incubate markets in a proactive manner.
5. Governments play a steering role in setting their corporate strategies (governments initiate or establish PDBs, sit on the board of directors to play a steering role in pursuing the development-oriented mandate, or provide fundraising support).

Kovachev (2013) defines development banks as a form of government intervention in the financial sector that aims to compensate for the market failure that hampers the provision of finance to achieve socioeconomic objectives and support a country's economic development. Development finance entails the specific financial services that private-owned commercial banks are unwilling to perform due to their relatively high risk, which is characterized by social gains higher than the economic return.

According to Kovachev (2013), the following conditions must be fulfilled in PDBs:

- The bank provides credit lines to targeted sectors of the economy according to the development plan (export-oriented industry, infrastructure, agriculture, SMEs…etc.).
- The bank fosters new investments in major global activities, such as clean renewable energy, biotechnology, and environmental projects.
- The bank functions in a free-market context and does not crowd out the private sector.
- The bank makes enough profits to be self-sustainable.

The requirement that development banks should be financially sustainable and should have funding sources beyond periodical budgetary transfers allows these banks to provide additional

sources of finance to complement public resources while crowding in private investment. In other words, "development finance complements government resources and market funding by filling the niche between fiscal funding for projects from which no cost recovery is possible and private funding for projects with profit opportunities. Development finance aims to lower the risks of investment in certain sectors or areas and hence crowd in private sector investment" (Thorne and du Toit, 2009, p.678).

While market failures justify the existence of PDBs in economic literature, these banks are also criticized for being subject to government failures. The creation of PDBs is a form of government intervention in the financial sector that could be associated with inefficiencies caused by moral hazard, crowding out the private sector, and – under weak institutional framework – poor governance and political manipulation that can lead to bank insolvency and high fiscal costs. The empirical research on the impact of PDBs on growth and development provides mixed evidence (Gutierrez et al., 2011). Hence, while PDBs are a form of government intervention to correct market distortions, they have their limitations and should not be an alternative to financial reforms that guarantee a more competitive financial sector and mitigate information asymmetries through better credit history bureaus. In the following sections, the main arguments for PDBs and their roles are reviewed along with their limitations.

3.2. The role of PDBs in economic stability and sustainable development

PDBs are legally independent financial institutions that are usually majority-owned or totally owned by the government, with the aim of supporting development goals. In this regard, PDBs serve to provide financial and non-financial services to projects that have social externalities. Hence, *these banks distinguish themselves from commercial banks as they are not only driven by financial profits, but by the socioeconomic impacts of the financed project*. The general mandate of PDBs must emphasize the objective of these banks in supporting development projects in fields that are in accordance with government development plans and imply high social externalities and not on the main agenda of private banks.

3.2.1. Bridging market gaps and crowding in the private sector

As stated in the economic literature (Feil and Feijo, 2020), the private financial sector sometimes fails to meet the demand for certain economic sectors, geographic areas, and specific services. Therefore, it is widely accepted that because of market imperfections (particularly the asymmetric distribution of information) PDBs are needed for improving resource allocation efficiency and therefore have a role to play in modern economies.

PDBs play an integral role in the growth and sustainable development of the economy by filling the market gaps that exist due to the inability and/or unwillingness of the private sector to finance certain projects that have social and developmental returns but are either too risky or too costly to finance. In doing so, they mobilize and crowd in private funds to achieve development plans.

Accordingly, PDBs should not crowd out the private sector as they exist to fill the gap between the needs for development projects and the abilities of the private sector. PDBs do not substitute the role of governments in providing basic services that have an important social impact but are financially unprofitable. These services can only be covered directly by government spending (International Finance Consulting, 2017).

One of the tools that PDBs can use to crowd in private investors is the extension of guarantees. PDBs can extend guarantees to private investors instead of direct lending. This is more relevant to investments in startup projects that would be too risky for private creditors to finance but have high social externalities. This applies to projects that are credit-constrained due to low creditworthiness, but it assumes that PDBs have informational superiority and is more relevant to the case where commercial banks are excessively risk-averse. It is important, however, that PDBs do not engage in guarantees unless they have adequate information and expertise in the underlying project to avoid transferring private losses to PDBs (Fernandez-Arias et al., 2019). Another strategy proposed by Fernandez-Arias et al. (2019) is through equity holding. This allows PDBs to share in the profits of the firms and play a role in the management of these venture projects and help with non-financial technical assistance to these firms. The equity provided by PDBs will also act as collateral and thus help crowd in private creditors. This strategy can be superior to guarantee extension for PDBs due to the profit-sharing advantage, since profit sharing in successful ventures would account for the losses in failed ones and hence would avoid the high cost of guarantees borne by banks.

3.2.1.1. Financing or co-financing projects with the private sector

In order to fulfill their role, PDBs make use of their close relationships with governments, and their stable capital structures allow them to *mitigate the political risks* of new projects and intervene to either directly finance or co-finance with the private sector projects that have high positive externalities for development (Mohieldin et al., 2018). PDBs maintain a good relationship with both the government and the private sector, and this allows them to coordinate between both and fill in the gaps. *PDBs optimally choose the best mix of public-private sources of funds* so that a major part of their sources of finance would be public and/or private financing through long-term bonds to prevent them from only focusing on the financial profit target like commercial banks (Romero, 2017). Because of this, the capital structure of PDBs is more stable as it relies more on long-term sources of finance and hence can finance long-term projects (Marodon, 2020). Accordingly, PDBs finance infrastructure projects that usually require long-term financing and a large amount of capital. They also finance export-oriented projects to make up for the limited foreign currency available to private investors. Moreover, they also focus on micro-finance and rural development in marginalized areas due to the lack of access to private finance and new technologies due to their relatively higher levels of risk (Marodon, 2020; International Finance Consulting, 2017).

Since PDBs are important in helping establish projects that would otherwise be impossible with private financing only, these banks need not provide the required finance at a low lending rate. Financial assistance to projects is justified on the grounds of “big push” models where multiple projects need to be established simultaneously to reap their positive externalities because these projects are complementary. “A big push, therefore, requires either commercial banks with market power or a large state-owned bank that does not aim at maximizing profits” (Fernandez-Arias et al., 2019, p.9). “*PDBs should develop a business model to help them select projects that are in line with their development mandate but are also financially profitable at the same time to help them remain resilient and sound. This will prevent them from becoming a burden on the government. By achieving financial profits, they also signal to the private sector possible profitable investment opportunities, and thus crowd in the private sector and help fill the market gap”* (International Finance Consulting, 2017).

3.2.1.2. Providing non-financial services to development projects

PDBs can aid in mobilizing and crowding in the private sector to certain development projects *by providing non-financial services* for these projects, thus making them more bankable. In this regard, PDBs help the project without the need to directly share in its financing. Examples of such services include training and advisory services, technical assistance, and entrepreneurship programs and seminars. Some PDBs also invest in technologies to allow entrepreneurs in marginalized areas to better access financial services (International Finance Consulting, 2017).

3.2.1.3. Subsidizing financial services

PDBs often serve development goals by *providing cheap sources of finance to projects with high levels of social externalities.* These projects usually exist in poor areas where commercial bank loans would be too expensive. PDBs can hence provide loans with lower interest rates compared to commercial banks and thereby allow the implementation of such projects. It is worth mentioning here that PDBs should not resort to providing lending rates that are below their cost of capital, thus making the project financially non-profitable (International Finance Consulting, 2017). Subsidized lending could be financed through grants and official development assistance, but the use of grants should come with caution as they may lead to a moral hazard from the PDB side and thus support failing businesses (Romero, 2017). Subsidized loans can be a powerful tool when commercial banks are not competitive and are lending at inefficiently high rates. Therefore, in this case, subsidized loans will not be a cost to the government (Fernandez-Arias et al., 2019).

Subsidized financial services must be adopted when justified; meaning, when the projects to be financed are expected to generate higher externalities in terms of productivity and innovation (IDB, 2014). In order to avoid subsidized loans from crowding out private banks, Fernandez-Arias et al. (2019) argue that cheap credit should be granted to projects with high positive externalities and that are not credit-constrained. The authors argue that subsidized lending should be based on “real activity rather than defective financial systems” (Fernandez-Arias et al., p.8). Meanwhile,

when the project faces tight credit constraints but is expected to have social externalities, the more suitable strategy would be the extension of guarantees to crowd in private creditors.

3.2.2. Maintaining economic stability during times of crises

As argued earlier, PDBs have more stable capital structures that mainly depend on long-term sources of finance. Accordingly, they show lower liquidity risk in times of volatility and can be a source of stability for the economy during crises as these banks are at a greater opportunity for investing in development projects and granting credit when the private sector falls short of liquidity (Marodon, 2020).[7] Empirical evidence reviewed by Leon (2020) confirms that this *counter-cyclical role* applies to public commercial banks without an explicit development mandate due to four reasons:

1. The implicit mandate that public banks share due to their public ownership makes them more focused on long-term objectives rather than profitability alone.
2. The political manipulation of public banks affects their credit policies in times of crisis. Therefore, governments generally use public banks as a tool to gain support during economic downturns.
3. The stability of their capital structures renders them less prone to liquidity risk compared to private banks. Public banks rely on their own resources, and there is a government guarantee on their deposits and so they are less likely to be prone to bank runs.
4. They maintain long-term relationships with investors as they tend to grant long-term loans. This relationship and deep knowledge of their customers makes them more willing to maintain their credit policy during crises.

The effect of this counter-cyclical role on long-term development, however, is dependent on the bank's independence from political bias during project selection, their success in choosing worthy projects to support, their success in risk management and overall financial resilience after the crisis, and the quality of institutions in the country. *The importance of good governance practices and the quality of institutions is key to the success of these counter-cyclical effects on development, even for PDBs.* A counterexample is the case of Mexico after the global financial crisis; the counter-cyclical lending strategies of PDBs focused mainly on the support of heavily indebted businesses and thus led to higher fiscal costs for the government (Romero, 2017).

Marshall and Rochon (2019) show how PDBs can play an important role as part of the economic policy toolkit. According to the authors: "Public banks could be used along with monetary and fiscal policies, to control aggregate demand in the short term." When the regulator faces many difficulties in the regulations of private financial institutions, the public banks can serve the role of the public policy arm, giving functionality to the financial system through targeted credit policies. This strategy would be more efficient than public spending and would enhance fiscal

[7] While this role for PDBs is not a developmental role, this argument is presented here as one of the main arguments for the establishment of PDBs in an economy and one of its main roles.

policies. The authors argue that public banks, unlike private banks, are not driven by profits and do not engage in speculation. The speculative activity of private banks leads to financial crises and their profit-seeking goal leads to credit rationing during downturns, even with government bailouts. Banks "would not lend out the new money, but rather use it to reconstruct balance sheets" (Marshall and Rochon, p.5). Within this context and under only private banking, the impact of expansionary fiscal policy, such as higher government unemployment benefits and lower taxes on aggregate demand, will be hampered. "If families and businesses use fiscal stimulus to pay off bank loans, then fiscal policy offers similar results to monetary stimulus – an increase in bank profits but little increase in aggregate demand" (Marshall and Rochon, p.13). Accordingly, the authors suggest the introduction of public banks as a policy tool to aid in limiting the negative effects of the too-big-to-fail private banks. The argument for directing credit policy through public banks broadens the understanding of their role beyond their countercyclical function. Thus, public banks would be part of a permanent toolkit for managing aggregate demand and finance and funding long-term investments; acting counter-cyclically and ensuring that productive investment is not held hostage to private financial sector liquidity preference.

3.2.3. Information collection and identifying areas of market and government failures

Another role played by PDBs is proposed by Fernandez-Arias et al. (2019) in their discussion on the creation of smart development banks. They argue that due to the proximity of PDBs to investment projects, whether through the screening of projects or the direct involvement in the establishment of the project, these institutions can act as a source of information to discover possible areas of market and government failures. PDBs can be used as a tool to collect and analyze information for the designing and implementation of development policy based on defining actual market failures rather than assuming their existence, which can result in the financing of inefficient projects adopted by uneducated government development plans. They defined the main areas that PDBs can help collect information about with the direct help of private investors in the following (Fernandez-Arias et al., 2019, pp.21-22):

1. What are the business ventures that the private sector is exploring?
2. What type of inputs (e.g., goods, services, skills) that pioneering firms need to develop and become viable?
3. What are the bottlenecks that affect specific industries?
4. What are the industries that could benefit from the experiences already acquired in other parts of the economy?
5. What economic activities can generate positive externalities or would benefit from interpectoral coordination?

Accordingly, these smart development banks can use their information database not only to define market failures and the subsequent designing of development policies but also to aid in evaluating the success of these policies at a later stage. This information collection role of PDBs would also

facilitate the governance and accountability of these institutions as it would lead to more transparency and improve the measurement and assessment of their development role.

3.2.4. PDBs and social development goals

It is well-established that fulfilling social development goals (SDGs) requires the cooperation of countries on the global level since most of these goals are interlinked; a shortage in one country affects the rest of the world. On another note, a shortage in one goal affects the achievement of other goals, even within a given country. This calls for development projects to be implemented in parallel with other institutional reforms and measures to guarantee that they will produce their expected social externalities. It also requires that the private sector follows and adheres to some governance rules in its investment, as government investments in development projects will not yield the expected social gain if private investors do not alter their selection mechanism to be in line with the same goals. According to Marodon (2020), the private sector continues to invest heavily in the industries that they are well-acquainted with, even though some of these projects have a negative impact on the environment and contribute to loss of nature. Despite the negative impacts of oil industries on the environment, it is estimated that investments in oil-related sectors in 2019 were almost triple the total annual amount of official development assistance directed to reducing pollution and the achievement of SDGs. Thus, the achievement of SDGs requires the cooperation of both the private and public sectors on the national level as well as the cooperation of countries together on the international level. Depending on government budgets alone to finance such a transition is unattainable due to the high fiscal cost, so there is a need for private sector engagement to guarantee the expected results. *This emphasizes the importance of the involvement of PDBs in the national, regional, and international contexts.*

The earlier discussion of the functions of PDBs and the justification of their existence highlights three main reasons why SDGs cannot be efficiently sought by governments without the help of PDBs (UN, 2021).

First, due to their *more stable capital structures*, their close relationship with governments, and their role in stabilizing the economy during times of crises, PDBs can take on macro-relevant risks. These risks impede development and hinder the financing decisions of long-term development projects by private banks. However, due to the counter-cyclical role that PDBs play, they can take on the responsibility of financing or co-financing long-term development projects that would be resilient during economic downturns with private investors, which would facilitate the transition to sustainability.

Second, PDBs can have a catalytic role in countries with under-developed financial markets. Due to the poor financial systems in these countries, there is a lack of information on the credit rating of investors and inefficient lending rates, which contribute to the difficulty in calculating the expected returns of projects for the private investor, not to mention the lack of access to banking

products by the poor and marginalized. This is where PDBs can step in with their resources to make the market more competitive in coordination with regional and international development banks.

Third, PDBs can provide the long-term funding needed for the establishment of long-term development plans needed for the transition. Due to their development mandate, they can accept low profits if a positive social impact is expected. Furthermore, due to their co-financing programs, long-term relationships with private investors, and knowledge of the local markets and barriers to investment, PDBs can crowd in private investment and direct them toward the achievement of SDGs. On climate policy finance, for example, Smallridge et al. (2012) show that climate finance funds are not sufficient to induce the needed transition, as they are directed to governments that use them to change the policy barriers with little effect on actual private investments. *Furthermore, the transition requires coordination between different players, and these last two points stress the importance of PDBs with their knowledge of the markets, investors, investment barriers, and their ability to induce private sector engagement and coordination.* PDBs can also help reduce the risk of new technologies for the private sector and thus encourage them to participate through constructing project incubators and providing other non-financial assistance.

3.3. Financial regulations of PDBs: Is it better to be more prudent, or less?

The failure of a majority of PDBs has been attributed to poor regulation. The conflict of interest issue is reflected in the government as both the owner of these banks and the entity controlling the regulation and supervision entities that suffer from a lack of governmental independence. It is important to balance between the government as the owner of development banks and the government as the supervisor of banks (Mazzucato and MacFarlane, 2019).

To achieve this, it is important to ensure that government ownership does not distort the policies or regulations. One way to achieve this is to create an entity independent from the government that reports to a legislative assembly and hence allow management complete independent operational control. The same is crucial for the supervisory bodies, which should also be independent to protect the State from reputation and credit risk and allow the private sector to operate in a competitive environment.

PDB requirements are not different from those of private banks. PDBs should have independent boards, sound risk management, efficient monitoring, and high levels of disclosure. It is very important to ensure that the playing field is competitive and that public banks do not crowd out private banks. In terms of capital adequacy, there is a view that development banks should be exempted from the Basel requirements, while others suggest that development banks should not be exempted from their commercial activities. Credit rating is another important tool to help banks and governments assess their financial management ability. Credit ratings are not a formal tool; however, they can complement the formal role of regulatory entities.

3.3.1. Should development banks be regulated?

De Castro (2018) adopts the point of view that PDBs should not be regulated but supervised. His point of view rests on the notion that market failures occur due to externalities, asymmetric information, and low levels of competition and monopolies. He highlights that PDBs do, in fact, lower the risks of market failure as they reduce social and regional disparities, have a positive impact on the environment, promote technological advances, and are able to provide public information and hence lower the issues of asymmetric information.

Supervision, not regulation, is required to avoid systemic crises, increase capital allocation efficiency, and allow for consumer and investor protection. Supervision should focus on two main aspects: to verify that the credit is allocated efficiently and that the social benefits of the projects surpass the fiscal costs associated with them. Another matter of concern for supervision is ensuring that PDBs do not practice monopoly due to their relatively low interest rates compared to private banks. However, PDBs can by no means be classified as a case of monopoly, since a monopoly rests on higher prices and not lower interest rates (De Castro, 2018).

3.3.2. Is the Basel regulation a suitable framework for development banks?

The Basel regulations have been under scrutiny after their failure in hindering the global financial crises. The flexibility of the Basel II framework allowed many PDBs to voluntarily adhere to it, benefiting from the "quality seal" as well as the flexibility of its risk management tools. It is, however, important to affirm that PDBs are different from private banks and hence should require different risk management tools. Accordingly, Basel regulations should consider the PDB-specific characteristics and adopt a more flexible specific set of regulations for them. This flexibility will not only allow PDBs to pursue their developmental role but also allow them to practice their positive impact on the economy and reduce financial fragility. This can be achieved by their ability to offer stable long-term funds, thereby lowering uncertainty and protecting the economy from external shocks (De Castro, 2018).

3.4. PDB best practices and good governance

The justification of PDBs and their existence relies on the existence of market failures due to information asymmetry, which leads to credit rationing by the private sector and calls for the intervention of PDBs to carry on the development process. It is important to note, however, that providing credit will not solve this problem. PDBs demonstrate government failures, which might come at a great cost. Government failures related to wrong financing decisions or poor monitoring of the financed projects lead to high fiscal losses, misallocation of resources, and the creation of public sector "white elephants" (Fernandez-Arias et al., 2019). Additionally, the public-private financing of development projects might create a moral hazard since the private partner benefits

from the favorable terms offered by PDBs, and the knowledge of political pressure for project implementation might lead to lax collection (Marodon, 2020).

Therefore, it becomes important for PDBs to ensure that they are more efficient than the private sector in obtaining and analyzing information about the underlying projects to avoid government failures (Gutierrez et al., 2011; Fernández-Arias et al., 2019). Better information collection and analysis also aid in the accountability and governance of these banks. Poor governance in PDBs not only leads to fiscal burden; it also has social costs that are difficult to calculate since most governments provide either direct transfers to these banks or guarantees on their debts. These subsidies entail social costs even for financially profitable banks if the PDBs fail to reap the positive externalities of the underlying projects.

In order to avoid such failures, PDBs should operate within rules that guarantee the achievement of their development mandates while minimizing the direct and social cost of the subsidies granted by governments to them. *This requires PDBs to develop operational frameworks that allow them to select the worthiest development projects and ensure that they provide them with a suitable form of assistance without crowding out the private sector while maintaining financial resilience.*

According to Thorne and du Toit (2009), there are several factors that lead to the success of PDBs: an enabling environment, a public mandate, regulation and supervision, governance and management, financial sustainability, and performance assessment. In what follows, we shed some light on international best practices of successful PDBs.

3.4.1. Clarity of the mandate

Development banks need clear and appropriate mandates. The several success stories of development banks in Malaysia, Brazil, and Rwanda show the importance of flexible, well-defined, and institutionally fit mandates (BAR, 2006). The mandate should have several important characteristics that include clarity, fitness, scope, and flexibility (Thorne and du Toit, 2009). In terms of clarity, the bank needs to have a clear and concise mandate that will allow it to achieve the stated objectives. If the mandate is unclear or vague, the bank can drift from its main objective and lose in terms of accountability. The scope of development banks ranges from a very wide scope, which is multi-sectoral development banks, to a narrow scope, which includes the specialized development banks that focus on one sector. While a multi-sector development bank has the advantage that it can accommodate several sectors, diversify risk across different sectors, and achieve larger benefits for the financial sector, it can be unfocused, ineffective, and more prone to political interference, thereby leading to high costs borne by the economy. On the other hand, specialized development banks are more focused, but because they cover only projects within one sector, countries would require several specialized banks, which can be a challenge in the case of small financial sectors. Hence, the choice of the broad or narrow option will be dictated by the macro-economic environment, the potential market size for the bank, and the efficiency of the

supervising and regulating institutions. The changing and evolving environment in which development banks operate makes the flexibility of the mandate another important characteristic. PDBs should be able to regularly revisit and adjust the mandates in order to be compatible with the developments in the economy, the development agenda, and the advances in the financial sector.

In practice, not all PDBs have clear-cut mandates. In fact, some PDBs have explicit development mandates stating the bank's role in certain sectors, while others have general development mandates underscoring the support of the bank to development plans. It is argued that banks with a narrow mandate are better aligned with their development goals as they do not lead to crowding out private banks, unlike banks with general development mandates that end up competing with private banks. Narrow and clear mandates also facilitate the overall transparency and accountability of PDBs. On the other hand, more general mandates lead to better information collection and coordination between different sectors, which creates economies of scale for these institutions (Fernández-Arias et al., 2019). Romero (2017) defines a clear development mandate (one of the key features of a successful business model) as one that is strong, avoids dual or vague purposes, is stable and counter-cyclical with a long-term perspective, targets finance where it is most needed or where it has the highest social return, takes care of social and environmental standards, and is aligned with national plans. As mentioned earlier, public banks with no explicit development mandates were found to have a counter-cyclical role in stabilizing the economy during downturns in many countries. Accordingly, the *clarity of public mandate* can be one factor contributing to the accountability and governance of PDBs; however, it might not be necessary or sufficient since the *quality of institutions and independence from political pressure* play a major role in how the bank's policies actually contribute to the country's development.

3.4.2. Establishing a theory of change and a results chain for the projects

In order to stop PDBs from becoming a burden on the government budget, they have to be financially sustainable while financing projects with the highest social returns. This implies that PDBs should have a framework for defining and measuring the social return of a project to select the best projects for investment. This social return can be in the form of rural development; expansion in SMEs; women's empowerment; climate-friendly projects; poverty reduction; the creation of job opportunities, capacity building, and knowledge transfer; and the achievement of SDGs in general (International Financial Consulting, 2017; Romero, 2017). Having identified the areas of development of a project, well-governed PDBs should be able to make use of a theory of change *to develop a results chain linking all the financial inputs of a project to its expected developmental outputs.* This would "establish what should be measured and reported; communicate to stakeholders the rationale for chosen activities and how these activities lead to development outcomes; and prevent unrealistic expectations of impact directly attributable to the PDB's interventions" (International Financial Consulting, 2017, pp.5-6). The bank and government should be aware of the costs and benefits of the various development projects in order

to make the correct decisions and perform efficiently. Project assessment must cover two main aspects:

1. Outreach (Thorne and du Toit, 2009) covering the depth and breadth of the service, the cost and benefit, and how many will benefit from it and for how long.
2. Financial sustainability of the services provided to the project.

3.4.3. Monitoring and evaluating the projects in the post-financing stage

A successful PDB should establish a monitoring and evaluation department to measure the actual impact of the project in the post-financing stage. Thus, while the theory of change defines the expected development impact, the monitoring and evaluation department measures the actual impact and guarantees efficiency and good governance. This is particularly important since, as argued by Fernandez-Arias et al. (2019), PDBs might be too pressured by their financial resilience that they become more concerned with it than with the more difficult to measure development mandates and end up functioning like private commercial banks. Measuring and evaluating the development impact of projects in the post-financing stage can allow banks to judge their success and weigh the development and financial returns against the financial costs. It also allows the bank to anticipate problems and intervene early in the project implementation stage to ensure the achievement of the anticipated results. Monitoring allows the bank to make sure that projects comply with the development objectives and environmental standards of the bank and projects not complying with the bank requirements should not receive more funds. The bank should have the right to stop supporting projects that do not abide by development goals (Romero, 2017). Best practices suggest that PDBs should use *scenario analyses to calculate the expected effect of policy changes on the output and impacts of a project and expect problems and intervene early enough to aid the investors and avoid project failure.* This also aids in decision-making and helps create a database that can be used to crowd in private investment and guide government plans. The development impact indicators used by PDBs may be linked to specific government policies, specific bank programs, influenced by donors, or they can be macro-economic indicators (International Financial Consulting, 2017).

Publicizing the results and actual impacts in the post-financing stage adds to the transparency and accountability of the bank and helps crowd in private investors to new sectors. In this regard, it is important to stress that the accuracy of the publicized information is key to the bank's financial sustainability. Poor governance practices to manipulate publicized performance indicators include publicizing only expected returns and not actual returns, non-prudent regulations of provisioning for expected and unexpected losses, and more forbearance with non-performing loans. On the other hand, "best-in-class PDBs take a sober view of the non-performing loans (NPLs) to determine the main reasons for the non-performance: Quality of credit underwriting? Political interference? Borrower perception that the PDB is "government" (International Financial Consulting, 2017, p.8).

In addition to the aforementioned best practices, it is important to note that the socioeconomic environment plays a major role in the success and sustainability of PDBs. While the mandate of the development bank is usually to improve the economic situation in the country where it operates, *it is nearly impossible for a development bank to operate efficiently when countries have major problems in their economic and political systems. In order to be successful, resilient, and sustainable, PDBs need efficient and prudent regulation, proper infrastructure, and independence from political manipulation.* They also require a stable political environment and well-functioning legal and supervisory entities that allow the banks to play their important role in both the financial sector and development (De la Torre, 2002; Bruck, 2005).

4. PDBs in Egypt over the last decade

Egyptian national banks have long played a vital role in Egypt's economy throughout the years, especially during crises where the whole economy was put under pressure. The role of public commercial banks is not limited to offering commercial services, but those banks equally fulfill several developmental mandates.

The engagement of public banks in development projects has been known for years but has been reinforced and recently connected and empowered by the government's recent efforts toward sustainable development and sustainable finance. The CBE has taken initiatives in this respect in the fields of promoting and subsidizing loans to SMEs, industrial, agricultural, and housing projects, mortgage finance, and vehicle substitution initiatives, which target environmental protection and the controlling of carbon emissions (CBE, 2021). The CBE principles on sustainable finance set the guidelines for all Egyptian banks operating in Egypt toward achieving sustainable finance, and, accordingly, SDGs. These include six main principles to create sustainable finance; meaning, creating a banking system that supports environmental protection and takes into account the social elements of projects, along with good governance and reporting policies. These principles are:

- Building the necessary capabilities and knowledge.
- Enhancing sustainable finance.
- Involving all stakeholders.
- Managing climate change risks.
- Applying the principles of sustainability to the bank's internal activities.
- Reporting.

Moreover, public banks, under the auspices of the CBE, engage in corporate social responsibility (CSR) activities that aim to address the most critical issues of community needs such as education, health, housing, debt relief, women's empowerment, and disability integration in order to ensure quality of life for all Egyptian citizens. Such community roles are rather humanitarian than developmental, though they can contribute to development through different indirect channels.

The biggest national Egyptian banks in terms of activity and market share are NBE, BM, and BdC. Banks generally follow the CBE's directives regarding lending rates and national strategies. Financial inclusion and entrepreneurship are among the key priorities on the current national agenda; therefore, one-fifth of national banks' lending portfolios are now directed to SMEs. Furthermore, banks have upgraded their digital banking systems in response to the COVID-19 pandemic, where Internet banking has become essential in carrying out banking transactions.

Before presenting a detailed analysis of these banks, it is important to note that Egypt is endowed with some PDBs (that are not commercial), the role of which is rather limited (with the exception of the National Investment Bank, see Appendix 1). These banks are:

1. *National Investment Bank*, the role of which is to finance and follow up on projects in the national plan for economic and social development through either sharing or lending such projects as well as following up on the implementation of those projects.
2. *Egyptian Agricultural Bank* provides the necessary support and financing to farmers for all types of crops and all activities related to agriculture, as well as providing all banking services, financing projects, natural gas, and biogas loans, especially in the countryside.
3. *Nasser Social Bank*, the role of which is to achieve social solidarity for all members of the society to have a decent life and to achieve social and economic development among citizens.
4. *Housing and Development Bank*, the key mandate of which is to finance moderate housing units for Egyptian inhabitants while bridging the gap between supply and demand in the real estate market.
5. *Industrial Development Bank* offers its services in economic and development activities and projects, besides savings vessels with multiple advantages, and provides the foreign currencies necessary for importing raw materials, machinery, and equipment.
6. *Export Development Bank of Egypt,* the mission of which is to boost and facilitate the access of Egyptian products to markets worldwide in all sectors.

Yet, as mentioned before, the role of these banks from a development perspective is rather limited given that most of the development-related activities are implemented by commercial banks that are government-owned. This section analyzes the largest three banks that dominate the market. The order of presenting them pertains to their size and market share.

4.1. National Bank of Egypt

NBE is the largest and oldest financial institution in Egypt. Established in 1898, NBE's mission is to maximize the efficiency of financial intermediation and promote financial inclusion while safeguarding depositors' funds and maximizing returns to shareholders. NBE contributed to Egypt's comprehensive economic reform program since 2016 as a key player in monetary and fiscal policies by availing the necessary domestic resources and foreign reserves. Following the floatation of the Egyptian currency, NBE offered high interest rate investment certificates with a total of EGP 545 billion. Additionally, NBE offers a variety of retail banking lending services that

are in continuous expansion. In 2019, NBE extended its outreach by opening 38 new branches, establishing 101 new ATMs, and attracting 1.4 million new customers (NBE, 2020).

Sustainability is a key principle in NBE's business strategy, which is in line with the UN SDGs and Egypt Vision 2030. Among NBE's strategic priorities are financial inclusion, SME support, e-commerce, empowering youth, green financing, and community investment. NBE also contributes heavily to social responsibility[8] in the areas of healthcare, education, and slums development, among others. NBE's total donations increased by 70 percent year-on-year reaching EGP 2.6 billion in the 2019/20 fiscal year. NBE supported families suffering from personal debt burden with EGP 75 million in tandem with the Misr El Kheir foundation.

NBE's lending facilities to the private and public sectors constitute one of the main channels through which the bank contributes to Egypt's economic development. NBE's total investment portfolio across Egypt's economic sectors accounted for EGP 583.6 billion in 2019. Its private corporate portfolio reached EGP 143.9 billion in 2019, out of which EGP 96.4 billion are directed to the production sector, and EGP 47.5 billion to the service sector, which conforms to CBE initiatives toward industrial deepening. More recent figures show that in the first half of 2021, NBE's top financing contributions were for the mining and quarrying, construction and real estate, and food and beverage, with total values of EGP 304.8 billion, EGP 210.4 billion, and EGP 40 billion, respectively. Table 2 presents a number of development projects partially or fully financed by NBE that target different economic sectors such as the construction, infrastructure, and transport sectors.

Table 2. NBE's financing contributions to private and public development projects across sectors

Project	Sector	Description	Amount
Egyptian Chemical Industries Company (KEMA)	Fertilizer industry	NBE supported the Egyptian Chemical Industries Company (Kema) in the implementation of its expansions by providing approximately 30 percent of the required finances.	EGP 532.4 million + USD 88.4 million
Sidi Krier Petrochemical Company (SIDPEC)	Petrochemical industry	NBE supported SIDPEC in the partial payment of the company's gas supply bill, as well as other credit facilities for the company's investment in expansions and financing major operating needs.	EGP 500 million

[8] NBE launched the first-ever Corporate Social Responsibility (CSR) unit in the banking sector in Egypt.

Bahr Al-Baqr Water Treatment Plant	Infrastructure	NBE contributed by 44 percent of the required financing for the construction of Bahr Al-Baqr water treatment plant.	EGP 4 billion
Social Housing Finance	Construction	NBE partially financed infrastructure projects in the new administrative capital by providing the required funds to the New Urban Communities Authority. NBE also supported the Social Housing Finance Fund to support the provision of a proper low-income housing category since April 2018.	EGP 3.2 billion
National Railway Authority	Transport	NBE provided financing facility to the National Railway Authority as part of a joint facility for General Electric to supply locomotives, spare parts, and technical support.	USD 575 million

Source: Constructed by authors using the 2020 NBE Sustainability report.

One of the bank's main mandates is to promote and support small- and medium-sized enterprises (SMEs), offering both financial and non-financial services. The total SME loan portfolio in relation to the bank's overall portfolio grew from 19.9 percent in the first half of 2019 to 27 percent in the first half of 2021. NBE signed two cooperation protocols: one with the Arab Academy of Science, Technology and Maritime Transport amounting to EGP 2-4 million and the other with Danone-Egypt as part of "Al-Omda" project amounting to EGP 7.5-10 million to support and enable young entrepreneurs to establish startups.

NBE provides a set of specialized financing programs to foster a number of industrial activities, including plastic recycling projects, marble workshops, and factories in the Shaq El-Teaban area. Other financing programs target the service sector's activities, including the veterinary services program and Al-Ahly program for hotels and resorts. SMEs specialized in agriculture-related activities are eligible for a variety of financing programs, such as livestock-raising projects, agricultural development programs using solar power applications, and agro-processing programs.

NBE also provides non-financial services to SMEs through the "Nile Preneurs" project, which is a nationwide initiative powered by the CBE with the aim of offering business development services, training and consultancy services, and mentorship services to SMEs. The "Youth in Business" initiative was designed by NBE and the European Bank for Reconstruction and Development to support distinguished young people to create their own SMEs by acquainting them with the necessary technical and managerial skills. Another non-financial program initiated by NBE is "Skills in Business," where consultancy services in the areas of human resources

management are provided to SMEs at affordable costs. Moreover, NBE supports green economy projects via its "Green Economy Finance Facility" program that provides free technical and consultancy support for green economy projects.[9]

4.2. Banque Misr

Another key player in the Egyptian banking sector is BM, which features 687 branches distributed across Egypt and offers a variety of corporate, retail, investment banking, and Islamic banking services. BM's mission is to facilitate access to affordable and reliable banking services for all Egyptians as well as ensuring inclusive and sustainable development for the national economy. It plays a vital role in supporting different industries within the national economy, serving a large base of more than 10 million clients in Egypt, with a total paid-up capital amounting to EGP 15 billion.[10]

BM offers vital support to the economy at large through its lending activities to both the public and private sectors. BM has facilitated funds for the development of the new administrative capital and the renovation of Egypt's road network as well as affordable housing projects. Moreover, BM extends credit across Egypt's economic sectors, including the petroleum, energy, electricity, gas, telecommunication, real estate, and construction sectors, where the bank's total loan portfolio reached EGP 584 billion in the 2020/21 fiscal year.[11] As shown in Table 3, BM took part in different development projects over Egypt's main economic sectors and areas such as manufacturing, agriculture, infrastructure, healthcare, and renewable energy, among others. The highest share of BM's contributions in 2020 was in the manufacturing sector with a value of EGP 73.9 billion, followed by the agriculture sector (EGP 6.9 billion), infrastructure development (EGP 1.9 billion), and healthcare (EGP 1 billion).

Table 3. BM's financing contributions to development projects across sectors in 2020

Sector	Value (EGP mn)
Manufacturing sector	73972
Agriculture sector	6869
Infrastructure development	1880
Healthcare	1020
Rural area development	502
Education	299
Clean and renewable energy	72
SMEs	39
Women's empowerment	20

[9] More details on NBE's different financial and non-financial initiatives for SMEs and their respective eligibility criteria and required documents are accessible on the NBE website https://www.nbe.com.eg/.
[10] BM bank profile. Accessible via Banque Profile (banquemisr.com).
[11] Data for the 2020/21 fiscal year are preliminary.

Source: Constructed by authors using data from BM.

BM follows the CBE's directives with regard to certain national objectives, such as promoting SMEs, financial inclusion, entrepreneurship, and innovation. Financial inclusion is considered a strategic priority on BM's agenda for promoting sustainable development and social welfare. Integrating marginalized communities and encouraging financial literacy will help ensure a better understanding of financial products. BM has adopted different channels to promote financial inclusion, including the organization of workshops and events on financial awareness for youth and unbanked groups during International Financial Inclusion Week.[12] Other programs also target youth by offering different banking services, including Teen Card, BM Card, and Go Card. Moreover, BM launched the "Amman El Masreyeen" certificate of deposit for temporary and seasonal employment insurance and low-income segments as well as "Tahweesha Bezyada," a saving initiative that aims to support small savers.

As part of its sustainable development agenda, BM supports and empowers SMEs through a number of initiatives to facilitate access to financial services and increase the share of SMEs in the bank's lending portfolio in line with CBE directives. In this regard, BM offers a wide range of lending and cash management services to SMEs, where around 420 thousand businesses receive financing from the bank. BM also takes part in the "Nile Preneurs" initiative and offers business development services and training to young entrepreneurs in order to enable an innovative environment. In cooperation with the Egyptian Banking Institute, BM launched the 'Mashrouak' initiative to encourage young entrepreneurs to establish small- and medium-sized projects by presenting effective methods of dealing with banks in order to meet financing needs.

The bank's SME portfolio reached EGP 31 billion in the 2019/20 fiscal year compared to EGP 19 billion in the 2018/19 fiscal year. The bank signed a cooperation protocol with the Ministry of Local Development that enabled it to finance 77,367 clients with a total value of EGP 6.3 billion. A second cooperation protocol was signed with the Damietta Furniture City company to finance, modernize, and stimulate the exports of SMEs specialized in furniture production. Through this protocol, the bank funded 149 projects with a total value of EGP 82.5 million. Additionally, BM signed a program with General Electric Healthcare to provide innovative financing solutions that help emerging clinics and hospitals develop and expand their business, thereby providing better healthcare to more patients across Egypt.

Furthermore, BM promotes women's empowerment through its partnership with the International Finance Corporation to help increase the number of women-led businesses receiving financing from BM as part of its SME portfolio.

[12] Banque Misr. 2020. "Annual Sustainability Report (2018/2019)." December.

On a final note, BM contributes to community welfare through its active role in social responsibility, where the bank's total expenditures on CSR activities amounted to EGP 760 million in 2019. Among the bank's CSR efforts is the renovation of Sanofar Primary School in Al Faiyum, which serves 1,800 students annually.

4.3. Banque du Caire

BdC is one of the major public commercial banks in Egypt with a network of 241 branches across the country and serving more than 3.2 million clients. The bank contributed to Egypt's economy throughout several decades by offering a full range of products and services across the economy's key sectors. BdC's total loan portfolio increased by 17 percent in 2020 compared to 2019 to reach EGP 92.8 billion. Furthermore, BdC is among the biggest contributors to national projects such as the "Tahya Masr Fund" earmarked for the new arts and culture city within the new administrative capital.

In line with CBE directives, BdC attaches vital importance to financial inclusion by building up its microfinance portfolio and customer base. BdC holds 25 percent of the microfinance market share in Egypt's banking sector, with 40 and 50 percent of the lending portfolio granted to women and rural areas, respectively. Moreover, BdC launched the first digital lending program in the Egyptian banking sector, thereby enabling microfinance clients to obtain loans electronically.

BdC offers a number of financing services to SMEs, including soft loans, cash management, treasury, and leasing services. The SME loan portfolio increased by 27 percent year-on-year to reach EGP 8.9 billion in 2020 and amounting to 10 percent of the bank's total portfolio.

Additionally, the bank extends non-financial services via three business development services hubs in Delta and Upper Egypt. In cooperation with Nile University, BdC sponsors the capacity building and educational activities provided to SME clients through the Export Excellence Center with the aim to enhance their export business capabilities. Furthermore, BdC signed a financing agreement with the European Investment Bank (EIB) to provide SMEs with new lines of credit with lower costs and flexible repayment schedules.

In cooperation with the Misr El Kheir Foundation, BdC developed the "Youth Training and Rehabilitation" program to empower youth and provide them with the necessary skills to ensure their employment in the Egyptian labor market. Through this initiative, BdC succeeded in supporting 210 young men and women (aged 18-35) in Sohag by providing them with adequate training and enabling them to obtain a stable source of income, therefore reducing youth unemployment at the national level.

BdC is also involved in CSR activities. The "Masdar Rizk" (which translates to "source of income") program was initiated by the bank in partnership with the Al Hassan Foundation to

empower wheelchair users and help them develop their talents by participating in the economy and earning their own living. Additionally, BdC issued 724 Aman certificates to provide an insurance cover for widows and divorced single moms in Beni Suef governorate.

One of the bank's top sectors of priority is the health sector. The bank participated in the renovation of many universities and governmental hospitals across different governorates by supplying them with medical equipment. It also supported the 57357 Children's Cancer Hospital and participated in the national campaign to eliminate Virus C by offering several donations. Moreover, BdC offered financial donations to the Dr. Magdy Yaqoub Foundation for the treatment of heart patients in Aswan and contributed to the completion of the third phase of Shefa El Orman Hospital in Luxor.[13]

5. Public banks' framework of operations, policies, and governance

The previous section highlighted the size and role of public banks in the Egyptian economy. In this section – and building on the determinants of PDBs discussed in section 3 – the paper attempts to analyze to what extent public banks in Egypt undertake the role of development banks. The analysis is based on a bank survey conducted with public banks.

5.1. Survey methodology

Building on the determinants of development banks listed by Kovachev (2013) earlier in section 3 as well as the definition of PDBs adopted by Xu et al. (2021) and the Finance in Common definition of PDBs, we formulated a 25-question survey and distributed it among public banks. The main objective of the survey was to determine to what degree public banks in Egypt can qualify as development banks in light of their actual market presence and dominance in the government's development projects as highlighted in section 4. The survey questions cover three aspects: legal status independence and autonomy, the role of the government, and the clarity of the public mandate. The first two aspects tackle the independence of the banks from the government in their sources of finance as well as their financing decisions. The third examines whether these banks are obliged by their mandates or the government to support the development process in the economy. The survey also addresses the bank's role during economic crises; one of the main roles of development banks and their main argument for existence. In addition, the survey also addresses the efficiency and governance of operations of these banks in light of the best practices highlighted in section 3.4. All survey questions are short answer questions to be answered with either "yes," "no," or "N/A" to be filled by representatives from the banks. The survey questions were sent to representatives from the public banks by email, and Zoom meetings with the representatives were then conducted to discuss the questions and the main objective of the survey. The discussions were fruitful in further elaborating the short answers to the survey questions. The discussions were also important to ensure the proper understanding of the underlying questions and their goal and avoid

[13] More information on BdC's activities and contributions are available on: https://www.bdc.com.eg/bdcwebsite/sustainability/our-activities.html

the misinterpretation of the questions. The survey questions, along with the responses received, are available in Appendix 2. The analysis has been focused on the two main public banks with the largest market shares: NBE and BM.

5.2. Survey results

5.2.1. Legal status independence and autonomy

PDBs should enjoy independent legal status and financial autonomy. The responses of both BM and NBE both confirm the legal independence of these banks and their autonomy in project financing decisions. The banks' government ownership does not interfere with their decisions in project selection, assessment, and monitoring. This finding should, however, be taken with caution as public banks in Egypt are the main dealers in the primary dealers' system, the role of which is to finance treasury bills and bonds. Hence, these banks play an important role in financing government securities. Thus, while legal independence can be established from the survey, actual independence can be questioned. Moreover, it is important to distinguish between the laws and rules promulgated by the CBE and the internal policies (such as credit and risk policy) that are determined within each bank. All banks are bound by the CBE's rules and regulations, but the credit and finance decisions are made by their own management according to the policy applied in each sector.

5.2.2 Role of the government

According to Xu et al. (2021), PDBs are controlled and supported by governments. The six survey questions denied the existence of any role of the government in both BM and NBE rather than ownership. The government does not seem to inject funds or contribute to financing the bank's activities or aid in NPLs (which are already very low). The central government does not use the bank as a financial arm to finance development projects by directly subsidizing loans to favorable projects. It is important to mention the CBE's SDG achievement initiative, which states that banks should increase and encourage "finance or investment in projects that take into consideration the elements of sustainable finance and that achieve sustainable development." The initiative calls for cooperation among all stakeholders in the issue, including central governments, but applies to all banks equally. In this case, public banks do not have an advantage in terms of government support, although the active engagement of BM in the execution and commitment to the initiative in the forthcoming future was emphasized during the interviews held in the preparation of this paper.

5.2.3. Clarity of the public mandate

An explicit and clear public mandate that states the bank's role in development, such as those related to SMEs, infrastructure, women's empowerment, housing, entrepreneurship, financial inclusion, green energy, and other SDGs, is one of the determinants of PDBs. Having a clear and explicit mandate also has its advantage in terms of PDB accountability and governance. Both BM and NBE representatives emphasized during interviews that they are purely commercial with no explicit/implicit development mandates. All three public banks engage in commercial banking

activities and control a major market share in the Egyptian financial sector. Yet, in addition to their actual presence and dominance in development projects as illustrated in section 4, the responses of BM and NBE to some survey questions were of particular interest. Both banks confirmed that some financing decisions reflect a general direction toward the financing of projects that serve the government's development plan. In addition, being committed to the CBE principles on sustainable finance, both banks confirmed that the projects' effects on the environment affect financing decisions and financing terms. During interview discussions of the survey questions, the BM representatives interviewed referred to the bank's commitment toward environment-friendly projects in terms of the financial initiative of the UN's environmental program for launching "responsible banking principles," which target the realization of sustainable development and the social and environmental responsibility of institutions. The interview discussions also proudly referred to BM's compliance with the Global Reporting Initiative (GRI) standards on its reporting framework in terms of governance, human rights, combating corruption, community engagement, and environmental protection and safety. While these guidelines shape the bank's policies, some challenges are still ahead in terms of defining and measuring the environmental effects with accuracy, an argument that was both brought up during interviews and is reflected in survey responses. The same goes for NBE, the representatives of which stated that they are still in the process of preparing an environmental and social management system.

The three public banks played an important counter-cyclical role in the Egyptian economy. While this is not a developmental role, it is one of the arguments for the establishment of a PDB and one of its main roles in an economy. While the survey responses received from BM and NBE only state explicitly that the banks expanded credit during economic downturns with the intention of boosting the economy, public banks' counter-cyclical role can be evident from their portfolio expansions as indicated by data on the SME portfolio and the total assets post-COVID-19 crisis in section 4. This provides evidence to the view that public banks without explicit development mandates can have a counter-cyclical role.

5.2.4. Bank governance

BM's response in this part of the survey comes in line with their previously mentioned commitment toward GRI standards. The bank is committed to publicizing both the expected and actual impacts of financed projects in periodical publications. *The bank is also committed to monitoring projects in the post-finance stage in line with best practices discussed in section 3.4 despite the non-existence of a department specialized in monitoring and evaluation or a model for project selection.* However, these issues pose some limitations and challenges ahead of BM toward achieving better governance. For NBE, the bank confirmed having a monitoring and evaluation department but only publicize actual evaluations of projects after customers' consent. In terms of NPL management, both BM and NBE stated that no NPL receives favorable treatment regardless of whether its objective is developmental or not, owing to the commercial nature of these banks.

6. Lessons learned from the Egyptian realities and the challenges ahead of PDBs

In March 2020, the World Health Organization (WHO) announced the outbreak of COVID-19. The global spread of the pandemic led all sectors of the economy to severe tests for survival, especially the banking sector, which had to undergo the most difficult tests. This is due to several reasons, most importantly due to the upsurge in demand for credit by businesses, hit by economic turmoil and struck by lengthy lockdowns, and consumers who lost their jobs or had to work for fewer hours and decreased salaries. Initially, all the banks suffered tremendously, yet within a few months, some banks managed to cope better than others. Several factors can help banks absorb unanticipated shocks. One factor is the concentration of assets in loans to households and businesses, and the second factor is how much capital banks hold to handle losses (CRS, 2020).

The Egyptian banking sector, at large, is well capitalized to absorb expected credit losses with a minimum capital adequacy ratio set by the CBE at 12.5 percent, and an actual average capital adequacy ratio of 19.5 percent in 2020 (CEIC, n.d). Another good indicator of the resilience of the Egyptian banking sector is the relatively high bank liquid reserves to bank assets ratio of 34.6 percent. The percentage of NPLs in the Egyptian banking sector in 2021 reached 3.5 percent of the total loan portfolio of banks. This percentage ranges from 2.2-2.6 percent for NBE, BM, and BdC. It is worth noting that NBE and BM ranked 9 and 10, respectively, among the safest banks operating in Africa (Global Finance, 2021). This is in line with the adoption of the Basel III principles (Nguyen, 2019), which was mainly initiated by the global financial crises. The Basel III framework aims to strengthen the quality and quantity of the regulatory capital base and to apply new minimum capital adequacy ratios (leverage ratio, common equity, countercyclical capital buffer...etc.). The main role of these ratios is to contain the ability of banks to take excessive risks (Ashraf et al., 2016). This will enhance the stability of the banking system and improve the resilience of the banks' risk profiles through the introduction of new minimum standards for funding, including the liquidity coverage ratio and the net stable funding ratio (BCBS, 2017).

Recent regulatory developments in Egypt:

1. Set a limitation of USD 50,000 on monthly cash and/or wired deposit amounts in foreign currencies for individuals and corporations.
2. The CBE decreased the maximum concentration ratio per client from 20 percent to 15 percent of the bank's tier-one capital. The maximum concentration ratio per client and its related parties has also been decreased from 25 percent to 20 percent of the bank's tier two capital.
3. The CBE gradually increased the total capital adequacy ratio to 12.5 percent.
4. The CBE introduced the capital conservation buffer to cover bank losses in the case of crises and to protect the banking sector.

Starting January 2022, banks in Egypt began applying Basel IV (CBE, n.d).

On another note, various recent measures have been adopted by the CBE to contain the negative effects of COVID -19 on the economy. Those include (CBE, 2020):

- Applying several cuts in overnight deposit rates.
- Deferring all customers' credit dues, implementing loan restructuring, and assisting customers to decrease their credit risk.
- Encouraging the use of electronic payment methods through a transitional period of lower or no fees and increasing limits.
- Allowing banking licenses to fintech firms through the new CBE law.
- Promoting banks to finance strategic imports, especially food commodities.
- Reducing the interest rates on CBE initiatives, including mortgage finance for middle-class housing, industrial, construction, and agricultural private sector initiatives.
- Supporting the tourism sector through multiple measures.

It is important to analyze how the three banks handled the effects of COVID-19. NBE (General Meeting, NBE, April 2021) achieved net after tax profits of EGP 13.1 billion in June 2020. The total financial position exceeded EGP 2 trillion in June 2020 and EGP 2.5 trillion by the end of March 2021. This was also reflected in a high level of equity for shareholders.

Based on the interview with NBE, it was evident that the bank's highest priority is to enhance digital banking services, especially to ensure public health standards and maintain social distancing in all branches. Although digitalization was initiated long before COVID-19, the pandemic has served as a catalyst for the increase in digitalized delivery alternatives. This resulted in an increase in the number of NBE's Internet banking (El Ahly Net) users to 5.6 million (March 2021).

During the pandemic, NBE also provided substantial credit to the tourism sector (EGP 1.57 billion) and (EGP 11.6 billion) to the industrial sector. This reflects the important role of NBE as a PDB that serves as a vehicle in promoting industrial policy, which is essential for growth in both developing and advanced economies. Even if financing is concentrated in large projects, they bear spillover effects on the rest of the economy (Hopewell, 2017).

NBE has learned from previous crises and performs regular stress testing since the 2011 revolution. This is an important tool to assess the effect of COVID-19 and to mitigate risk.

The bank has very low levels of NPLs and manifested the ability to be prepared for crises and act accordingly.

In addition, NBE promotes SMEs and follows the CBE's directives with regard to supporting SMEs, which are an important vehicle in achieving growth and development in Egypt.

NBE, BM, and BdC are the three main players of the primary dealer system, established in 2003, in charge of financing treasury bills and bonds through underwriting the initial offering of the government securities in the primary market. This role is not directly linked to development, yet banks perceive it as an important role they play in funding the government, which will then be able to finance development projects. From the perspective of the banks, they enjoy complete impendence from the government, and they consider themselves public commercial banks.

NBE also follows the directives of CBE in terms of financial inclusion, which has been achieved with the adoption of several innovative methods and the use of fintech to provide several alternatives for payment. This was reflected in an upsurge in Internet banking subscribers to 5.6 million and the increase in the total number of ATMs in June 2020 to 4,712, jumping to 4,953 ATMs in March 2021. Furthermore, the number of POS machines is currently 485,962 up from 314,372 in June 2020.

BM suffered a moderate contraction in profitability due to COVID-19 by EGP 344.2 million in the 2020/21 fiscal year, reaching EGP 10.70 billion from EGP 11.05 billion at the end of the previous fiscal year (General Meeting, BM, 2021). Based on our interview with BM, they highlighted that their main priority is financial inclusion. The data confirms this focus, with the increase in credit cards at the bank recording EGP 1.728 billion by the end of June 2021 compared to EGP 1.119 billion at the end of June 2020. On another note, personal loans increased to EGP 65.76 billion by the end of June 2021 compared to EGP 43.606 billion at the end of June 2020.

As explained earlier, BM has substantially contributed to SMEs. The general assembly's results showed a rise in the value of the SME portfolio to EGP 37.7 billion as of June 2020 compared to EGP 23.9 billion in June 2019. Based on the interview with BM, they highlighted that there is still a lot planned for SMEs in terms of conventional loans and mortgages. Another priority for the banks is women’s empowerment and broader outreach to underdeveloped areas through several means (the increase in branches and ATMs). BM has the largest branch network with more than 700 branches and units across Egypt, with a sophisticated network of 3,000 ATMs by the end of December 2020.

BdC managed the COVID-19 crisis with the use of numerous risk management tools, including a business continuity plan. As a result of the uncertainty caused by the outbreak of the pandemic, the bank used different models; applying quantitative and qualitative factors to measure the credit risk of its portfolio investment in all sectors of the economy.

In terms of financial inclusion, BdC established the digital and electronic payments company after obtaining the necessary approvals from the regulators (General Assembly, 11 July 2021).

In summary, the role of the three main public banks in Egypt as development banks is transmitted through three main channels: their role as stabilizers, their input in promoting SMEs, and their part in enhancing financial inclusion.

Their role as stabilizers to maintain economic stability in times of crisis was evident in the COVID-19 crisis. The resilience of the banks in times of crisis is crucial for the overall stability of the economy. The COVID-19 crisis would have been worse had the banking sector not been able to absorb the shocks with the available buffers in terms of capital and liquidity. The countercyclical role of these banks reflects their important role in times of crisis.

It is also clear that the three banks played an important role in promoting SMEs, as they have contributed to projects in all sectors of the economy. The three banks also followed the directives of the CBE in terms of enhancing financial inclusion through digitalization and various innovative fintech tools.

There are many lessons learned from the COVID-19 crisis that will serve to help face other challenges in the future:

1. Development banks can only play their important role if they have independence, flexibility, and expertise. The mandate of development banks is of lesser importance.
2. It is important to understand the factors that contributed to the different outcomes of COVID-19 on the different banks. The variables include capital, liquidity, and the legal and regulatory framework.
3. Stress testing is an important tool to mitigate risk. The introduction of stress testing in 2011 enabled Egyptian banks to react to several shocks, including COVID-19. After the pandemic, stress testing can focus on the effects of political challenges, economic fluctuations, and natural disasters.
4. COVID-19 has accelerated the complete adoption of digitalization. In this context, it is important to have the regulatory frameworks to protect banks and customers from various cyber threats. While the Financial Regulatory Authority (FRA) has drafted a law to regulate non-banking fintech operations, such as nano-finance, consumer tech, and insurance tech, the CBE has not taken visible steps in this direction for the banking sector.
5. Financial resilience is crucial to protect banks and the banking system. Building capital is not an option but a necessity. Liquidity is also of utmost importance, yet the optimal level of liquidity must be determined in order not to suffer from idle money and to avoid credit crunches.
6. The application of a flexible prudential regulation framework is needed to allow banks to operate freely and still maintain high levels of financial resilience.
7. Banks need to apply cost-cutting programs without negatively affecting their relationships with their customers.
8. The application of Basel IV principles is a further step in the right direction.
9. The future of the banking sector will be different, and all banks must equip themselves with all the requirements of the new era, which requires technological infrastructure, knowledge of fintech, and sufficient training on all the new financial tools.

7. Conclusion

This study aims to examine how the three main public banks in Egypt (NBE, BM, and BdC) played the role of PDBs.

We analyze the ability of banks and the banking sector to deal with crises and the disruption caused by COVID-19. We use the data provided by the banks and the results of a survey to analyze the role of the banks in development and to arrive at a number of lessons learned in how they were able to deal with COVID-19 turbulences. Our findings suggest that NBE, BM, and BdC are important stabilizers for maintaining economic stability. They played an important role in mitigating the negative repercussions of COVID-19 on the economy. Their financial resilience is based on high capital adequacy ratios and liquidity. The three banks also contribute to development through their pivotal role in promoting SMEs and various projects in the economy. The banks also play a prominent role in enhancing financial inclusion through digitalization and the application of innovative tools.

These three main roles in terms of maintaining financial stability, promoting SMEs, and enhancing financial inclusion allow for the characterization of public commercial banks as PDBs.

The future of banking after COVID-19 will be different, and the lessons learned from stress testing, mitigating risk, and acquiring financial resilience should serve as main instruments to deal with future challenges. The future of banking will depend heavily on digitalization and fintech. Hence, it requires institutional and regulatory frameworks that will allow banks to reap the benefits and minimize the costs.

References

Ashraf, B. N., Arshad, S. and Hu, Y. (2016). Capital regulation and bank risk-taking behavior: Evidence from Pakistan. International Journal of Financial Studies, Vol. 4 No. 3, pp. 16-36

BCBS (2017). Basel III: Finalizing Post-Crisis Reforms, Bank for International Settlements, Basel.

Beck, T., Demirgüç-Kunt, A., and Levine, R. (2000). A New Database on the Structure and Development of the Financial Sector. *World Bank Economic Review* 14 (3): 597–605.

Benefit Advisory Research (2006). Generic development finance institutional framework. Paper prepared for the Development Bank of Southern Africa.

Bruck, N. (2005). Future role of national development banks in the twenty-first century. Background paper for the Ad Hoc Expert Group Meeting on Rethinking the Role of National Development Banks, 1 – 2 December. New York: United Nations

CBE (2020). Central Bank of Egypt Measures to offset the impact of COVID-19. Central Bank of Egypt. December 2020.

CBE (2021). Discussion paper on sustainable finance, published 18 July 2021, available in Arabic online. https://www.moodysanalytics.com/regulatory-news/jul-18-21-cbe-publishes-guiding-principles-for-sustainable-finance

CBE (n.d). https://www.cbe.org.eg/en/BankingSupervision/Pages/BaselIII.aspx

CEIC (n.d). Global Economic Data, Indicators, Charts and Forecasts | CEIC (ceicdata.com)

Congressional Research Service (2020). COVID-19 and the Banking Industry: Risks and Policy Responses. June 2020 Report. CRS Reports R46422.

De Castro, L. B. (2018). Financial Regulation and Risk Management in Development Banks, in: The Future of National Development Banks. Oxford University Press, Oxford, pp. 321–348

De la Torre, A. (2002). Reforming development banks: A framework. Paper presented at the World Bank workshop on Public Sector Banks and Privatisation, 10 December, Washington, DC.

Fernandez-Arias, E., Hausmann, R., and Panizza, U. (2019). Smart Development Banks. CID Working Papers 350, Center for International Development at Harvard University.

Fernanda F. and Carmem F. (2021). Development Banks as an Arm of Economic Policy – Promoting Sustainable Structural Change, International Journal of Political Economy VOL. 50, NO. 1, 44–59 available online https://doi.org/10.1080/08911916.2021.1894827

Global Finance (2021). Global Finance names the top safe banks in Africa. Press release. 8th September 2021. press-release-worlds-safest-banks-2021-africa-1631651351.pdf

Gutierrez, E., Rudolph, H. P., Homa, T., and Beneit, E. B. (2011). Development Banks: Role and Mechanisms to Increase their Efficiency. World Bank Policy Research Series, Washington, DC.

Hopewell, K. (2017). When market fundamentalism and industrial policy collide: The Tea Party and the US Export-Import Bank. Review of International Political Economy, 1-30.

IDB (2014). Rethinking Productive Development: Sound Policies and Institutions for Economic Transformation, Washington, DC, United States: Inter-American Development Bank.

International Financial Consulting Ltd. (2017). The role of a public development bank: Can a bank be both profitable and efficient while taking an active social role? Paper written for the 47th ALIDE general assembly, May 2017.

Kovachev, G. (2013). Financing Agribusiness by State Development Banks - the Case of Macedonia, *Journal of Governance and Regulation*, vol. 2, Issue 3.

Léon F. (2020). Are public development banks counter-cyclical? A brief. FERDI Policy brief, B212, October.

Marshall, W. C., and Rochon, L. P. (2019). Public Banking and Post-Keynesian Economic Theory. *International Journal of Political Economy* 48 (1):60–75.

Marodon R. (2020). Can development banks step up to the challenge of sustainable development? Agence Francaise de Developpement research papers, n. 175, AFD Editions Paris, October.

Mazzucato, M., and Penna, C. (2015). Beyond Market Failures: The Market Creating and Shaping Roles of State Investment Banks. Annandale-on-Hudson: Levy Economic Institute. Working Paper no. 831. Available online https://www.ineteconomics.org/uploads/papers/WP7-Mazzucato.pdf

Mazzucato, M. and Macfarlane, L. (2019). A mission-oriented framework for the Scottish National Investment Bank. UCL Institute for Innovation and Public Purpose, Policy Paper (IIPP WP 2019-02). Available online https://www.ucl.ac.uk/bartlett/publicpurpose/wp2019-02

Minsky, H. (1986). Stabilising an Unstable Economy. New York: McGraw-Hill.

Mohieldin, M. and Nasr, S. (2003). On Bank Privatization in Egypt. Economic Research Forum Working Paper Series 325.

Mohieldin, M., Subramaniam, N., Verbeek, J. (2018). Multilateral Development Banks must mobilize private finance to achieve the SDGs. In The Brookings Institution. Available online: https://www.brookings.edu/blog/up-front/2018/07/19/multilateral-development-banks-must-mobilize-private-finance-to-achieve-the-sdgs/

Nguyen, Quang Thi Thieu (2019). Basel III: Where should we go from here? Journal of Financial Economic Policy Vol. 11 No. 4, pp. 457-469.

Romero, M. J. (2017). Public development banks: Towards a better model. A Eurodad discussion paper co-sponsored by Afrodad and Latindadd, European Network on Debt and Development, Brussels.

Smallridge, D., B. Buchner, C. Trabacchi, M. Netto, J. J. Gomes Lorenzo, L. Seraa (2012). The Role of National Development Banks in Intermediating International Climate Finance to Scale-up Private Sector Investments. Inter-American Development Bank, discussion paper No. IDB-DP-249, 2012, available online: http://publications.iadb.org/handle/11319/5692?locale-attribute=en

Stiglitz, J. (1994). The Role of the State in Financial Markets. The World Bank. Available online http://documents1.worldbank.org/curated/en/239281468741290885/pdf/multi-page.pdf

Thorne, J. and Charlotte D. T. (2009). Macro-framework for successful development banks. *Development Southern Africa* 26(5):677-694.

United Nations, Inter-agency Task Force on Financing for Development (2021). Financing for Sustainable Development Report 2021. (New York: United Nations), available online: https://developmentnance.un.org/fsdr2021

Wray, L. (2009). The Rise and Fall of Money Manager Capitalism: A Minskian Approach. Cambridge Journal of Economics 33 (4):807–28.

Xu, J., Marodon, R., Ru, X., Ren, X., and Wu, X. (2021). What are public development banks and development financing institutions? Qualification criteria, stylized facts, and development trends. China Economic Quarterly International, 1(4): 271-294.

Appendix 1. Development Banks in Egypt

1. Export Development Bank of Egypt

The Export Development Bank of Egypt (EBE) is an Egyptian joint-stock company established in 1983 under law no. 95 of 1983. Its mission is to boost and facilitate the access of Egyptian products to markets worldwide in all sectors. The authorized capital of the bank is EGP 5 billion, and the issued and paid-up capital amounts to EGP 2.728 billion.

Its primary vision is to provide and maintain its diversified services and products at a high quality through its well-spread network of branches and ATMs placed throughout Egypt along with its network of corresponding banks abroad. One of the bank's main business lines and activities is corporate banking and loan syndication, which provides diversified finance packages, including medium-term loans and short-term lending to finance working capital requirements for various economic sectors. In addition, EBE is committed to promoting the SME sector, in line with the 2005 IFC Agreement sustainability goals.

Since its foundation, the bank has managed to preserve its identity as a commercial and investment bank. It was able to grow through its strong performance and policy based on diversified investments. The bank resorted to opening new branches and gathering deposits to meet its main goal of establishing and boosting a solid export sector. For instance, EBE affirmed its geographic presence in export-oriented locations like Alexandria (May 1989) and the Tenth of Ramadan district (September 1989). With the beginning of the financial reform in 2004 following the amendment of Central Bank Law, as well as Banking Sector and Money Law no. 88 of 2003, the CBE reclassified all banks, thereby giving them more freedom to expand and to promote more products. Accordingly, the network of branches expanded to 21 branches in March 2012. As of 2021, the bank operated through 38 branches with six new branches expected to open during the new fiscal year. EBE aims to reach 58 branches by the end of 2022.

According to its annual financial report for the 2019/20 fiscal year, the bank's activities and services have witnessed significant development reflected in the growth rates of its loans portfolio. Deposits and net profits exceeded EGP 1 billion despite the severe slowdown in the global economy due to COVID-19. Net profits reached EGP 1.14 billion by the end of the 2019/20 fiscal year compared to EGP 1.51 billion year-over-year. Moreover, total assets grew to reach EGP 56.7 billion, with an increase of EGP 6 billion and a growth rate of 12 percent over the previous year. This was driven by growth in the portfolio of net loans and advances by EGP 6.1 billion to reach EGP 31.3 billion at a growth rate of 25 percent over the previous year. On the other hand, the total deposits portfolio increased by EGP 3.7 billion to reach EGP 44.3 billion at a growth rate of nine percent, which reflected positively on the loans to deposits ratio of 73.1 percent by the end of the 2019/20 fiscal year compared to 64.9 percent year-over-year. Furthermore, the total shareholders'

equity reached EGP 6 billion, with an increase of EGP 561 million at a growth rate of 10 percent over the previous year.

2. Industrial Development Bank

The Industrial Development Bank (IDB) was established in 1947 by Law No. 131 of 1947 as an Egyptian joint-stock company with a capital of EGP 1.5 million to finance the industrial private sector. In 1971, the bank was merged into the Bank of Alexandria as a specialized department. However, with the beginning of the policy of economic openness and the State's appreciation of the importance of the bank's independence, it was re-established in 1976 as a specialized bank with a capital of EGP 10 million. The bank's capital was increased several times (in 2003, for example) so that the authorized capital became EGP 1 billion and the issued and paid-up capital reached EGP 500 million.

As part of institutional reforms to create a stronger and more competitive banking entity and to diversify and deliver its banking services to industrial investors in various geographical areas, the "Egyptian Workers' Bank" was merged into the "Egyptian Industrial Development Bank" on 1 November 2008, and the name was changed to the "Industrial Development and Workers Bank of Egypt." However, in September 2018, the CBE agreed to change the bank's commercial name again to "Industrial Development Bank."

The bank works to provide a distinguished range of banking products and services to its various clients of individuals, institutions, and companies. It offers its services in economic and development activities and projects, besides savings vessels with multiple advantages, and providing the foreign currencies necessary for importing raw materials, machinery, and equipment. The bank also provides support for large, medium, small, and micro-projects in addition to its distinguished role in real estate financing and financing the delivery of gas to homes and factories. The bank's plan is based on expansion through a wide network of branches covering all parts of Egypt. IDB aims to expand the spread of new branches nationwide to bring the number of branches to 50 by the end of 2023.

The bank was chosen locally as the fastest-growing bank in Egypt for the year 2017, according to the Business News Index, which included 27 banks in its poll. IDB won first place in indicators of growth in the size of assets, net profits, and net return.

IDB business results revealed that the bank achieved profits of EGP 512 million, before taxes, at the end of 2019, compared to EGP 379 million at the end of 2018, representing an increase of 35 percent. The bank achieved the highest growth rate in its history during 2019, as its financial position increased to EGP 31 billion at the end of 2019 compared to EGP 24 billion at the end of 2018, with a growth rate of 27 percent. The bank's loan portfolio increased to EGP 13 billion at the end of 2019, compared to EGP 10 billion at the end of 2018, with a growth rate of 32 percent,

while the regular loan portfolio increased to EGP 12 billion against EGP 8.7 billion with a growth rate of 38 percent. Customer deposits increased to EGP 25 billion at the end of 2019, compared to EGP 19 billion at the end of 2018, with a growth rate of 32 percent.

3. Housing and Development Bank

The Housing and Development Bank (HD Bank) was established as an Egyptian joint stock company and an arm of the Ministry of Housing in 1979 with an initial capital of EGP 18 million. Upon its launch, the key mandate of HD Bank was to finance moderate housing units for Egyptian inhabitants while bridging the gap between supply and demand in the real estate market.

By the 1980s and 1990s, the bank had already successfully concluded many flagship developments, which brought new housing units to many urban communities and strategic investments in the country's northern coastal resorts. In 1993, the continued growth of real estate investments raised paid-in capital to EGP 54 million.

Since 2003 and with the new banking law no. 88 for the year 2003, the bank stepped into a new era witnessing its prime strategic plan, aiming to integrate into the market as a competitive commercial bank. This plan included focus on the growth of the core banking business and further expansion in real estate development to be carried out through subsidiaries. At the end of 2014, the bank had direct and indirect ownership positions in 14 subsidiaries and sister companies; reaching a total of EGP 912 million.

The bank has a range of banking products and services for its customers: SME products, retail products, corporate products, and real estate products. HD Bank's vision is to be among the top 10 performing banks in Egypt, as a full commercial bank with core strength in housing real estate, working on sustaining the current high operating efficiency. Since 2017, a new five-year plan was implemented to focus on investing in new IT systems, renovating its branch network, and increasing its marketing efforts. In 2020, HD Bank reached 97 branches spread all over Egypt with a presence in all governorates and more than 350 ATMs.

Regarding its financial position and according to its separate financial statement, total assets grew at the end of 2020 to reach EGP 60 billion with an increase of EGP 9 billion compared to the previous year. Net profits reached EGP 1.8 billion by the end of 2020 compared to EGP 1.9 billion year-over-year affected by the COVID-19 pandemic. Moreover, total shareholders' equity reached EGP 7.4 billion with an increase of EGP 1.3 billion over the previous year. Customers' deposits grew from EGP 41 billion at the end of 2019 to EGP 47 billion in 2020 with a growth rate of 14 percent in 2020. Total loans also increased to reach EGP 21 billion at the end of 2020 with a growth rate of 8.7 percent compared to EGP 19 billion in 2019 and a growth rate of 25.8 percent.

4. Nasser Social Bank

Nasser Social Bank (NSB) was established as a public authority under Republican Decree Law no. 66 of 1971 with a capital of EGP 1.2 million as the first social-economic entity in Egypt and the Middle East. The development of its capital and activities grew until it reached EGP 2.5 billion. The bank started with only one branch on 25 July 1972. Then, with the bank's development, the number of branches reached 94 branches spread all over Egypt.

Following the law of its establishment, the bank's objectives are to achieve social solidarity for all members of society to have a decent life and to achieve social and economic development among citizens through many activities:

1. Social solidarity, which aims to achieve social development for citizens by organizing collection funds, granting social loans to citizens, granting subsidies and assistance to those entitled to them, and owning the means of production for those entitled following the Takaful regulation
2. Banking and investment, which aim to work toward achieving economic development for individuals and entities while growing the bank's resources by providing all banking services, including accepting deposits and regulating their investment, as well as granting the necessary funds to raise the standard of living and investing the bank's money in public and private projects. With this activity, society can benefit and more job opportunities are created.
3. Vacant estates, which are represented in the application of the provisions of law no. 71 of 1962 regarding the estates that are left behind without an heir.
4. The Family Insurance System Fund, which aims to preserve the family entity and its stability, was entrusted to the bank under law no. 11 of 2004 to implement the provisions issued regarding expenses and wages.

At the end of 2020, the board of directors meeting headed by the Minister of Social Solidarity compared the financial position between the 2018/19 fiscal year and the 2019/20 fiscal year. The bank's profits rose to EGP 1.43 billion compared to EGP 1.81 billion for the previous fiscal year, registering an increase of EGP 346 million, or 32 percent. The bank's budget rose to EGP 22 billion compared to the same period of the previous year, which amounted to EGP 18 billion with a growth rate of 24 percent. The net financing and facilities for clients amounted to EGP 16 billion, compared to EGP 12 billion, with a growth rate of 29 percent. Total customer deposits grew to EGP 10 billion compared to EGP 6 billion in the previous year, registering an increase of 37 percent, because of the introduction of new savings pots for various terms and prices that led to attracting more customer deposits and the adoption of a list of distributions

5. Egyptian Agricultural Bank

During the global economic crisis, the State established the Egyptian Agricultural Credit Bank under Decree Law No. 50 of 1930 and the royal decree of the Egyptian Agricultural Credit Bank in 1931 to provide loans to Egyptian farmers to protect them from foreign real estate banks and lenders. The bank started with a capital of EGP one million.

With the economic openness policy, the bank's management was keen since the issuance of Law no. 117 of 1976 to change the bank's name to the "Development and Agricultural Credit Bank," provided that the bank provides the necessary support and financing to farmers for all types of crops and all activities related to agriculture, as well as providing all banking services, financing projects, natural gas, and biogas loans, especially in the countryside. However, a more recently issued law (no. 84 of 2016) stipulated that the "Development and Agricultural Credit Bank" will be transformed into a public sector bank called the "Egyptian Agricultural Bank" that takes the form of an Egyptian joint stock company, the capital of which is wholly owned by the State, having an independent legal personality and subject to the provisions of the laws of the CBE and the banking system.

The bank's vision is to become the locomotive of economic development, providing the necessary financing for various types of agricultural and rural development activities within the framework of the state's plan. The banks also tend to achieve an added value to the national economy by deepening financial inclusion in society, supporting, and developing the agricultural sector by providing an integrated package of banking and agricultural services to meet the needs of all clients as well as to reach food sufficiency.

As an important development institution for agricultural activity in Egypt and one of the largest agricultural banks in the Arab world and the Middle East, the bank owns more than 1,150 branches and village banks covering all governorates. Moreover, it owns more than four million square meters of storage capacity, including an area of two million square meters to receive local wheat from farmers.

The bank is constantly working on developing its performance, diversifying its current services, developing new services, providing support to the agricultural sector in its various fields, and applying international principles and standards within the framework of disclosure and transparency rules. Currently, the Agricultural Bank of Egypt is undergoing a complete restructuring as part of an ambitious plan that includes developing branches and training all workers to raise the efficiency of services provided to customers. The restructuring plan aims to achieve net profits within the next three or four years.

6. National Investment Bank

The National Investment Bank (NIB) was established by law no. 119 of 1980 for the purpose of financing and following up on projects of the National Plan for Economic and Social Development through either sharing or lending such projects as well as following up on the implementation of those projects.

NIB is considered the State's main economic and investment tool to implement its plans for economic and social development. The bank is also an affiliate of the Ministry of Planning and Economic Development in Egypt. Its mission is to increase and improve government investment to meet the national obligations of Egypt

NIB led to the establishment of massive infrastructure in all fields which added to the productive capacities and attracted more investments. This role helped achieve high growth rates for the Egyptian economy over the past decades.

Considering the recent economic changes witnessed by the local and international arena, which include emphasizing the activation of market mechanisms and trending toward a free economy while limiting governmental intervention to only supervisory, organizing, and regulation; these changes made NIB one of the major financial and development institutions, with its potentials and capabilities, a tool for regulating markets and implementing economic and social policies.

Over more than 40 years, the bank has carried out the largest process of local savings mobilization to finance the establishment and implementation of projects included in the successive economic and social development national plan. These investments have been able to implement a national wealth of assets that covered all of Egypt, including the establishment of electricity generating stations, electricity transmission and distribution networks, water and sanitation stations and networks, as well as networks of roads, bridges, railways, ports, agriculture, irrigation, services, housing, new city and mining projects, and other fields of economic activity. Moreover, NIB shares in several joint companies in main economic sectors such as fertilizers, petroleum, banking, financial services, food industries, urban development, metal industries, building materials, and tourism. NIB also shares in several Arab institutions with the participation of all Arab countries.

At the end of 2018, the total proceeds of the bank's savings vessels amounted to around EGP 353 billion. Moreover, the value of the bank's investment contribution increased from around EGP 14.5 billion at the end of June 2014 to around EGP 25.8 billion in the same period of 2018. Regarding investment in treasury bills and bonds, it reached EGP 125.3 billion at the end of June 2018. The bank is implementing a restructuring plan announced in 2018 in the framework of the structural reforms of the Egyptian economy.

Appendix 2. Survey questions with responses received from BM, NBE, and BdC

Questions	BM	NBE	BDC
Legal status independence and autonomy			
Does the bank have an independent entity?	**Yes**	**Yes**	**N/A**
Does the bank have the freedom to accept/reject projects that do not meet the bank's requirements?	**Yes**	**Yes**	**N/A**
Does the bank have the freedom to independently assess the projects before, during, and after financing?	**Yes**	**Yes**	**N/A**
Does the bank monitor the performance of the projects and have the freedom to alter financing terms if the project's execution comes in conflict with any of the bank's objectives?	**Yes**	**Yes**	**N/A**
Does the bank have autonomy over decisions related to providing support (financial or non-financial) to losing projects if they provide social/ developmental benefits?	**Partially**	**Yes**	**N/A**
Role of central government			
Does the central government contribute to financing the bank's activities?	**No**	**No**	**N/A**
Is the bank backed up by the central government?	**No**	**No**	**N/A**
Does the bank's board of directors include members of the government cabinet?	**No**	**No**	**N/A**
Did the central government inject funds in the past five years to support the development goal of the bank?	**No**	**Partially**[1]	**N/A**
Does the CBE provide favorable terms for the bank? (lending rates, help in re-scheduling and financing NPLs)	**No**	**No**	**N/A**
Clarity of the public mandate			
Is there a clear development mandate stated in the incorporation article?	**No**	**No**	**N/A**
Are the projects financed by the bank reflect general direction towards the financing of projects that serve the development plan of the government?	**Yes**	**Partially**[2]	**N/A**
Does the effect of the project on the environment affect the decision to finance it?	**Partially**	**Partially**[3]	**N/A**
Are there environmental requirements that need to be met by the project approaching the bank for finance?	**Partially**	**N/A**	**N/A**
Are there special rates (financial incentives) for projects that are more environment friendly (lower carbon emission, clean energy, energy efficient, less water pollution to the river/sea?	**Partially**	**Yes**[4]	**N/A**
Does the bank calculate the environmental/ climate change/ pollution risk of the financed projects pre-funding?	**No**	**N/A**[3]	**N/A**
Does the bank calculate the environmental/ climate change/ pollution risk of the financed projects post-funding?	**No**	**N/A**[3]	**N/A**

Does the bank expand credit during economic downturns with the intention to boost the economy?	**Yes**	**Yes**	**N/A**
Bank governance			
Is there a specific business model adopted by the bank for project selection that links the cost of the project to its expected development and socio-economic impact?	**No**	**Partially**[5]	**N/A**
Does the bank monitor projects post-finance and measure their actual development impact vs. the expected impact?	**Yes**	**N/A**	**N/A**
Is there a monitoring and evaluation department in the bank?	**Partially**	**Yes**	**N/A**
Does the bank have more forbearance with loans related to development projects?	**No**	**Partially**[5]	**N/A**
Does the bank deal with each on a loan-by-loan case considering the causes of non-performance?	**Partially**	**Yes**	**N/A**
Does the bank publicize the expected development impacts and financial returns of project in its periodical publications?	**Yes**	**No**	**N/A**
Does the bank publicize the results of project monitoring and actual evaluation post-finance in its periodical publications?	**Yes**	**Partially**[6]	**N/A**

[1] NBE is 100 percent owned by the Egyptian Government can support with its shareholder profit.
[2] The good projects only.
[3] NBE is in the process of preparing an environmental and social management system.
[4] Depends on the fund received from international financial institutions.
[5] On a case-by-case basis.
[6] On a case-by-case basis after the customer's prior consent.