Strengthening Digital Financial Inclusion in Aruba

Working Paper

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Strengthening Digital Financial Inclusion in Aruba

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> *"The benefits of financial inclusion and inclusive growth are clearly established. Access to financial services opens doors for families, allowing them to smooth out consumption and invest in their futures through education and health. Access to credit enables businesses to expand, creating jobs and reducing inequality. Financial inclusion is the bridge between economic opportunity and outcome."*
>
> *Deputy Managing Director Mitsuhiro Furusawa,*
> *IMF 2016*

Executive Summary

Digital financial inclusion is fundamental to building a sustainable and inclusive society. This working paper presents a roadmap for strengthening digital financial inclusion. A Financial Inclusion National Strategy (FINS) is outlined for fostering sustainable and inclusive economic development. Within the context of this paper, digital financial inclusion is defined as an *institutionally coordinated policy-driven process, which aims to smoothen digital accessibility, and enhance reliable, responsible, and affordable usage of financial products and services, and thereto, engender trust and confidence in the formal financial system by promoting financial integrity, literacy, and education.*

Despite a high degree of financial stability and access to basic financial services, the current state of financial inclusion remains vulnerable in Aruba (Figure 1). The research on households, consumers, and businesses describe a situation in which *basic access* to transaction and deposit accounts is readily available and extensively used. Nevertheless, access to and (responsible) usage of credit, savings, and insurance lag considerably amongst households and businesses. Also, whereas cash- and card-based payments are wide-spread throughout the community, the adoption of digital and mobile financial services remains embryonic.

Access	Usage	Quality	Confidence
• High density of branch offices, ATMs, and POS terminals • High adoption rate of internet and mobile technologies • High access to transaction and deposit accounts	• Significant (although diminishing) use of branch offices • High usage of cash and (debit) cards for banking and payments (consumers) • Limited use of savings, credit, and insurance accounts • Increasing consume demand for digital financial services • Moderate level of financial exclusion of consumers (for transaction accounts). • Significant risk of consumer overleveraging (loans and credit) • Limited digital financial inclusion of (small) businesses for financing, commerce, and payments	• Limited financial convenience (businesses), with considerable friction and inefficiency in government, banking and logistic services and transactions • Moderate ease in conducting mobile banking (consumers) • Relativelly high costs of banking and financial transcations (businesses)	• Limited personal financial confidence and financial competence • Limited financial space for (predominantly young er) small businesses.

Figure 1. The State of Financial Inclusion - Aruba, 2018.

The future state architecture for digital financial inclusion is a multi-level design. Consistent with the general principles and policies for fostering national financial inclusion, the future state architecture for Aruban financial inclusion is designed as a multi-dimensional framework consisting of four levels, i.e., (a) enabling conditions of governance, infrastructure, and education; (b) strategic levers for access, usage, quality, and confidence; (c) financial inclusion goals and outcomes for realizing the vision of (d) inclusive and sustainable economic development.

The multi-dimensional and dynamic nature of digital financial inclusions requires a multi-pronged strategy. The future state architecture captures the strategic goals and aspirations for financial inclusion within the specific context of Aruba. Commensurate with the four strategic levers of financial inclusion, distinct outcomes are described along the dimensions of access, usage, quality, and confidence. Considering the current and desired state of digital financial inclusion, at least five (5) pathways are identified in the roadmap for strengthening digital financial inclusion (see Figure 2).

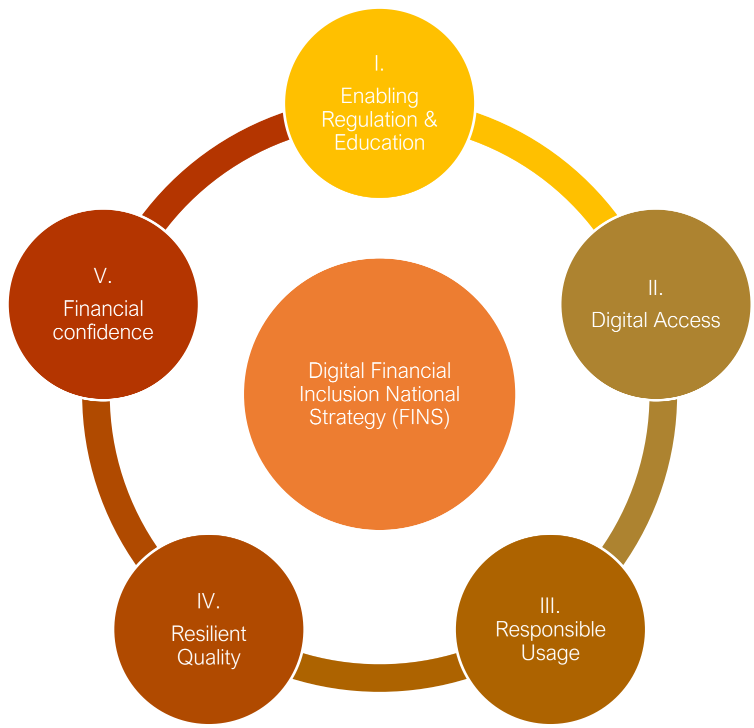

Figure 2. Digital Financial Inclusion National Strategy (FINS): Policy Dimensions and Pathways.

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List of Key Terms

Financial inclusion	An institutionally coordinated policy-driven process, which aims to smoothen accessibility, and enhance reliable, responsible, and affordable usage of basic financial products and services, and thereto, engender trust and confidence in the formal financial system by promoting financial integrity, literacy and education.
Digital Financial Inclusion	The use of digital financial technologies to enhance the access to, usage of, and quality of financial services.
Dimensions of Financial Inclusion	• *Access*: Access to transaction, savings, credit, and insurance accounts, with consideration for underserved households and small business owners; • *Usage*: Usage of digital payments, formal lines of (micro-) credit, insurance, and formal savings, with attention for mobile payments, e-commerce, and e-tax. • *Quality*: Quality of (digital) financial services and assets of financial institutions, with a focus on the efficiency, convenience, security and (prudential) diligence of digital financial services. • *Confidence*: Confidence in financial system and personal finance (including financial literacy, trust in the formal financial system, and financial well-being.
Financial Inclusion National Strategy	A nationally coordinated policy for strengthening digital financial inclusion.
Learning society	Active and inclusive citizenship, societal and environmental well-being, in addition to continuous innovation and learning from a systemic perspective.
Future state architecture	Integrated design and blueprint of a future desired state and aspirations.
Sustainable Development Goals (SDGs)	United Nations (UN) Sustainable Development Goals (SDGs) define global sustainable development priorities and aspirations for 2030 that seek to mobilize global efforts around a common set of goals and targets.
Sustainable Development Goal SDG #8	Promoting inclusive and sustainable economic growth, and full and productive employment.
Informal banking	Savings, credit and loan transactions conducted outside of the formal banking system.
Banking channels	Use of different channels for conducting bank transactions, including branch offices, ATMs, Internet, and Mobile (Application) Banking.

Chapter 1. Introduction

1.1. Financial Inclusion for Inclusive Growth

Financial inclusion has a dual focus on households and businesses.

Financial inclusion, generally understood as the proportion of society that has access to and makes responsible use of formal financial services, is prominently present on the international and national agendas for sustainable economic development. The heightened interest reflects a better understanding of the importance of financial inclusion for economic and social development. Financial inclusion is, however, not an end, but a means to an end, i.e., financial well-being and economic prosperity. There is ample evidence that financial inclusion has substantial benefits for citizens, households, and businesses, if appropriate regulatory frameworks and (macro-prudential) policies are in place (IDB, 2016; IMF, 2017). When people participate in the formal financial system, they are better able to start and expand businesses, invest in education, manage risk, and absorb financial shocks (World Bank, 2015). In addition, access to capital and other financial services, especially by small and medium-size enterprises (SMEs), spur industry innovation and can accelerate economic growth. Therefore, access to and usage of financial services have a critical role in reducing social exclusion, boosting shared prosperity, and supporting inclusive and sustainable development.

The search for sustainable development, as a philosophy and guiding principle, is one of the quintessential hallmarks of the 21st century. The United Nations (UN) Sustainable Development Goals (SDGs) define global sustainable development priorities and aspirations for 2030 that seek to mobilize global efforts around a common set of goals and targets. The SDGs provide a systemic framing of sustainable development. The SDGs call for worldwide action among governments, businesses and civil society to end poverty, and create a life of dignity and opportunity for all, within the boundaries of the planet. In 2017, the Government of Aruba adopted the SDGs as part of its long-term developmental aspirations (Aruba SDG Committee, 2017).

"…*promoting inclusive and sustainable economic growth, and full and productive employment*"

SDG 8, United Nations

Amongst the different SDGs, one specific goal (SDG 8) focuses on "*promoting inclusive and sustainable economic growth, and full and productive employment*" (See Box 1.1). The SDG 8 contains a series of policy directives and indicators for operationalizing inclusive growth. Within the context of financial inclusion, SDG directives 8.3 and 8.10 are of interest as these relate directly to financial inclusion. Whereas directive 8.3 includes the fostering of access to financial services by SMEs[1], directive 8.10 focuses on the expansion of banking, insurance and other services for citizens. Subsequently, financial inclusion is

[1] SDG Directive 8.3 is closely related to SDG Directive 9.3., i.e., to increase the access of small-scale industrial and other enterprises to financial services, including affordable credit, and their integration into value chains and markets.

geared at both citizens (individuals and households), as well as businesses (SMEs and start-ups) and industry (commerce).

Box 1.1. UN Sustainable Development Goal 8: List of Directives and Indicators.

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

8.1 Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries	8.1.1 Annual growth rate of real GDP per capita
8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high value added and labor-intensive sectors	8.2.1 Annual growth rate of real GDP per employed person
8.3 *Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small-and medium-sized enterprises, including through access to financial services**	8.3.1 Share of informal employment in non-agriculture employment, by sex
8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavor to decouple economic growth from environmental degradation, in accordance with the 10-Year Framework of Programs on Sustainable Consumption and Production, with developed countries taking the lead	8.4.1 Resource productivity
8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value	8.5.1 Average hourly earnings of female and male employees, by occupation, age group and persons with disabilities 8.5.2 Unemployment rate, by sex, age group and persons with disabilities
8.6 By 2020, substantially reduce the proportion of youth not in employment, education or training	8.6.1 Percentage of youth (aged 15-24) not in education, employment or training
8.7 Take immediate and effective measures to eradicate forced labor, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labor, including recruitment and use of child soldiers, and by 2025 end child labor in all its forms	8.7.1 Percentage and number of children aged 5-17 engaged in child labor, by sex and age group
8.8 Protect labor rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment	8.8.1 Frequency rates of fatal and non-fatal occupational injuries, by sex and migrant status 8.8.2 Number of International Labor Organization (ILO) Conventions ratified, by type of convention
8.9 By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products	8.9.1 Tourism direct GDP (as a percentage of total GDP and in growth rate); and number of jobs in tourism industries (as a percentage of total jobs and growth rate of jobs, by sex)
8.10 *Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all*	*8.10.1 Number of commercial bank branches and automated teller machines (ATMs) per 100,000 adults*

	8.10.2 Percentage of adults (15 years and older) with an account at a bank or other financial institution or with a mobile money service provider
8.a Increase Aid for Trade support for developing countries, in particular least developed countries, including through the Enhanced Integrated Framework for Trade-related Technical Assistance to Least Developed Countries	8.a.1 Aid for Trade commitments and disbursements
8.b By 2020, develop and operationalize a global strategy for youth employment and implement the Global Jobs Pact of the International Labor Organization	8.b.1 Total government spending in social protection and employment programs as a percentage of the national budgets and GDP
***9.3** *Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets*	*9.3.1 Percentage share of small-scale industries in total industry value added* *9.3.2 Percentage of small-scale industries with a loan or line of credit*

1.2. Financial Inclusion: Definition & Dimensions

Defining financial inclusion is a first essential step towards developing a suitable financial inclusion national strategy (FINS). A review of literature reveals that there is no universally accepted definition of financial inclusion (IMF, 2017; World Bank, 2017). The definitional emphasis of financial inclusion varies across countries and geographies, depending on the level of social, economic, financial, and institutional development. Thus, the design of FINS is contingent upon the nature and characteristics of the national institutional context. The global interest and focus on, e.g., governance, integrity, and inclusion are a clear and present sign of the importance of institutional capabilities for engendering trust and promoting the expansion of the formal economy to encourage inclusive economic growth (IMF, 2012). More specifically within the context of small island developing economies (SIDS), deficiencies in strong institutional capabilities are intimately intertwined with exclusive growth and extractive economies in the Caribbean (Acemuglo & Robinson, 2012; Inter-American Development Bank, 2016).

Broadly, financial inclusion means access to financial services for all in a fair, transparent and equitable manner at an affordable cost. According to the World Bank (2017), financial inclusion means that individuals and businesses have access to useful and affordable financial products and services that meet their needs (demand side). These products and services include, but are not limited to transactions, payments, savings and pension, credit, and insurance. More importantly and beyond access, these products and services should be delivered in a responsible and sustainable way (supply side). Therefore, financial inclusion implies a coordinated (policy-driven) effort in order to deepen financial services among a large number of customers, and aims at providing appropriate, low-cost, fair and safe financial products and services or instruments like bank accounts, affordable credit, assets, savings, insurance, and payments facilities, as well as financial advice from the *formal* financial system (World Bank, 2017). Within the context of this study, financial inclusion is defined as an institutionally coordinated policy-driven process, which aims to smoothen accessibility, and enhance reliable, responsible, and affordable usage of financial products and services, and thereto, engender trust and confidence in the formal financial system by promoting financial integrity, literacy and education.

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Generally, financial inclusion is measured along four dimensions (G20, 2016; World Bank, 2017): (i) *access* to financial services; (ii) *usage* of financial services; (iii) the *quality* of the financial products and the service delivery; and (iv) the confidence in (managing) financial services. Together, these four dimensions form a *financial inclusion value chain* (See Figure 1.2.). Access to a transaction account is a first fundamental step towards initiating and strengthening financial inclusion. Access to transactions allows people to store money and send and receive payments. A transaction account can also serve as a basic gateway to other financial services (World Bank, 2017), including but not limited to the use of transactions and credit accounts, and the usage of digital payment facilities.

Financial services and financial inclusion have not escaped the fourth industrial revolution (Schwab, 2016). Digital transformation and financial technologies (FinTech) play a key role shaping contemporary financial systems and financial inclusion strategies. The application of, e.g., mobile and data technologies, in addition to the expansion of distributed ledger technologies, digital currencies, artificial intelligence, and robotic process automation are significant forces of financial innovation and social transformation (WEF, 2015). Digital financial inclusion can reduce information asymmetries and market frictions.

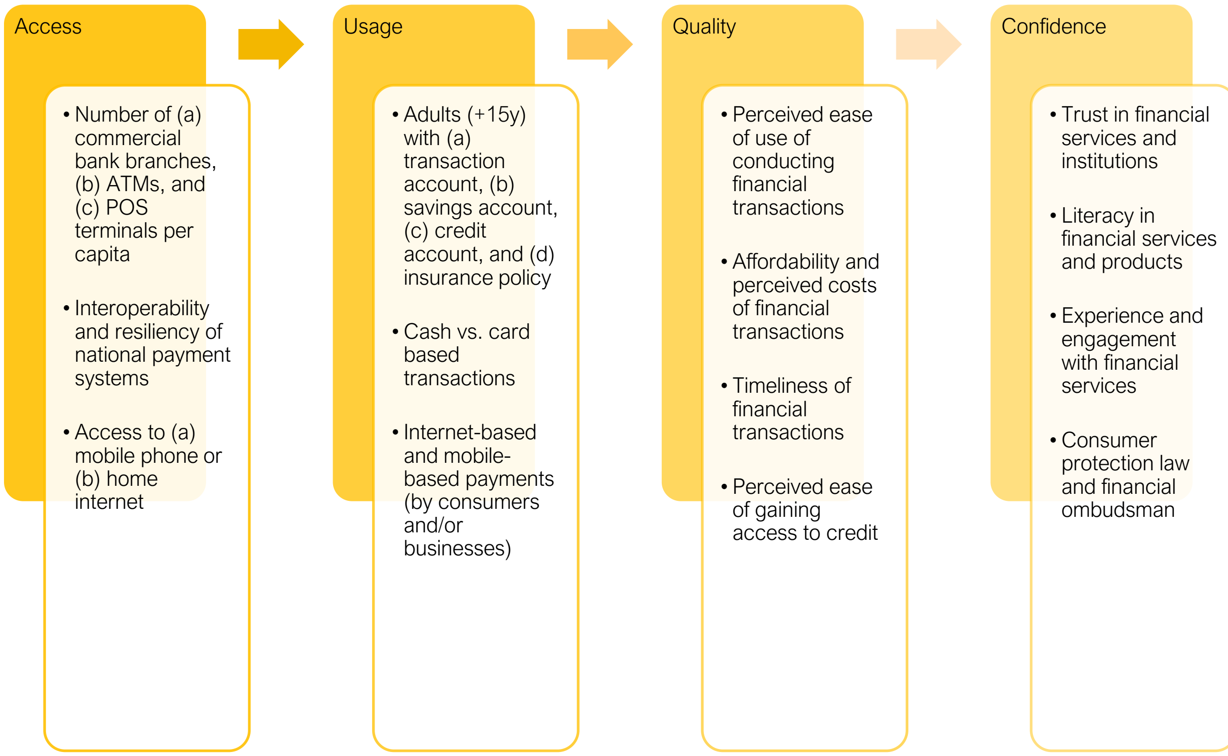


Figure 1.2. Financial Inclusion: Dimensions and Sample of Indicators (G20; IMF; OECD; World Bank).

Digital financial inclusion can make a difference. Research indicates that digital financial inclusion holds substantial benefits for national economies and public and private sectors, including responsible credit for micro-enterprising and start-ups, government savings by reducing leakage in spending and tax revenues, and operational efficiency gains for financial service providers (McKinsey, 2016). In the Caribbean, studies suggest that financial inclusion can expand real GDP growth by at least 2 percentage points (IMF, 2017; IDB, 2016).

Underscoring the importance and impact of FinTech on FINS, the G20 outline a series of principles for digital financial inclusion (see Box 1.2). The G20 (2016) defines digital financial inclusion as "*the use of digital financial services to advance financial inclusion. It involves the deployment of digital means to reach financially excluded and underserved populations with a range of formal financial services suited to their needs, delivered responsibly at a cost affordable to customers and sustainable for providers*". The principles for digital financial inclusion emphasize that access to financial services alone is insufficient. Spurring usage and understanding of responsible digital financial services are critical to financial wellbeing (G20, 2016).

Box 1.2. Principles for Digital Financial Inclusion (G20, 2016).

PRINCIPLE 1: Promote a Digital Approach to Financial Inclusion
Promote digital financial services as a priority to drive development of inclusive financial systems, including through coordinated, monitored, and evaluated national strategies and action plans.

PRINCIPLE 2: Balance Innovation and Risk to Achieve Digital Financial Inclusion
Balance promoting innovation to achieve digital financial inclusion with identifying, assessing, monitoring and managing new risks.

PRINCIPLE 3: Provide an Enabling and Proportionate Legal and Regulatory Framework for Digital Financial Inclusion
Provide an enabling and proportionate legal and regulatory framework for digital financial inclusion, taking into account relevant G20 and international standard setting body standards and guidance.

PRINCIPLE 4: Expand the Digital Financial Services Infrastructure Ecosystem
Expand the digital financial services ecosystem, including financial and information and communications technology infrastructure, for the safe, reliable and low-cost provision of digital financial services to all relevant geographical areas, especially underserved rural areas.

PRINCIPLE 5: Establish Responsible Digital Financial Practices to Protect Consumers
Establish a comprehensive approach to consumer and data protection that focuses on issues of specific relevance to digital financial services.

PRINCIPLE 6: Strengthen Digital and Financial Literacy and Awareness
Support and evaluate programs that enhance digital and financial literacy in light of the unique characteristics, advantages, and risks of digital financial services and channels.

PRINCIPLE 7: Facilitate Customer Identification for Digital Financial Services
Facilitate access to digital financial services by developing customer identity systems, products and services that are accessible, affordable, and verifiable and accommodate multiple needs and risk levels for a risk-based approach to customer due diligence.

PRINCIPLE 8: Track Digital Financial Inclusion Progress
Track progress on digital financial inclusion through a comprehensive and robust data measurement and evaluation system. This system should leverage new sources of digital data and enable stakeholders to analyze and monitor the supply of, and demand for, digital financial services, as well as assess the impact of key programs and reforms.

1.3. Outline

The purpose of this study is to assess the current state of digital financial inclusion in Aruba and to provide a future state architecture for strengthening digital financial inclusion. The aim is to design an initial blueprint for a Financial Inclusion National Strategy 2030 for Aruba. According to the World Bank (2012), *"national financial inclusion strategies can be defined as roadmaps of actions, agreed, and defined at the national or subnational level, which stakeholders follow to achieve financial inclusion objectives."* The remainder of this working paper is structured as follows. In Chapter 2, the economic context and state of financial inclusion are described based the main findings of household, consumer, and business surveys. A distinction is made between the financial inclusion of households and consumers, and businesses. Based on the overarching vision for fostering digital financial inclusion, a future state architecture is proposed, outlining the enabling conditions, strategic levers, and policy aspirations (Chapter 3). The working paper concludes (Chapter 4) by presenting a high-level roadmap for strengthening digital financial inclusion, and describes key policy actions, targets, and milestones for 2030.

Chapter 2. The State of Digital Financial Inclusion

2.1. Introduction

Reliable data on financial inclusion is essential to inform economic policies and to monitor the effect of financial inclusion programs, as well as serving as a starting point (base-line assessment) on which to base financial inclusion policies and strategies. Several international institutions have produced extensive lists of indicators for measuring and monitoring financial inclusion. Due to the rapid developments in both (digital) technologies and (developing) communities, financial inclusion indicators have evolved over the past decade (G20, 2016; WEF, 2018).

The foremost and contemporary framework of financial inclusion indicators is provided by the *G20 Financial Inclusion Indicators*. The G20 Framework (2016) is based on several international data sources, including: the World Bank Global Findex database, IMF Financial Access Survey, Gallup World Poll, World Bank Enterprise Surveys, OECD National Financial Literacy and Financial Inclusion Surveys, OECD Financing SMEs and Entrepreneurs Scoreboard, World Bank Doing Business, World Bank Global Survey on Consumer Protection and Financial Literacy, World Bank Financial Capability Surveys, and World Bank Global Payments Systems Survey.

In order to measure financial inclusion in Aruba, use is made of the G20 Framework and relevant indicators for households and businesses (see Annex A). This provides a (standardized) *baseline* assessment of the state of financial inclusion in Aruba. Data collection was organized by means of three different surveys[2] geared towards households, consumers, and businesses.

2.2. General Economic Context

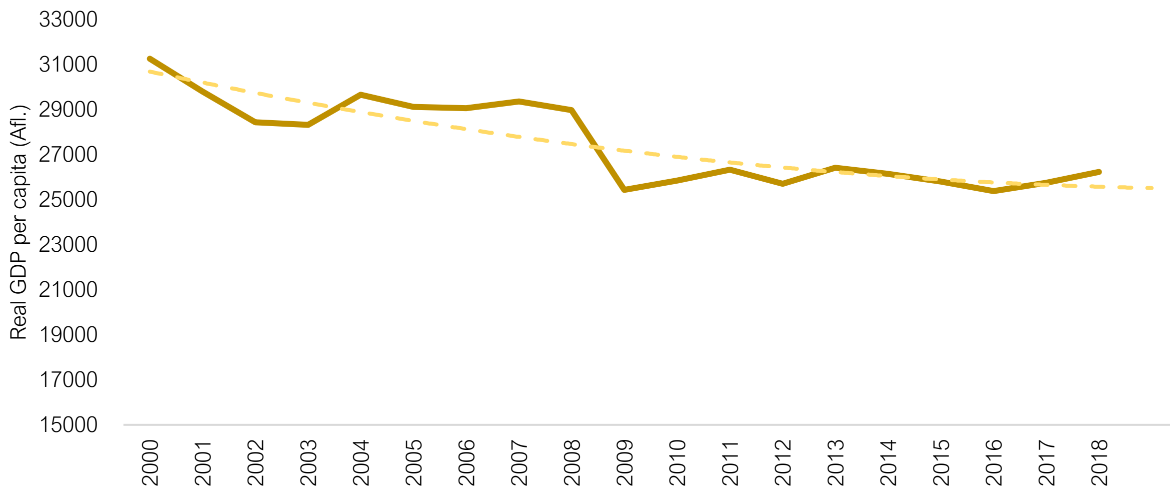
Despite a relatively high nominal GDP per capita, Aruba witnessed significant contraction over the past two decades in real output. Historical analysis of Aruba's economic growth indicates that since the early 1990s, real output growth has been on a downward trajectory contracting. Whereas the economy recovered initially between 2013 and 2018, long-run real economic growth is projected at an estimated 1.1 percent, thus, underscoring the structural vulnerability of the economy.

In similar vein, real GDP per capita has decreased steadily since 2000 (See Figure 2.1). This has yielded an adverse impact on general economic wellbeing. The compounding and interactive effects of economic shocks, demographic shifts, productivity lags, and institutional rigidity are largely responsible for the continuous decline in real GDP per capita.

[2] National surveys were conducted on an annual and quarterly basis between 2016 and 2018 amongst 400 randomly sampled consumers and businesses. The estimated margin of error is +/- 6%.

Further analysis reveals a weak labor market and labor force development. As of 2017, it is estimated that the (official) labor force of Aruba consists of 56.900 people, of which an estimated 52.500 are employed (DAO, 2017). Between 2010 and 2017, the labor force expanded with an estimated 4800 employees, and the unemployment rate decreased by 2.5 percent points. In 2017, the general unemployment rate is estimated at 8.9 percent, with youth unemployment close to 20 percent (DAO, 2017). Consistent with the decline in real GDP per capita, the labor market participation rate has been on a downward path since 2010, contracting by an estimated 5 percentage points. This reduction in labor market participation is more pronounced amongst Aruban youth and young adults (18-34 years). Both labor productivity and total factor productivity (TFP; a measure of economic efficiency) have declined significantly since 2000 (CBA, 2018).

Figure 2.1. Estimate Real GDP per capita (Aruba, 2000-2018)



In terms of income and income inequality, preliminary analysis yields a picture, which corroborates previous findings. According to the Aruba SDG Committee (2017), income inequality, measured by the Gini coefficient, increased in Aruba from 0.41 to 0.44 between 2006 and 2010. Currently, the Gini index is estimated at 0.43. The state of Aruba's Gini index suggests a weak level of income equality, with no significant change over the past decade. The IMF Article IV Mission in Aruba confirms that income and real wage growth have indeed remained stagnant (IMF, 2017). Moreover, already in 2010, the census data indicated that at least 15 percent of Aruban households suffered from income poverty (CBS, 2018).

Unlike households, the Aruban financial services industry remains in healthy condition. In general, Aruba's financial system is relatively sizeable, sound, and stable. Total assets of the financial industry, including monetary and non-monetary financial institutions, are estimated at 265 percent of GDP in 2017 (CBA, 2018). Five (5) commercial banks dominate the sector with almost half of the total assets (See Table 2.1). The remainder of the financial system is divided among pension funds, insurance companies, and bank-like institutions.

Table 2.1 Select stylized indicators of commercial banking sector in Aruba (CBA, 2018).

Commercial banking soundness & system indicators (2017)	
Total assets to GDP	112 percent
Capital adequacy (Regulatory capital - Tier I + II - to risk-weighted assets)	30.6 percent
Asset quality (Non-performing loans to gross loans)	4.0 percent
Liquidity (Liquid assets to total assets; Loans to deposits ratio)	28.6 percent; 68.2 percent
Liquid assets to deposits	68.2 percent
Number of commercial banks	5
Number of branch offices	18
Number of ATMS	93[3]
Number of national payments systems (including C&S)	3

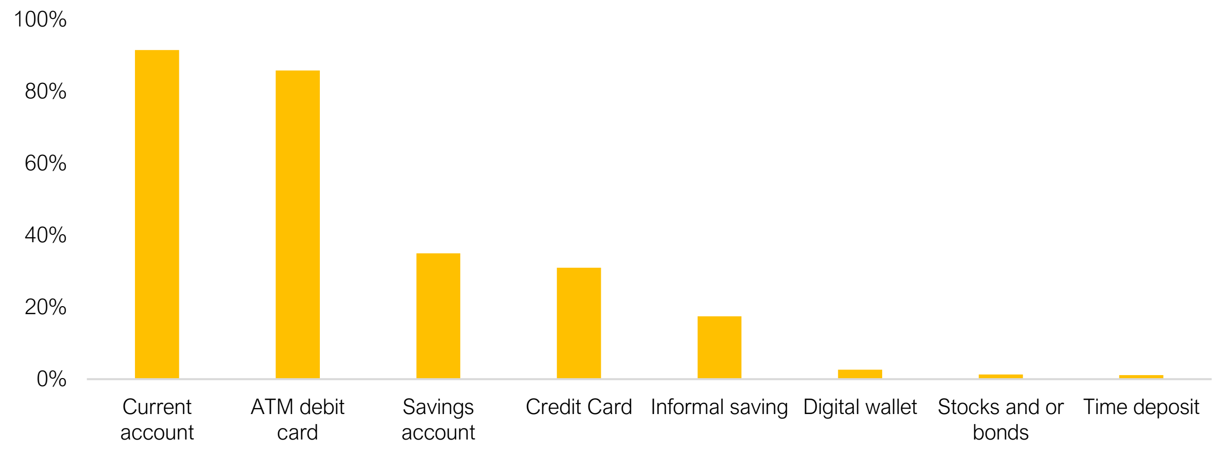
2.3. Digital Financial Inclusion: Households and Consumers

A relatively high proportion of Aruban households have a bank account. Results of the Household Financial Survey (CBA, 2018) indicate that approximately 92 percent of households have a bank account, with 86 percent making use of a debit card (See Figure 2.2). Less than one-third of households save at a financial institution. Savings accounts and credit are available to, respectively, 35 percent and 31 percent of households. It is estimated that approximately one-third of Aruban households have an insurance policy. Informal savings account for 18 percent of households. Analysis suggests that at least 10 percent of the population is underserved by the financial services industry. Whereas access to transaction accounts and card payments enjoy high rates of access and usage, an estimated 14 percent is likely to be (voluntarily or involuntarily) underbanked, or structurally underserved.

> Approximately 92 percent of households have a bank account, with 86 percent making use of a debit card.

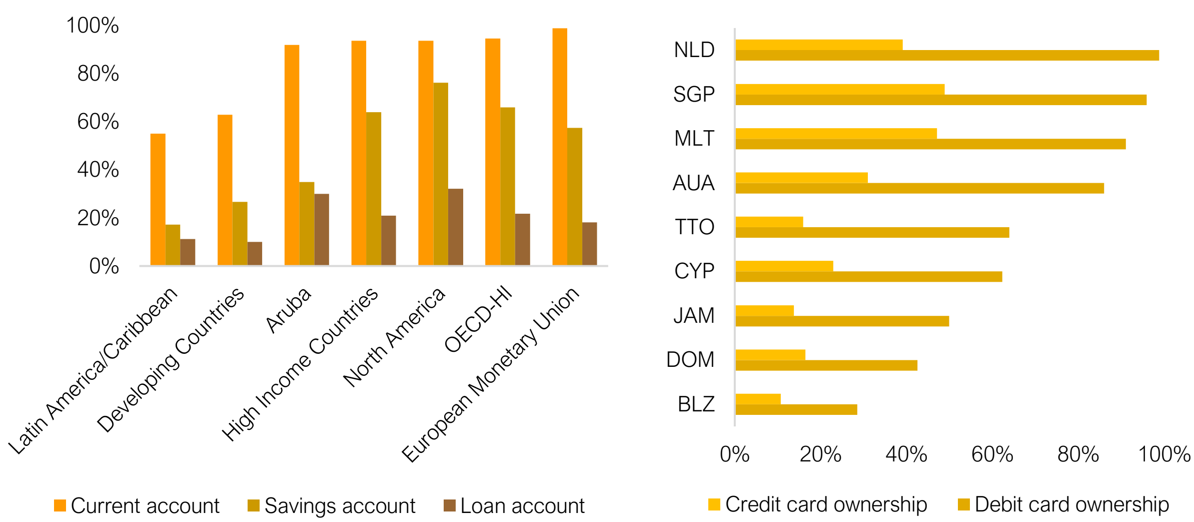
[3] For every ATM, an estimated 1200 inhabitants (ATM access index of 0.8)

Figure 2.2. Financial accounts and instruments
(Percentage of households, CBA, 2018)



In relative terms, the state of financial inclusion in Aruba is similar to most high-income countries. In comparison to Latin America and the Caribbean region, Aruba fares relatively well in terms of access to basic financial services, outperforming the region, yet trailing advanced economies (World Bank, 2018). However, in terms of savings accounts, Aruba lags significantly behind high-income countries (See Figure 2.3). With respect to card usage, Aruba performs relatively well amongst its Caribbean small state peers. Nonetheless, card usage lags behind other small advanced states.

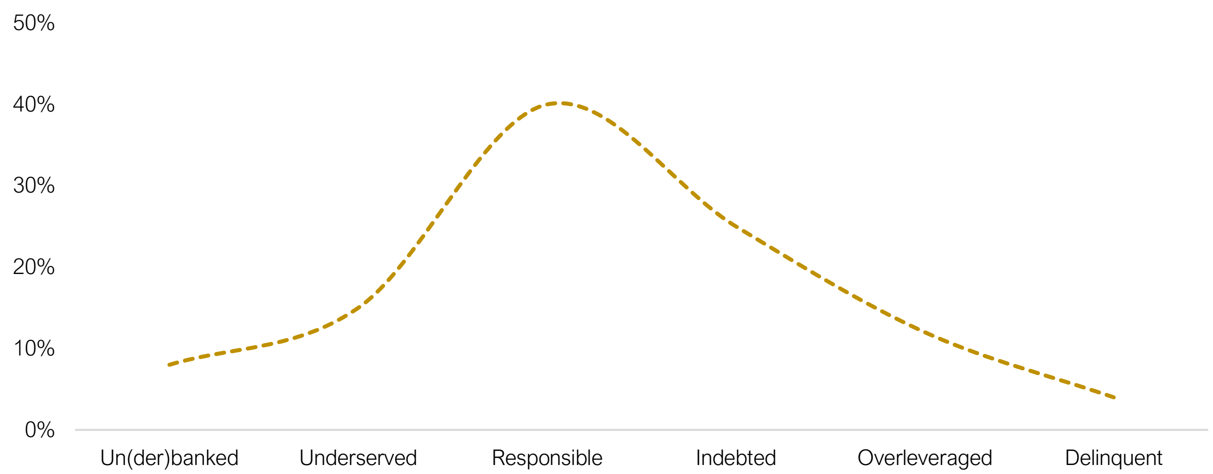
Figure 2.3. Select Financial Inclusion indicators in comparative perspective (CBA, 2018; World Bank, 2018).



The challenge of Aruban financial inclusion is likely demand driven. The relative lack of savings and insurance accounts, in tandem with the proportion of informal savings and household indebtedness, suggests that the Aruban financial inclusion challenge lies beyond access to basic transaction accounts, and is likely a consequence of several interrelated factors, including a declining real GDP per capita and a rising income inequality. This mix of financial inclusion determinants includes, but is not limited to, contracting (real) income levels, increase cost of living, faltering labor participation rates, the general lack of (higher) financial education, and fickle consumer habits. The limited number of households with (formal) savings indicates that at least 50 percent of all households have no financial buffer in place, nor a long-term financial outlook.

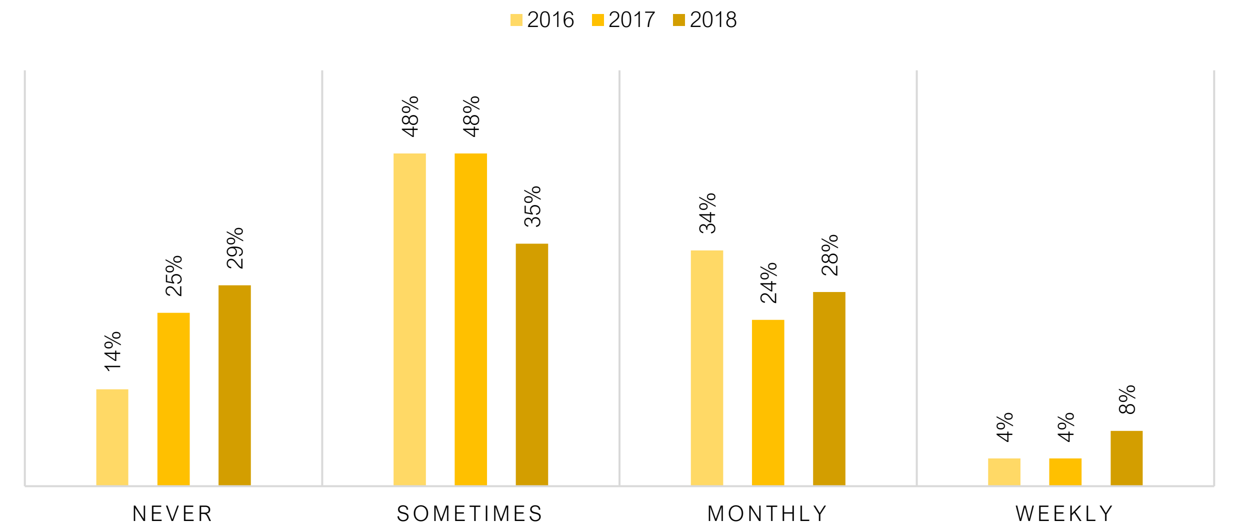
Aruban financial inclusion faces 'double jeopardy' with significant risks tilted towards the indebted and 'overleveraged' (See Figure 2.4). Results of the Household Financial Survey (CBA, 2018) reveal that whereas the median household (monthly) income ranges between Afl. 3000 and Afl. 6000, the median (monthly) debt surpasses Afl. 4000. The latter includes, but is not limited to, e.g., housing mortgage (Afl. 1670), car loans (Afl. 860), personal loans (Afl. 660), student loans (Afl. 540), and tax debt (Afl. 280). The financial overleveraging of households poses a significant (tail) risk to financial stability and inclusion. Moreover, informal banking is not uncommon in the local financial ecosystem. Analysis suggests that an estimated 15 percent of (household) loans stem from non-regulated financial institutions.

Figure 2.4. Double Jeapardy of Aruban Financial Inclusion
(Percentage of households, CBA, 2018)



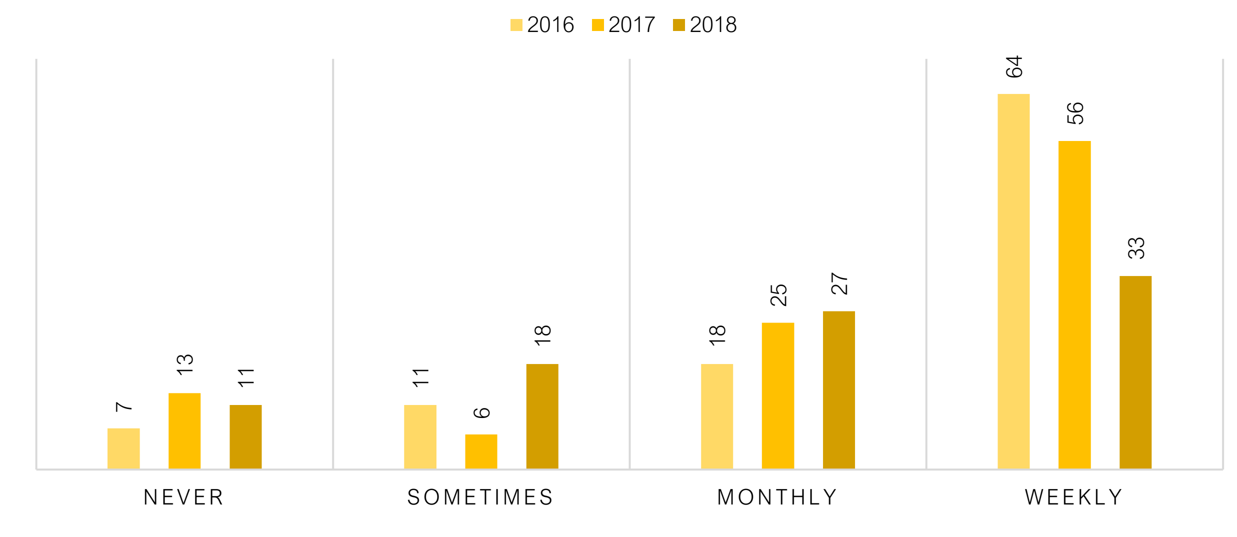
Traditional and electronic banking channels dominate financial transactions. Turning towards *usage* of banking, the consumer survey results indicate that use of branch offices remains the preferred and primary banking channel amongst an estimated 70 percent of consumers (See Figure 2.5), and only 30 percent making regular (monthly and weekly) use of branch offices (of commercial banks). Over the past three years, the percentage of consumers never making use of a branch office has increased steadily from 14 percent to 29 percent.

Figure 2.5. Use of branch offices 2016-2018



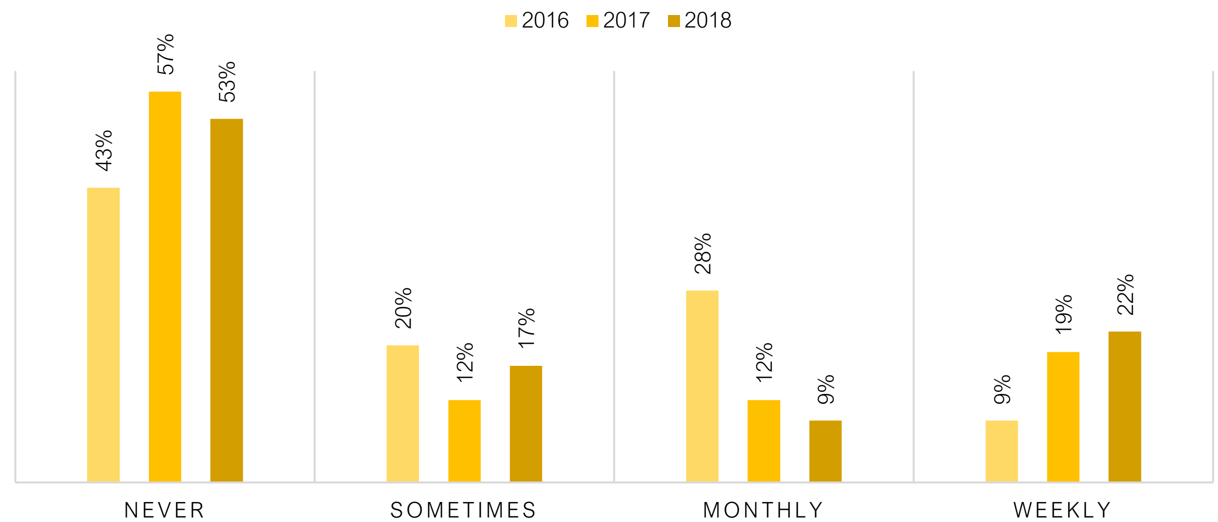
Debit cards enjoy a relatively high usage rate. Moreover, consistent with the findings of the Household Financial Survey (CBA, 2018), close to 70 percent of consumers regularly make use of a debit card (See Figure 2.6), and only-one third of consumers using their debit card on a weekly basis; declining by 31 percentage points since 2016. Alternatively, monthly usage of debit cards increased by 9 percentage points between 2016 and 2018.

Figure 2.6. Use of ATM & POS 2016-2018



The digital transformation of the financial system is well under way in Aruba. In general, Aruba enjoys an internet penetration rate of well over 90 percent of households, with more than 70 percent of the population using social media. It is therefore no surprise that almost 50 percent of consumers use the internet for banking and personal financial purposes (See Figure 2.7). On average, an estimated 30 percent of consumers make regular use of internet banking facilities offered by commercial banks, of which a good 20 percent are high-frequency users. The demographic of these 'digital financial nomads' is characterized by a relatively high(er) income and education, with a bias towards young(er) adults and professionals.

Figure 2.7. Use of internet banking 2016-2018



Mobile banking is gaining traction in the Aruban financial system. Similar to internet banking, mobile technologies have slowly entered the realm of banking with close to 40 percent of consumers making use of their smart phones and financial banking applications (See Figure 2.8). Although still embryonic, the usage of mobile banking supersedes internet-based banking amongst consumers, with weekly usage surging from 8 percent to 27 percent in less than three years.

Although access to and usage of financial services are important for enabling financial inclusion, they are not enough. Thereto, financial confidence and financial literacy are essential in strengthening financial inclusion. Drawing from the Consumer Confidence Survey data, a multivariate proxy indicator is used to assess the *confidence* dimension of financial inclusion[4]. The Personal Finance Confidence Index (PFCI) is estimated by averaging three sub-indexes: (1) current personal financial situation; (2) outlook personal financial situation; and (3) confidence in taking out loan (See Figure 2.9). The results indicate that financial confidence remains relatively subdued with the PFCI lingering below the neutral threshold (=100).

[4] The results of a national study on the financial competence and literacy of Aruban households are forthcoming.

Figure 2.8. Use of mobile banking 2016-2018

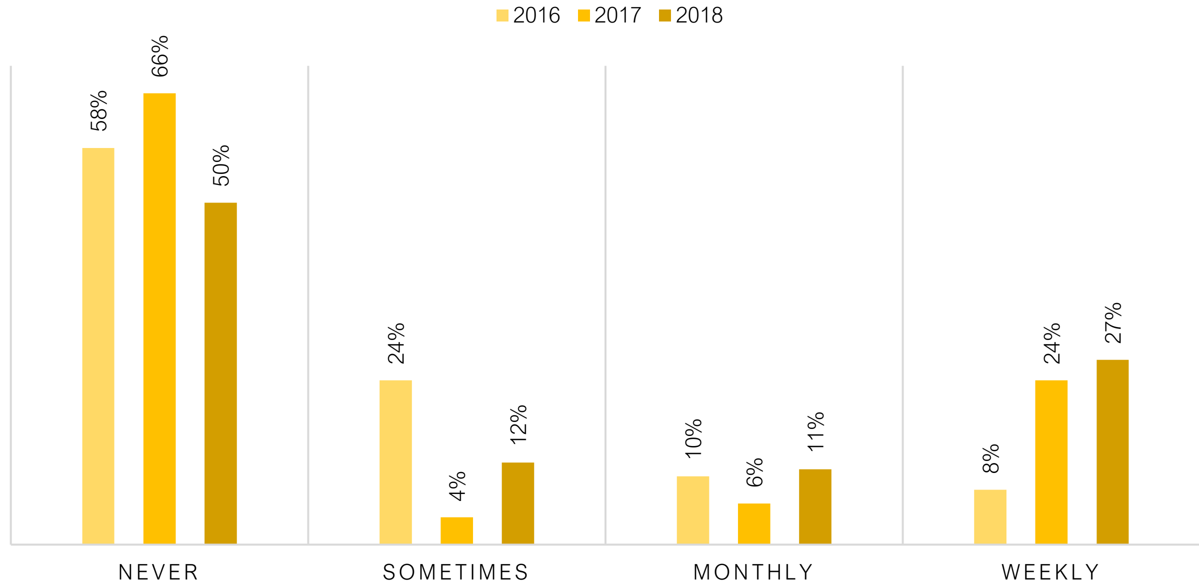
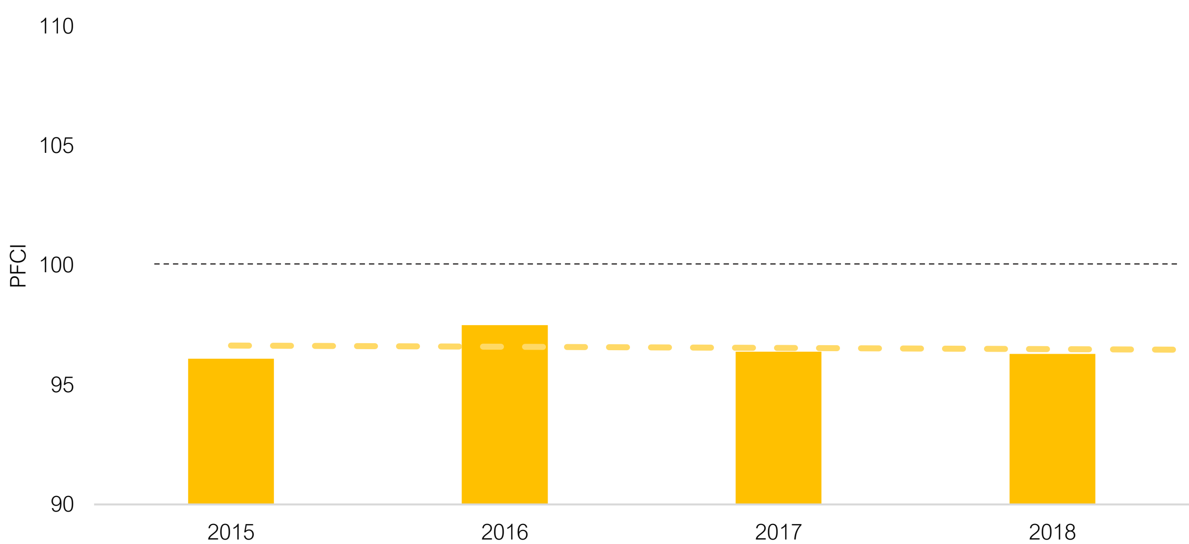


Figure 2.9. Personal Financial Confidence Index

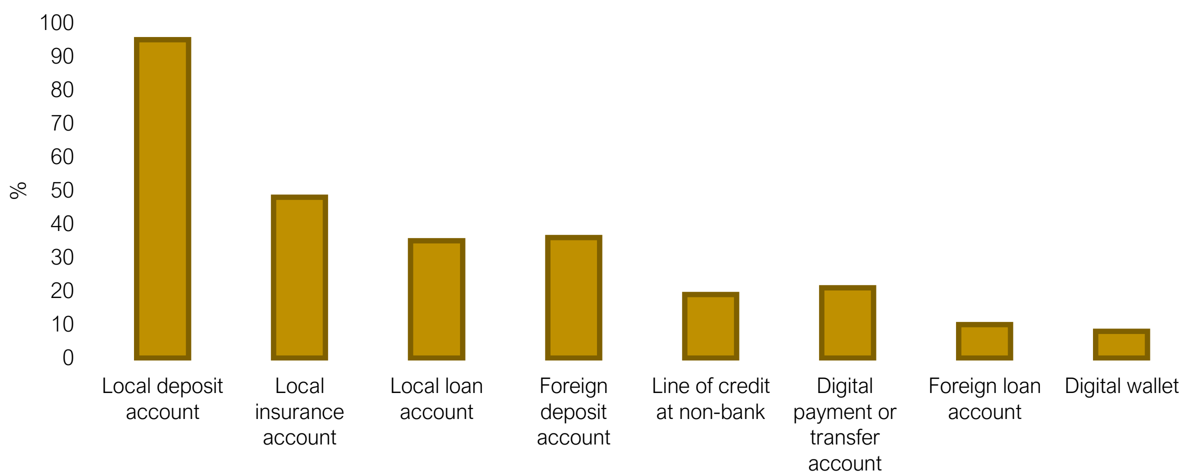


2.4. Digital Financial Inclusion of Small Businesses

Financial inclusion of small businesses is essential to economic growth. More so within the context of small island economies, which consist predominantly micro- and small businesses. With regard to the *access and usage* of financial accounts and instruments by the Aruban business community, recent survey results (CBA, 2018) yield the following insights (See Figure 2.10).

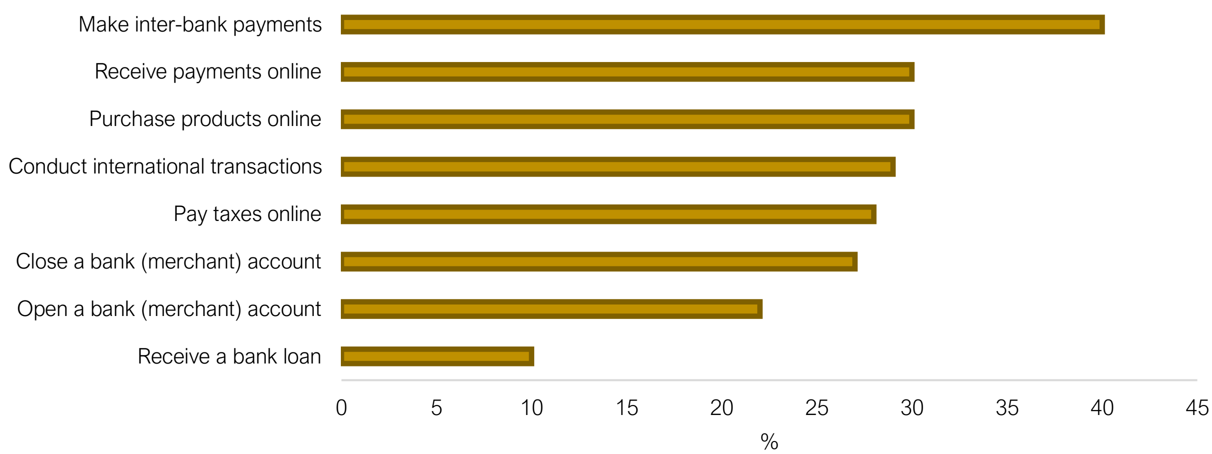
Beyond ample access to deposit accounts, businesses remain relatively excluded from the (formal) financial system. An estimated 95 percent of businesses have a (local) deposit account at a commercial bank, with one-third of businesses indicating that they have a foreign deposit account. In terms of loans, 35 percent of businesses indicate that they have access to local loans, and 10 percent make use of a foreign loan account. It is noteworthy that at least two-thirds of businesses indicate that they have limited access to financing and credit from a commercial bank. This may explain why an additional 19 percent has a line of credit at a *non-bank* institution. For payments and transfers, one (1) in five (5) businesses makes use of digital banking facilities, and competes on innovation and quality (CBA, 2018).

Figure 2.10. Financial accounts and instruments of businesses (percentage of businesses, CBA, 2018)



Financial inclusion *quality* remains challenging for the local business community. Turning towards the *quality* of financial services and the ease of doing finance, less than 40 percent of businesses indicate that it is convenient and efficient to make inter-bank payments, receive payments over the internet, and purchase products online (See Figure 2.11). For an estimated 28 percent of businesses, conducting international transactions is considered convenient. Alternatively, at least two-thirds of businesses indicate that it is difficult to open a (merchant) bank account and to receive a business loan.

Figure 2.11. Ease of conducting financial transactions
(percentage of businesses rating easy to very easy, CBA, 2018)



The previous findings are consistent with the main (financial) challenges for doing business in Aruba. On average, 80 percent of business indicate that the government administration is burdensome and that the level of taxes limits incentives to invest (See Figure 2.12). Less than one-third of businesses think that it's easy to start a business and to access capital (See Figure 2.13). The inefficiency in customs procedures (for imports) and public financing is deemed challenging by an estimated 90 percent of businesses. Not surprisingly, the three main challenges for doing business in Aruba are (1) the high cost of doing business, (2) the limited access to capital and financing, and (3) the inefficient procedures associated with government bureaucracy.

Figure 2.12. Main challenges for doing business in Aruba - 2018
(affirmative response rates in percentage, CBA, 2018)

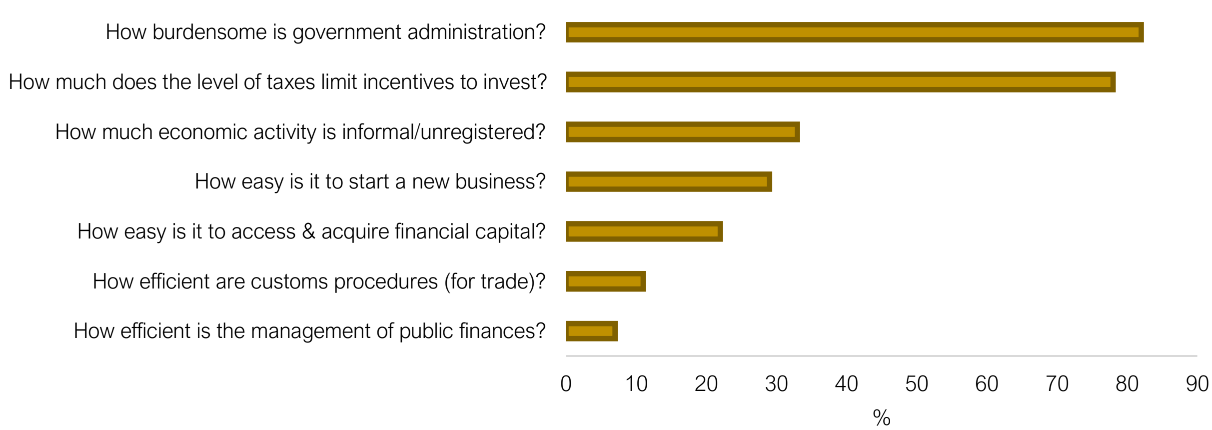
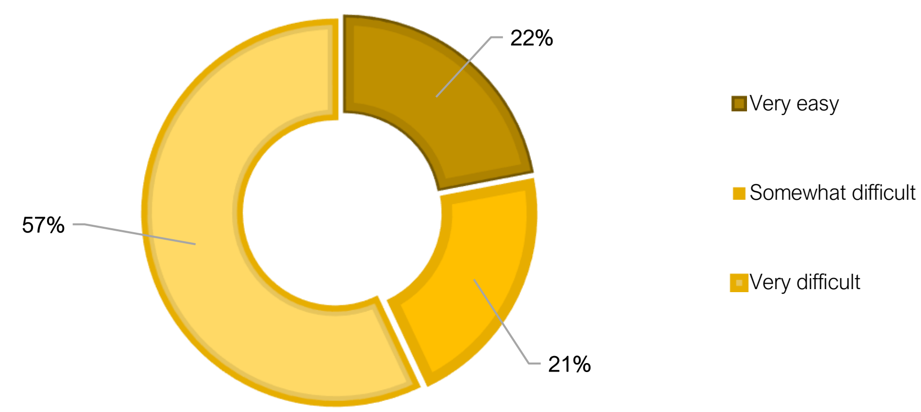
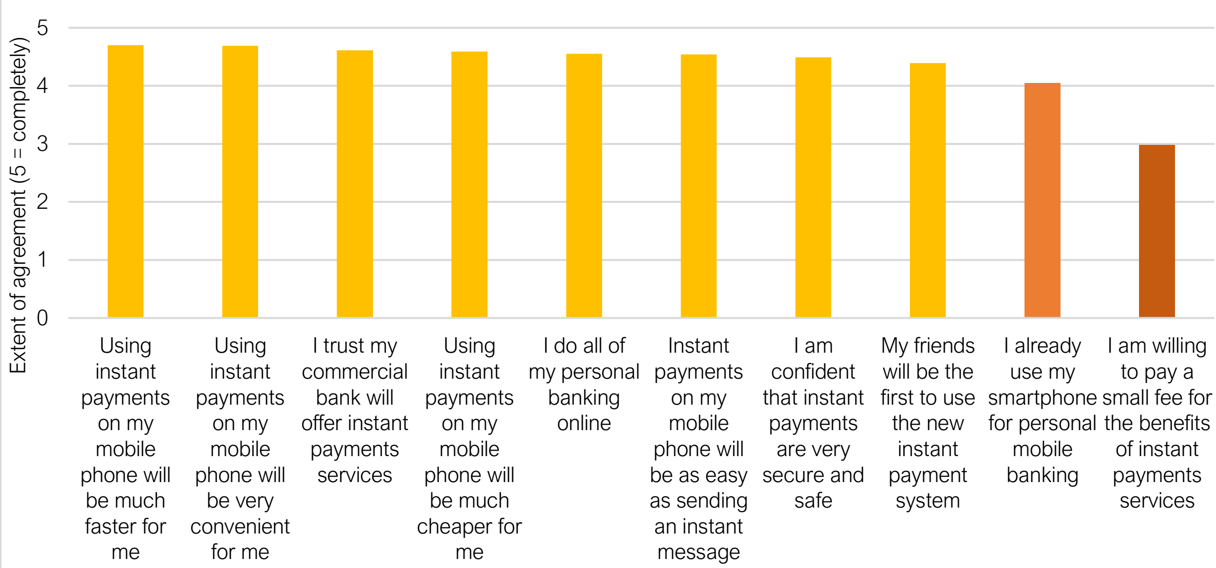


Figure 2.13. How easy is it to access and acquire capital and financing?



Although the current state of digital financial inclusion of businesses is minimal, the short-term outlook for digital innovation is upbeat. Looking towards the future of digital banking, a recent study on the intention to adopt and use Instant Payments (IP) by commercial business indicates that an estimated 65 percent of businesses agree that they intend to adopt IP next year.

Figure 2.14. Business intentions and perceptions of IP usage



In general, the local business community has a positive outlook on IP innovation. Speed and convenience are perceived as the main benefits of IP, followed by trust in the (future) offerings by commercial banks and digital payment service providers. More than half of respondents (52 percent) already use a mobile banking application on their smartphone. Willingness to pay a (usage) fee is viewed, however, as a potential hurdle to using IP. Factor and correlation analysis reveal six factors that influence the commercial adoption of IP by businesses (see Figure 2.15). Convenience, confidence, control, and competence have a significant[5] positive impact on the intention to adopt IP. On the other hand, costs and price perception deter – the rate of – IP adoption. Contextual factors, including generational (i.e., age) and relational (i.e., social network) factors, also have a significant influence on the intention to adopt IP by businesses.

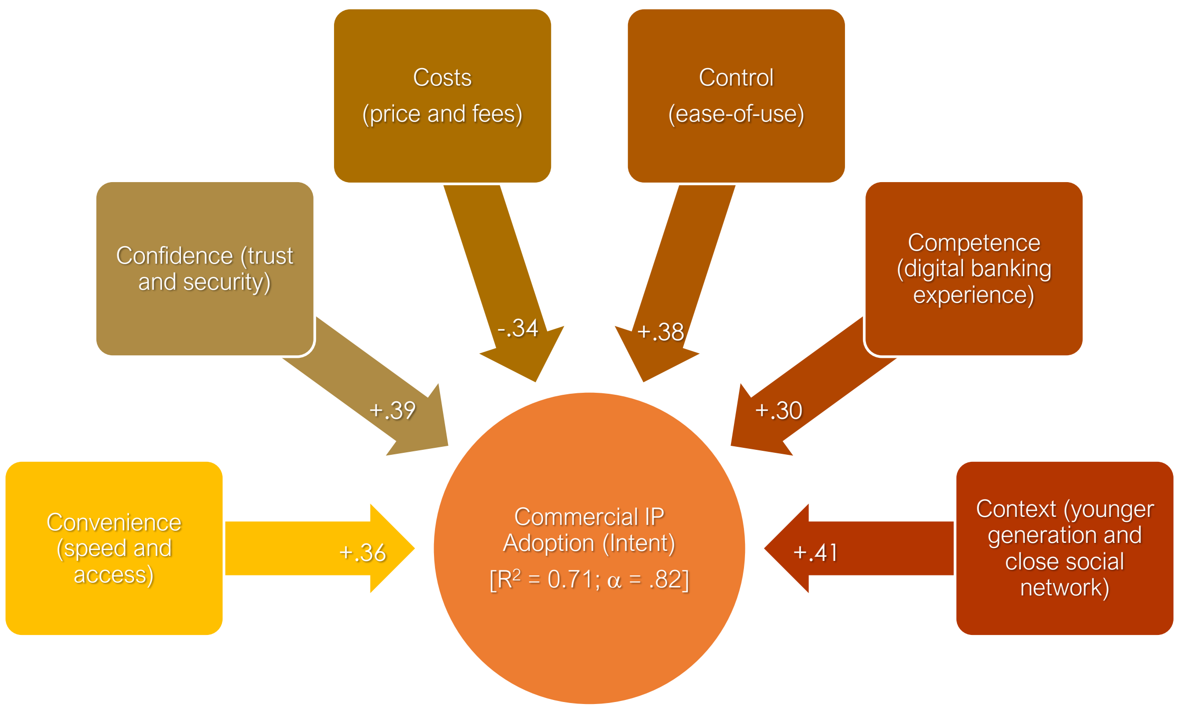


Figure 2.15. Drivers of commercial IP adoption (CBA, 2018).

[5] $p < .05$

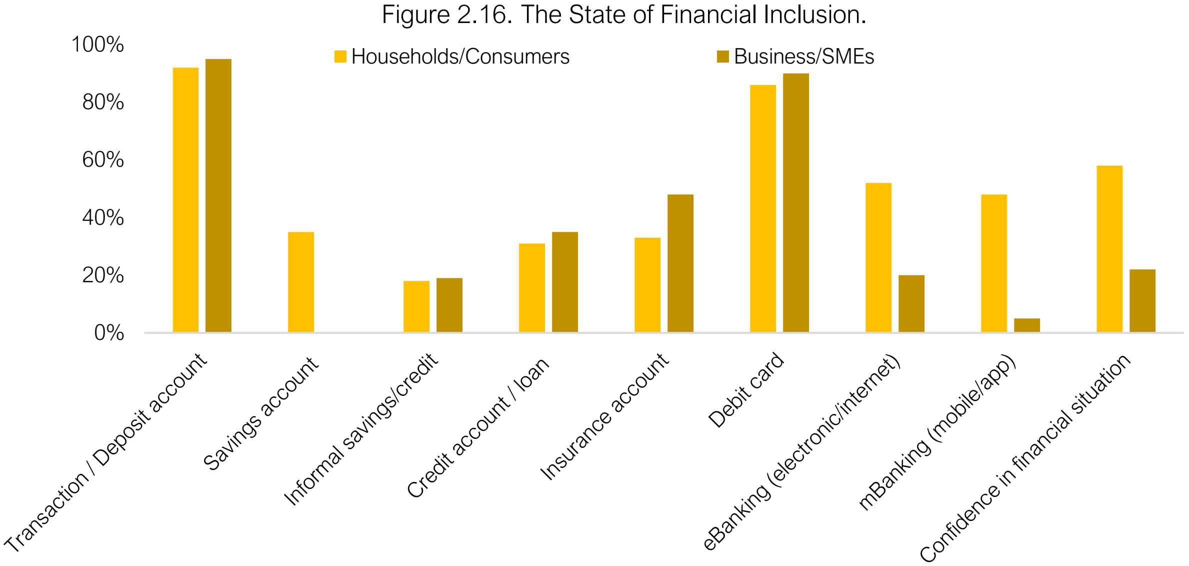
2.5. Conclusions

What is the state of digital financial inclusion in Aruba? The overall findings of this study suggest that while *basic access* to transaction and deposit accounts is readily available and used, access to and usage of bank credit, savings, and insurance lag considerably amongst households and businesses (See Figure 2.16). More specifically, less than 50 percent of Aruban households have access to savings, credit or insurance, most likely due to financial and income constraints (i.e., demand). Likewise, credit and insurance do not enjoy widespread usage amongst small businesses.

Furthermore, informal financing seems to be well trenched in the Aruban financial industry. Informal savings and credit amongst households and businesses account for almost 20 percent. However, a lurking state of 'double jeopardy', i.e., simultaneously financially constrained and overleveraged, is a threat to financial inclusion and financial stability. Targeted policy measures and specific (niche) actions are required to 'rebalance' consumer financing, and mitigate the associated risks, especially considering the anemic economic position and developments over the past decade.

Digital payments enjoy a growing usage by consumers, while businesses seem to be slowly adopting digital banking and other digital transformations. Electronic and mobile banking are increasingly being used by households, with close to 50 percent of households using digital facilities for payments and other personal financial transactions. The findings suggest that there is a structural transition, albeit initial, from physical (brick-and-mortar) branch offices to more digital banking channels. However, less than one quarter of small businesses indicate that it is easy to do business and conduct their financing in Aruba. The limited access to credit and the high costs of doing business are considered key financial barriers by small business owners.

Figure 2.16. The State of Financial Inclusion.



In summary, whereas Aruba's strength lies in financial stability and access to basic financial services and products, the current state of digital financial inclusion is hampered by the lack of financial inclusion depth, i.e., the use of digital financial services and products, including bank credit, savings, and loans, in addition to restrained financial confidence, especially amongst small(er) businesses. Building forth on the strengths and opportunities of digital financial inclusion and addressing some of the structural weaknesses and emerging threats (See Figure 2.17), a future state architecture for financial inclusion is presented in the next chapter.

Access

- High density of branch offices, ATMs, and POS terminals
- High adoption rate of internet and mobile technologies
- High access to transcation and deposit accounts

Usage

- Significant usage of branch offices (although diminishing)
- High usage of cash and (debit) cards for banking and payments (consumers)
- Limited use of savings, credit, and insurance accounts
- Moderate level of financial exclusion of underbanked consumers
- Significant risk of consumer overleveraging (loans and credit)
- Limited digital financial inclusion of (small) businesses

Quality

- Limited ease in doing finance (businesses), with considerable inefficiencies in government, banking, and logistics procedures.
- Moderate ease in conducting mobile banking (consumers)
- High costs of banking and financial transcations (businesses)

Confidence

- Moderate personal financial confidence (consumers)
- Limited confidence in business finances (businesses)

Figure 2.17. The State of Financial Inclusion in Aruba – Summary of Main Findings.

Chapter 3. Strengthening the Future

3.1. Introduction

Digital financial inclusion provides a gateway towards developing a sustainable and inclusive economy. The future and desired state of digital financial inclusion is quintessential in developing a Financial Inclusion National Strategy (FINS), as the former provides direction to national strategies and policies for strengthening digital financial inclusion in order to promote inclusive and sustainable economic development. The future state architecture for Aruban financial inclusion is a multi-level design. Consistent with the general principles and policies for fostering national financial inclusion, the future state architecture for digital financial inclusion is designed as a multi-dimensional framework consisting of four levels, i.e., (1) enabling conditions of governance and infrastructure, (2) strategic levers of access, usage, quality and confidence, (3) financial inclusion impacts and outcomes, and (4) inclusive and sustainable economic development (See Figure 3.1).

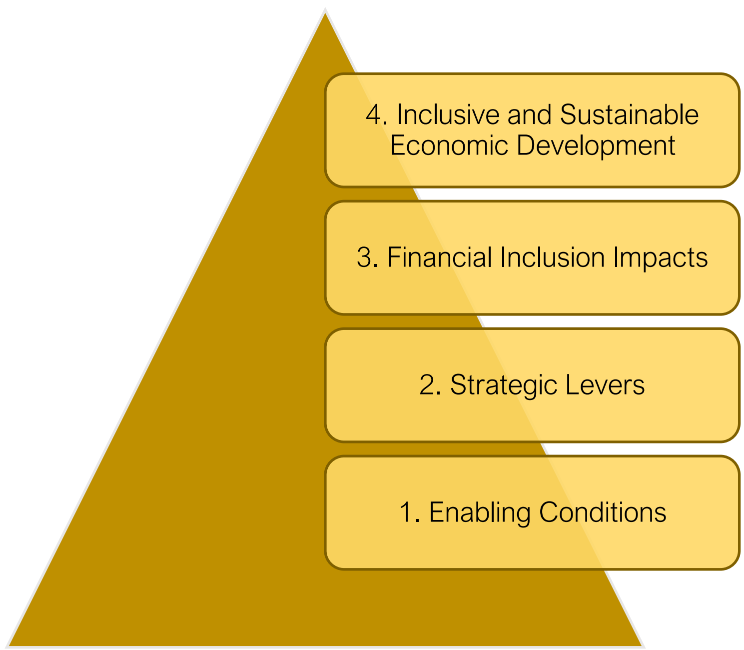


Figure 3.1. Multi-level Design for Digital Financial Inclusion.

3.2. Enabling Conditions

Enabling conditions focus on regulatory and infrastructural elements for creating the right and responsible environment to enable financial inclusions. First and foremost, this involves the *commitment and capacity of government* to create the appropriate legal and regulatory framework, in addition to working collaboratively with the public and private sector (See Figure 3.2). A national platform or council, consisting of relevant stakeholders and institutions across a wide variety of sectors, should be established and mandated with financial inclusion strategies and policies, in addition to measuring and monitoring the effectiveness of financial inclusions programs and impacts.

Concurrently, appropriate regulatory and legal instruments should be developed and deployed. This suite of legal instruments is a necessary condition for enabling, e.g., the digital identification of citizens and business (i.e., national digital IDs and digital citizenship), the protection of consumer financial rights (i.e., consumer credit legislation), and the establishment of a national digital financial ombudsbureau. Furthermore, considering new EU and other international regulations, existing regulatory frameworks should be extended with new data/privacy legislation, payments systems directives, and macro-prudential instruments to safeguard financial stability (CBA, 2018).

From a digital infrastructure perspective, national telecom policies should meet state-of-the-art cyber resilience directives and standards. Resiliency, efficiency, scalability and interoperability are at the forefront of national digital systems to facilitate the (secure) sharing of data and information. More importantly, the development of a fast, fair and future-proof digital payments infrastructure is a sine qua none in enabling access to, usage of, quality of, and confidence in financial services (CBA, 2017).

Financial literacy and financial education are pivotal to bolstering national financial inclusion. While regulatory and technical requirements are necessary for fostering financial inclusion, they are insufficient for realizing financial inclusion and building an inclusive society. Thereto, concerted national efforts, e.g., by means of a National Financial Inclusion Platform consisting of government and financial institutions, should be geared at educating citizens, households (especially the most vulnerable), and (small) businesses on (digital) financial services and products. According to the OECD (2005), financial education is "*the process by which financial consumers/investors improve their understanding of financial products, concepts and risks and, through information, instruction and/or objective advice, develop the skills and confidence to become more aware of financial risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being*".

Within the public sector, coordination between government departments of, e.g., finance, education, labor, and social affairs is required to strengthen digital financial inclusion. Formal education systems, such as (primary and secondary) schools, adult learning and vocational programs, and community centers provide an efficient and available channel for creating digital financial awareness and enhancing digital financial literacy. Alternatively, national campaigns and (regular) seminars on digital financial literacy should be pursued. Considering the wide-spread usage of social and other digital media, campaigns and programs should be offered in a digital and interactive (gaming) format.

Digital Financial Inclusion Goals	National digital identification of citizens Universal access to transaction and savings accounts Responsible access to capital and financing Growth in household and business insurance accounts Availability of microfinancing and micro-insurance National fund for start-ups and business entrepreneurship	Usage of digital and mobile banking by consumers Usage of digital payment facilities by business Usage of digital tax payments Increase i use of fomal financial system (i.e. decrease in informal savings and lines of credit)	Convenient, affordable, and secure transactions (digital payments) Convenience in opening a bank (merchant) account (digitally enhanced CDD) Adoption and usage of a national digital credit registry Enhanced risk-based and prudential supervision (digitally enhanced)	Confidence and trust in formal financial system Financial empowerment and well-being (income equality) Advanced level of financial literacy (budgeting, credit, savings, insurance) Knowledge and understanding of consumer rights and financial protection Adoption of consumer credit legislation and financial ombudsbureau
Strategic Levers	**Access** to transaction, savings, credit, and insurance accounts	**Usage** of digital payments, formal lines of credit, and formal savings	***Quality*** of (digital) financial services	***Confidence*** in financial system and personal financial competence
Enabling Conditions	**Governance & Infrastructure:** Government Commitment and Capacity National Policy and Partnerships Financial Legistation and Regulatory Framework Digital Infrastructure and Payments Rail State of the art Cybersecurity Digital Financial Literacy and Education			

Figure 3.2. Future State Architecture for Digital Financial Inclusion.

3.3. Strategic Levers

Strengthening digital financial inclusion requires both supply- and demand-driven levers, which require institutional coordination. Consistent with the definition and framing of financial inclusion, and considering the current state of financial inclusion, four strategic levers are distinguished for fostering national financial inclusion:

- *Access*: Access to transaction, savings, credit, and insurance accounts, with consideration for underserved households and small business owners;

- *Usage*: Usage of digital payments, formal lines of (micro-) credit, (micro-) insurance, and formal savings, with attention for mobile payments, e-commerce, and e-tax;

- *Quality*: Quality of (digital) financial services and assets of financial institutions, with a focus on the efficiency, convenience, security and (prudential) diligence of digital financial services;

- *Confidence*: Confidence in financial system and personal finance, with concentration on financial literacy, trust in the formal financial system, and financial empowerment and well-being.

3.4 Financial Inclusion Impacts

Measuring and monitoring the impacts and outcomes of financial inclusion strategies and policies are pivotal to realizing inclusive growth. In advancing financial inclusion metrics from access to financial empowerment, the World Economic Forum (2018) concludes that with the rapidly changing regulatory and market expectations, i.e., greater convenience, improved service, and higher transparency, it is crucial to identify concrete outcomes that financial inclusion brings for both households, consumers, and business, as well as for financial and government institutions.

The future state architecture captures the strategic goals and aspirations for financial inclusion within the specific context of Aruba. Commensurate with the four strategic levers of financial inclusion, distinct outcomes are described along the dimensions of access, usage, quality, and confidence:

- ***Access*:** National digital identification of citizens; universal access of households to transaction and savings accounts; responsible access to capital and financing for small businesses; growth in household and business insurance accounts; availability of micro-financing and micro-insurance; national innovation fund for business entrepreneurship (start-ups in the first two years of establishment).

- ***Usage:*** Usage of digital and mobile banking by consumers; usage of digital payment facilities by business; digital payment of and compliance with taxes; increased usage of the formal financial system (decrease in informal savings and informal lines of credit).

- ***Quality:*** Convenient, affordable, and secure digital payments and financial transactions; convenience in opening a bank (merchant) account (digitally enhanced CDD); usage of a national digital credit registry; enhanced risk-based prudential supervision (digitally enhanced).

- ***Confidence:*** Confidence and trust in formal financial system; financial empowerment and well-being (reduced income inequality); advanced level of financial literacy (e.g., budgeting, credit, savings, insurance); knowledge and understanding of consumer rights and financial protection; adoption of consumer credit legislation and financial ombudsbureau.

In conclusion, the future state architecture for financial inclusion provides an integrated design for framing the desired state of digital financial inclusion, in addition to identifying the pathways for developing a roadmap for fostering a sustainable and inclusive economy.

Chapter 4. Conclusion

4.1. Introduction

Based on the future state architecture for financial inclusion, this concluding chapter presents a roadmap for strengthening digital financial inclusion in Aruba. Several policy dimensions, pathways and performance goals are outlined and described.

4.2. Roadmap for Digital Financial Inclusion

Digital financial inclusion is essential for fostering a sustainable and inclusive Aruban economy. Hereto, it is recommended to establish a *Financial Inclusion National Council of Aruba* (FINCA) to oversee the development, implementation, and management of specific, targeted national financial inclusion policies and programs. Functioning as a national multi-stakeholder platform, the FINCA would consist of representatives of government (e.g., ministries of finance, education, and labor) and financial institutions (e.g., CBA, ABA, and IAA).

Recommendation: Establish a Financial Inclusion National Council of Aruba

The proposed roadmap for financial inclusion adopts a multi-year framework for financial inclusion. Underscoring the contextual and processual nature of financial inclusion, and in line with the national efforts surrounding the SDGs, and more specifically to promote inclusive and sustainable economic growth (SDG 8), a mid- to long-term time horizon is presented. This multi-year framework and time horizon incorporates and outlines specific short- to medium-term targets (set for 2020 and 2025), policy actions, and targets (with commensurate financial inclusion metrics). Subsequently, it is recommended to adopt 2030 as a long-term target, with intermediate targets set for 2020 and 2025 (See Figure 4.1).

Recommendation: Adopt a multi-year framework for digital financial inclusion

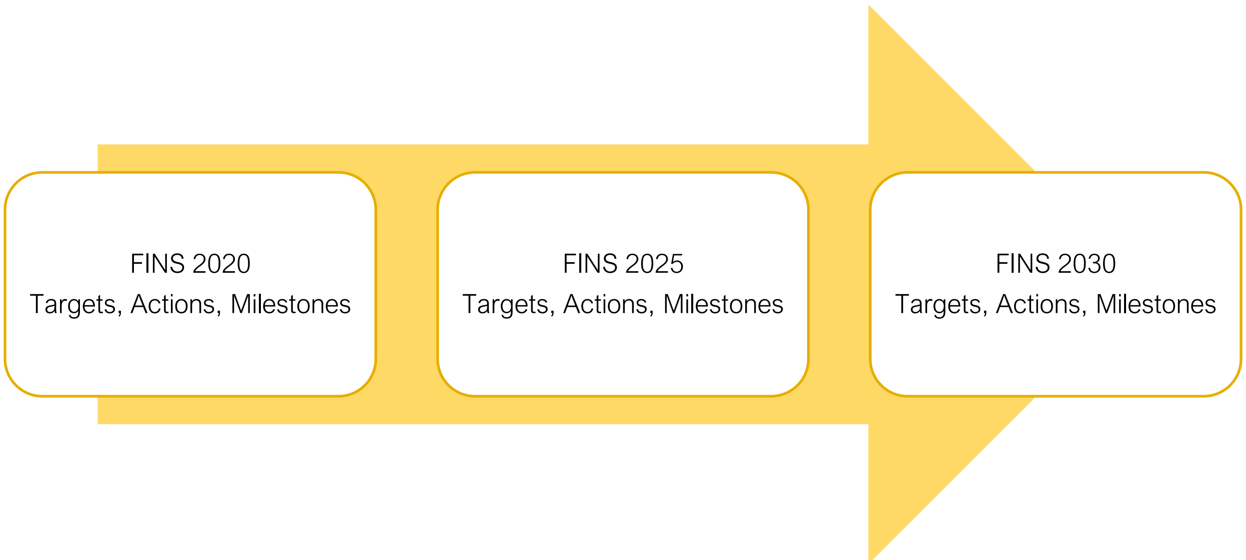


Figure 4.1. Financial Inclusion National Strategy 2020-2030.

The multi-dimensional and dynamic nature of digital financial inclusion requires a multi-pronged strategy. To foster financial inclusion, multiple pathways are designed and implemented in a parallel fashion. Reflecting on the current and desired state of financial inclusion, at least five (5) pathways are identified in the roadmap (See Figure 4.2):

(I) ***Enabling regulation & education*:**

- A national digital identification program (i.e., Aruba Digital Citizenship) and a concurrent regulatory framework and laws are established by 2020. By 2025, digital citizenship is universal;
- Consumer financial protection laws (i.e., consumer credit regulation) are enacted and enforced by 2020;
- A national digital financial ombudsbureau is established and operational by 2020;
- A national cybersecurity commission is fully operational and effective by 2020;
- An Aruban Payments System Directive (i.e., APSD) is enacted and enforced by 2020;
- Financial education is adopted in the national educational curriculum in primary and secondary schools by 2020.
- A dedicated national program for financial inclusion, literacy, and education is organized annually, especially for vulnerable groups in society;
- Financial literacy is achieved amongst 75 percent of households by 2025. By 2030, the Aruban society should be universally literate in (digital) finance.

Recommendation: Focus on five policy dimensions and pathways of financial inclusion

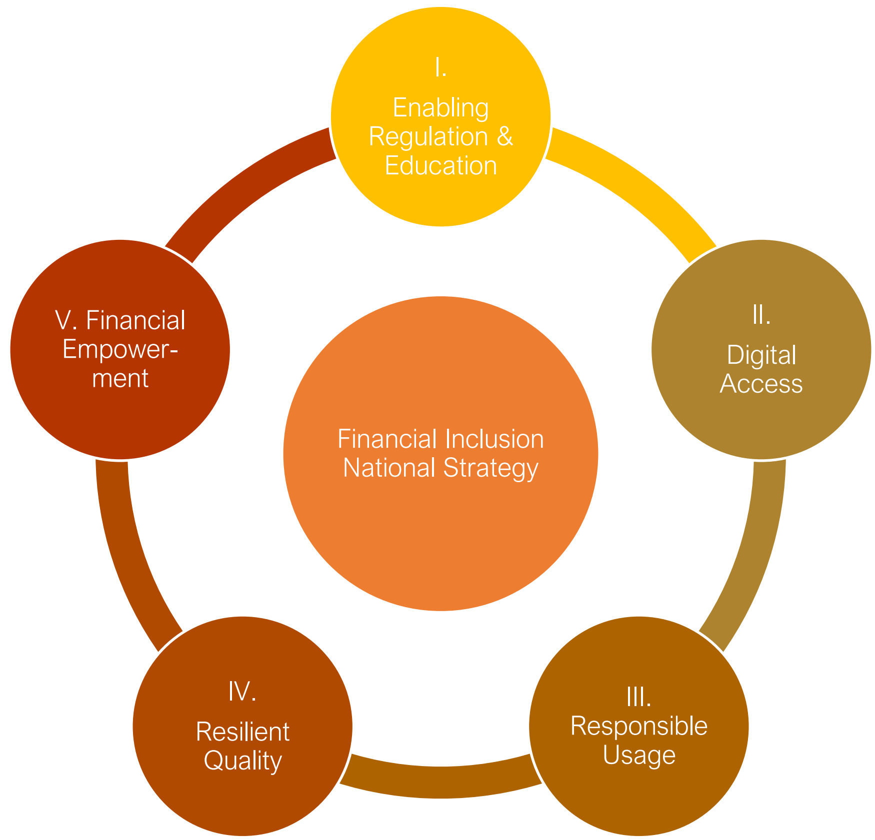


Figure 4.2. Financial Inclusion National Strategy: Policy Dimensions and Pathways.

(II) ***Digital access*:**

- By 2020, there is universal access to transaction and deposit accounts (in the formal financial system);
- Formal access and use of savings and lines of credit have advanced significantly (to 75 percent) amongst households and business by 2025;
- By 2025, micro-credit and micro-insurance are readily available and affordable to small businesses and start-ups. A National Innovation Fund is established and operational to accelerate small business development. At least 75 percent of business and households are insured by 2025;
- By 2025, all consumers and businesses have a unique and standardized digital ID.

(III) ***Responsible usage*:**

- The usage of digital payments (e-banking and m-banking) enjoys a 75 percent adoption rate amongst consumers and commerce by 2025. Digital payment facilities and an 'Aruban digital wallet' are universally available by 2025;
- By 2020, the responsible usage of the formal commercial banking system (i.e., savings and credit) has increased by 10 percentage points, thus, reducing informal banking and the number of underserved citizens;
- By 2025, 75 percent of businesses and households pay taxes online.

(IV) ***Resilient quality*:**

- Instant payments (real-time financial transactions) are available and operational by 2020;
- By 2025, at least 75 percent of businesses report convenient inter-banking payments;
- At least 75 percent of business can conveniently and securely receive payments online by 2025;
- By 2025, ease of conducting financial transactions has reached 75 percent amongst small businesses;
- There is convenient, affordable, and responsible access to credit by at least 75 percent of (small) businesses;
- By 2025, all (commercial) banking institutions conduct customer due diligence by means of regulatory and supervisory technologies (i.e., regtech and suptech).

(V) ***Financial confidence*:**

- By 2025, at least 75 percent of consumers and households are confident in their personal financial situation and feel financially empowered. The PFC index scores above 100 by 2025;
- By 2025, conducting business in Aruba is considered convenient by at least 75 percent of businesses;
- There is universal knowledge and understanding of (consumer) financial rights by 2030;
- Confidence and trust in the financial system are maintained and improved by 2030.

Recommendation: Strengthen financial inclusion evidence-based policies and programs by executing regular national surveys

Fundamental to strengthening digital financial inclusion is the measurement of financial inclusion key performance indicators. The policy dimensions and pathways provide specific measurable targets and milestones for monitoring and managing the impacts and outcomes of financial inclusion policies and programs. Hereto, it is recommended to strengthen evidence-based policy development for financial inclusion by organizing and executing regular national surveys on the state and progress of financial inclusion of households, consumers, and (small) businesses. Future research should focus on developing a more 'fine-grained' perspective of financial inclusion in Aruba. It is recommended to conduct a tri-annual Financial Inclusion Survey of individuals and business owners. The Financial Inclusion Survey would be specifically focused on collecting and analyzing more 'granular' evidence regarding financial inclusion initiatives, processes, outcomes. Moreover, future studies should include metrics and indicators of financial literacy, education, and competence (World Bank, 2018.)

4.3. Conclusion

The purpose of this study is to assess the current state of financial inclusion in Aruba, and subsequently, to design a future state architecture for strengthening digital financial inclusion. Regarding the current state of financial inclusion, the available evidence points towards a relatively weak state. Whereas the financial system is sound and stable, and general access to basic financial services is available, the usage, quality, and confidence remain constrained. More specifically, the current state of financial inclusion is hampered by the lack of financial inclusion depth and digitalization, in addition to weak financial competence and confidence amongst households and (smaller and younger) businesses.

Financial inclusion fosters economic resilience[6]**.** When people participate in the formal financial system, they are better able to start and expand businesses, invest in education, manage risk, and absorb financial shocks. In addition, access to capital and other financial services spur industry innovation and can accelerate economic growth. Access to and usage of digital financial services have a critical role in reducing social exclusion, boosting shared prosperity, and supporting inclusive and sustainable development. Consequently, the future state architecture for digital financial inclusion provides a blueprint and is designed to create the enabling conditions and deploy multiple levers for realizing Aruba's digital financial inclusion goals towards 2030 (See Figure 4.3).

[6] Financial inclusion is a necessary, yet insufficient condition for building a resilient economy.

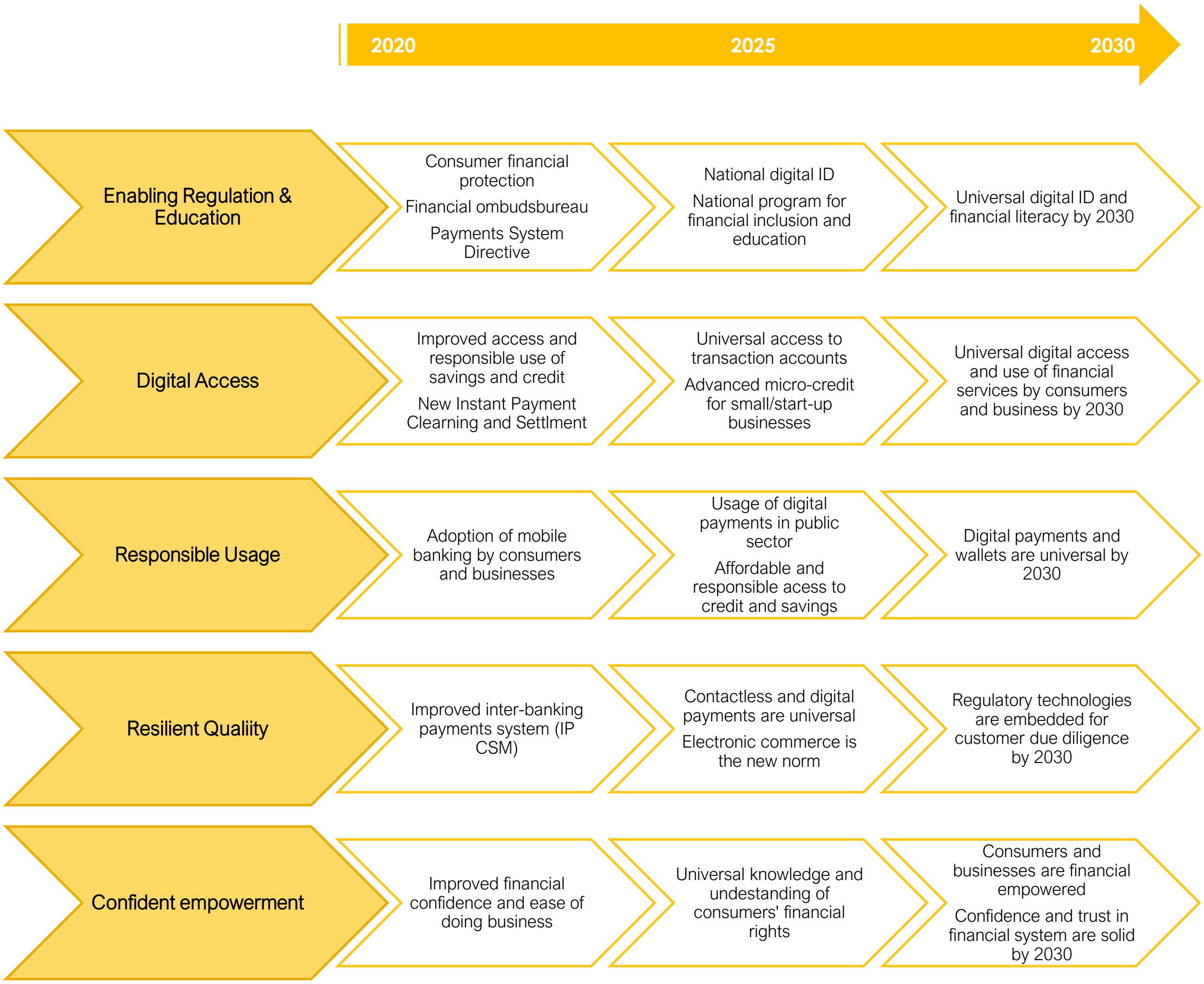


Figure 4.3. Financial Inclusion National Strategy: A Roadmap for Aruba 2030.

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Annex A – G20 Financial Inclusion Indicators

Account at a formal financial institution (% age 15+)
Account at a formal financial institution, female (% age 15+)
Account at a formal financial institution, income, bottom 40% (% age 15+)
Account at a formal financial institution, income, top 60% (% age 15+)
Account at a formal financial institution, male (% age 15+)
Account at a formal financial institution, older adults (% age 25+)
Account at a formal financial institution, rural (% age 15+)
Account at a formal financial institution, urban (% age 15+)
Account at a formal financial institution, young adults (% ages 15-24)
Automated teller machines (ATMs) (per 1,000 sq. km)
Automated teller machines (ATMs) (per 100,000 adults)
Average total cost of sending USD 200 (%)
Commercial bank branches (per 100,000 adults)
Commercial bank branches (per 1,000 sq. km)
Direct credits (per adult)
Direct debits (per adult)
Disclosure index combining existence of a variety of disclosure requirements.
Financial knowledge score
Financial knowledge: Division
Financial knowledge: Inflation
Financial knowledge: Interest rate
Getting credit: Distance to frontier
Index reflecting the existence of formal internal and external dispute resolution mechanisms.
Insurance policy holders (per 1,000 adults)
Interoperability of Automated teller machines (ATMs)
Interoperability of Point of Sale (POS) terminals
Life Insurance policy holders (per 1,000 adults)
Loan accounts with commercial banks (per 1,000 adults)
Loan from a financial institution in the past year (% age 15+)
Loan from a financial institution in the past year, female (% age 15+)
Loan from a financial institution in the past year, income, bottom 40% (% age 15+)
Loan from a financial institution in the past year, income, top 60% (% age 15+)
Loan from a financial institution in the past year, male (% age 15+)
Loan from a financial institution in the past year, older adults (% age 25+)
Loan from a financial institution in the past year, rural (% age 15+)
Loan from a financial institution in the past year, urban (% age 15+)
Loan from a financial institution in the past year, young adults (% ages 15-24)
Mobile phone used to pay bills (% age 15+)

Non-life Insurance policy holders (per 1,000 adults)
Number of borrowers from commercial banks per 1,000 adults
Deposit accounts with commercial banks (per 1,000 adults)
Number of depositors with commercial banks per 1,000 adults
Payments by cheque (per adult)
Payments by credit card (per adult)
Payments by debit card (per adult)
Percent of SMEs where the top manager is female with an account at a formal financial institution (5-99 employees)
Percent of SMEs where the top manager is female with an outstanding loan or line of credit (5-99 employees)
Percent of SMEs where the top manager is male with an account at a formal financial institution (5-99 employees)
Percent of SMEs where the top manager is male with an outstanding loan or line of credit (5-99 employees)
Percent of SMEs with an account at a formal financial institution (5-99 employees)
Percent of SMEs with at least one female owner with an account at a formal financial institution (5-99 employees)
Percent of SMEs with at least one female owner with an outstanding loan or line of credit (5-99 employees)
Percent of large enterprises with an account at a formal financial institution (100+ employees)
Percent of large enterprises with an outstanding loan or line of credit (100+ employees)
Percent of male-owned SMEs with an account at a formal financial institution (5-99 employees)
Percent of male-owned SMEs with an outstanding loan or line of credit (5-99 employees)
Percent of medium enterprises with an account at a formal financial institution (20-99 employees)
Percent of medium enterprises with an outstanding loan or line of credit (20-99 employees)
Percent of small enterprises with an account at a formal financial institution (5-19 employees)
Percent of small enterprises with an outstanding loan or line of credit (5-19 employees)
Point of sale (POS) terminals (per 100,000 adults)
Proportion of SME loans requiring collateral (%)
Received remittances in the past year (% age 15+)
SME borrowers from commercial banks (% of non-financial corporation borrowers from commercial banks)
SME deposit accounts with commercial banks (% of deposit accounts by non-financial corporations with commercial banks)
SME depositors with commercial banks (% of non-financial corporation depositors with commercial banks)
SME loan accounts with commercial banks (% of loan accounts by non-financial corporations with commercial banks)
Saved at a financial institution in the past year (% age 15+)
Saved at a financial institution in the past year, female (% age 15+)
Saved at a financial institution in the past year, income, bottom 40% (% age 15+)
Saved at a financial institution in the past year, income, top 60% (% age 15+)
Saved at a financial institution in the past year, male (% age 15+)
Saved at a financial institution in the past year, older adults (% age 25+)
Saved at a financial institution in the past year, rural (% age 15+)
Saved at a financial institution in the past year, urban (% age 15+)
Saved at a financial institution in the past year, young adults (% ages 15-24)