

FEBRABAN



2017 FEBRABAN Banking Technology Survey

CONDUCTED BY

Deloitte.

FEBRABAN

FEBRABAN, the Brazilian Federation of Banks, is the main entity representing the banking industry. It was founded in 1967 in the city of São Paulo for the purpose of improving the financial system and its relations with society and contributing to the economic and social development of Brazil.

The Federation's goal is to represent its members at all levels—the Executive, Legislative and Judicial branches, and entities representing society—enhance the regulatory framework, aim at continual improvement of production, and reduce risk levels. It also focuses its efforts on increasing the public's access to financial products and services.

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Introduction

In order to meet the needs of a demanding digital consumer, financial institutions invested heavily in innovations through technologies that bring greater convenience and security to the user.

In its 25th edition, the FEBRABAN Banking Technology Survey identified a transformation of consumer behavior and a trend toward digital channels in 2016. Increasingly, consumers actively participate in the digital transformation process and have their experience taken into consideration.

The innovation driven by the Brazilian banking industry is globally recognized thanks to the sustained investment and the search for system improvement. Faced with a new profile of consumer, who demands customized solutions and experiences, banks have successfully implemented their strategy to use new technologies coupled with quality face-to-face customer service.

Despite the constraining economic environment in 2016, the Brazilian banking industry expanded customer service and service offerings and sustained investments in technology, which reached R\$18.6 billion in the period. The banks' proactive strategy when faced with a market downturn proved to be effective, as shown by the customer service survey results, especially in digital media, which grew dramatically, with the required agility. To serve a more digitally minded consumer, financial institutions invested heavily in technology-based innovations that increase user convenience and security.

This edition of the FEBRABAN Banking Technology Survey shows an impressive—and growing—number of transactions in different channels, mostly digital. In 2016, Mobile Banking stood out as the Brazilians' favorite, with a 140 percent growth in financial transactions. Channel diversity, coupled with the simplicity and convenience necessarily leads to an increase of consumer demand and use. Digital transformation is built using two parallel drivers: customers point out their needs and desires and banks reinforce their role as fund and service providers in real time and securely. This process creates a cycle that feeds back into the process and improves relationships.

Banks have witnessed a leap in the use of both physical (Branches, ATMs and Correspondents) and digital (Internet and Mobile Banking) channels. There were 65 billion banking transactions in 2016—an increase of 9.3 billion in the year, the largest in historical data series. The user-friendliness of these channels increased the use of the means of payment to a new level, gradually resulting in the lowest levels of cash circulation. Yet, banks have invested in training to further enhance face-to-face service in branches, which increasingly provide advisory services, as a supplement to digital services.

Through consistent investments and technology pioneering, Brazilian banking became one of most connected industries to the new digital consumer. For the coming years, the focus on developing cutting-edge structures that ensure a performance level above the average of all other industries in Brazil will continue to drive banking services' investments in Brazil. In this transformation, banks assume new interfacing roles with consumers and are the facilitators in the use of innovative tools that streamline relationships and ensure the facility, accessibility, and mobility offered by the technological revolution.

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Executive Summary

1 Transactions per channel Mobile Banking becomes consumers' favorite

The use of digital media for financial services continues to grow, in line with the recent years' trend. Today, one in five financial transactions in Brazil is made via Internet Banking or Mobile Banking. The highlight in 2016 was Mobile Banking, Brazilians' favorite channel to access banking services, with 21.9 billion transactions—a year-on-year increase of almost 100 percent. In the past three years the volume of transactions using smartphones has quadrupled in the country. Mobile Banking topped for the first time Internet Banking in total transactions and kept progressing in financial transactions, a reflection of the trust in the security and easiness provided by the channel.

2 Consumers Banks introduce technological novelties to consumers

The demand for banking services grew and the industry offered new services to consumers that follow up the digital transformation. Customization, easiness and usability are the focus of banking services for this connected consumer. In 2016, 9.5 million Brazilians used Mobile Banking for more than 80 percent of the transactions, that is, they are considered as heavy users of the channel. And even with the economic downturn, bancarization reached a record 90.4 percent. The number of transactions is also unheard of: 65 billion—a year-on-year increase of 9.3 billion, the largest in historical data series.

3 Channel Diversification Overlapping digital and traditional channels serves all types of consumer

We are experiencing an overlapping and integration of physical and digital channels, made possible by the tools and services that the banking industry offers. Even with the increase in the preference for Mobile Banking, physical service channels are strengthening their advisory role, as financial educators, and supplementing consumer experience, who refer to branches to find new services and features.

4 **Technology Investments and Expenditure**

The banking sustains investments and reaches the top in Brazil

Despite the economic downturn in the period, banks kept their technology investments and expenditure, which reached R\$18.6 billion in 2016. In the year, bank investments were at the same level of government investments—a sector that historically spends the most in technology in Brazil—reaching a 14 percent share, or one percentage point above the world's average. Thus, financial institutions remain at the global technology forefront, strengthening the degree of efficiency excellence, especially in consumer service.

5 **New Technologies**

Banking technology introduces innovations in consumers' lives

Currently in Brazil more than half of financial transactions are already carried out using digital channels. This transition from physical sites to channels media is organic due to the pervasiveness of new technologies in everyday life. However, the high level of adoption of and confidence in online channels is the result of considerable investments in innovation and security that result in a positive consumer experience. In addition to the technologies already commonly used in financial services, such as biometrics and mobile payment, banks also invest heavily in future innovations: 65 percent plan blockchain deployment and 47 percent invest in analytics.

Sample and methodology

17 banks that operate in the Brazilian banking system and make up for 91 percent of the banking industry's assets in the country responded to this survey. The study was conducted by requesting these financial institutions to complete an online form and through interviews with experts, the consolidation of public data, and Deloitte surveys.

A close-up photograph of a woman's hands holding a silver smartphone and a gold credit card. The background is blurred with warm, bokeh light effects. A dark blue banner is at the bottom.

Digital Channels: Mobile Banking is Brazilians' Favorite

Technological tools have changed the way consumers interact with banks, while they demand new services. All this change creates challenges that the banking industry has been meeting through constant investments. One of the most discernible benefits for society is the technology that boosts the population's access to financial services, easily and securely. This development is a major gateway to the use of technological novelties in Brazilian everyday life, such as iris and fingerprint scanners, encrypted data, and cognitive computing in service channels, whether digital or physical. By assuming that many roles, the financial industry also becomes the financial data industry.

This development relationship also has a major influence on the way people handle their finances and promotes the interaction with banking institutions. Consumer choice is one of the items that help banks to improve and design new consumer service strategies. The need to strengthen and make all service channels effective becomes a key driver of a bank's success.

A few years ago consumers only went to a bank branch to perform services. Today, a broad range of channels seeks to meet each different consumer profile the best way possible. And banks know that each consumer wants to get customized service, either via Internet Banking chat, a clerk or a manager at a branch, by phone, or in an ATM. These channels are created and improved daily to provide faster, easier and securer services to each accountholder.

All the channels diversification developments are now experiencing a new consolidation stage, with the increasing access to smartphones. Internet Banking and Contact Center already offered a banking service experience anywhere in the country and the world. With Mobile Banking, mobility becomes an even more compelling value, to meet society's wishes. Banks can cater to this current need as few other industries can, without neglecting physical service—which now supplements digital service.

Mobile Banking, the new era of consumer relations

In 2015-2016, the number of banking transactions increased to 65 billion from 55.7 billion. In this context of increasing consumer access to banking services, the use of Mobile Banking (cellphone apps) services has been, without a doubt, the major relationship channel between accountholders and banks. The channel has become consumer's favorite by offering more features and becoming more user-friendly and secure.

To get an idea of this channel's strength, back in 2011, when Mobile Banking was first offered as a transaction channel in Brazil, it totaled 100 million accesses. In 2011-2016, access increased by 21,8 percent (from 100 million accesses in 2011 to 21 billion accesses in 2016).

This use growth was only possible because in recent years the long effort made—wrapped in security and focused on the development of the most innovative systems—has taken shape. The 17 banks represented in this study have shown that they are aware of the need to develop and generate disruptive standards, issues that the industry addresses and pushes forward with new solutions and services on a daily basis.

The rapid migration to Mobile Banking confirms that the industry's strategy of investing heavily in technological innovation was correct. In addition to securing the digital transaction environments and the banking network as a whole, this strategy enables the development of the Brazilian Information Technology sector, globally recognized for its efficient support to banking systems.

The easiness of literally using technology in the palm of one's hand explains why the downturn in Internet Banking usage, which for the second year lost share among access channels. In 2014, this channel peaked at 18 billion transactions, dropped to 17.7 billion in 2015, and lagged at 14.8 billion accesses in 2016. In other words, in two years the massive mobile platform app usage trend was confirmed to the detriment of desktop Internet Banking usage.

Consumers have maintained the self-service usage through automatic teller machines (ATMs) in 10 billion transactions per year, both in 2016 and in 2015. The peak of ATM usage was in 2014, with 10.2 billion transactions. In ATMs it is possible to withdraw cash and make deposits, transfer money, check balances and statements, buy cell-phone credit, and print checks, among other services.

Because of their convenience, ATMs allow for consumer independence, expedite service, and consist of one more channel for customer convenience. This, for example, streamlines the withdrawal process without the need to go into the branch and wait for personal service to pay a simple bill.

Bank Branches had an increase in the number of completed transactions to 5.3 billion in 2016 from 4.4 billion in 2015. In 2011, transactions totaled 3.9 billion.

Banks, aware of this demand and the shift in service use by consumers, are planning a transition in branch service. The so-called "branches of the future" will be driven by technologies that streamline processes and make transactions convenient and secure. The trend, driven by the fourth industrial revolution, is that the banking role will be adjusted and more focused on helping consumers in managing their businesses, the available features, and a better allocation of resources, besides working on building more streamlined, smart internal processes.

The growing number of transactions and Correspondents (see below) shows how human involvement is crucial in the relationship between consumers and the bank. The branches' employees play an important role in the transition from transaction handling overlapping in physical sites (Bank Branches) to the digital media (Mobile Banking and Internet Banking).

The number of accounts and services handled by Correspondents, such as lottery stores and post offices, was a positive surprise in 2016, peaking at 5.1 billion transactions, compared to 3.2 billion in 2015. In 2011, the number reported was 1.3 billion.

Because of their service hours, different from those of Bank Branches, and a nationwide network, Correspondents allow consumers who do not use the digital channels (Mobile Banking and Internet Banking) to conveniently pay bills or make small withdrawals.

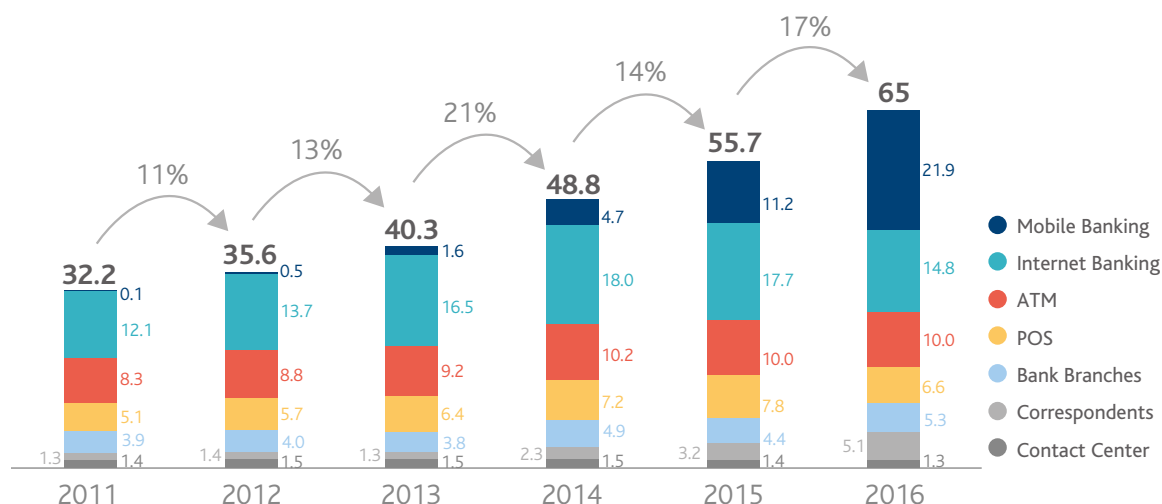
There was a decrease in the number of debit and credit transactions completed in the portable machines massively used in retail Points of Sale (POS), such as shopping centers, malls, gas stations, and stores. In 2015, 7.8 billion transactions were conducted against 6.6 billion in 2016. However, the comparative analysis with 2011 shows their materiality, since six years ago 5.1 billion transactions were conducted using these devices.

The economic downturn may explain this behavior. In a year that ended with an unemployment rate of 12 percent (or 12.3 million unemployed), according to the Continuous National Household Sampling Survey (Continuous PNAD, IBGE), it is natural for retail sales to reflect the insecurity in the job market and customers' expectations regarding the future. The Monthly Retail Sales Survey, also released by the IBGE (Brazilian Statistics Bureau), shows an 8.7 percent drop in broad retail (including all industries and car, motorcycle, auto part sales) through 2016. This decline in overall retail explains the decline in consumer use of POS.

Finally, transactions through Contact Centers remained basically flat, at 1.3 billion transactions compared to 1.4 billion in 2015—the same number reported in 2011.

Financial transactions using mobile banking grew 140 percent.

TRANSACTION DEVELOPMENT PER CHANNEL (in billions)



SOURCE: 2017 FEBRABAN BANKING TECHNOLOGY SURVEY

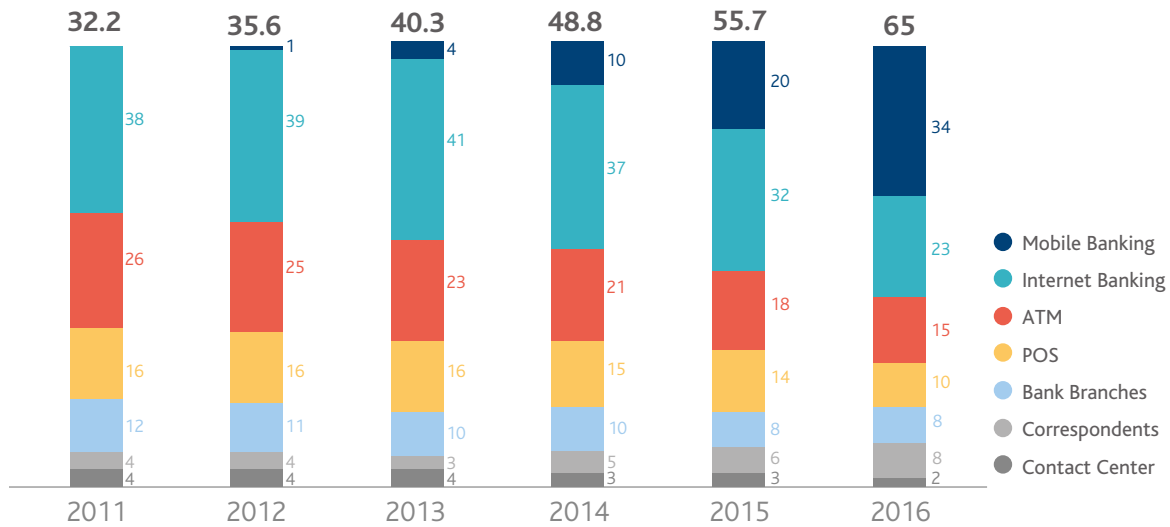
Preferred channels to conduct transactions

The percentage use of available channels in the Brazilian banking network to conduct transactions points to a consistent migration to digital channels. However, there is still a stable demand for services offered in Bank Branches.

Today, more than half of the banking transactions in the country are already performed using digital channels reaching 57 percent of the total. Represented by Mobile Banking, with 34 percent of transactions in 2016 compared to 20 percent in 2015, and by Internet Banking (transactions on the bank's website, through computers), digital channel data shows an evident migration to applications and a reduction in the computer use (which dropped from 32 to 23 percent). The relationship with digital channels indicates a change in the behavior of the public that previously used computers and now prefers to perform transactions via mobile apps. These are trends that could show the Brazilian consumer's maturity in the use of the features offered by financial institutions.

In physical sites, the highlight is Bank Branches, which kept an 8 percent share of transactions in 2016, the same percentage of 2015, and Correspondents, which increased their share from 6 percent in 2015 to 8 percent in 2016. On the other hand, there was a reduction in the share of transactions conducted in ATMs (from 18 to 15 percent in 2016), POS (from 14 to 10 percent) and Contact Centers (from 3 to 2 percent).

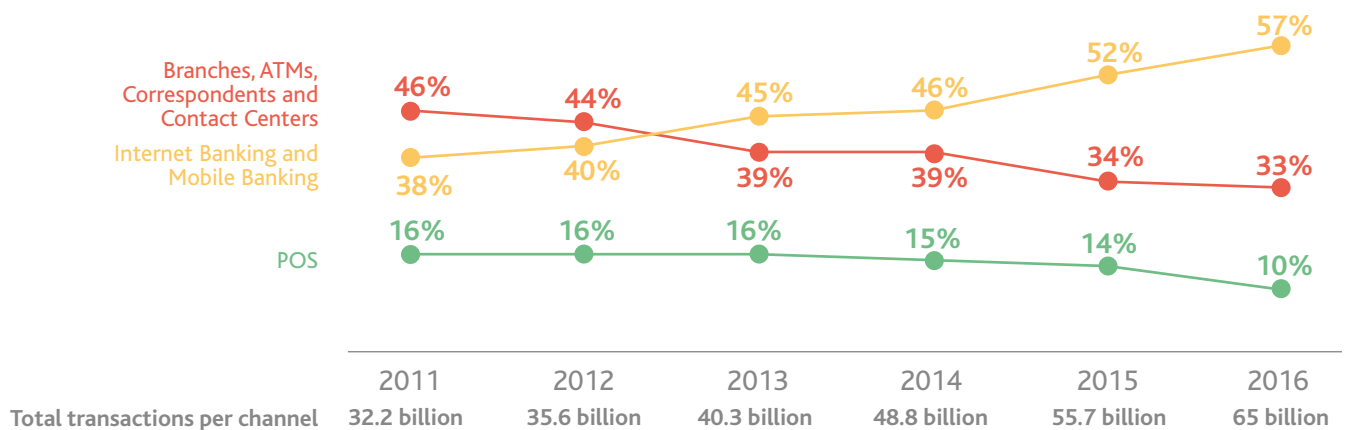
TRANSACTION SHARE BY INDIVIDUAL CHANNELS (in percent)



SOURCE: 2017 FEBRABAN BANKING TECHNOLOGY SURVEY

By group, digital channels account for 57 percent of transactions, followed by the group consisting of Bank Branches, ATMs, Correspondents and Contact Centers, with a 33 percent share, and POS, with a 10 percent share. However, the traditional channel group remains practically flat and POS reports a drop from 14 to 10 percent. The growth of digital channels is significant when we consider that in 2011 the use share was 38 percent.

TRANSACTIONSHARE DEVELOPMENT BY GROUP OF CHANNELS



SOURCE: 2017 FEBRABAN BANKING TECHNOLOGY SURVEY

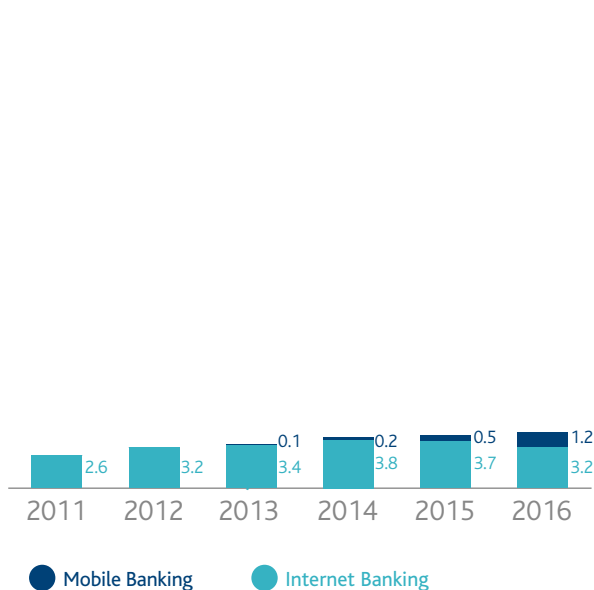
The demand for banking services grows along with the investments in innovation and technology made by banks, which try to anticipate consumer needs. In most transactions, the user still uses digital channels without making money transactions, but the fact that the system has a whole set of tools available helps changing usage behavior and diversity. Another important point is the trust placed by the accountholder who uses digital media.

In 2011, 12 billion transactions were conducted via Internet Banking. Of these, 9.4 billion were transactions with no financial activity and 2.6 billion included financial activity. In 2016, there were 11.6 billion transactions without financial activity and 3.2 billion transactions with financial activity, totaling 14.8 billion transactions. Internet Banking use peaked in 2014, with 18 billion transactions, of which 14.2 billion without financial activity and 3.8 billion with financial activity. This scenario confirms the migration trend of digital users from desktop to mobile.

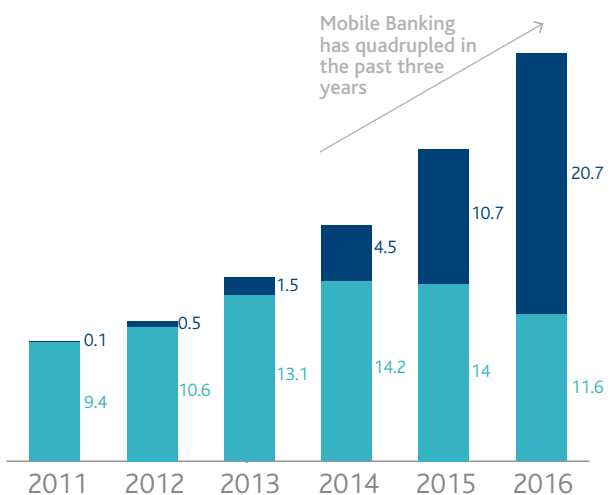
Six years ago, only 100 million transactions were conducted via Mobile Banking in the year. In 2016 this number rose to 21.9 billion, of which 20.7 billion were without financial activity and 1.2 billion with financial activity. The use of mobile banking services has more than quadrupled in the past three years, from a total of 4.7 billion in 2014 to 21.9 billion transactions in 2016.

DEVELOPMENT OF TRANSACTIONS PER CHANNEL, WITH AND WITHOUT FINANCIAL ACTIVITY (in billions)

WITH FINANCIAL ACTIVITY



WITHOUT FINANCIAL ACTIVITY



SOURCE: 2017 FEBRABAN BANKING TECHNOLOGY SURVEY

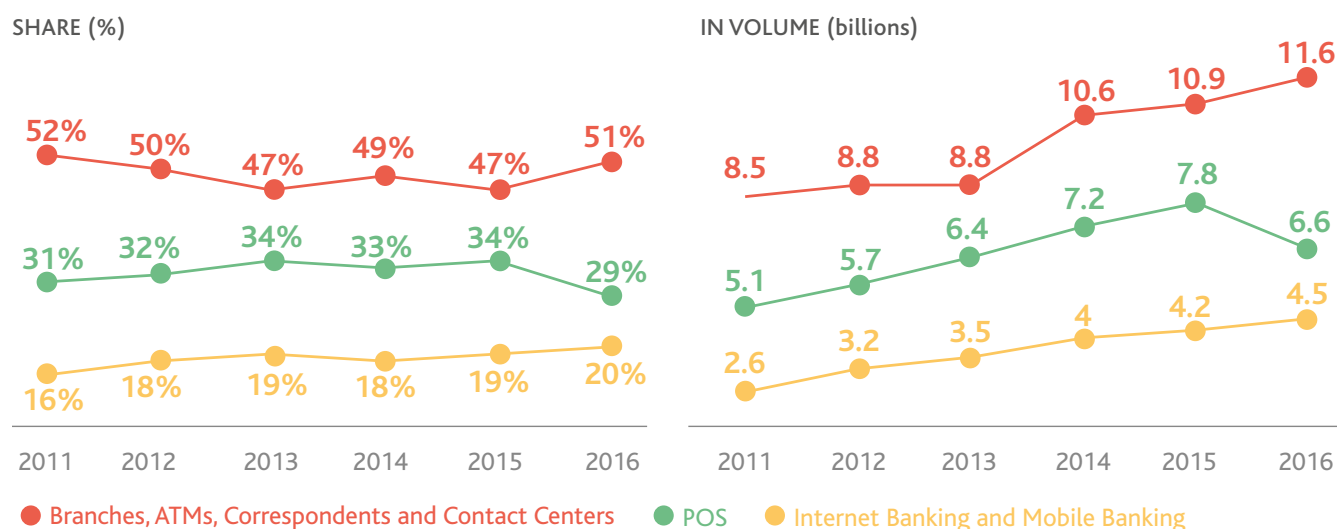
The daily challenge of the banking industry is to make more traditional consumers understand that the digital media is secure, especially given the sizeable, constant investments in security. Banking is the private sector industry that invests most in technology in Brazil and in the world, second only to government investments. (See chapter on investments in page 31.) The Brazilian banking integration system has the fifth largest worldwide network of ATMs, according to TecBan data. A robust technology park has certainly supported the digital shift banks are currently experiencing.

Transactions per channel with financial activity

Of the transactions with financial activity, the highest percentage in 2016 (51%) was posted by traditional channels (Bank Branches, ATMs, Correspondents and Contact Centers), followed by POS, with 29 percent, and by digital media (Internet Banking and Mobile Banking), with 20 percent.

By breaking down the three categories within the general banking scenario, POS posted a reduction from 34 to 29 percent from 2015 to 2016. As previously explained, this loss is closely related to the decline in Brazilian retail sales. When compared to 2011, this decline is smaller: from 31 percent in 2011 to 29 percent in 2016. The traditional channels remained stable from 2011 (52%) to 2016 (51%). Meanwhile, digital media have been gaining consistent momentum in the last six years of the banking technology survey: from 16 percent in 2011 to 20 percent in 2016.

DEVELOPMENT OF TRANSACTIONS WITH FINANCIAL ACTIVITY—DEVELOPMENT PER CHANNEL



SOURCE: 2017 FEBRABAN BANKING TECHNOLOGY SURVEY

The currency volume traded in traditional channels showed a steady increase, from 8.5 billion in 2011 to 11.6 billion in 2016. Digital media have posted a less noticeable increase, while significant (from 2.6 billion in 2011 to 4.5 billion in 2016). Meanwhile, POS performance also dropped sharply from 2015 to 2016 (7.8 billion to 6.6 billion), but remains above the volume posted in 2011 (5.1 billion to 6.6 billion).

Transactions per channel without financial activity

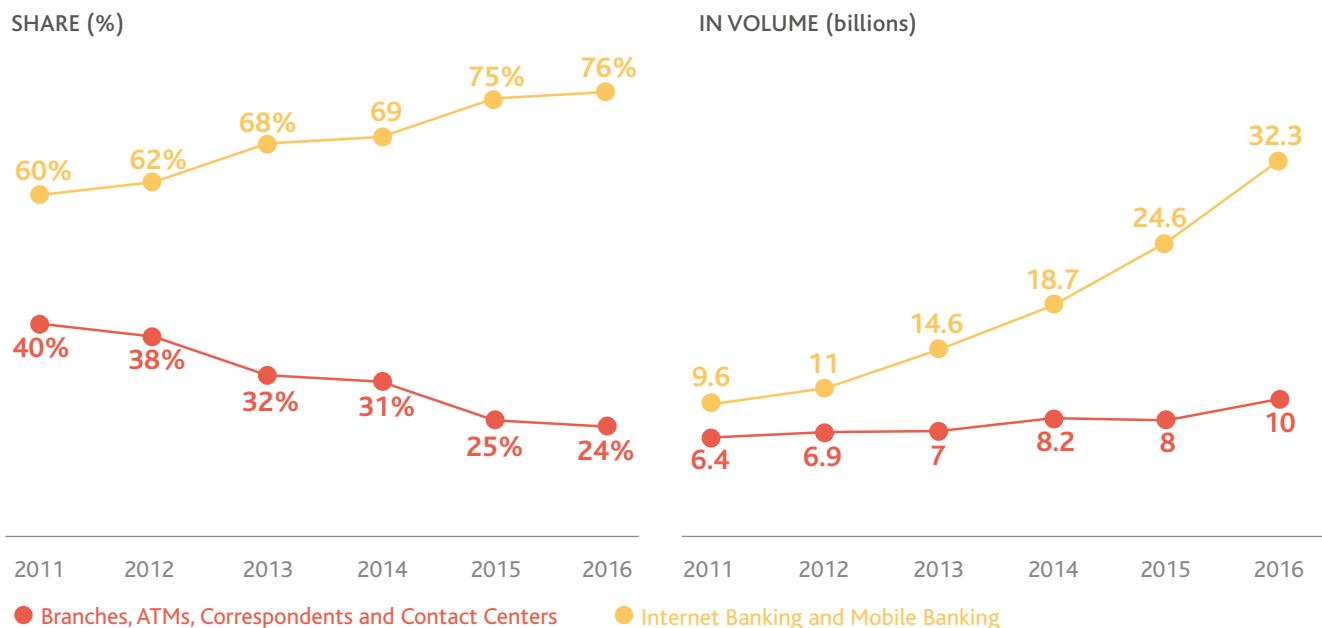
Service virtualization, with intuitive, customized browsing by accounts and banking environments, is one of the key components that boosted the number of transactions with and without financial activity. Any consumer with Internet access can, for example, check balances and statements, conduct transactions, and make simulations. The attractiveness of digital technologies, in addition to facilitating consumers' lives, further stimulates and closes the link between consumers and banks. Transaction agility, coupled with user-friendly and interactive interfaces, has been the driver of the transformation in the relationship between consumers and banking services. It is evident that the experimentation era has arrived for accountholder 2.0.

The percentage breakdown of digital media and traditional channels, in number of transactions without financial activity, shows that digital media has gained momentum while traditional channels have been slowing down since 2011. The share Internet Banking and Mobile Banking grew from 60 percent in 2011 to 76 percent in 2016. Traditional channels have dropped from 40 to 24 percent. The change in one category explains the change in the other: users conduct more transactions via digital media and less via traditional channels.

In the selection by billions of transactions without financial activity, both activities rose in the last six years, but the highlight is, again, the speed of growth of the digital media. In 2011, transactions without financial activity of Internet Banking and Mobile Banking were to the tune of 9.5 billion, a number that rose to 32.3 billion in 2016, an increase by 240 percent in the period. Traditional channels transactions rose from 6.4 to 10 billion, an increase by 56.2 percent.

While transaction with financial activity conducted using traditional channels loses momentum, we can observe that Bank Branches and ATMs still play an important role in consumers' lives.

DEVELOPMENT OF TRANSACTIONS BY CHANNEL—WITHOUT FINANCIAL ACTIVITY



SOURCE: 2017 FEBRABAN BANKING TECHNOLOGY SURVEY

Mobile Banking stands out as the preferred channel of Brazilians for access to banking services

The need for connection and agility that modern life imposes on people is heavily reflected on how consumers use banking services. In transactions with financial activity via mobile media this comes clear by the fact that the number of this type of transaction has more than doubled in a span of just one year, jumping from 500 million in 2015 to 1.2 billion in 2016—a 140 percent growth. The banks' actions helped in this transition, with the emergence of new applications and interfaces, aimed at different audiences, and the possibility of solving almost everything using the cellphone, on a daily basis.

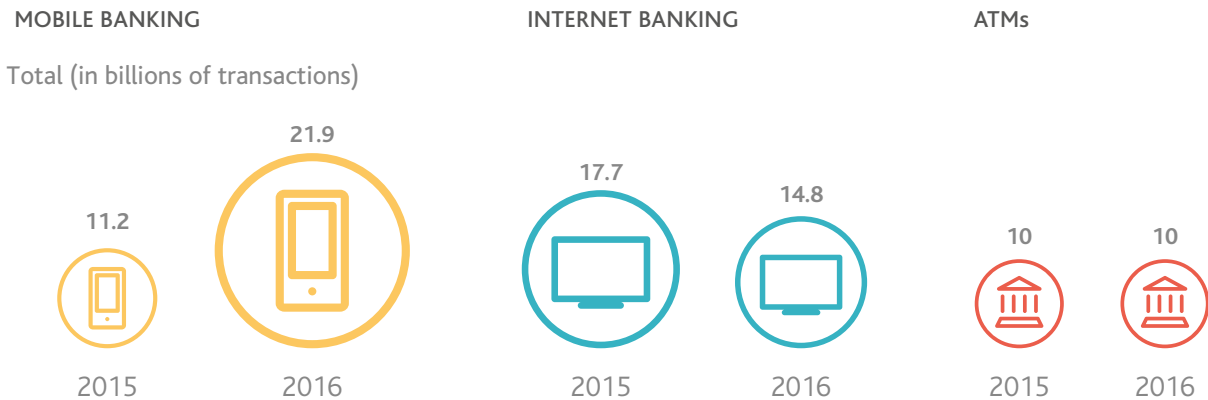
Bank branches show their consolidated relevance in transactions with financial activity rising from 4.4 billion to 5.3 billion from 2015 to 2016. Correspondents grow in relevance in this scenario, from 3.2 billion to 5.1 billion. Together, these two categories show the usefulness of face-to-face service since consumers require a direct channel with the bank to meet many of their needs. For this reason, a bank employee must know how to cater to the new demands brought up by technology, whether in traditional transactions, such as a withdrawal, or in support to the use of biometrics.

The use of ATMs remained stable at 10 billion transactions with financial activity, so as Contact Center use, which was technically flat (from 1.4 billion to 1.3 billion transactions in 2015-2016).

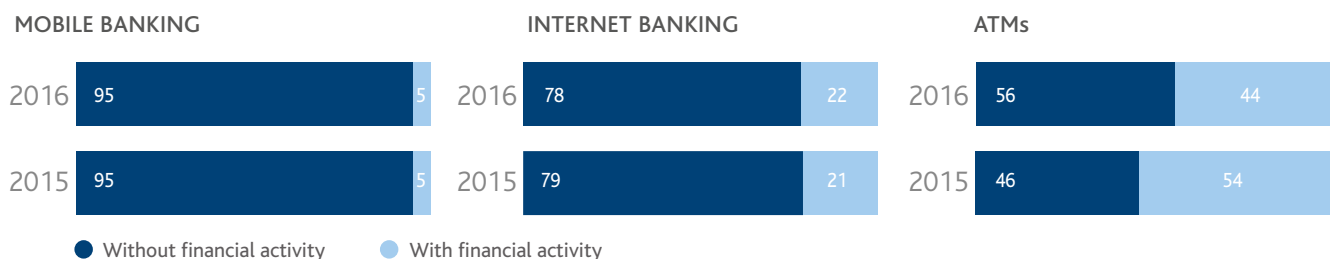
After losing a major share to Mobile Banking, the largest decline in 2016 was Internet Banking—which fell to 14.8 billion from 17.7 billion in 2015. The convenience offered by web-based systems and installed apps and security checks have made Internet Banking a key tool for consumer transition from the physical to the digital media. Now, this trend has moved forward, with the rise of mobile. In this transition, data show an information and service consumption behavioral trend seamlessly connected to the smartphone revolution that is supported by the development of Internet Banking security.

Finally, year-on-year POS declined from 7.8 billion to 6.6 billion transactions, reflecting the increase in unemployment, which causes a drop in average income and sales and consumption.

FINANCIAL TRANSACTIONS VIA MOBILE BANKING ALMOST DOUBLE IN A YEAR



TRANSACTIONS WITH AND WITHOUT FINANCIAL ACTIVITY PER CHANNEL (%)



SOURCE: 2017 FEBRABAN BANKING TECHNOLOGY SURVEY

Mobile Banking experiences dramatic growth

The sky's the limit. The saying sums up what can already be done in terms of access by and convenience for smartphone users. All the technology is within reach of anyone's hands. Either via a Wi-Fi connection, broadband, 3G, or 4G, it doesn't matter: the services offered by the Mobile Banking experience are intuitive and attractive. It is not without justification that bank ads are aiming various types of applications, tailored to different connections and user profiles. In many cases, the banks themselves offer access to these services with no need to use a data package.

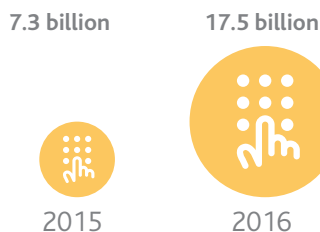
The whole current mobility concept adds a new value to the user, adapts to and proposes different solutions for different people, anywhere, any time. A consumer can travel the world and solve everything from his or her device, or can all bills paid and transfers scheduled before travelling. Financial life planning has become easier based on the countless features offered by the Brazilian banking system.

In 2016 alone, 17.5 billion balance checks were performed via Mobile Banking compared to 7.3 billion in the previous year, a 139.7 percent increase in just one year. The growing volume of transactions with financial activity via digital media is also proof that we are living in the convenience era. Transfers, including interbank transfers, performed via Mobile Banking rose from 60 million in 2015 to 505 million in 2016 (a 741.6 percent increase). Bill payments via mobile phone rose 37.2 percent, from 341 million to 468 million in 2015-2016.

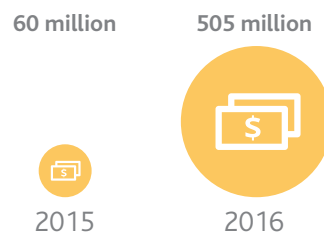
INTER-CHANNEL TRANSACTIONS HIGHLIGHTS

Mobile Banking

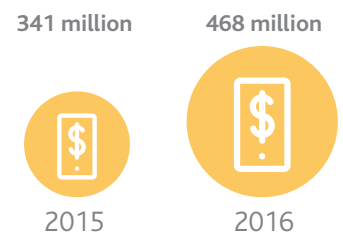
Balance checks



Transfers

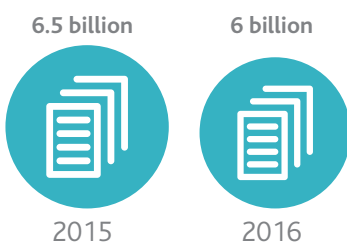


Bill payments

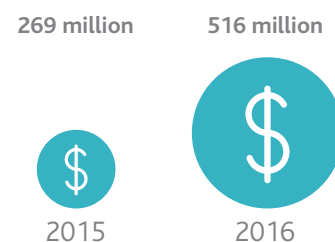


Internet Banking

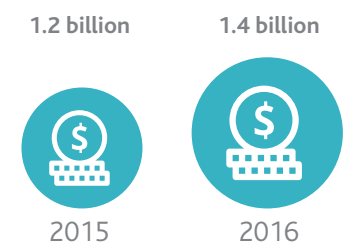
Balance checks



Transfers



Bill payments



SOURCE: 2017 FEBRABAN BANKING TECHNOLOGY SURVEY

In terms of transactions with financial activity via Internet Banking, the figures are not as high as those of Mobile Banking, but they are still great. Transfers performed increased from 269 million in 2015 to 516 million in 2016 (a 91.8 percent increase). Bill payments rose from 1.2 billion in 2015 to 1.4 billion in 2016.

Physical channels strengthen consultative role

After posting a drop in previous years, physical service channels—namely Bank Branches, Banking Service Points (BSP, a station inside government offices and businesses with the presence of at least one bank clerk), Electronic Service Points (ESP, a place gathering ATMs), and ATMs—posted an increase in 2016. The relevance of these service points is justified by the fact that they are the only place where withdrawals can be made, while the virtual transactions with financial activity can be made in any media, whether digital or physical.

Branch profile has changed and the service focus has shifted to advisory services, more complex transactions, and troubleshooting. Each of these channels' employees must undergo continual training on the use of modern technologies and is mostly focused on knowing customers better and offering customized solutions.

1.2 billion withdrawals were performed in Branches and BSPs in 2016, against 1.1 billion in the previous year. ATMs showed a reverse trend, dropping from 2.3 billion to 2 billion withdrawals in 2016.

As for the volume of bill payments, branches and BSPs practically doubled the number of transactions, from 273 million to 526 million within one year. Transactions on ATMs were virtually flat, from 878 million in 2015 to 895 million in 2016.

PHYSICAL SERVICE POINTS REMAIN RELEVANT IN TRANSACTIONS WITH FINANCIAL ACTIVITY

Branches and BSPs**Withdrawals**

1.1 billion



2015

1.2 billion



2016

Bill payments

273 million



2015

526 million



2016

Deposits

991 million



2015

441 million



2016

ATMs**Withdrawals**

2.3 billion



2015

2 billion



2016

Bill payments

878 million



2015

895 million



2016

Deposits

633 million



2015

775 million



2016

SOURCE: 2017 FEBRABAN BANKING TECHNOLOGY SURVEY

Branch services have shifted to advisory services, complex transactions and troubleshooting



New Services for an Increasingly Digital Consumer

The technology that transforms people's lives also changes bank consumers' behavior, creating new demands and services. In this system that feeds back into demands and services, two factors are key for the development of relationships between customers and financial institutions. The first one is trusting service and transaction security. The second is investing in technology that generates new services and convenience, and tighten relationships.

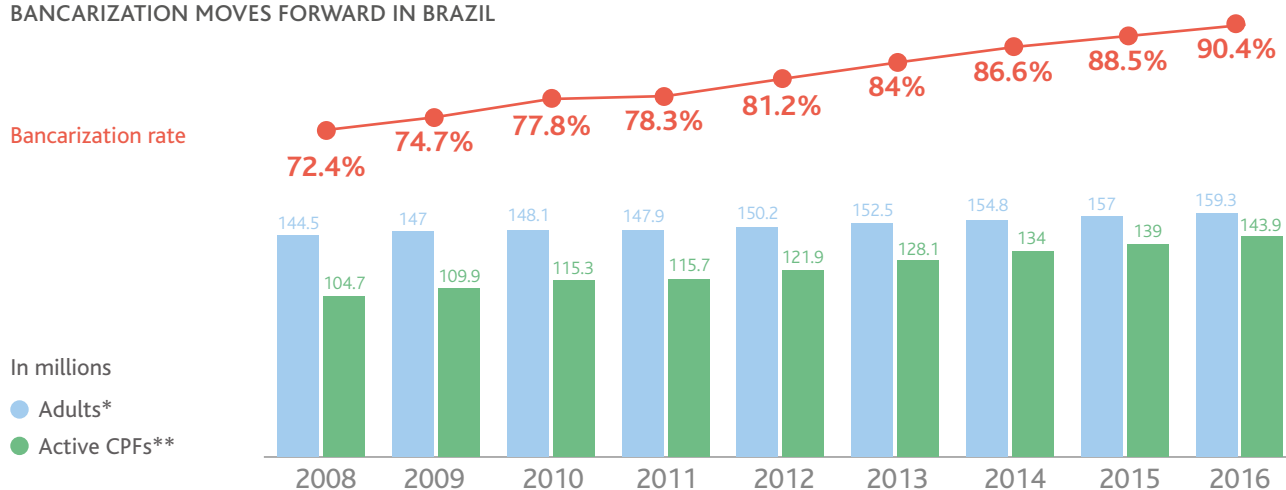
This second factor allows consumers to enjoy so convenient experiences that he or she does not even think of "going to the bank during lunchtime to solve a problem" anymore. Everything is available at the palm of his/her hand, on his/her smartphone. Today, with all the features available in Internet Banking and the development of Mobile Banking, a customer still goes to a branch but for a face-to-face talk about investments and business, perform security processes, and make withdrawals. The digital novelties changed the branch scope and streamlined previously difficult solutions.

Consistent bancarization

Universal bancarization is a reality, conquered after years of strategies adopted to give access to the entire population. Data from the National Financial System Customer Register (CSC) on Brazil's bancarization rate show the level of access to essential services by Brazilians.

The bancarization rate is obtained by dividing the number of active CPFs (individual taxpayer numbers) at the Central Bank of Brazil of people over 15 years old by the population within the same age bracket. In 2016, this rate exceeded 90 percent—a year-on-year increase of almost two percentage points, indicating a consistent growth trend in recent years.

BANCARIZATION MOVES FORWARD IN BRAZIL



* Brazilian Population above 16 years old from PNAD and Population Projection (IBGE) surveys

** CPFs of people over 15 years old active at the Central Bank of Brazil

SOURCE: CENTRAL BANK OF BRAZIL

9,5 million use Mobile Banking in at least 80 percent of the transactions

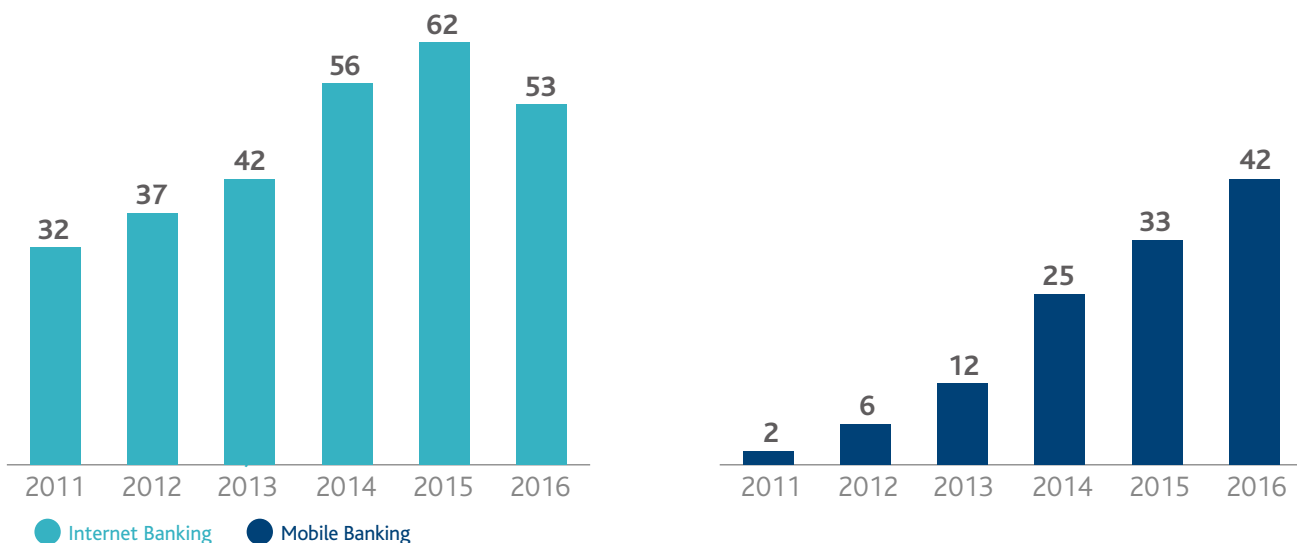
Another interesting conclusion of the customer behavior survey refers to customer relationships with technologies. In 2016 banks created digital branches where all bank manager services, for example, are performed via Mobile Banking, Internet Banking, or Contact Center. In 2016, 5.1 million users used Internet Banking for more than 80 percent of transactions, while 9.5 million users chose primarily Mobile Banking in 80 percent of their use time.

An integrated industry

Technology helped the banking industry to promote the integration of consumers' bills. Thus, for example, a bill that is received by Bank 1 can be paid via the Internet Banking of Bank 2. This integration between banks increases the convenience of accountholders, who do not need to go to Bank 1 to pay their bills, because the Brazilian interbank system performs the transactions securely. Consumers do not even need to know that this intermediation process exists.

As part of the usability development of available digital tools, 2016 was marked by the migration of accounts from Internet Banking to Mobile Banking. The growth of accounts access via smartphone came about progressively, year after year, at a speed higher than the one observed in similar changes in Internet Banking use increase. From 2011 to the peak Internet Banking use, in 2015, the growth rate was 93.7 percent (from 32 million accounts in 2011 to 62 million in 2015), with the volume of users almost doubling in a five-year period. Conversely, Mobile Banking, in the same period, grew 1,550 percent,

PART OF THE GROWTH IN THE NUMBER OF MOBILE BANKING ACCOUNTS ORIGINATES FROM THE MIGRATION OF INTERNET BANKING CONSUMERS (in millions)



SOURCE: 2017 FEBRABAN BANKING TECHNOLOGY SURVEY

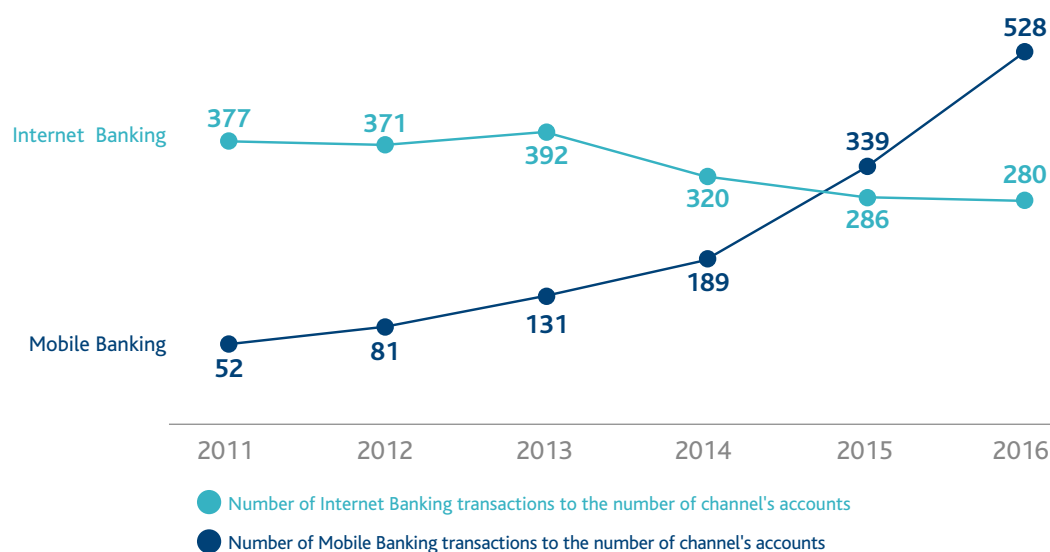
from 2 million accounts in 2011 to 33 million in 2015. In 2016, this channel has grown once again, reaching 42 million accounts with access via Mobile Banking.

The growth performance difference is justified because smartphones, as other fourth industrial revolution digital technologies, reach exponential usage results by consumers. It is worth noting that much of the reliance in Mobile Banking is supported by the trust already conquered in previous years by the tool that launched digital relationships, Internet Banking, from which comes part of the customer base that use mobile today. Therefore, it is possible to assign Mobile Banking success to the work performed by the banks' IT teams and the adequate levels of investment made throughout this decade.

Transactions per account: Internet Banking and Mobile Banking

In the past six years, the trajectories of the two digital media available in the Brazilian banking system are completely opposite. While the number of transactions conducted using computers to the number of accounts with access to that channel gradually decreased, year after year, the transactions conducted using smartphones, also to the number of accounts enabled for this medium, is growing geometrically. The number of transactions to accounts via Internet Banking fell from 2011 to 2016, except in 2013, when they increased. In the whole period, the number of transactions per account decreased to 280 from 377 in 2016 (a 25.7 percent decline). Mobile Banking transactions to the number of accounts increased from 52 to 528 in the same period (a 915.3 percent increase).

THE NUMBER OF TRANSACTIONS TO THE NUMBER OF ACCOUNTS HIGHLIGHTS THE GROWTH OF MOBILE BANKING IN BRAZIL



SOURCE: 2017 FEBRABAN BANKING TECHNOLOGY SURVEY

Mobile Banking topped Internet Banking in total transactions and is moving forward in financial transactions, a reflection of the trust in security and the convenience that the channel provides. Mobile Banking is, without a doubt, Brazilians' favorite channel to access banking services, with a growth of almost 100 percent over the previous year—57 percent of total transactions.

The digitally connected consumer

The forms of interaction between banking consumers and financial institutions increased in virtually all channels—a reflection of a culture of greater engagement and transparency in this relationship. The only communication channel that declined last year was the mailing of bank statements. All other channels grew, driven by the greater connectivity promoted by the digital environment.

The highlight was the increase in the use of email as a way of sending bank statements and marketing campaigns, and text messaging to customers, which increased to 4.3 billion in 2016 from 2.4 billion in 2015. The number of webchat contacts was also significant—jumped from 4.2 million in 2015 to 9.3 million in 2016.

INTERACTION BETWEEN CUSTOMERS AND BANKS GROWS IN DIGITAL ENVIRONMENTS



SOURCE: 2017 FEBRABAN BANKING TECHNOLOGY SURVEY

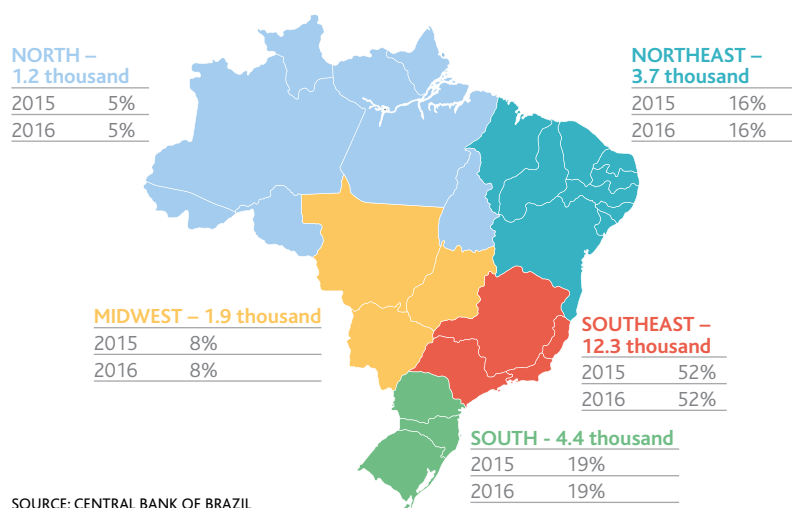


Channel Diversification: New Profiles for Multiple Consumers

Despite the economic downturn in 2016, the number of Bank Branches nationwide increased slightly in the period, from 22.9 million to 23.4 million. The banking industry remained, thus, stable in number of general in-person service points. Over the past six years it is possible to observe this stability, with slight increases and decreases, common to the residual stability effects. It can be noticed that the channel is going through an important role readjustment and redefinition stage and is increasingly incorporating its more advisory role.

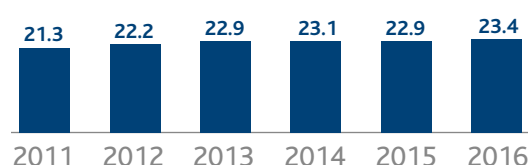
The breakdown by region shows no changes. The Southeast concentrates the highest number of bank branches (52 percent, with 12.3 thousand branches), followed by the South (19 percent, or 4.4 thousand branches), the Northeast (16 percent, or 3.7 thousand branches), the Midwest (8 percent, or 1.9 thousand branches) and finally the North (5 percent, or 1.2 thousand branches).

NUMBER OF BRANCHES GROWS IN BRAZIL IN 2016



SOURCE: CENTRAL BANK OF BRAZIL

VOLUME (in thousands)



BSPs and ESPs

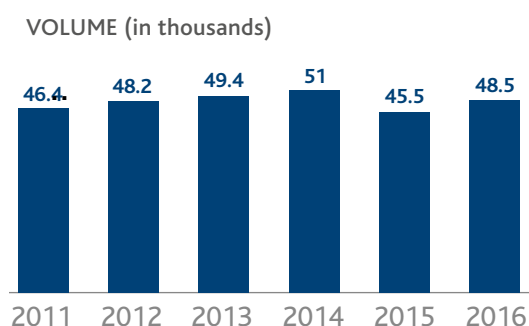
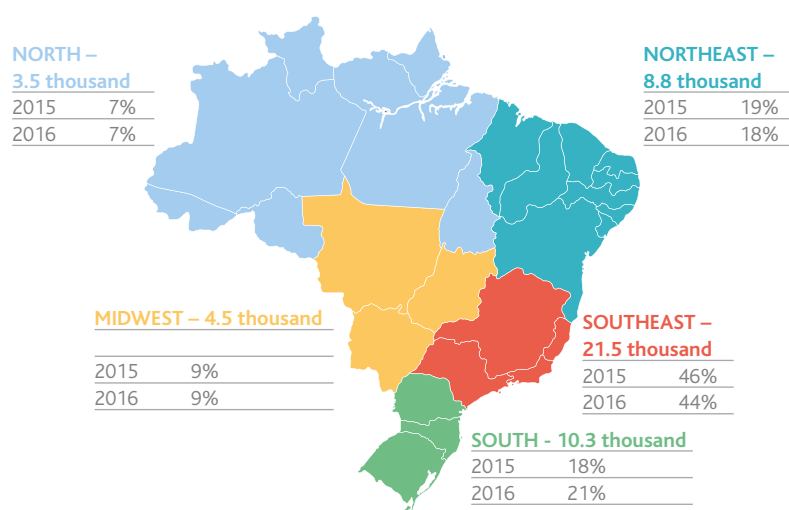
The number of BSPs and ESPs grew in 2016 nationwide, after a drop in 2015. In 2016, 3,000 new units were rolled out after a 5.5 thousand reduction in transactions in 2014-2015. Of 48.5 thousand in transactions in 2016, most of them (69%) were PAEs.

The increase occurred mainly in the South, which held 18 percent of these units in 2015 and rose to 21 percent in 2016, totaling 10.3 thousand units. This was the only region with an increase in the number of BSPs and ESPs. One of the reasons for this growth is that, according to the General Employed and Unemployed Register (CAGED, released by the Ministry of Labor), the South, especially the states of Paraná and Santa Catarina, kept the level of formal jobs throughout 2016.

The Southeast concentrates the highest number of BSPs and ESPs (44 percent, with 21 thousand BSPs and ESPs), followed by the South (21 percent or 10.3 thousand), the Northeast (18 percent or 8.8 thousand), the Midwest (9 percent or 4 thousand) and finally the North (7 percent or 1 thousand)

There was a slight decrease in the number of BSPs and ESPs, in the comparison between 2015 and 2016, in the Southeast (decrease from 46 to 44 percent, in the total of these devices) and Northeast (decrease from 19 to 18 percent).

THE SHARE OF THE NUMBER OF BSPS AND ESPS GROWS IN SOUTH



SOURCE: CENTRAL BANK OF BRAZIL

Correspondents

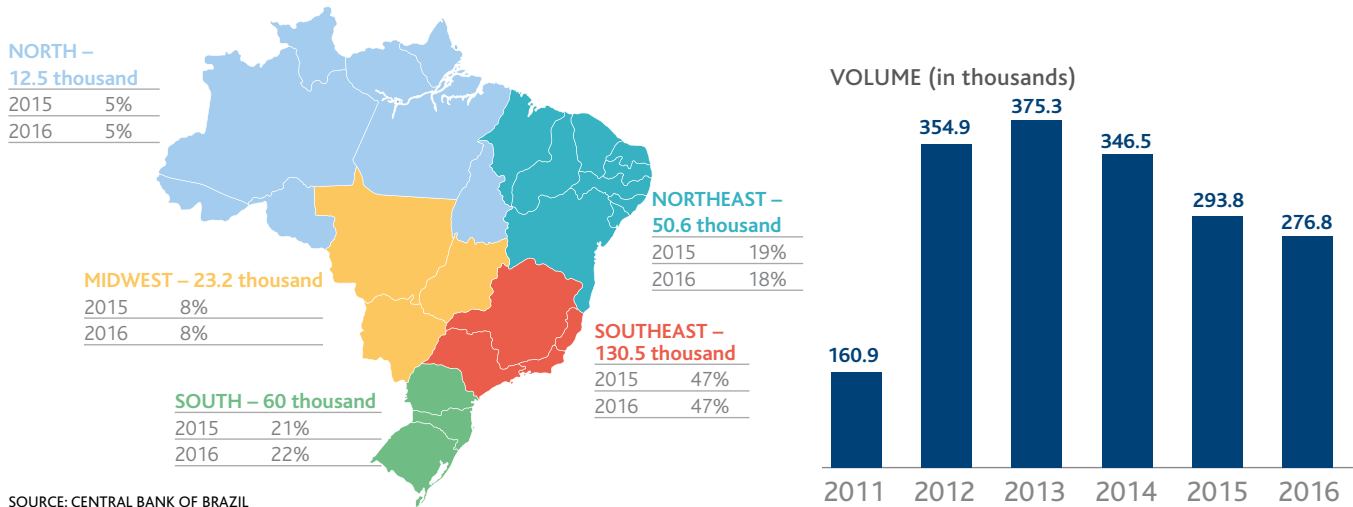
The number of correspondents has decreased in number of units nationwide in 2016, despite the growth in the number of transactions (see page 12). In 2015-2016 the number of units dropped from 293.8 thousand to 276.8 thousand nationwide, following the decrease trend that started in 2013. This decrease is related to the current economic scenario. With the decrease in income, the number of required financial transactions decreases and people become more insecure when deciding on non-essential spending and cut bills and expenses.

The decline in the number of units, however, is virtually residual when we remark that both the South and the North reported a one percentage point change in the number of units, in terms of distribution by region percentagewise. In the South, the number of units has increased from 21 to 22 percent, while in the Northeast it decreased from 19 to 18 percent.

The Southeast concentrates the largest number of units (47 percent, or 130.5 thousand Correspondents), followed by the South (21 percent, or 60 thousand units), the Northeast

(18 percent, or 50.6 thousand), the Midwest (8 percent, or 23.2 million) and, finally, the North (5 percent, or 12.5 thousand). The percentage breakdown by region is very similar to the BSP and ESP distribution.

NUMBER OF CORRESPONDENTS DROPS

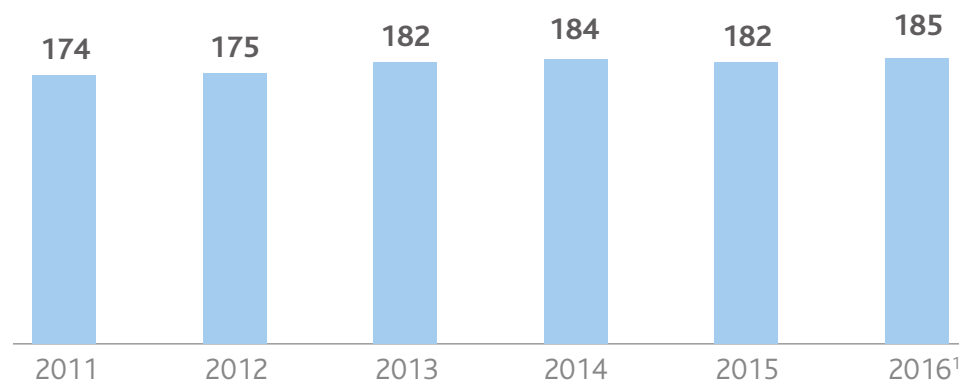


ATMs

The number of ATMs nationwide increased by 3,000 new machines in 2016, increasing from 182 thousand to 185 thousand. In 2011, that number was 174 thousand. Almost half of the network (44 percent of machines) is under TecBan's responsibility.

To provide greater convenience for all consumer audiences, banks have increased the accessibility to this equipment: according to survey respondents, 78.8 percent of all ATMs are adapted for disabled people.

NUMBER OF ATMS GROWS IN 2016 (in thousands)



SOURCE: CENTRAL BANK OF BRAZIL

¹ ESTIMATE BASED ON 2017 FEBRABAN BANKING TECHNOLOGY SURVEY

78.8 percent
of ATMs are
adapted for
disabled people



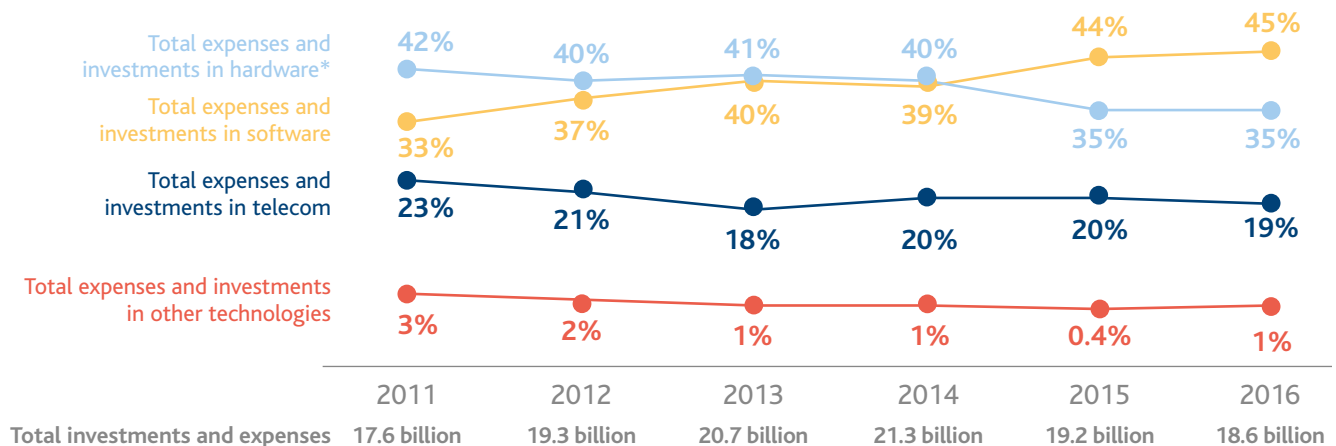
**Banks at the Forefront of
Technology Investments**

This entire scenario of technological developments, with a wide range of tools and solutions available to Brazilian consumers, is the result of the huge investments made by banks over the past few years. The industry's long-term planning can be seen in the innovations introduced and the continued increase in the use of all available resources and the level of transaction security.

The largest investments to build the structures that will allow the future development and pave a secure path for institutions and consumers have been made in recent years, in technology parks, hardware, i.e., the physical portion that provides the infrastructure that allows building efficient, innovative, and practical systems. Now is the time to invest in keeping disbursements to ensure process efficiency and even the effectiveness of the resources already ran in hardware.

For this reason, it is possible to note that this type of investments has stabilized, while investments in software continue to grow. In 2011-2016, investments in hardware dropped from 42 to 35 percent. Conversely, the funds invested in software rose from 33 to 45 percent. Investments in telecommunications and other technologies (such as analytics, mobile payment, and cognitive computing) remained within a certain range, with small annual fluctuations, while maintaining stability. This rationale is the driver of investments, starting at R\$18 billion in 2011 and reaching their peak in two consecutive years (2013 and 2014), and returning to previous levels in 2016, when it closed with investments of R\$19 billion.

TECHNOLOGY-RELATED INVESTMENTS AND EXPENSES ARE SUSTAINED DESPITE THE CRISIS



* Investments and expenses in mainframe are included in hardware

SOURCE: 2017 FEBRABAN BANKING TECHNOLOGY SURVEY

Share of investments and expenses by segment

The prospect of creating a sustainable future for the banking activities led the industry to adopt a specific design to achieve this goal: provide the funds to be invested (investments) in the expansion of activities by means of technologies and cover repair or upgrading costs (expenses) that avoid any downtimes.

As reported, investments were strategically concentrated in previous years and now banks need to keep the current investment levels, while expenses should stabilize. In 2011, investments totaled R\$5.8 billion, whereas in 2016 that figure was R\$5.3 billion, with the peak recorded in 2014 (R\$7.9 billion), while the period's simple average remains at R\$6.4 billion. During the period, investments in software averaged R\$3.2 billion and hardware averaged R\$2.7 billion per year. Investments in telecommunications averaged R\$410 million.

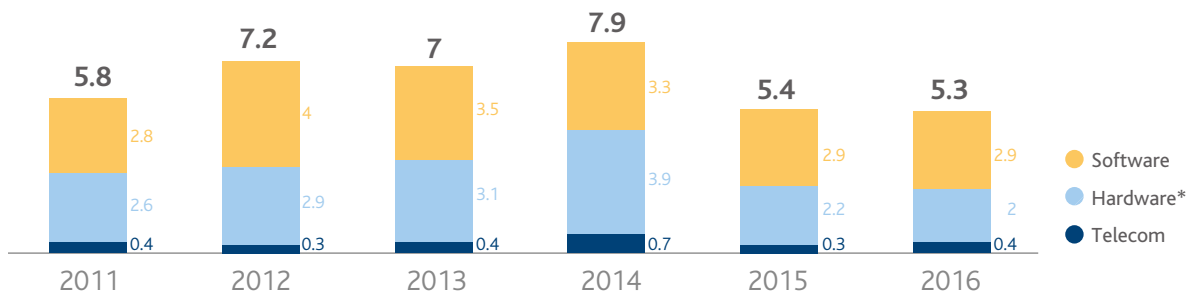
On the other hand, expenses did not fluctuate much, averaging R\$13 billion per year, with slight increases from 2011 (R\$11.8 billion) to 2016 (R\$13.3 billion). Expenses on software totaled R\$3.1 billion in 2011 and increased to R\$5.5 billion in 2016. Expenses on hardware totaled R\$5 billion six years ago and R\$4.6 billion in 2016. Expenses on telecommunications decreased from R\$3.7 billion in 2011 to R\$3.2 billion in 2016.

By analyzing investments and expenses for the six years surveyed, we can see that the economic downturn did not have a significant impact on the industry's budget planning, on the contrary, since, as we can see, the level of investments and expenses has been sustained.

R\$18.6 billion were invested in technology by
brazilian banks

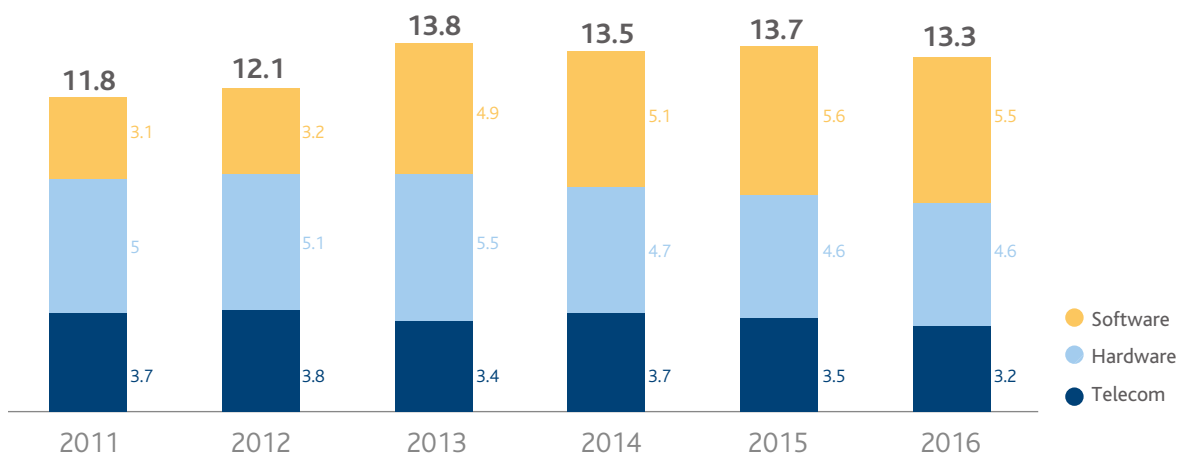
TECHNOLOGY INVESTMENTS REACH STABILITY

TOTAL INVESTMENTS* (R\$ billion)



* Software investments and expenses in mainframe are included in hardware

TOTAL EXPENSES (R\$ billion)



SOURCE: 2017 FEBRABAN BANKING TECHNOLOGY SURVEY

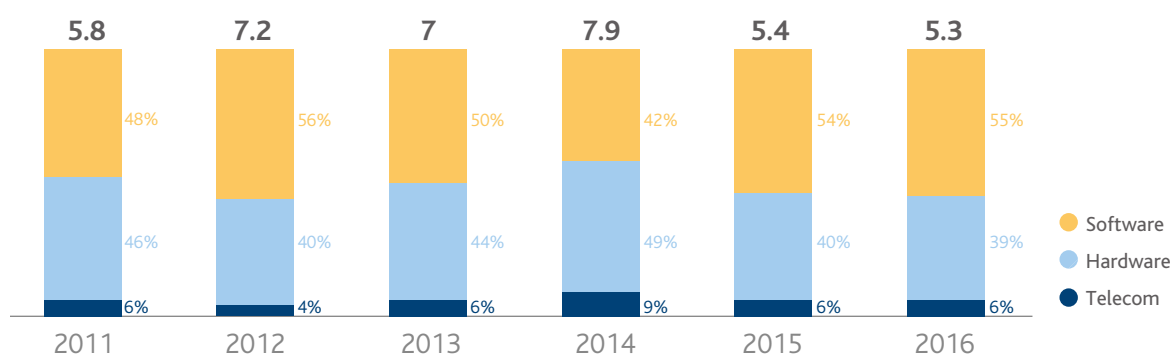
Breakdown of investments in and expenses on technology

Software leads in both investments and expenses based on the percentage breakdown per type of structure. As already mentioned, this is justified by the initial need for large investments in infrastructure, without forsaking contributions to technological content development, which led to large sums being invested in previous years, trending to stability in the last two periods. Thus, total software investments increased from 48 percent in 2011 to 55 percent of investments in 2016. In the same period, hardware investments decreased from 46 to 39 percent, and telecommunications investments remained at 6 percent.

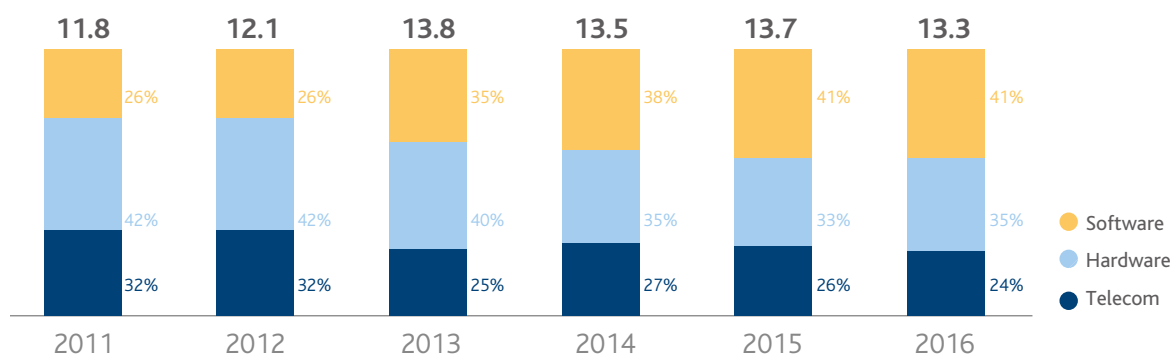
When we look at expenses, the distribution is less imbalanced, while there was an increase in software investments. This category rose from 26 to 41 percent in 2011-2016. Telecommunications went from 32 to 24 percent, while hardware dropped from 42 to 35 percent.

THE BREAKDOWN OF TELECOM, SOFTWARE AND HARDWARE EXPENSES REMAINS UNCHANGED

TOTAL INVESTMENTS* (R\$ billion)



TOTAL INVESTMENTS* (R\$ billion)



* Software investments in and expenses on mainframe are included in hardware

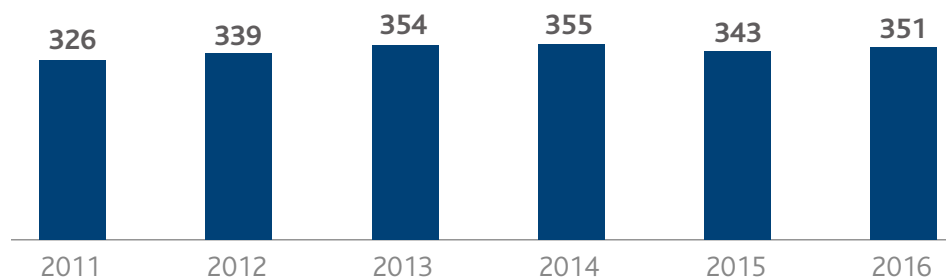
SOURCE: 2017 FEBRABAN BANKING TECHNOLOGY SURVEY

The big picture: expenses on and investments in technology around the world

As occurred in Brazil recently, the level of expenses on and investments in banking technology around the world increased in 2011-2016 and also peaked in 2013 and 2014. This is related to the fruitful creation, development, and dissemination trend of disruptive technologies and the presence of systems and services integrated with various everyday devices interconnected by the Internet of Things (IoT).

According to a study from US-based consulting firm Gartner, in 2011 investments in and expenses on banking technology totaled \$326 billion and \$351 billion in 2016, an increase of 7.6 percent. The investments averaged \$344.6 billion.

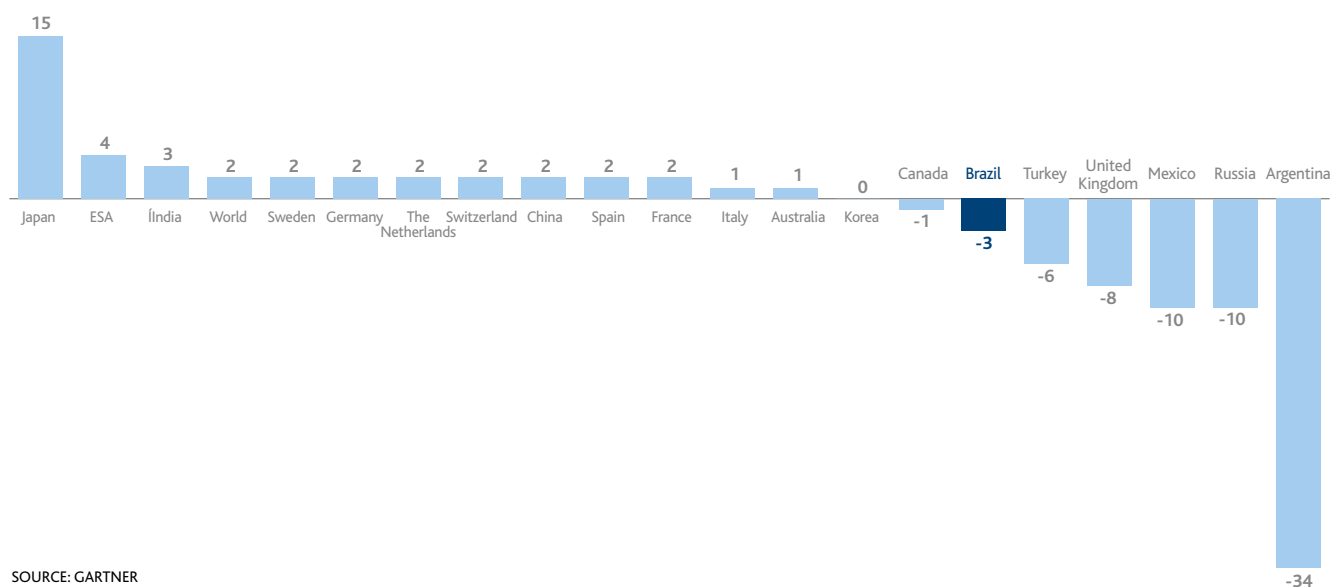
TOTAL EXPENSES IN BANK TECHNOLOGY AROUND THE WORLD (\$ billion)



SOURCE: GARTNER

The depreciation of the Brazilian currency against the dollar in 2016 and compared to 2015, had an adverse effect on the funds invested in and spent on technology by Brazilian banks: a 3 percent drop, while global funds increased by 2 percent.

EXCHANGE RATE APPRECIATION CAUSED INVESTMENTS TO DROP IN BRAZIL – percentage change in 2015 and 2016 (in \$)



SOURCE: GARTNER

The banking industry investments in technology share first place with government spending

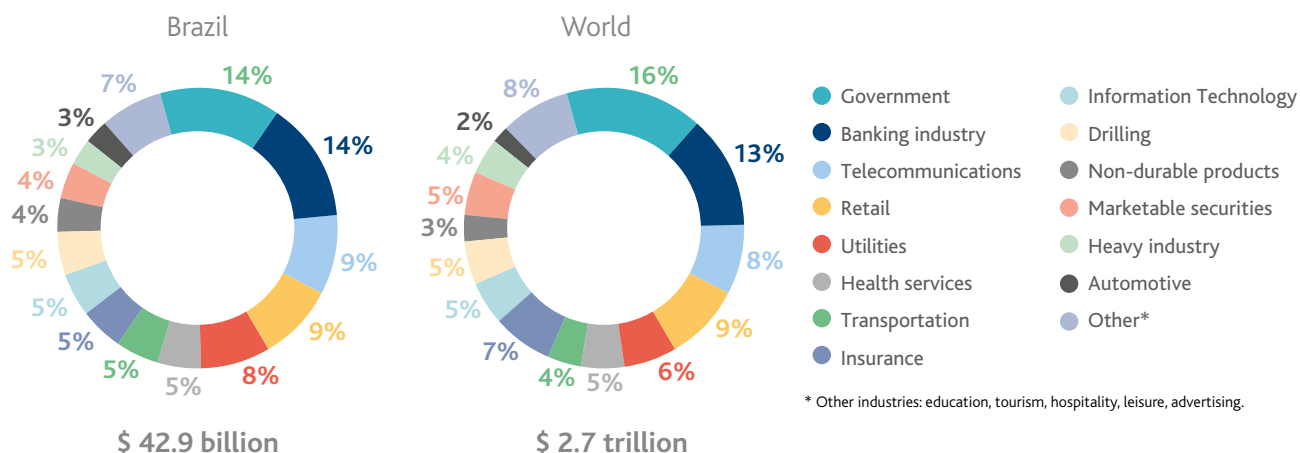
The banking industry made the largest investments and spent the most money in technology in 2016 in Brazil, matching government spending, each with 14 percent of the total \$42.9 billion posted in 2016. In 2015, the industry was the runner-up, with 13 percent, behind the Government. Matching state spending puts the banking industry at the forefront.

Known worldwide as one of the largest data processing industries, Brazilian banks consider their focusing on features such security as one of their vantage points and a key part of its growth strategy.

In order to perform thousands of transactions per second, investments are directed at big data, memory processing, robotics, and artificial intelligence, all to speed up and ensure system security.

Globally, the banking industry is the runner-up, with a 13 percent share, after Government spending (16%). According to Gartner's data, in 2016 expenses on and investments in technology totaled \$2.7 trillion.

BREAKDOWN OF TECHNOLOGY EXPENSES BY INDUSTRY IN BRAZIL AND IN THE WORLD IN 2016



SOURCE: GARTNER



New Disruptive Technologies Within Consumer Reach

Investments in a range of technology tools put the banking industry at the forefront in the use of new platforms and means of relationship with consumers, in addition to providing the job market and its employees the possibility of getting in touch with the most contemporary processes and features.

Part of this can be seen with the high use of analytics, which represents 47 percent of the industry's investments. Analytics has been a key part of the arsenal developed, but novelties like this help banks and their employees to thoroughly and quickly respond to challenging questions. Often, this means scanning big data to check patterns that can suggest gaps, increase security, and underpin future opportunities for accountholders.

Cognitive computing receives 18 percent of the invested funds. This technology simulates human thought and includes machine learning, natural language processing, voice recognition, and computer vision.

Another point that shows the planning strategy drawn from the innovation is that 65 percent of banks are studying the implementation of blockchain—a digitally distributed ledger where transactions are securely saved and stored in a distributed, connected network of nodes, without the need for a central authority, such as governments or banks.

On the industry's radar are some priorities to constantly improve the Internet and Mobile Banking. A key feature enabled by new tools is customizing channels by consumer, making them more visually consistent, with graphic details with which people identify. For the mobile platform, 77 percent of the banks will prioritize investments in improvements of transactions with financial activity, 54 percent customer customization, and 46 percent improving accessibility. For Internet Banking, the priorities are customer customization (62%), accessibility (54%), and multichannel integration—remote contact, such as video conferencing or chat (46%).

Channel use behavior by consumer is diversified

One point that needs to be considered, based on banks' responses in the survey, is the fact that banking consumers use service channels with great diversification, due to numerous forms of service offered. This is a result of banks' strategic planning work and shows the various convenience options designed to ensure that consumers can have banking services as an ally in solving everyday problems. There are virtually no obstacles to use the services or service hours.

The peak hour for transactions is undoubtedly between 10:00am and 2:00pm, in all available channels, either digital or physical. This reflects consumers' behavior, who in general are focused on solving banking issues during a productive part of their day, leaving the resting period outside their usage focus.

NEW INVESTMENTS DIRECTED AT OFFERING BANKING SERVICE

47%
invest in analytics

18%
invest in cognitive
computing

65%
study implementing
blockchain

TECHNOLOGY INVESTMENT
AND SPENDING PRIORITIES

Mobile Banking



77%

Improvement of transactions
with financial activity

54%

Consumer customization



46%

Improvement in accessibility

Internet Banking



62%

Consumer customization



54%

improvement in accessibility



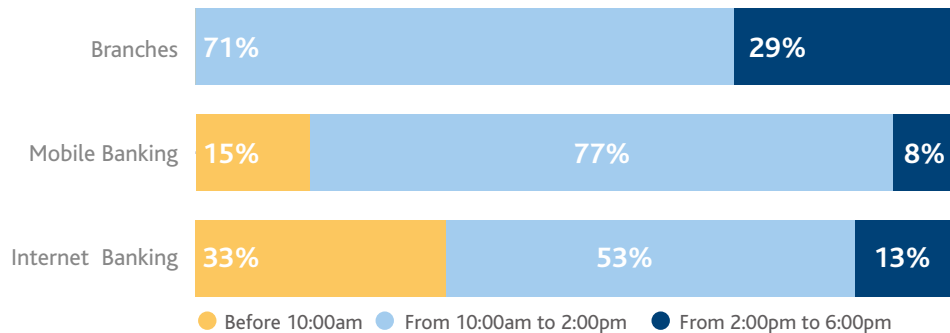
46%

Multichannel integration
(remote contact with video
conferencing or chat)SOURCE: 2017 FEBRABAN BANKING
TECHNOLOGY SURVEY

Mobile Banking and Internet Banking users intensively use these channels before 10:00am (15 and 33 percent, respectively). Consumers who prefer the physical channels can also use in this timeframe the ATMs and ESPs.

The survey on preferred hours to use channels and services by accountholder allows banks to organize themselves in terms of providing a robust service system at peak hours, without neglecting the other timeframes.

TIMES WITH THE LARGEST VOLUME OF TRANSACTION PER CHANNEL



Results different from 100 percent due to rounding

SOURCE: 2017 FEBRABAN BANKING TECHNOLOGY SURVEY

To where new technologies will migrate

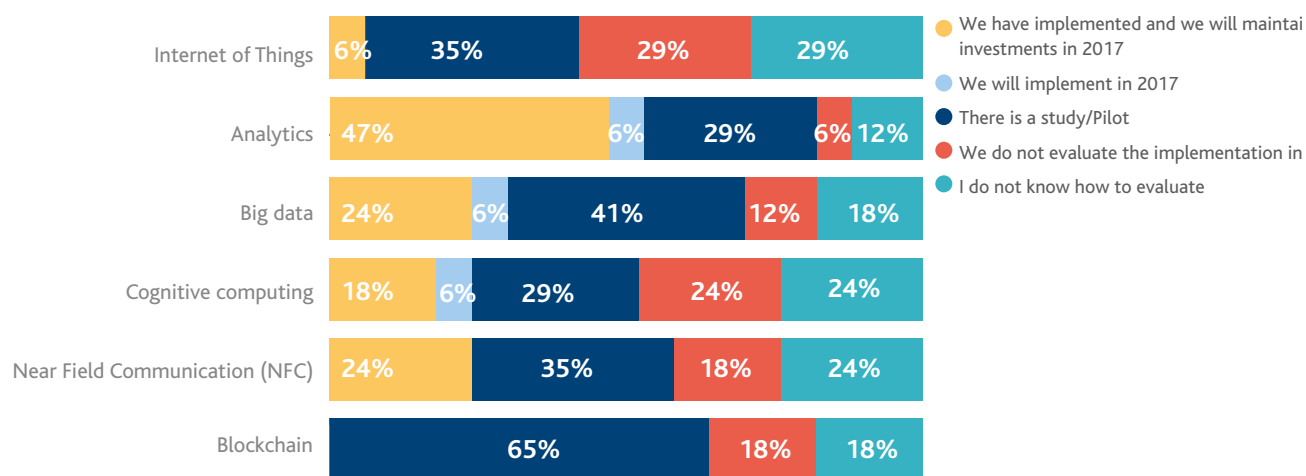
Digital convergence is no longer a challenge as technologies are already being used by the banks and increasingly accepted by consumers. Thus, the survey points to where the efforts are being directed, with experimentation in studies and pilot projects, which will be crucial for the implementation of disruptive novelties, as it has been done in recent years. Never stop.

Among survey respondents, 65 percent study implementing blockchain, 41 percent have a pilot project aimed at big data, 35 percent are assessing the use of Near Field Communication (NFC)—a tool that allows wireless exchange of information securely, similar to the use of the Bluetooth, badges and electronic ticket cards—and IoT, and 29 percent already assess the experiences with analytics and cognitive computing.

The progress in use analyses by banks points to the implementation, already in 2017, of analytics, big data, and cognitive computing, all with a 6 percent share. 47 percent of banks have already implemented analytics and will maintain investments in 2017. The percentage is 24 percent for big data and NFC, 18 percent for cognitive computing and 6 percent for IoT. This scenario clearly shows the technologies that most help the Brazilian banking indus-

try to promote advances in the offering of services and efficient experiences to users. The percentage below 30 percent for the banks that do not know how to evaluate the use of technologies is also important because it indicates that there is more concern about understanding how and if the tools are more effective than ignorance about the issues.

DIGITAL CONVERGENCE DIRECTS INVESTMENTS IN AND SPENDING ON TECHNOLOGY



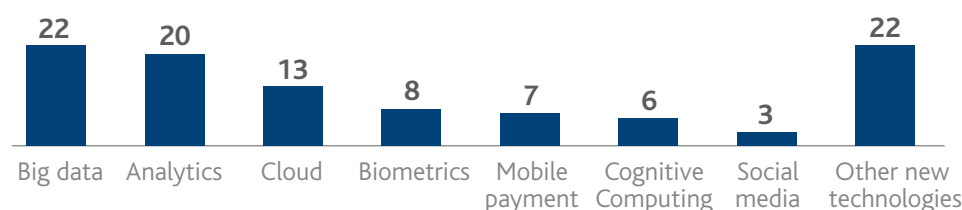
Results different from 100 percent due to rounding

SOURCE: 2017 FEBRABAN BANKING TECHNOLOGY SURVEY

The newcomers of 2016—Investments in new technologies

Investments in new technologies made in 2016 were directed mainly to three groups: big data (22%), analytics (20%), and cloud (13%). These percentages are indicative of why these new technologies were virtually absorbed by the country's banking structures, and indicate that those with lower relevance in the survey are already known to the public, because of their use or offering in the Brazilian network.

NEW TECHNOLOGIES THAT RECEIVED INVESTMENTS IN 2016 (%)*



* 13-BANK SAMPLES

SOURCE: 2017 FEBRABAN BANKING TECHNOLOGY SURVEY



Signs of a Technological Revolution

The way consumers manage their finances is changing and challenges banks to offer services that add value beyond the transactional value. In this process, technology has been a great ally of the financial industry in the development of sophisticated engagement models with its customers, integrated with multiple channels and devices, and always connected to the Internet, anywhere, any time.

Deloitte's recent surveys and analyses show how the role of this digital revolution can impact the future relationship between banks and consumers throughout the world. All studies consistently show that the popularity of data-based services never fades and consumers respond with growing enthusiasm to companies that, based on these data, offer intuitive, engaging, and useful experiences and insights.

Check below some of these new technologies and trends that should impact the finance and other industries in the coming years.

5 platforms that will impact businesses

Below are five technologies highlighted by the Tech Trends 2017 study, by Deloitte, as key for financial institutions to keep up with customer expectations.

1. IT without borders



The incorporation of technology on all sides of business helps giving the Information Technology (IT) functions a strategic nature. This moving to an open, agile, and interdisciplinary operational model that explores talent and new relationships with suppliers, incubators, and with the academy. Deloitte's estimates show that IT, data centers and software spending will reach \$547 billion by 2018 worldwide.

Impacts and opportunities

IT is changing the way a company's ecosystem works, jointly with its supply chain, increasingly contributing to business results. Through DevOps and autonomous platforms, IT can align development and front office teams in its processes, tools and responsibilities, and accelerate quality deliveries. By overcoming the limitations of traditional manual work and unaligned teams, IT leverages talent and creates teams that are multi-skilled and focused on results

2. Blockchain—Trust economy



Blockchain, a technology that, through a network of computers, allows the transfer of financial assets between different parties in a reliable way, without relying on intermediaries, is assuming a new role as “guardian” of digital assets, identities and smart contracts. Blockchain is not the cure for all the challenges faced to create and maintain trust, but it has a strong potential in this sense.

Impacts and opportunities

Companies and government are already exploring opportunities to selectively share compounded digital identities with other entities, safely and efficiently trade assets, and offer digital contracts. Person-to-person transactions do not trigger traditional trust mechanisms, such as credit ratings. They depend on each party’s reputation and the digital identity—the elements of which may soon be stored and managed in a blockchain. In the trust economy, individuals and organizations can use blockchain to store digital records, trade digital assets and execute smart contracts.

3. Dark analytics



Through the dark analytics concept, it is possible to shed a light on the opportunities hidden in unstructured, nontraditional data, such as video, audio and images, access the deep web and take advantage of unused data that the company already owns.

Impacts and opportunities

In this technology-driven era, data is a competitive currency. Dark analytics enables accessing raw or non-indexed information, transforming it into critical insights that, lit up by analysis, can support the decision-making process. The efforts are surgically precise, both in intent and range.

4. Machine intelligence



Machine learning, bots and robotic solutions increase the volume and automate human tasks. It is the evolution of analytics.

Impacts and opportunities

An innovative analytical environment allows accessing large volumes of data to gather information in real time. Machine intelligence creates value through automation, perception and cognitive involvement. This tool expands the process intelligence by allowing employees to focus on improving the basic operations, creating new resources, and generating better results.

5. Everything-as-a-service (XaaS)



It is time for companies to begin thinking about their products, offers, and processes as a collection of services. The “Everything-as-a-service” concept revolutionizes consumption by offering products as services. One example that is already in everyday life are copying machines, rented by companies, and cable TV in residences.

Impacts and opportunities

This new vision can help simplify IT operations, save costs and generate new revenue streams. The use of a product is offered (for example, on a free lease basis) and a subscription is charged. Which used to be a technical legacy systems review process has become an effort to create greater efficiency and engage customers, employees, and business partners to engage in new types of marketing and relationships.

Benefits of using digital identification

The "Perfect image—A model for digital identification" study, conducted by Deloitte in partnership with the World Economic Forum (WEF), shows that, when well planned, a digital identification network can benefit not only the financial institutions, but also those who work with them: users, identification providers, accreditation third parties, governments, and regulators.



Offers

Companies can use detailed, reliable customer information to provide personalized services



Transactions

Transferring and manipulating digital attributes allow banks to streamline and automate processes, eliminating human error.



Security

The secure and digital storage of user information reduces fraud resulting from stolen information or compromised authentication.



Compliance

Thanks to the manipulation of digital attributes and the greater access to user's identity, compliance becomes easier and more accurate.



Revenue

Companies have the opportunity to increase revenue by offering better products and services, and provide identification as a service.



Competitiveness

Financial institutions offer a simplified user experience and position themselves as an essential part of the digital economy.

The future of branches

Deloitte's analyses show that the branches of the future will need to consider providing a genuine customer-oriented experience.



Flexible spaces

Pleasing environment easily configured to customer expectations



Human connection

Make the most of the personal connection between employees and their customers



Expand sales and personalized services

Employees should know customers ever more



Digital and integrated

Conceived within the digital multichannel context



Exceptional customer experience

Changing the banking environment for the better, with customized experiences



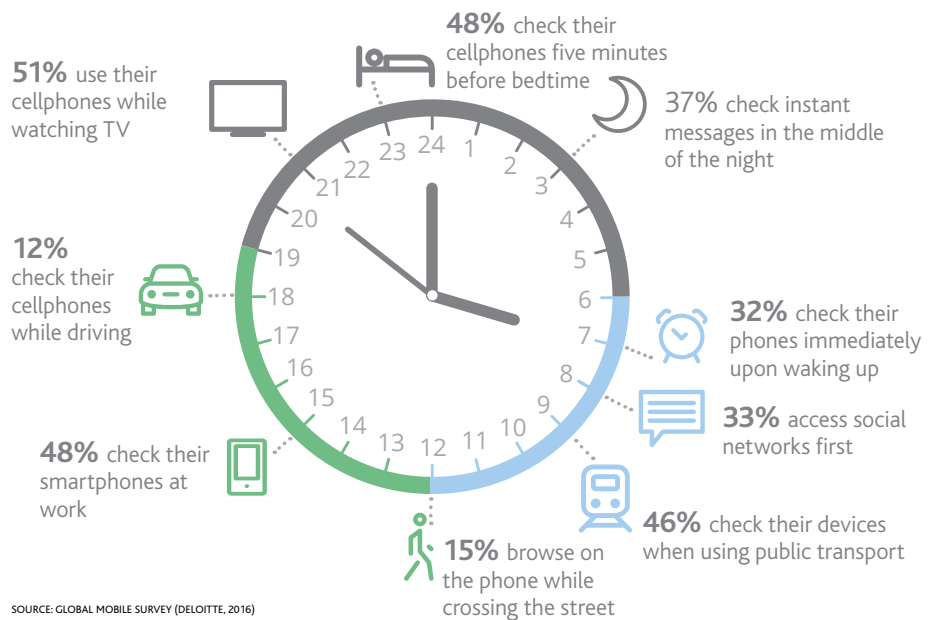
Sustainable and scalable

Preserving the brand and contributing to society

Smartphone is the preferred of the connected Brazilian

Eight out of ten Brazilian citizens already have smartphones, a 176 percent increase compared to 2013. This is one of the 2016 Global Mobile Consumer Survey findings, conducted by Deloitte, that paints a broad picture on the evolution of the mobile telephony market and consumer behavior in more than 30 countries, including 2,000 respondents in Brazil.

A TYPICALLY CONNECTED DAY OF A BRAZILIAN CITIZEN



Banking transactions performed

57% performed some type of financial transaction on their phones in the previous three months

- 47%** Bank statement checking
- 28%** Payment of service bills
- 23%** Transfers within Brazil
- 17%** Bill payments
- 12%** Transfers abroad

2017 FEBRABAN Banking Technology Survey

Survey project leader: Brazilian Federation of Banks (FEBRABAN)

FEBRABAN professionals directly involved in the initiative:

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Preparation of this edition of the survey, including this report: Deloitte

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