

SPI

*Sistema de Pagamentos
Instantâneos*
(Instant Payments System)

Annual **Report** **2024**

Prepared by
Banco Central do Brasil
Department of Banking Operations and Payments System

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Introduction

About this report

This is the fourth edition of the Instant Payments System (SPI) Annual Report, covering five years of system operation—from its launch in November 2020 through December 2024—with particular focus on the most recent year.

The report presents information on the management and operation of the SPI and is intended for readers interested in understanding the system and its role within the Pix Payment Scheme¹.

‘Chapter 1 – Participation in SPI’ discusses the types and profiles of SPI participants.

‘Chapter 2 – Interbank Instant Payments’ provides data on transaction volumes and values settled, along with their historical evolution.

‘Chapter 3 – Liquidity Provision for IP Accounts’ explains how institutions allocate funds to IP Accounts and outlines the remuneration of IP Accounts.

‘Chapter 4 – SPI Performance’ presents key performance indicators, including system availability, compliance with the Service Level Agreement (SLA), and the cost recovery model.

‘Chapter 5 – SPI Evolutionary Agenda’ details recent system enhancements and ongoing development initiatives.

Data presented in this report refer exclusively to SPI. For further information about the Pix Payment Scheme, please visit its official website.¹

Instant Payments System

SPI is a Financial Market Infrastructure (FMI)² operated by the Banco Central do Brasil (BCB) and forms part of the Brazilian Payments System (SPB). It is the sole platform for settling instant payments between different institutions (interbank transactions).

1 Refers to: https://www.bcb.gov.br/en/financialstability/pix_en

2 Refers to: <https://www.bcb.gov.br/en/financialstability/financialmarketinfrastructures>

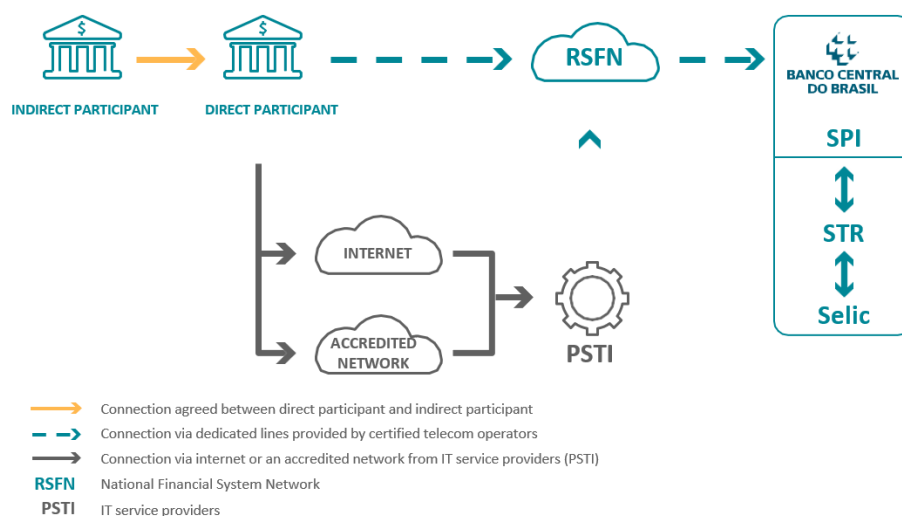
SPI operates as a real-time gross settlement (RTGS) system, meaning transactions are processed and settled individually, as soon as they are received. Once settled, transactions are final and irrevocable.

Instant payments are settled in specific-purpose accounts held at the BCB by SPI participants, known as Instant Payment Accounts (IP Accounts). To ensure the soundness of the system, IP Accounts must always maintain a non-negative balance, as overdrafts are not permitted.

The Department of Competition and Financial Market Structure (Decem) regulates the Pix Payment Scheme; the Department of Banking Operations and Payment Systems (Deban) operates the SPI; and the Information Technology Department (Deinf) serves as the system's IT provider.

Figure 1 illustrates the architecture of the SPI. Access to the system is provided exclusively through the RSFN (National Financial System Network)³, either directly or via an accredited PSTI (IT Service Provider)³. The box labeled “Banco Central do Brasil” illustrates the auxiliary systems used by participants to manage the liquidity of their IP Accounts: STR (Reserves Transfer System), managed and operated by Deban; and Selic (Special System for Settlement and Custody), managed and operated by Demab (Open Market Operations Department).

Figure 1 – SPI Architecture



³ Refers to: <https://www.bcb.gov.br/estabilidadefinanceira/comunicacaodados> (only in Portuguese)

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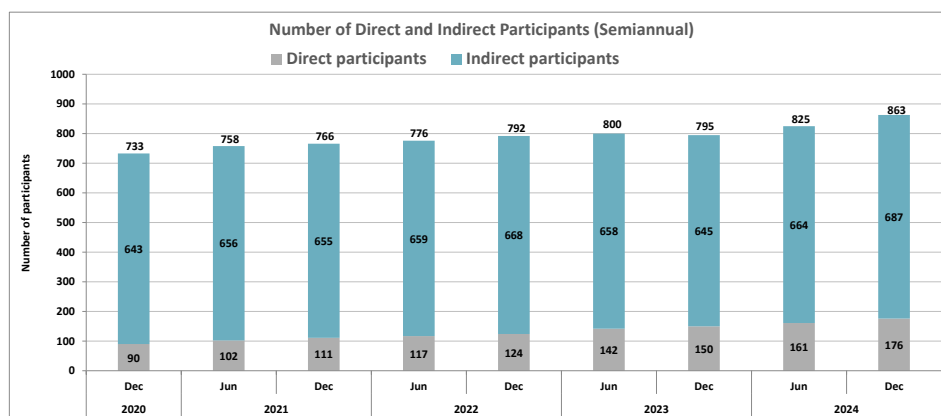
Participation in SPI

There are two categories of participation in SPI: direct⁴ and indirect⁵.

Direct participation is mandatory for commercial banks, universal banks with commercial portfolios, savings banks, clearing and settlement service providers, and the National Treasury Secretariat (STN). Payment institutions not subject to authorization by the BCB must participate indirectly. Other institutions may choose either direct or indirect participation.

Indirect participation enables institutions to issue and receive interbank payment orders on behalf of their clients without incurring the costs associated with connecting to the RSFN.

Chart 1 – Number of Direct and Indirect Participants (Semiannual)



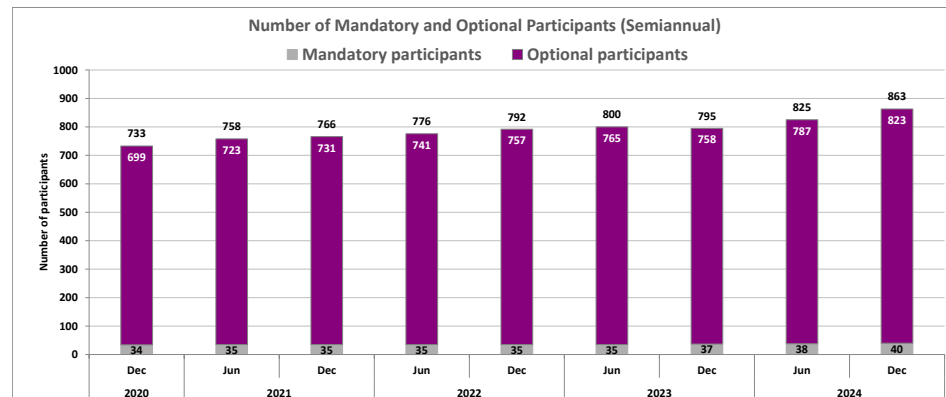
Since the launch of SPI, the number of direct participants has increased by 86, and indirect participants by 44, resulting in a total growth of 17.73 percent in the number of participants. As of now, indirect participants account for 79.61 percent of the total, while direct participants represent 20.39 percent.

⁴ Direct participant: institution authorized to participate in the SPI, owner of an IP Account and with direct access to the SPI.

⁵ Indirect participant: institution without direct access to the SPI and without IP Account. Participation occurs through a direct participant, who is responsible for his registration in the SPI and for settling his transactions.

Participation in SPI may be either mandatory or optional, depending on the institution classification within the Pix Payment Scheme⁶. Institutions that are mandatory participants of the Pix Scheme are also required to participate in SPI, whereas optional participants may choose whether to join the system.

Chart 2 – Number of Mandatory and Optional Participants (Semiannual)



Over the past five years, the number of mandatory participants increased by 6, while the number of optional participants rose by 124.

Table 1 provides a correlation between the data presented in Charts 1 and 2, as of December 31st, 2024.

Table 1 – Correlation Between Access Type and Mandatory Participation Requirement

Mandatory participants	Direct	35
	Indirect	5
Optional participants	Direct	141
	Indirect	682

Direct access is predominant among mandatory participants, while indirect access is more common among optional participants. However, in absolute terms, the number of optional participants with direct access is significantly higher than that of mandatory participants with the same access type.

The large number of optional participants using indirect access is primarily explained by the presence of numerous individual credit unions, which connect to the system through central credit unions or cooperative banks that represent the cooperative system.

As of December 2024, SPI had the following participant profile: 71 banking institutions, 66 non-banking financial institutions, 577 credit unions, 91 payment institutions subject to authorization by the BCB, 57 payment institutions not subject to authorization by the BCB, and the National Treasury Secretariat (STN).

⁶ Refers to art. 3 of the Resolution BCB 1, of August 12th, 2020: “Participation in Pix is mandatory for the financial institutions and payment institutions authorized to operate by the Banco Central do Brasil that have more than half a million active customer accounts, considering the demand deposit accounts in savings and prepaid payment accounts.”

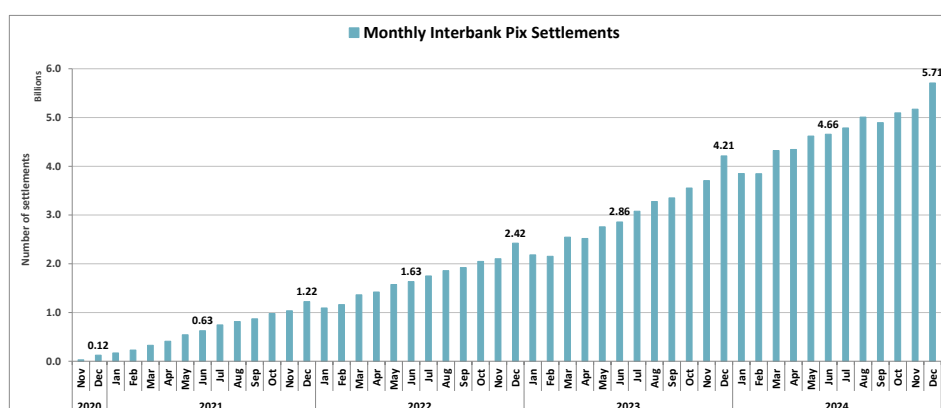
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Interbank Instant Payments

Pix Transactions

Chart 3 provides an overview of monthly interbank Pix settlements since the launch of SPI.

Chart 3 – Monthly Interbank Pix Settlements



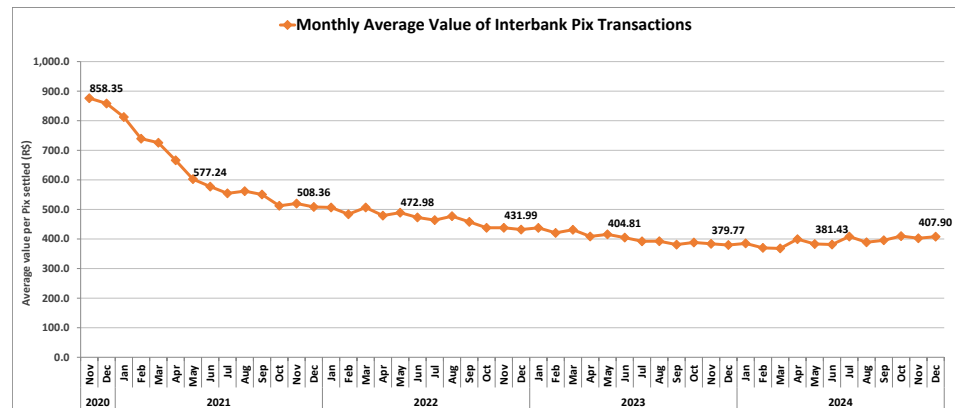
One year after its launch, the SPI was settling 1.22 billion interbank Pix transactions per month (as of December 2021). Since then, the volume of transactions has grown significantly, with an average increase of more than 1 billion transactions in each subsequent December. This upward trend led to a total of 5.71 billion transactions settled in December 2024. When comparing December 2023 to December 2024, the volume of settled Pix grew by approximately 35.52 percent.

It is common for January to show a decline in transaction volume compared to December, although it generally remains higher than in November. December typically stands out due to increased activity associated with 13th salary payments and year-end celebrations.

In terms of value, the largest individual Pix transaction ever settled by the SPI was R\$ 3.0 billion. The total value of transactions settled in 2024 reached R\$ 22.12 trillion, bringing the cumulative amount settled since the system's launch to over R\$ 50.72 trillion.

Chart 4 illustrates the month-by-month evolution of the average value of instant payments settled by the SPI since its launch.

Chart 4 – Monthly Average Value of Interbank Pix Transactions



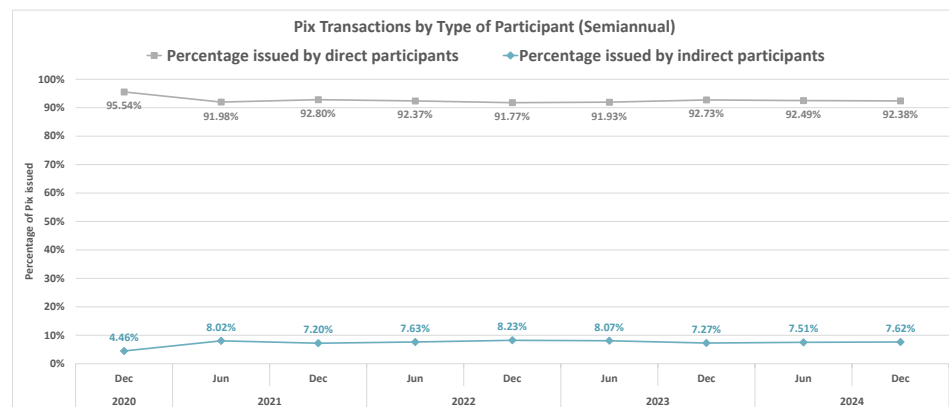
In December 2024, the average value per Pix transaction was R\$ 407.90. Data distribution shows that: 50 percent of transactions (median) were below R\$ 39.00; 90 percent were below R\$ 400.00; and 99 percent were under R\$ 3,731.00.

These figures confirm that SPI is primarily used for retail payments.

Direct and Indirect Participants Transactions

Chart 5 shows the percentage of Pix transactions issued by direct and indirect participants.

Chart 5 – Pix Transactions by Type of Participant (Semiannual)



Although more than 80 percent of SPI participants are classified as indirect (as shown in Chart 1), they account for only about 7 percent of Pix transactions issued since 2021. This is primarily because large institutions, including conglomerate leaders and central credit unions, typically choose direct participation, connecting to SPI via the RSFN, either directly or through an accredited PSTI.

Interbank Pix Distribution

Charts 6 and 7 show, respectively, the number of interbank Pix transactions issued and received, broken down by participant segment in the SPI⁷.

Chart 6 – Pix Transactions Issued by Participant Segment (Semiannual)

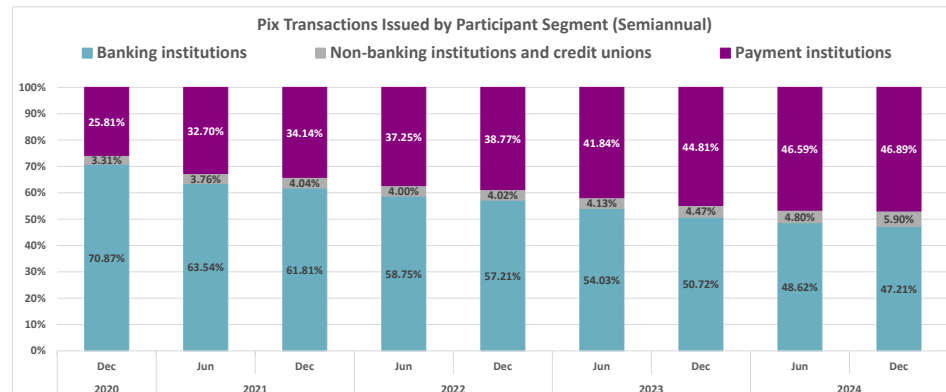
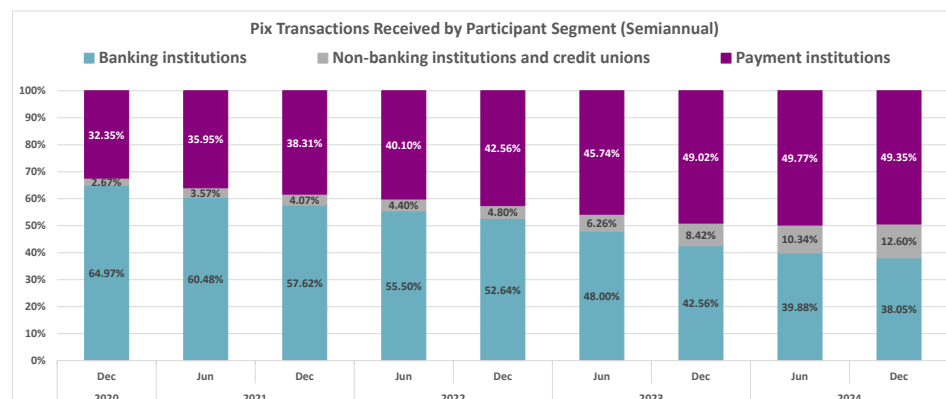


Chart 7 – Pix Transactions Received by Participant Segment (Semiannual)



Charts 8 and 9 illustrate, respectively, the quantity and values of Pix distributed per type of users (payer and payee)⁸.

⁷ SPI participants segments:

- banking institutions: commercial banks, exchange banks, universal banks, cooperative banks and saving banks.
- non-banking financial institutions and credit unions: savings and loans associations, credit unions, security brokerage institutions, consumer finance institutions, micro-financing institutions, direct credit societies and security distribution institutions.
- payment institutions: authorized e not authorized to operate by the BCB.

⁸ P2P: person to person; P2B: person to business; B2P: business to person; B2B: business to business.

Chart 8 – Pix Transactions by Type of User (Semiannual Volume)

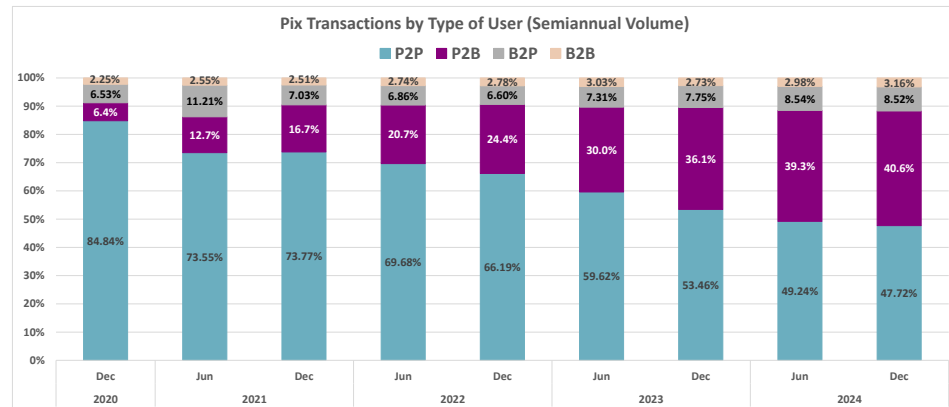
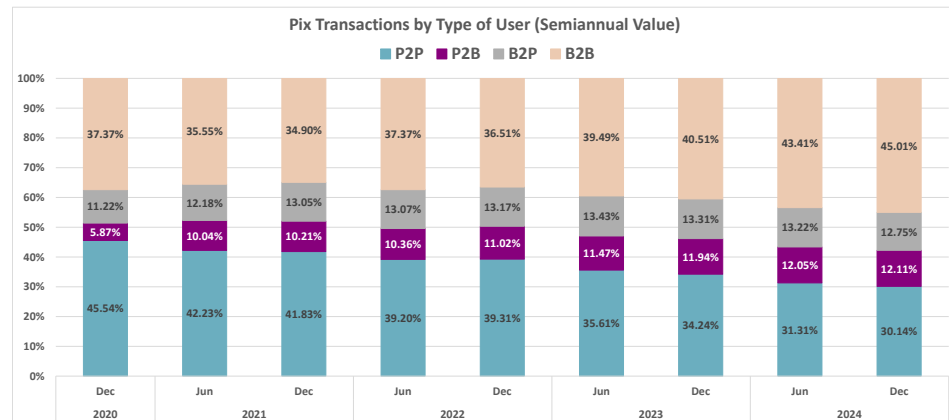


Chart 8 shows that P2B transactions have grown at a faster rate than other types of Pix transactions.

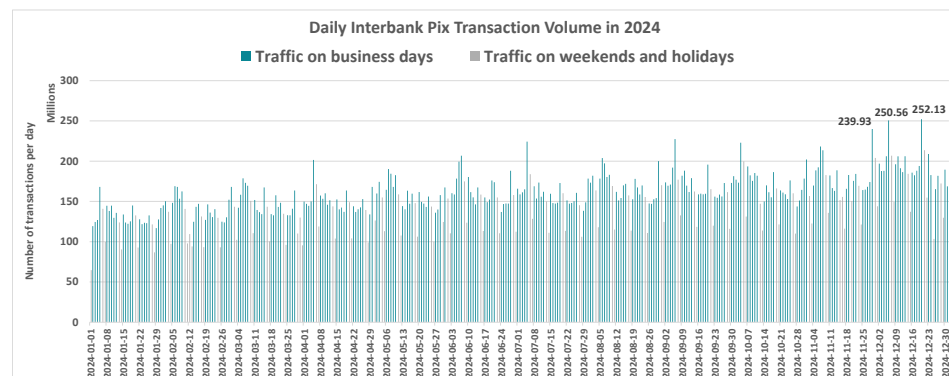
Chart 9 – Pix Transactions by Type of User (Semiannual Value)



Transactions Distribution

Chart 10 shows the daily distribution of SPI transactions in 2024.

Chart 10 – Daily Interbank Pix Transaction Volume in 2024



In 2024, the three days with the highest number of Pix transactions settled in the SPI were November 29th (239.93 million transactions), December 6th (250.56 million), and December 20th, which set a record with 252.13 million transactions.

Although the number of transactions was higher on business days, the expansion rate of Pix was also observed on weekends.

Chart 11 – Average Daily Volume by Day of the Week (2024)

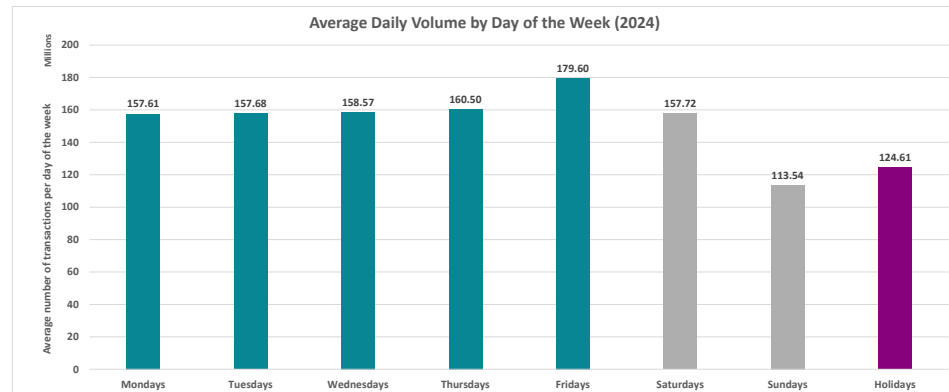


Chart 11 highlights the higher volume of transactions settled on business days, particularly on Fridays, which averaged 179.60 million settlements. Sundays recorded the lowest volume, with an average of 113.54 million transactions, while holidays averaged 124.61 million, surpassing Sunday activity.

Notably, the average number of transactions on Saturdays (157.72 million) is comparable to that of some business days. This upward trend in Saturday activity had already been observed in previous SPI reports, indicating its consistency over time.⁹

Chart 12 – Intraday Distribution of Transactions in 2024

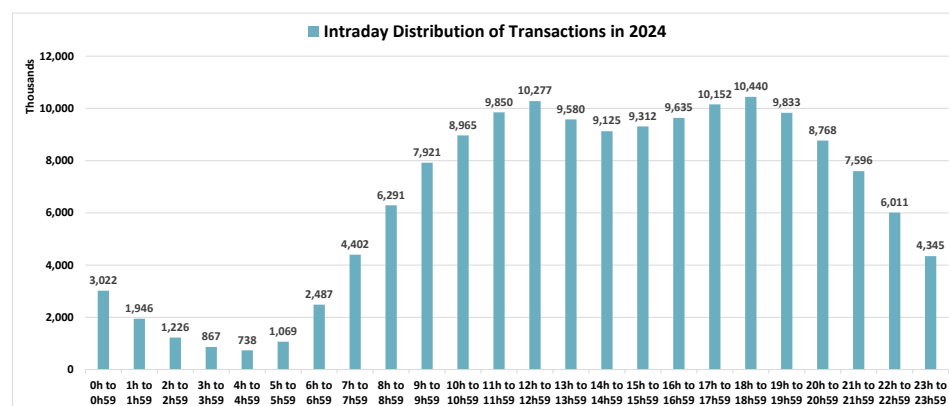


Chart 12 highlights that the average number of transactions consistently remained above 700 thousand, indicating uninterrupted system activity. The lowest volumes were recorded between 2 a.m. and 6 a.m., while peak activity occurred between

⁹ Refers to: https://www.bcb.gov.br/en/financialstability/spi_en

10 a.m. and 2 p.m., and again from 4 p.m. to 8 p.m. After 8 p.m., transaction volumes gradually declined.

Channels for Message Transmission

The SPI operates with two message transmission channels: the primary and the secondary.

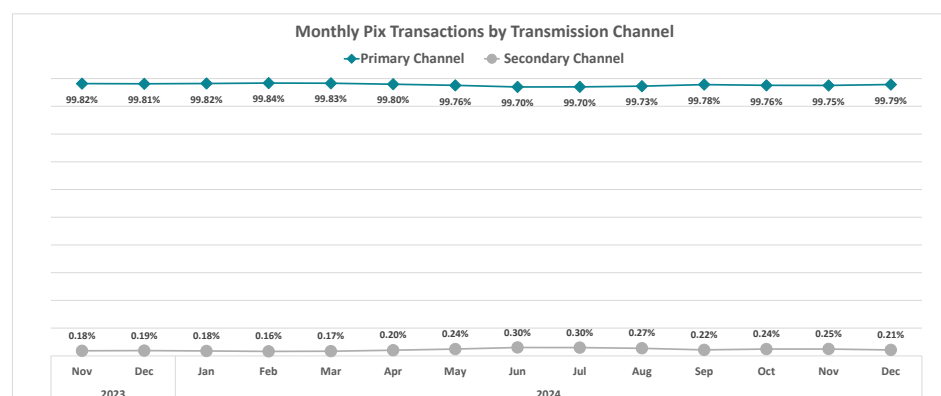
The primary channel is used for Pix transactions requiring instant and prioritized settlement, such as point-of-sale payments and immediate person-to-person transfers.

The secondary channel is reserved for non-priority Pix transactions, where real-time processing is not necessary. This includes scheduled payments, future-dated invoices, and other batch-processed operations.

Designed as a complementary structure within the SPI, the secondary channel enhances the efficiency of large-volume processing, while all instant Pix transactions remain exclusively handled by the primary channel. This separation enables a more effective allocation of technological resources for both the SPI and its participants, ensuring that each transaction type is processed according to its urgency and operational profile.

The use of the secondary channel is expected to increase substantially with the launch of new products that will rely exclusively on it, such as *Pix Automático* (recurring payments using Pix).¹⁰

Chart 13 – Monthly Pix Transactions by Transmission Channel



¹⁰ Refers to: https://www.bcb.gov.br/en/financialstability/pix_en

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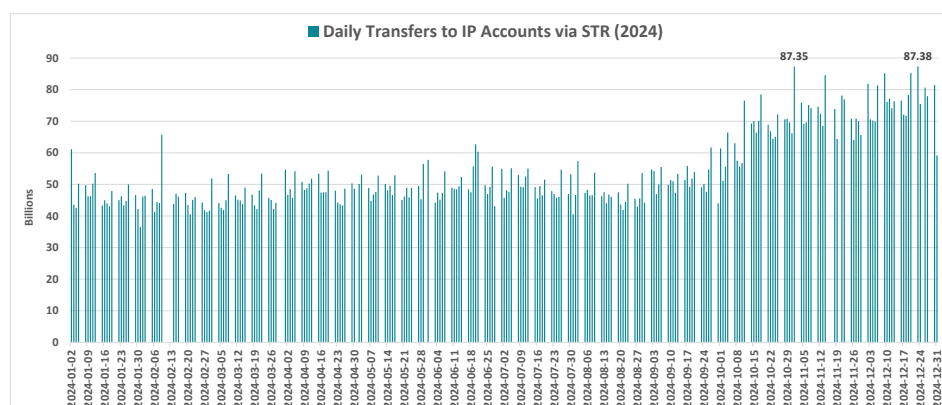
Liquidity Provision to IP Accounts

Given that transactions in the SPI are settled through specific-purpose accounts (IP Accounts), the BCB provides mechanisms for direct participants to supply liquidity to these accounts.

One such mechanism is the Reserves Transfer System (STR), which operates on business days from 6:30 a.m. to 6:30 p.m. During this period, participants can freely transfer funds between an IP Account and other STR-eligible accounts, such as Reserve Requirements Accounts, Settlement Accounts, or Electronic Currency Correspondent Accounts (CCME). Additionally, a 30-minute extension after STR's regular operating hours allows participants to make deposits into IP Accounts only.

Chart 14 illustrates the daily volumes transferred to IP Accounts via STR throughout 2024. These values are not included in other sections of this report, which are limited to Pix transactions.

Chart 14 – Daily Transfers to IP Accounts via STR (2024)



Liquidity provision via the STR, which can exceed R\$ 87 billion per day, reflects the high availability of resources in the system, particularly after the close of regular hours (6:30 p.m.). During this period, institutions subject to reserve requirements on demand deposits, as well as electronic money institution (emi) holding funds in the Electronic Currency Correspondent Account (CCME), can transfer these resources to IP Accounts at no cost.

Higher volumes are frequently observed on Fridays, driven by the need to ensure liquidity for the entire weekend, when the STR is unavailable.

Another liquidity mechanism provided by the BCB is the SPI Rediscount Facility, available exclusively to financial institutions that are direct participants in the SPI. However, its high operational cost leads to minimal usage. In 2024, while transfers via STR totaled R\$ 13.68 trillion, only R\$ 169.24 million was accessed through the rediscount facility.

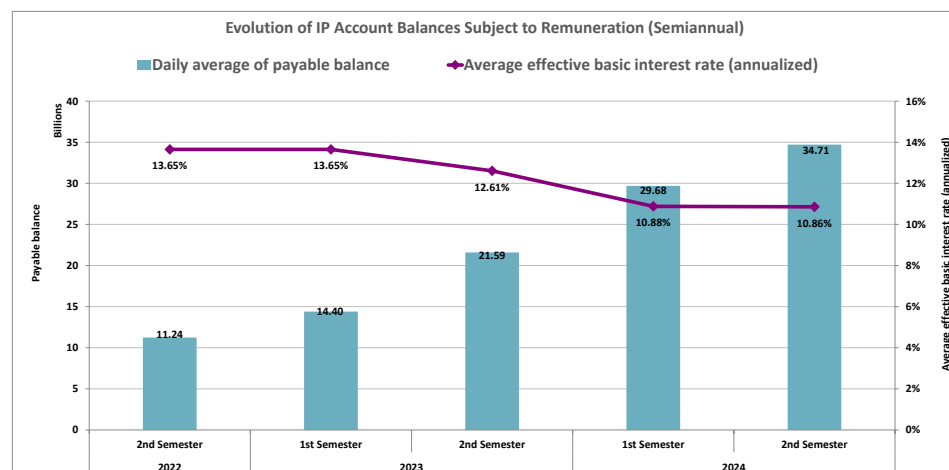
IP Accounts Remuneration

BCB Resolution No. 195, dated March 3rd, 2022, established the remuneration of balances held in IP Accounts. The objective is to minimize the opportunity cost borne by Pix participants, while ensuring the soundness of the system and promoting competition, financial inclusion, and transparency in the provision of payment services¹¹.

Remuneration is calculated based on the daily balance recorded in the IP Account when STR closes and before the start of the additional transaction window (typically at 6:30 p.m.). The applicable interest rate is the basic interest rate (Selic), which offsets the cost of maintaining liquidity in the SPI. To prevent distortions or direct competition with other market operations, a ceiling is set on the remunerated balance.

BCB Resolution No. 412, dated September 19, 2024, updated the limit applicable to the remunerated portion of the daily IP Account balance.

Chart 15 – Evolution of IP Account Balances Subject to Remuneration (Semiannual)



11 Refers to: [Vote BCB 297](#), of November 23th, 2021 (only in Portuguese).

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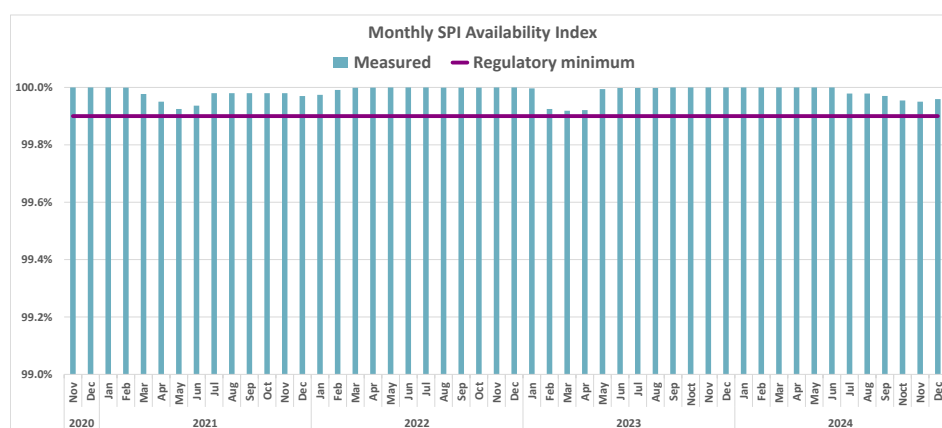
SPI Performance

Availability Index

The SPI Availability Index¹² measures the percentage of time the system was operational and available to participants over the past three months¹³, relative to the total time it was expected to be available.

The minimum level required by regulation is 99.9 percent.

Chart 16 – Monthly SPI Availability Index¹⁴



The availability index has consistently remained above the regulatory minimum since the SPI launch, reaching 99.96 percent in December 2024.

In addition to availability, other performance indicators are continuously monitored by the BCB to ensure the effective and uninterrupted operation of the system. One example is the Service Level Agreement (SLA) for transaction processing time, as outlined in item 5.1 of the Pix Times Manual¹⁵. According to this SLA, 50 percent of all Pix transactions must be settled within 2.8 seconds, and 99 percent within 4.6 seconds inside the SPI.

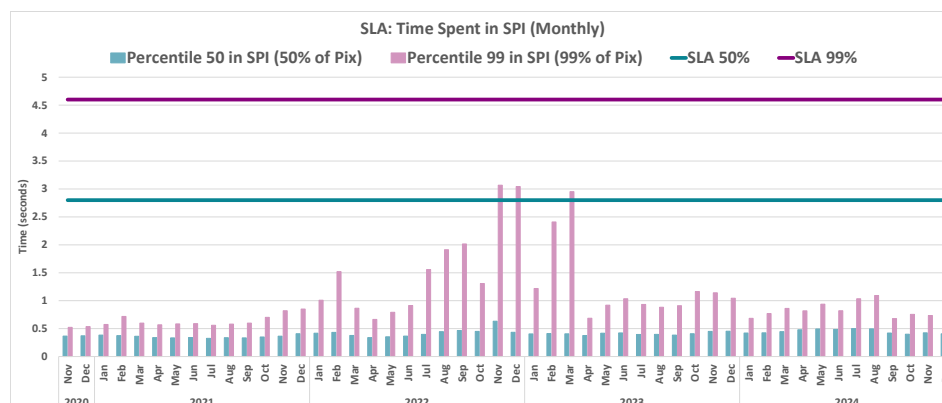
12 Refers to: [Resolution BCB 195](#), of March 3rd, 2022 (only in Portuguese).

13 SPI must operate 24 hours a day, every day of the year, including weekends and holidays.

14 Updated monthly, available on: <https://www.bcb.gov.br/estabilidadefinanceira/indice-disponibilidade-spi> (only in Portuguese).

15 Refers to: [IX_ManualdeTemposdoPix.pdf](#) ([bcb.gov.br](https://www.bcb.gov.br)) (Only in Portuguese).

Chart 17 – SLA: Time Spent in SPI (Monthly)



These results do not account for the time spent within participants' internal systems, which is measured separately under a different SLA, as defined in the Pix Times Manual.

Cost Recovery Policy

Institutions with direct participation in the SPI are subject to usage fees. The purpose of these fees is to reimburse the BCB for costs related to the systems and IT infrastructure required to operate the SPI^{16,17}.

In accordance with the cost recovery policy of the Central Bank Information System (Sisbacen), revenues and costs are continuously updated, and fees are periodically reviewed based on actual and projected results.

The following fees currently apply:

- R\$ 0.01 for every ten Pix transactions settled, charged to the receiving direct participant.
- R\$ 3.00 per megabyte (MB) for IP Account statement requests submitted by direct participants.

No fees are charged to institutions when issuing Pix transactions or for failed transactions that are not settled.

16 Refers to: articles 46 to 48 of [Resolution BCB 195](#), of March 3rd, 2022 (only in Portuguese).

17 Refers to: chapter VII of [Resolution BCB 366](#), of January 17th, 2024 (only in Portuguese).

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Evolutionary Agenda

Actions Taken in 2024

Among the most relevant actions implemented in 2024, it is worth mentioning:

- The implementation of BCB Resolution No. 412, dated September 19th, 2024, which revised the ceiling on the portion of the IP Account balance eligible for remuneration; and
- The introduction of a feature enabling SPI direct participants to consult the contact information of the individuals responsible for managing IP Accounts at other participating institutions.

Planned Actions for 2025

The SPI continues to evolve in response to increasing transaction volumes and the introduction of new business products under the Pix Scheme agenda.

In addition to these developments, the system regularly incorporates improvements and new services aimed at its participants.

One of the main priorities for 2025 is the adaptation of the SPI to support *Pix Automático*, whose launch is scheduled for the first half of the year.

Another key initiative is carrying out adjustments to the system to enable it to handle alphanumeric CNPJ identifiers (National Register of Legal Entities), in line with requirements set by the Federal Revenue Service.

Glossary

Acronyms

BCB	Banco Central do Brasil
CCME	Account Corresponding to Electronic Currency
FMI	Financial Market Infrastructure
IP account	Instant Payment account
PSTI	IT Services Provider accredited by BCB
RSFN	Brazilian Financial System Network
RTGS	Real-Time Gross Settlement
SA	Settlement Account
Selic	Special System for Settlement and Custody
Sisbacen	Central Bank Information System
SLA	Service Level Agreement
SPB	Brazilian Payment System
SPI	BCB's Instant Payments System
STN	National Treasury Secretariat
STR	Reserves Transfer System

