

ACTIVITIES REPORT 2018

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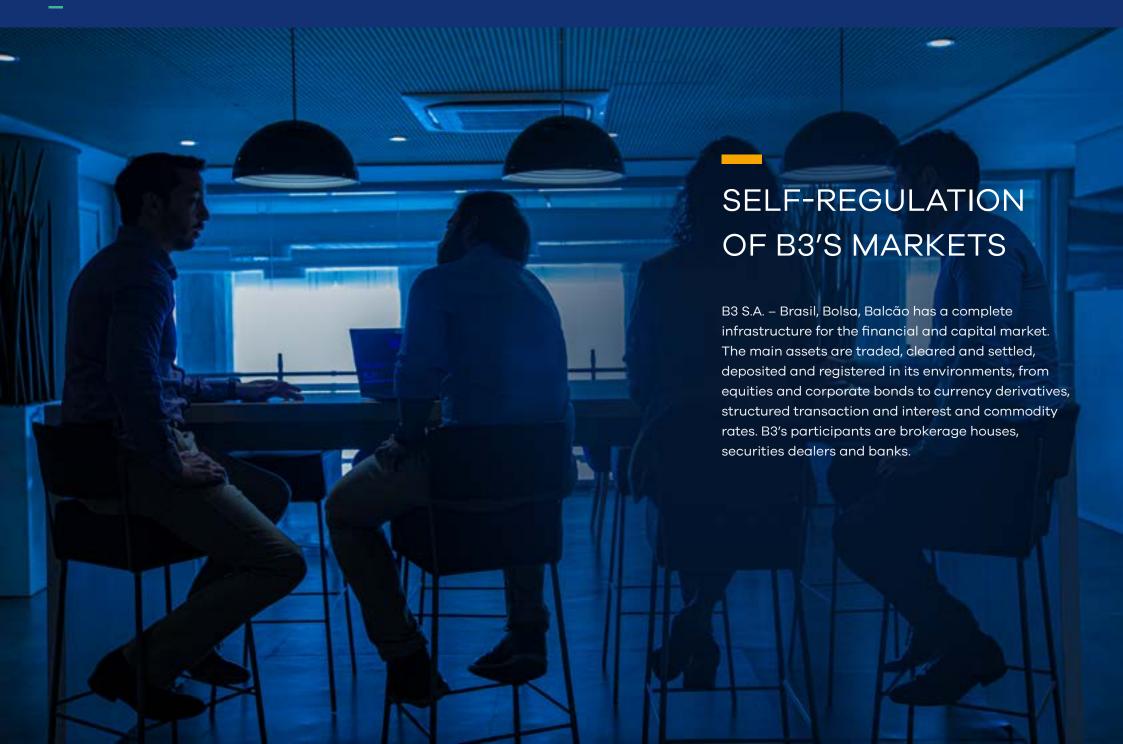
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This ecosystem has rules that seek a fair and equitable environment for all agents, so that the market can perform its essential role of enabling investment alternatives for savers (individual, pension fund and other investors); of enabling financing sources for companies, governments and other institutions; and of hedging for individuals or bodies that need protection against price fluctuations in a product or currency.

BSM is the body responsible for

supervising the markets operated by B3, with the aim of maintaining their integrity. We believe that to promote market integrity is to promote the development of Brazil.

BSM is thus built on three pillars:

1

### Knowledge and guidance:

we provide market guidance, share knowledge and assist B3's participants in adopting the best practices for their processes and controls.



### **Market integrity:**

we monitor all of the transactions that occur in B3's markets, audit participants and when necessary act to prevent repetition of irregularities.



#### **Protection for the investor:**

in addition to helping maintain market integrity in a transparent and fair way, our Investor Compensation Mechanism seeks to compensate investors harmed by the actions or omission of B3 participants.

In the following pages, we set out the main activities that BSM executed over 2018.



### OUR MISSION

To ensure the integrity of B3's markets and protection of investors.

### OUR MANDATES

Supervise activities (orders, registrations and trades) in B3's markets.

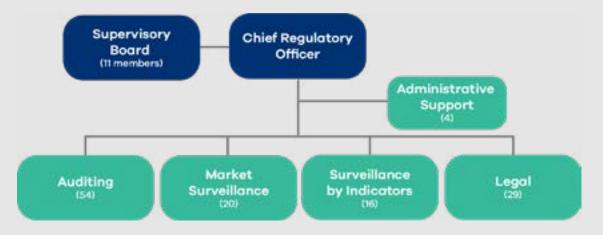
- Inspect B3's participants
- Oversee B3's activities as a market operator and issuer of listed securities (self-listing).
- Take necessary measures to preserve the integrity of the market through guidance

- activities or, when necessary, bringing disciplinary administrative processes that can result in penalties against those involved in irregularities.
- Manage the Investor
   Compensation Mechanism
   (MRP).

# ORGANIZATIONAL CHART

We have budgetary autonomy and a dedicated team. Figure 1 sets out our organizational chart, for the end of 2018.

Figure 1 – BSM Organizational Chart













# BSM-ANBIMA Joint Workshop on Abusive Practices

Almost 200 people representing 65 different institutions followed the event (in person or via streaming), which covered manipulative practices through layering and spoofing.

B3 participants and ANBIMAmember asset managers took part this workshop and this is expected to be a growing trend at subsequent events, which are also expected to be led by the buy side (managers, foundations and other investors).

# Money Laundering Prevention Training

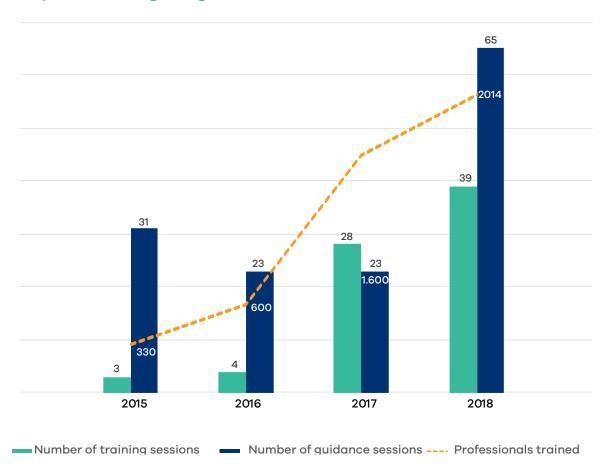
Followed by around 200 individuals, in person or via streaming, money laundering prevention training is an established part of our annual

calendar. Taking part in the 2018 edition were Antônio Carlos
Ferreira de Souza, president of the Council for Financial Activities
Control (Coaf) and Marcus Vinicius de Carvalho, who heads Prevention of Money Laundering and Combat of Terrorism Financing at the
Securities & Exchange Commission of Brazil (CVM).

In addition to workshops aimed at the market, we provide specific training requested individually by participants. These events have been promoted frequently and have proven very productive, as they have allowed the specifics of each institution to be dealt with and have granted a level of depth that is not always possible at open meetings.

Graph 1 shows the number of people trained at the workshops for the market and in individual training sessions.

### **Graph 1 – Training and guidance**



In addition to these events, the BSM team provides daily guidance by telephone, email or in person. This is now common practice and allows better interaction between BSM experts and the market.

In 2018, we initiated a new type of market guidance: the publication of videos. The first of these videos, launched in December, dealt with same investor trades during auctions. There were also four videos recorded for publication in the first half of 2019, about churning, layering, spoofing and illegal money-passing between accounts.

We also provide speakers for B3 Education programs and initiatives such as Programa TOP – which aims to have university lecturers disseminating information about the capital market.

### International forums

We take part in the main international forums involving regulators and self-regulators, with meetings and training sessions from the International Organization of Securities Commissions (losco), the Affiliate Members Consultative Committee (AMCC) of losco and the Council of Securities Regulators of the Americas (COSRA).

Of special note, in 2018 we held a presentation with losco's Committee for Secondary Markets, at the invitation of CVM, regarding our methodology for layering and spoofing identification, which had international repercussions and became a reference for the subject.

### Team training and qualification

In addition to events aimed at B3 participants and investors, we have an intensive agenda for our staff. Of note in this regard is International Training that has been held annually since 2011 for BSM and B3 employees, as well as for regulators (CVM and the Central Bank of Brazil), other self-regulators (ANBIMA, Ancord and Febraban) and for the Federal Police, Federal Public Prosecutors' Officer and the Federal Judiciary.

In the 2018 edition there was discussion, among other things, of trends in investigative and enforcement programs, the use of data mining and analytics, money-laundering prevention programs, suitability, the calculation of penalties and benefits, and challenges in single self-regulation.

Corinne Riguzzi (SIX Exchange Regulation – Switzerland), Elsa Renzella (IIROC – Canada), Kevin Piccoli (CFTC – USA), Lara Thyagarajan



(FINRA – USA), Ricardo Saponara (SAS – Brazil), Henrique Machado (CVM), Francisco José Bastos Santos (CVM) and Marcus Vinícius de Carvalho (CVM) participated as speakers.

We also encourage our employees to participate in specific overseas training, such as that offered annually by the Securities and Exchange Commission (SEC) and the Commodity Futures Trading Commission (CFTC). In 2018, two employees took part in this training.

Due to the ever more intensive use of the disciplines of analytics in supervision and audit processes, we sent two employees to Statistical Analysis System (SAS) headquarters in the United States to take part in reference training in the tool, which is used in our data mining activities.



# WHISTLEBLOWER CHANNEL

Our whistleblower channel was created to allow complaints to be sent about the activity of market professionals, companies traded at B3 and financial intermediaries.

The whistleblower channel is an important source of information for BSM's inspection activities.

In 2018, we received 71 complaints regarding the issues set out in Table 2.

**Graph 2 – Complaints received in 2018** 







Phase*	2012	2013	2014	2015	2016	2017	2018	Total
Discovery	-	-	-	-	-	-	415	415
Trial	-	-	-	-	-	4	85	89
Notification of accused	-	-	-	-	-	-	133	133
Appeal timeframe	-	-	-	-	-	-	24	24
Concluded at BSM	200	144	185	235	620	158	122	1,664
Total	200	144	185	235	620	162	779	2,325

<sup>\*</sup>Status on December 31, 2018.

We witnessed a significant rise in the number of complaints to the MRP in 2018 due to the receivership of the Gradual Investimentos and Walpires brokerage houses. Over the past seven years, another four institutions have gone into receivership. The number of complaints resulting from these receiverships can be seen in Graph 3.

In 2018, we made 82 compensation

payments for partially or fully accepted claims, totaling BRL 2,243,729.1

The BSM audit team is called upon to assess the technical aspects of

complaints made to the MRP or to calculate the real value of investors' losses. In 2018, the Auditing team drew up 583 technical reports on which to base decisions within the scope of the MRP.

<sup>1</sup> This does not include partially accepted claims, whose claimants have submitted an appeal to CVM and with claims still pending the autarchy's consideration.

### Graph 3 – Number of complaints to MRP



### MRP DIGITAL

In December 2018, MRP's digital platform went into production. As a result, all communication between the investor, BSM and B3's participants went from paper to electronic, providing greater security and agility.

An explanatory video with all the guidance required for making a complaint via the MRP Digital platform is published at our website (access here).



### AUDIT

BSM is responsible for the supervision and direct inspection of markets operated by B3, which are tasks that it performs through audits to assess compliance of the participants' processes and controls with the applicable laws and regulations. This inspection process occurs through different types of audit, as set out below.



### **Operational audits**

In the operational audits, we assess compliance of the participants' infrastructure, processes and controls with the rules of access to the markets operated by B3, based on the valid normative basis.

To this end, our audit team reaches agreement upon and maps out the participants' processes and controls, and assesses their existence, adequacy and functioning.

We assess the following aspects in the case of BM&FBOVESPA segment participants: client registration; suitability; the receipt, registration and execution of orders; trade settlement; custody of assets; risk management; investment club administration; margin accounts; self-employed investment agents; and information technology.

In the case of Cetip UTVM (OTC market) segment participants, in addition to some of the processes described above, we assess the registration and update of asset information, the intermediation of assets registered at B3 and the physical safekeeping of hard-copy assets.

In 2018, the BM&FBOVESPA and Cetip UTVM segments' audits were integrated. Until then they had been performed by discrete teams from BSM and from Cetip's Self-Regulation Department. This integration brought synergy, audit timetable optimization and wider coverage of the participants audited in the OTC segment, encompassing all 37 products registered with 76 participants in 2018.

Joint generation, with the Surveillance by Indicators area, of indicators and audit samples, using statistical software and models, has also allowed greater analysis efficiency, reducing the time of the audit team allocated with participants and decreasing requested material.

In 2018, we began to perform operational audits with the Agribusiness Depositories responsible for the safekeeping and maintenance of commodities, as well as activity in the physical delivery process foreseen in agribusiness futures contracts. This audit encompasses the assessment of Agribusiness Depository processes as per the requirements that B3 has established regarding commodity warehousing capacity and activity and regarding registration documentation.

## Indirect audits

Complementing operational audits, our indirect audits (also

called remote audits or audits by indicators) assess participants' compliance with the regulations, through the application of normative rules based on data treated via statistical software.

This type of audit tends to be more efficient as it allows analysis of the entire universe of information, not only samples as normally occurs with tests executed in operational audits. It also reduces the observance cost of audit work in the field.

In 2018, in line with our strategic planning, we created the Surveillance by Indicators area, which is responsible for intensifying the indirect audits program.

The following tests were performed via indirect audits:

 compliance with the economic and financial requirements

- foreseen in the B3 Access Manual
- portfolio compliance and the submission of investment club reports
- linked person trading via a different participant to that which it is linked.

### **Pre-operational audits**

To become a B3 participant in a particular access category, an institution must meet several operating, technological and financial requirements which are checked in a preoperational audit.

## Pre-trading risk tool audits

Direct Market Access (DMA) occurs when the investor directly accesses B3's trading system by means of an automated connection. Four models of DMA currently operate at B3.

Whatever the DMA model, an investor can only access

B3 through an intermediary, who is responsible for monitoring customers' trades and for setting trading limits.

To preserve market integrity, it is important for participants to have adequate pre-trading risk control systems, which check whether the orders entered and positions held by customers comply with certain pre-requisites. BSM is responsible for auditing this tool when the participant requests accreditation of a new trading system with B3.

### **Specific audits**

We perform specific audits motivated by complaints received or by requests from the CVM, Central Bank of Brazil or B3. The major work in this regard since 2018 is described below.

Absence of customer orders met by the participant's agents.

Diagnosis regarding simplified registration for nonresident investors.

 Revision of the Standard Rules of B3's Operational Qualification Program (PQO).

- Assessment of plan of action adequacy and/or compliance in the Settlement Agreement that participants submit to BSM.
- Survey into participants' master letter of credit use.

The main activities performed by the audit in 2018 are summarized in Table 2.

#### Table 2 – Audits held in 2018

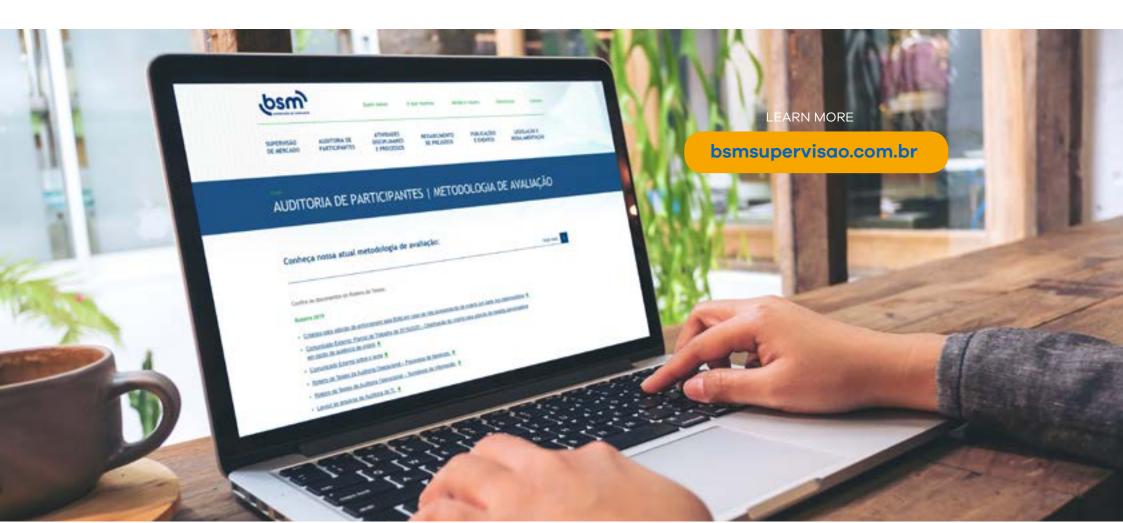
Type of audit	Number
Operational – Trading participants (brokers	
and dealers)	58
Operational – Registration participants and	
requalification	70
Operational – Agribusiness Depository	2
Operational - Self-Employed Investment	
Agents	490
Indirect	0
Pre-operational	17
Specific	11
Pre-trading risk tools – DMA	1

### **Market guidance**

Participant guidance is a pillar of BSM's activity. In 2018, we held 136 meetings and sent answers to 459 emails, which generally regarded clarification of doubts about rules and processes.

We have published the audit

program for 2019 at our website. This allows participants to apply the same approach used for the BSM audit in the assessment of their processes and internal controls environment, in a way that promotes transparency and knowledge-sharing and that cooperates in market compliance with the rules.





### **Market Oversight Reports**

When there are signs of irregularities, following the analysis of an alert or complaint, a Market Oversight Report is initiated.

In 2018, 246 reports were initiated, 27 of which for transactions executed in the Cetip UTVM segment (OTC market) and 219 for trades executed in the BM&FBOVESPA segment.

The main irregularities targeted in these reports are set out in Tables 3 and 4.

In the same period, 168 reports were completed. Of these, 78 were dismissed and nine submitted for adoption of enforcement measures. Another 81 cases were sent on directly to the CVM, as they regarded situations where the offenders are not B3 participants (or their employees or agents) and therefore outside of the scope of the BSM's activity.

## Table 3 – Irregularities identified in Cetip UTVM segment transactions (Market Oversight Reports Initiated in 2018)

Irregularity	Number
Price manipulation or artificial supply, demand or price conditions	13
Signs of money laundering (money transfers between investors or other irregularities)	8
Unfair practices	2
Order registration and control failures	2
Registration process failures	2
Total	27

### Table 4 – Irregularities identified in BM&FBOVESPA segment transactions (Market Oversight Reports initiated in 2018)

Irregularity	Quantity
Price manipulation or artificial market conditions	119
Undue use of privileged information	49
Signs of money laundering (money transfers between investors or other irregularities)	24
Unfair practices, deprioritization and/or fraudulent transactions	17
Irregular portfolio management	2
Order registration and control failures	2
Suitability	2
Registration process failures	2
Other irregularities	2
Total	219

## Table 5 – Reports received, concluded and in progress (Market Oversight Reports in 2018)

Phase	Number
Initial caseload (reports in progress on January 1, 2018)	76
(+) Initiated	246
(-) Dismissed	78
(-) Forwarded to CVM	81
(-) Forwarded for enforcement	9
Final caseload (claims in progress on December 31, 2018)	154

# Summary of market oversight activities in 2018

Table 5 sets out the overview of investigations (Market Oversight Reports) in 2018.

### **Market guidance**

As highlighted in section 2 of this Annual Report, one of our pillars of activity is market guidance. BSM Market Surveillance performs these guidance activities daily by telephone or email.

BSM also participates in an intensive training routine directly on the participants' premises whenever requested. In 2018, these training sessions dealt with the combat of abusive market practices and the prevention of money laundering. In many of these cases there was guidance about analyzing the alerts that are shared by BSM, described in Box 2.

### SHARING ALERTS WITH THE MARKET

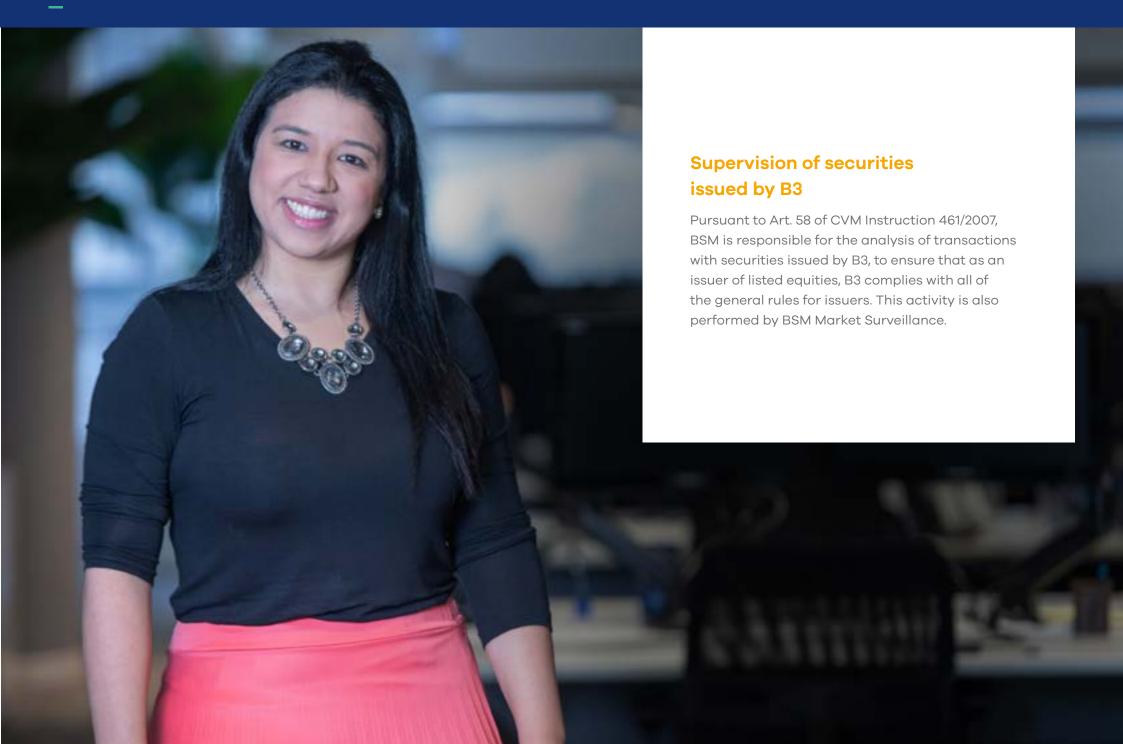
In 2017, BSM began to share alerts with the market. Initially (April 2017), the alerts shared with participants were about transactions showing signs of layering and spoofing.

The success of the experience, and demand from participants, meant that we began to share alerts about transactions showing signs of money laundering. More specifically, money transfers between investors, as described in CVM Instruction 301 – Art. 6, subparagraphs II and VII. These alerts began to be shared in

November 2017, and in 2018 enhancements were made based on accumulated experience and inputs from the market.

The alerts must be analyzed by the participants and, if they discover an irregularity, they must take measures to prevent its recurrence and if such is required communicate it to the competent authorities.





## SURVEILLANCE BY INDICATORS

In 2018, we created the Surveillance by Indicators (SSI) area, which has a multidisciplinary team of economists, auditors, statisticians and data engineers for the performance of modeling, data mining and indicator management activities.



The SSI's activities are thus connected to the development of quantitative studies (Data Analytics), management of data bases and the development of management dashboards and Business Intelligence (BI). SSI also monitors BSM's projects.

SSI's main activities include:

- development, jointly with the Market Surveillance team, of models that seek to identify transactions with signs of irregularities
- generation of samples for the audit team's work
- processing of indirect audit routines (audits by indicators)
- generation of dashboards with management indicators of BSM's main activities
- monitoring of BSM's projects, especially those regarding the development, enhancement

and implementation of systems

In compliance with the CVM, since 2018 BSM has had full autonomy over the data bases of assets registered at the organized OTC market environment of B3.

In 2018, we also reviewed all of BSM's data bases and developed a project that seeks to unify the bases, allowing greater systemic efficiency.

Furthermore, we implemented important enhancements to the alerts for market surveillance, both those used internally by the Market Surveillance team and those that are shared by the market.

The indirect audits allow inspection of a broader range of OTC products.

We also execute inter-disciplinary projects involving all of the B3 Group, such as a joint project with Fixed Income Depository, where BSM analysts helped to develop a bank CD control tool in compliance with new rules from the Brazilian Central Bank.

The team also monitors Statistical Analysis System (SAS) training for other B3 departments. The course seeks to train professionals in this statistical software, teaching how to develop queries and more detailed analyses at large data bases.

### Other SSI activities

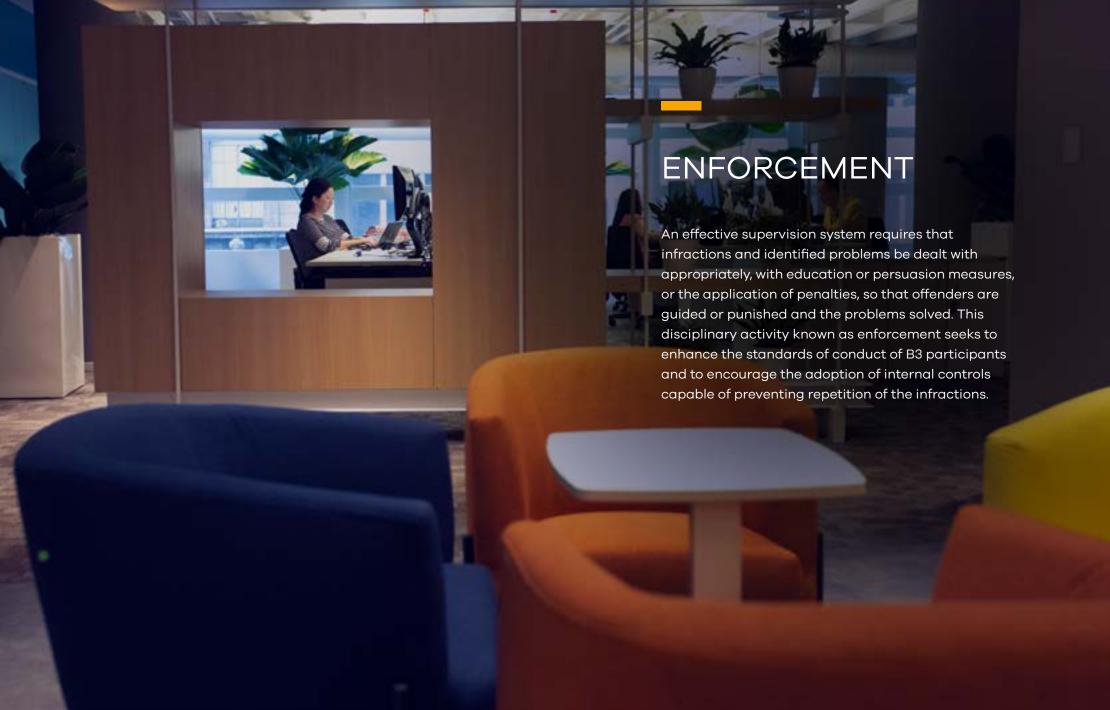
SSI is also responsible for meeting the requirements of regulatory bodies and other institutions such as the Federal Police. The concentration of this activity into the SSI team has enabled efficiency in the identification and gathering of information, as well as the timely submission of answers to official letters.

Furthermore, SSI has a unit responsible for communication and marketing activities and for support in the performance of market guidance activities (training, workshops, production of videos and drafting reports for the general public and regulators), as well as the production of content at the BSM website.

This unit is also responsible for receiving and monitoring the complaints sent to BSM and for managing the Contact Center.

Finally, SSI performs financial and budgetary monitoring of BSM.





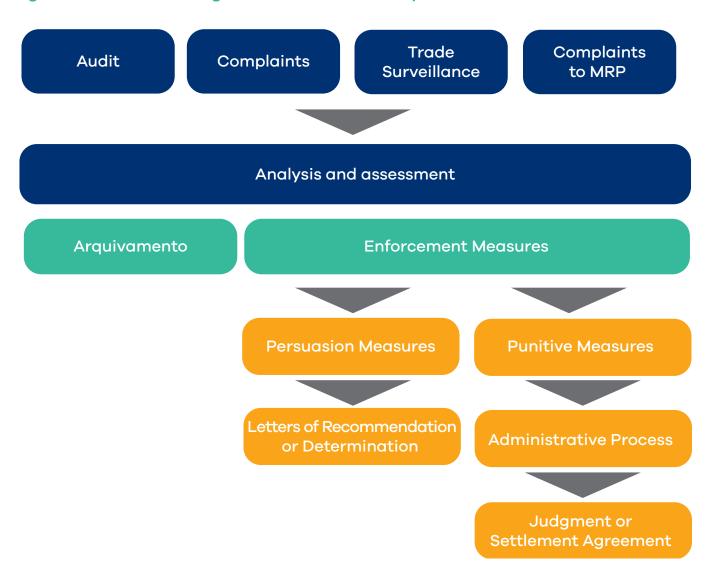
As described in Figure 2, signs of infractions discovered within the scope of surveillance activities, auditing, complaints to the MRP and complaints received are analyzed and can give cause for enforcement actions, varying from recommendations that the institution improve its processes and controls, to the bringing of Disciplinary Administrative Proceedings (PAD). This can result in BSM fining participants in the markets operated by B3, and their agents.

### Letter of Recommendation and **Letter of Determination**

Within the scope of our supervision activities, we may discover signs of irregularities that do not result in Disciplinary Administrative Proceedings (PAD), but which nonetheless require the participants' attention. In these situations, we can send a Letter of Recommendation or Letter of Determination, as a guidance measure for preventing recurrence.

In the Letter of Recommendation, we recommend that the participant improve its conduct, rules, procedures and/or internal controls. We may also determine that the participant adopt a plan of action to improve the points singled out in the letter, noting that, in the plan of action, the participant must designate the measures to be adopted and the respective implementation plan.

Figure 2 – Schematic diagram of the enforcement process



In the Letter of Determination, we alert participants about irregular practices and determine that these practices be curtailed and not recur.

In 2018, 84 Letters of
Recommendation were sent,
resulting from irregularities
identified in indirect audits,
such as noncompliance with
B3's economic and financial
requirements and transactions
by persons linked to another
participant. There were also 340
Letters of Determination sent.

# Disciplinary Administrative Proceedings (PAD)

Infractions of applicable laws and regulations by participants in B3's markets may be subject to Disciplinary Administrative Proceedings within the scope of BSM which, in addition to B3's participant institutions, involves their representatives (partners or directors) or agents (traders or self-employed investment agents).

BSM Corporate Bylaws foresee the following penalties.

- Warning.
- Fine.
- Suspension (up to 90 days).
- Temporary disqualification (up to ten years).
- Other penalties provided for in B3's rules and regulations.

The administrative proceedings observe constitutional procedural principles, such as the right to a full defense and the right to an adversarial hearing and are conducted in accordance with BSM's Procedural Rules, approved by the Securities & Exchange Commission of Brazil and are available in Portuguese on the website www.bsmsupervisao.com. br, Legislação e Regulamentação | Leis, Normas e Regras, BSM, Regulamento Processual.

The administrative proceedings are judged in the first instance by the Chief Regulatory Officer (summary proceedings) or by a panel of BSM's Supervisory Board comprised of three members, selected by lot and with the

majority being independent members (ordinary proceedings).

If convicted, the offender may appeal to the Plenary of BSM's Supervisory Board, comprised of 11 members.

Within the scope of the PAD, the Settlement Agreement can be signed at any time as long as the defendant presents the proposal by the date on which the case is judged in the first instance.

The BSM Supervisory Board analyzes the Settlement Agreement proposal and it may accept it, reject it, or make it conditional, bearing in mind opportunity and convenience, as well as the nature and seriousness of the infractions that have been analyzed, the prior record of the offenders, procedural economy, and the realistic possibility of punishment in concrete cases.

The Settlement Agreement requires the offender to cease the irregular practice that gave rise to the proceeding and pay compensation for any losses caused by it, including to third parties.

The Settlement Agreement carries no weight in regard to the confession of facts, nor to recognition of the illicit nature of conduct analyzed by the PAD.

If there is compliance with the
Settlement Agreement, the
PAD will draw to a close. If there
is noncompliance with the
Settlement Agreement the PAD will
remain on its regular course and
proceed to judgment.

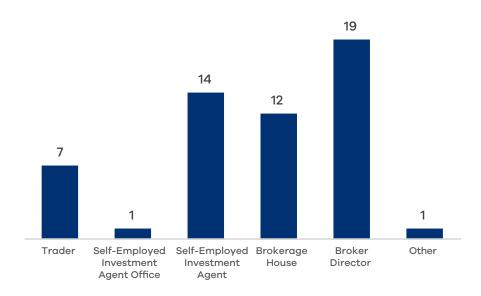
In 2018, BSM analyzed 28
Settlement Agreement proposals, involving 54 accused parties, as shown in Graph 4 of which ten were approved and two were rejected.

In addition to the 54 accused there were three proceedings in which the participants and agents involved in suspected irregularities, presented Settlement Agreements prior to the initiation of a PAD.

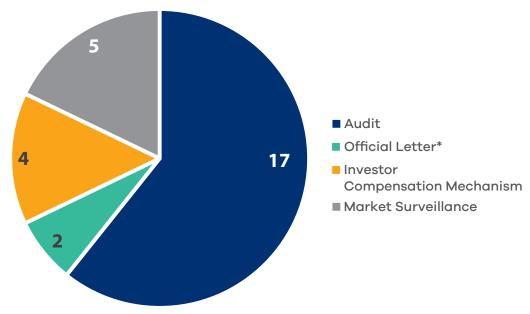
Graph 5 shows the origin of the PADs initiated in 2018.

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Graph 4 – Types of accused in PADs initiated in 2018



Graph 5 – Origen of the PADs initiated in 2018



\* Cases brought for failure to comply with BSM official letters.





The main tasks of the administrative support team are described below.

- Drafting, sending, receiving and controlling correspondence
- Scheduling and controlling internal and external meetings, travel and other engagements
- Drafting, checking and sending applications for reimbursements and payments (Supervisory Board, CRO, managers, staff)
- Controlling office material, equipment, conference rooms, subscriptions to periodicals
- Documentation assembling case files, digitizing and filing
- Personal and telephone service

The work of this team allows, for example, audit professionals to visit all the participants and their agents, such as self-employed investment agents (AAI).

The map below shows the distribution of the AAIs in Brazil and exemplifies the complexity of the logistics enabled by the secretariat and administrative support.

Table 6 shows key statistics for these activities.

Tabela 6 – Secretariado e apoio administrativo em números

Activity	Total	Monthly average
Correspondence sent	9,712	809
Correspondence received	3,225	269
Document digitizing (pages)	100,915	8,410
Processing of receipts	1,193	99
Flight and hotel bookings	861	72

Figure 3 – Geographical distribution of the AAIs



