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Debt records and operational risk

by

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Debt Recording and Operational Risk

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Summary

1. Definition of Operational Risk
2. Operational Risk Framework
3. Operational Risk Management at the Brazilian DMO
4. Integrated Debt System - SID
 - Debt Recording
 - Debt Controlling / Payment
5. Conclusions

1 – Definition of Operational Risk

- **Operational Risk is defined as the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events** (Basel II (2003))
- **Operational risk is the least understood among the debt risk categories.**
 - It cannot be captured and measured as easily as credit or market risk, and it is often endogenous to the institution (Tokaç and Williams (2013))
 - Operational risk is a “wide umbrella”, often seen as covering everything except for market, credit, refinancing, and liquidity risks (Magnusson et al (2010))
 - The benefits of operational risks management are difficult to measure as they can only be defined strictly in terms of what did not happen (Tokaç and Williams (2013))

However, whenever it happens, hefty financial impacts may arise

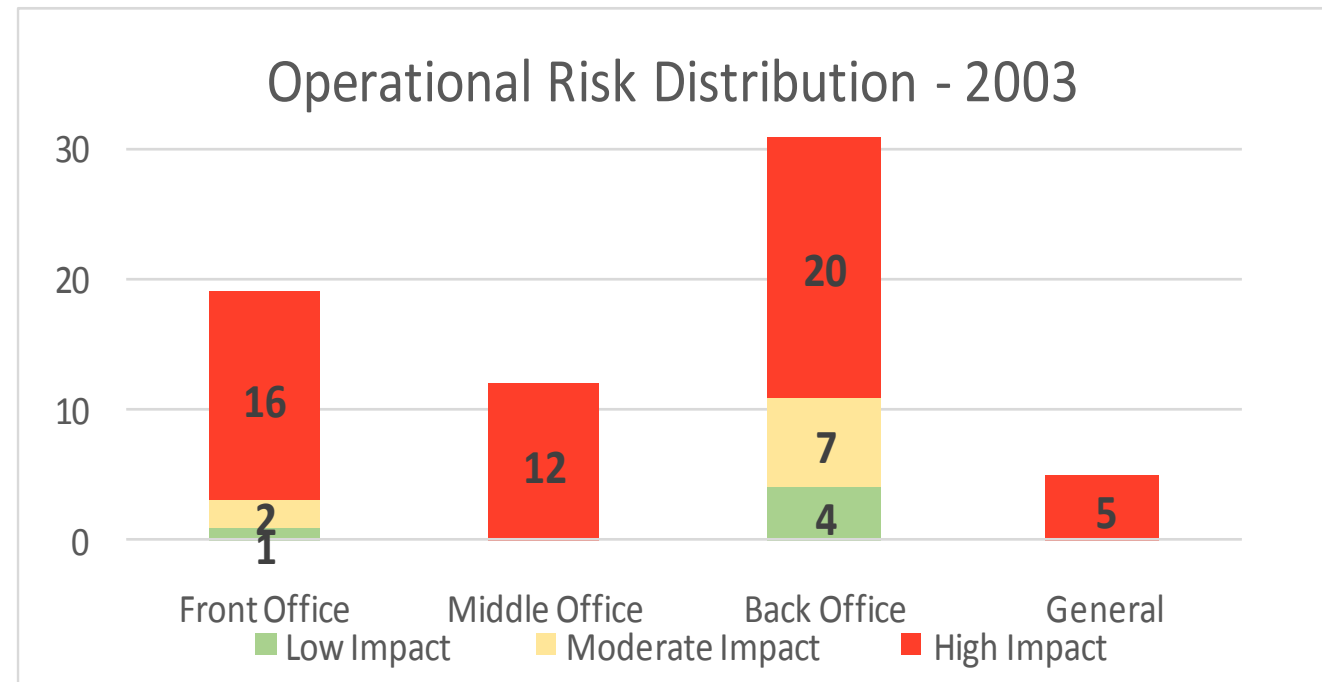
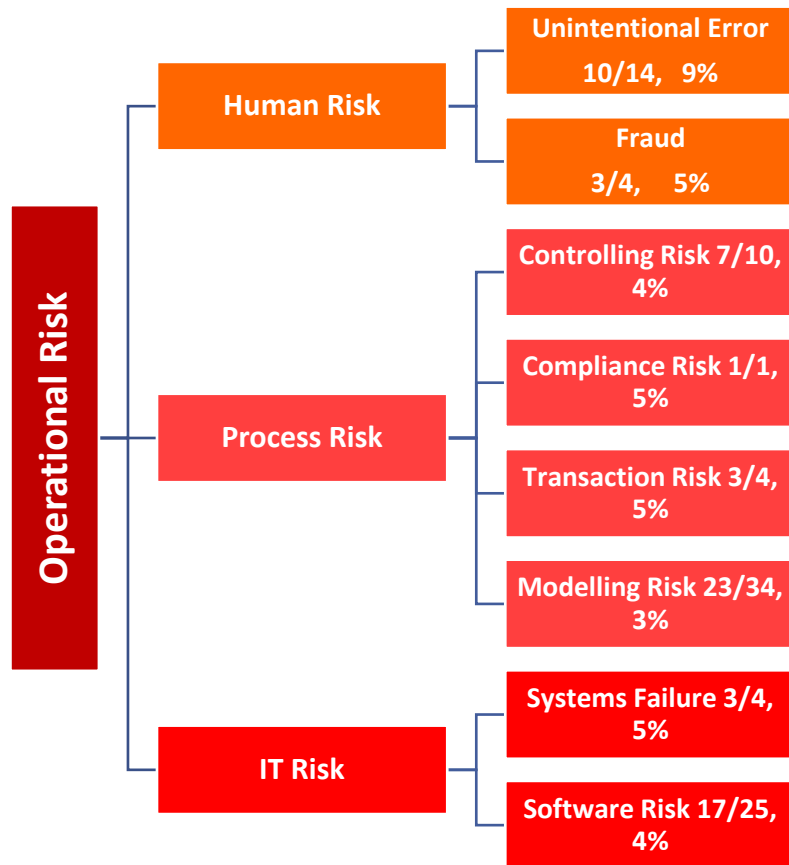
2 –Operational Risk Management Framework

-> A few steps are useful to frame-in operational risk

1. Understand and document business activities
2. Identify, assess and measure risks
3. Develop risk management strategies
4. Implement capabilities
5. Monitor performance
6. Continuous improvement

3 – Operational Risk Management at the Brazilian DMO

- Back in 2003 -> definition of an Operational Risk Management model
- A consulting group was hired to analyze and propose changes in the operational set up of the DMO
- 67 processes were mapped, identifying their underlying risks, assessing the likelihood and the impact of each mapped operational risk and developing a risk matrix.



3 – Operational Risk Management at the Brazilian DMO

In the past 15y, debt operational risk management has been improved by a series of measures:

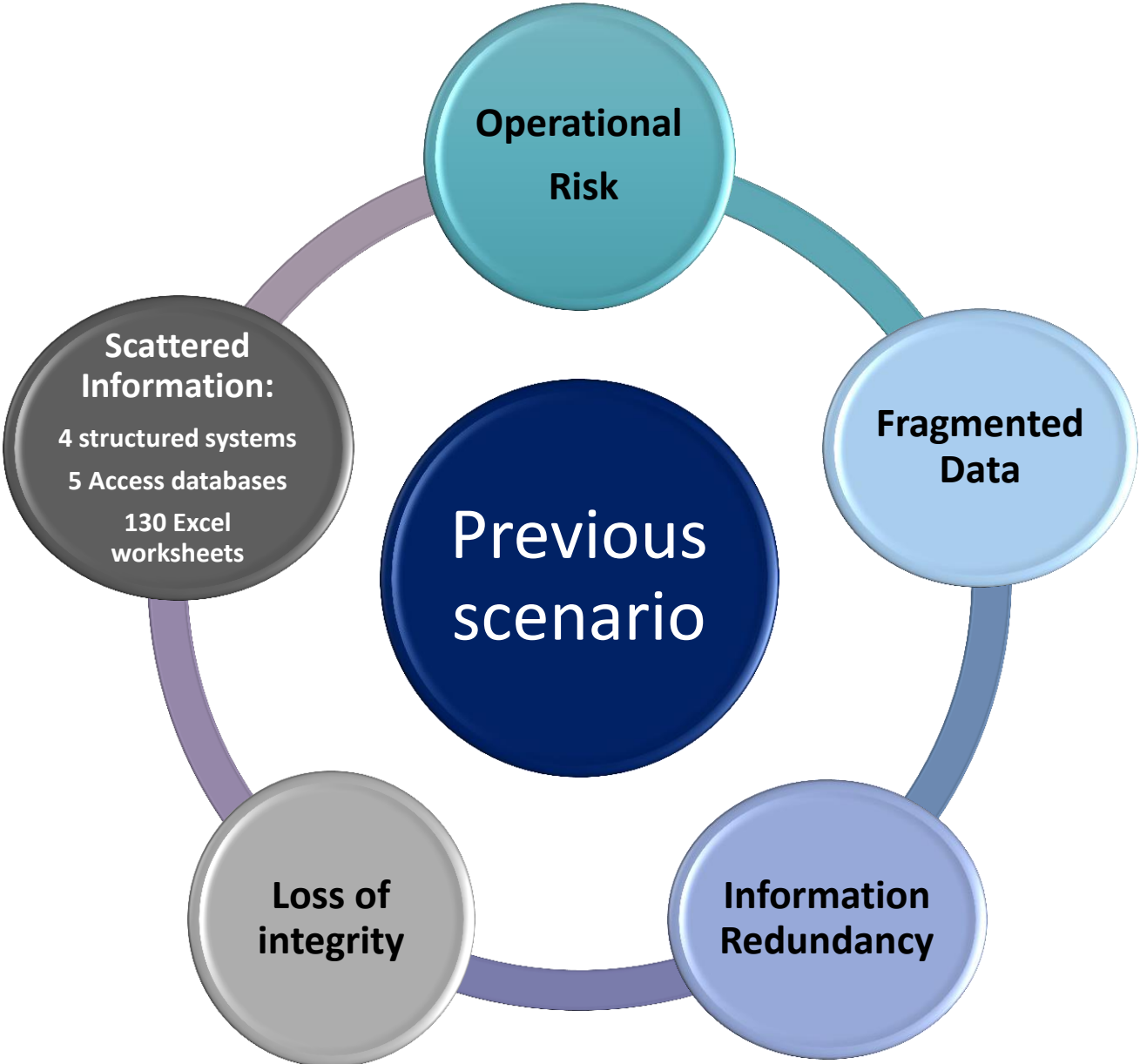
- The Brazilian National Treasury established a Compliance Unit, responsible for the definition of the underlying methodology and concepts, besides the provision of information and suggestions to the managers
 - **The pilot project was in the DMO**
- Some defined actions to minimize operational risks became institutional targets
- Contingency plans were developed
- A System of Integrated Debt Management is been developed.

3 – Operational Risk Management at the Brazilian DMO

- Based on the Operational Risk results, it became evident the necessity of the development of a new system that would consolidate the DMO activities and reduce significantly its operational risks.

- We wanted to design a **debt system** that would include the following functions:
 1. Recording transactions
 2. Controlling
 3. Reporting
 4. Analytical
 5. Budgetary
 6. Projections / Estimates

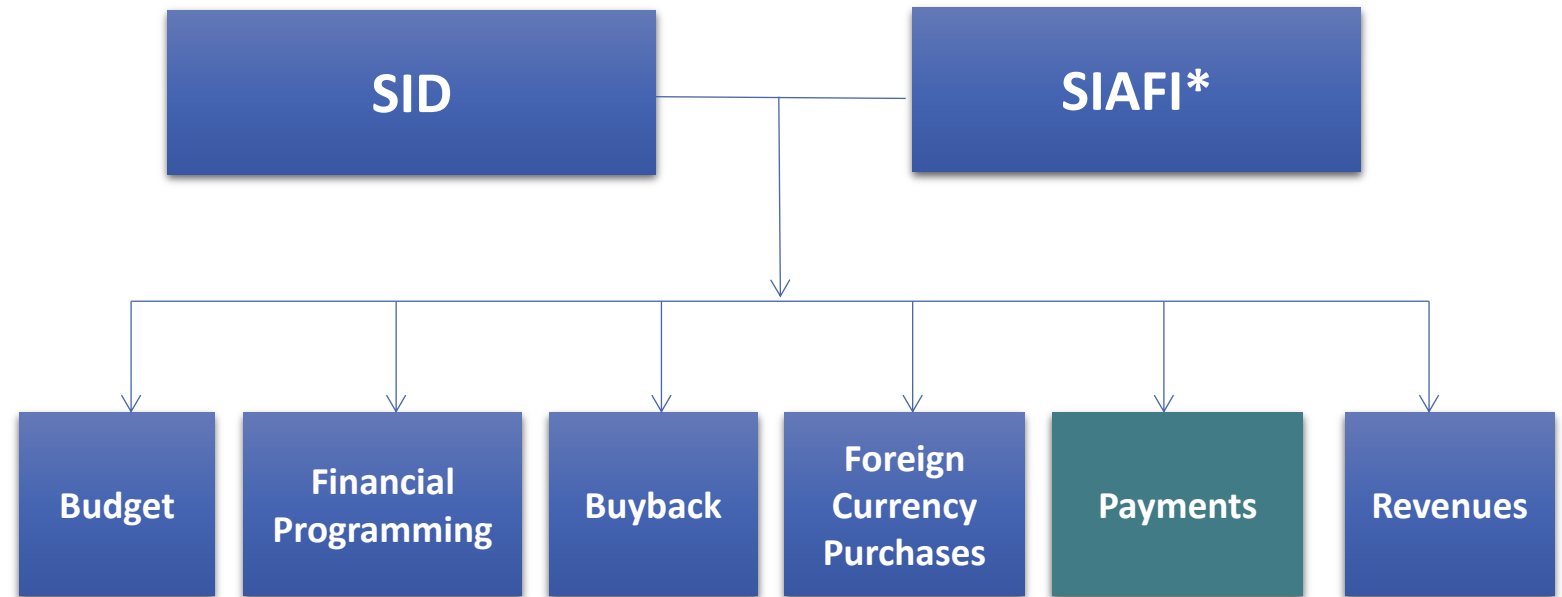
4 - Integrated Public Debt System –SID



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-> Advantages :

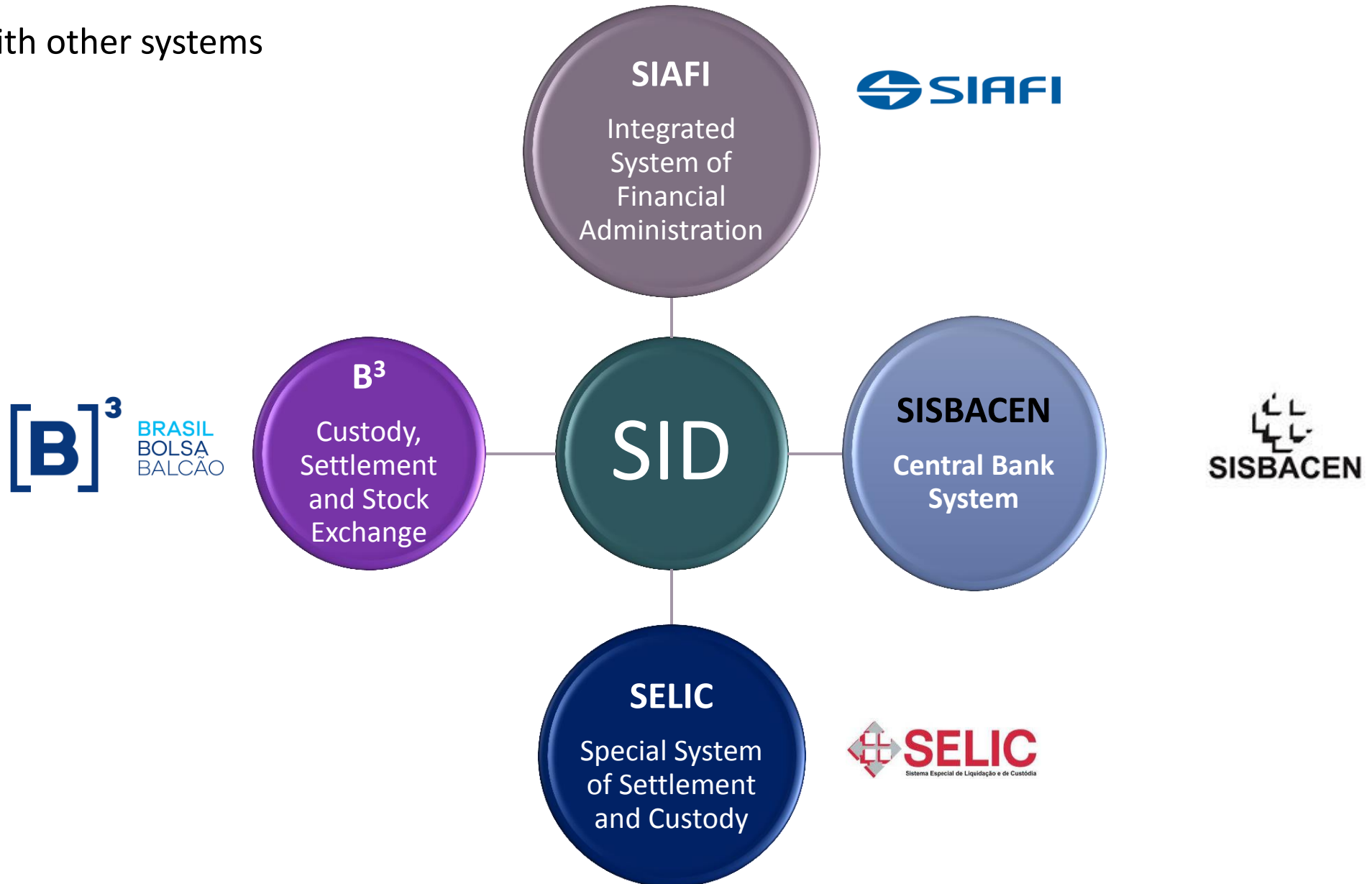
- i. Reduction of redundancies
- ii. Elimination of inconsistencies
- iii. Safer data sharing
- iv. Higher security – restricted use
- v. Data Standardization
- vi. Integrity



* SIAFI is the acronym for Integrated System of Financial Administration

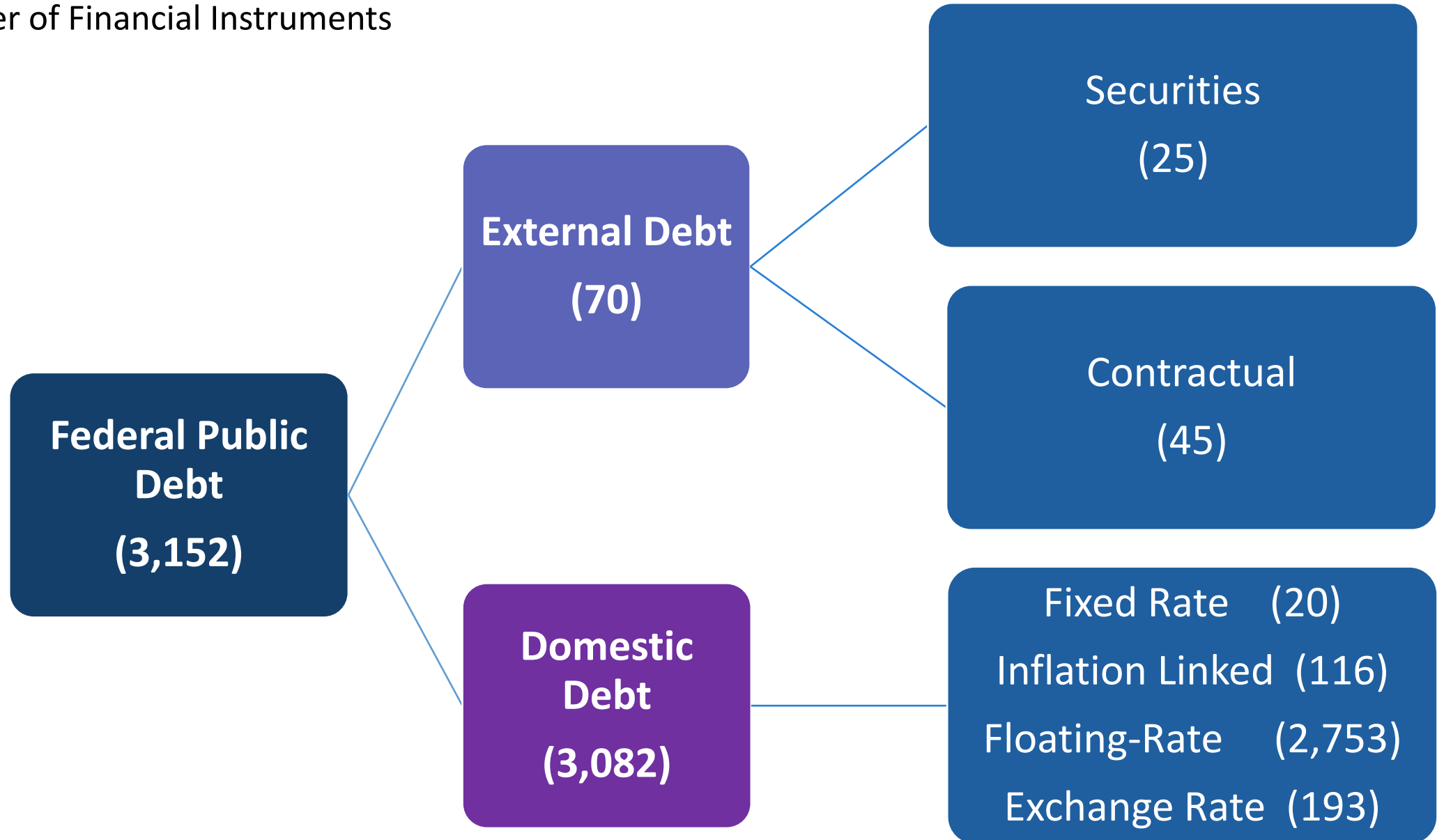
4 - Integrated Public Debt System –SID

-> Integration with other systems

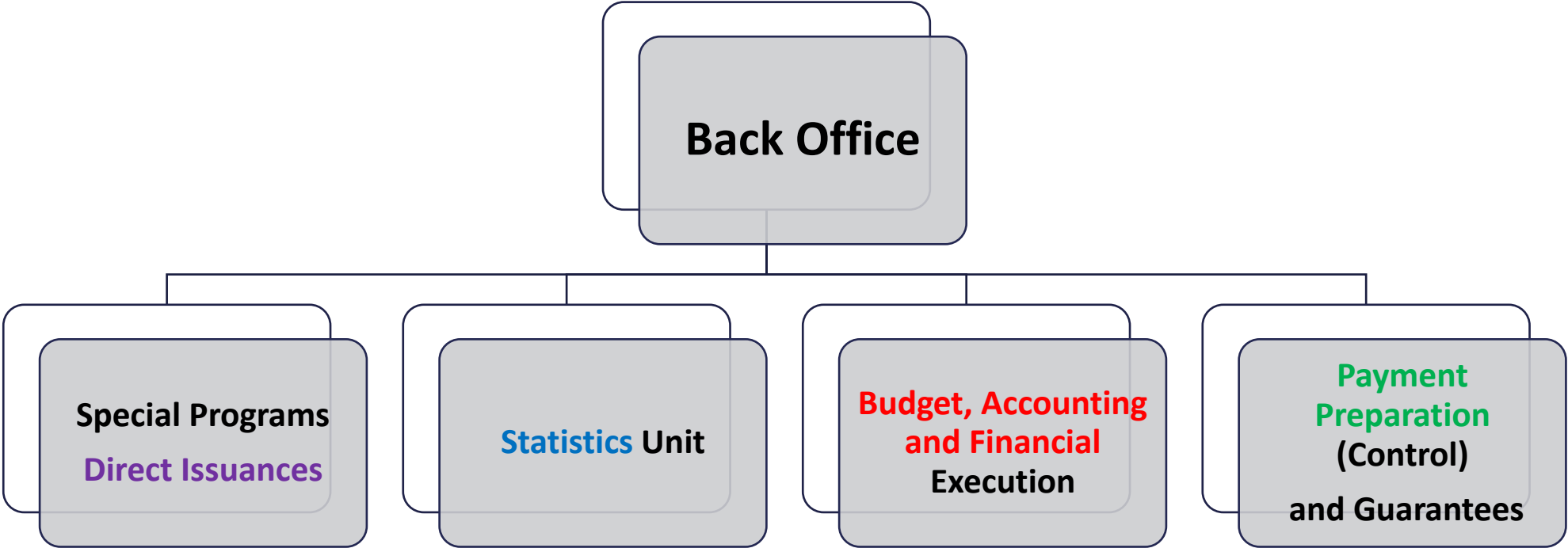


4 - Integrated Public Debt System –SID

-> Number of Financial Instruments



4 - Integrated Public Debt System –SID

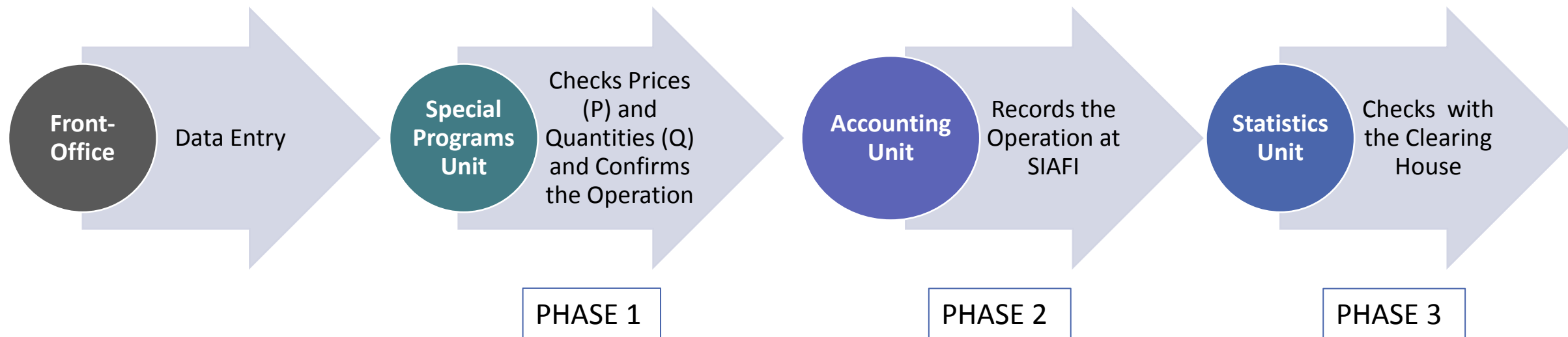


4 - SID - Registering the Debt Operations

-> Example - Competitive Public Offerings (Auctions, Exchanges and Retail Sales Program):

- i. Issuance starts at the Front-Office through uploading a data file at SID;
- ii. A member of Back Office's **special programs unit** confirms the operation, checking the underlying prices and quantities;
- iii. A member of Back Office's **accounting unit** records it at SIAFI;
- iv. A member of Back Office's **statistics unit** checks the operation with the Clearing House;
- v. The operation recording affects the outstanding and the stream of payments

=> **checking points.**

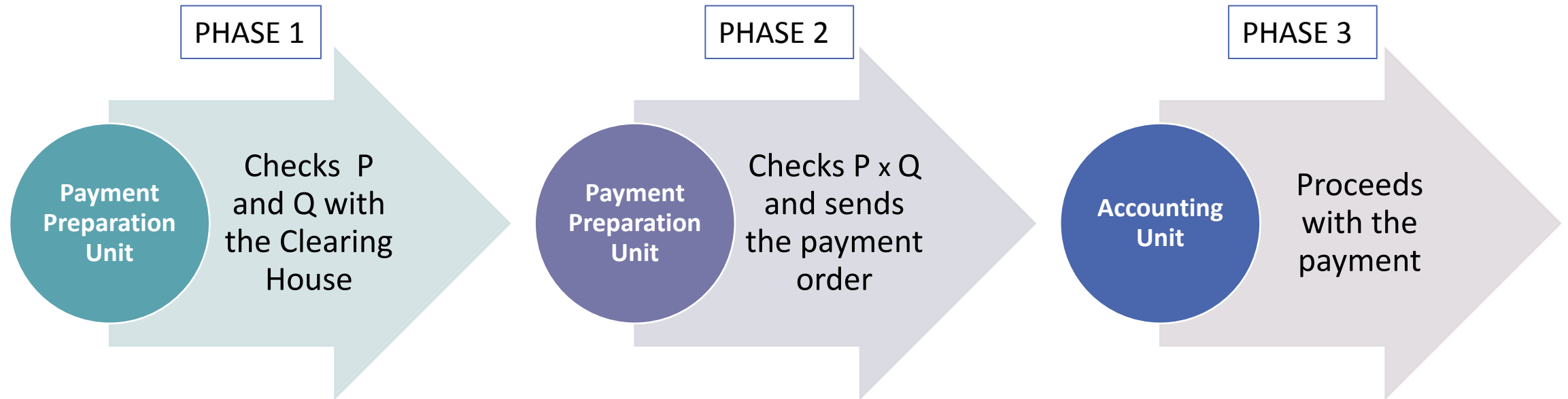


4 -SID- Registering the Debt Operations -What could go wrong?

- Data different from official operation – Back Office’s members have **3 different phases to criticize them**
- An user can’t make an operation that is incompatible with his **user profile**
- **Flawed Data Entry** (security name, date, price)
 - SID criticizes it
- **Financial operation for a future date**
 - SID does not allow it
- **Contractual debt**
 - Disbursement amount is larger than the contract – SID will not permit the operation

4 – SID - Payment Operations

-> Much of the action starts at D-1 (D = maturity date)



D-1 -> checks securities Prices (P) and Quantities (Q) with the Clearing Houses,

- uploading their data files into the System;
- **If there is some divergence, the system will inform it and will block the operation until the problem is solved**

4 – SID - Payment Operations -What could go wrong?

-> Examples

- I. There is a blackout/ internet crash during the maturity day – There is an alternative room in another building with appropriate hardware to proceed with the payment;
- II. The payment amount is different from the correct one – The system will not allow the payment;
- III. Double Payment: Two members of DMO make the same payment – The system criticizes the second payment.

5 - Conclusions

- i. In spite of its low status compared to others debt risk categories, operational risk can cause severe financial damage, as well as political and reputational problems
- ii. Op.Risk and IT Systems are connected **Business Continuity Model, Auditing**
- iii. Focus on **registration and payment** - if not, cascade problems may unfold
- iv. The implementation of the Integrated Public **Debt System** – SID was a result of the concern with operational risk.
 - i. It significantly reduced the operational risk related to public debt
- v. Create **double-checking** mechanisms with different people doing the job in distinct ways
- vi. It's everyone's job to control it. Increment **general awareness** -> Choose a risk champion
- vii. **Constantly** improve your safety guards and **contingency plans. Monitor performance**

Thank you

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