

# Internal Audit - Continuous Electronic Audit

Itaú-Unibanco Holding S.A

November 2013



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- Electronic Continuous Audit at Itaú-Unibanco S.A.
  - Overview of Itaú-Unibanco S.A
  - Solution's development area structure
  - Framework – How we operate
  - Projects of Professor Miklos developed at Itaú-Unibanco
  - Auditor of the future – Our Perspectives

# Continuous Eletronic Audit

Itaú-Unibanco Holding S.A. (Overview)



- Bank leader in Brazil
- US\$ 75,7 billion in market value
- 94,280 employees in Brazil and abroad
- 4,975 branches and service stations in Brazil and abroad
- 27,981 ATMs in Brazil and abroad
- Brazilian multinational company
- Provider of credit for expansion of Brazilian companies
- The best professional talents in the Brazilian financial system

## Highlights

Assets (total)	US\$ 481,24 Bi Loan
(total)	US\$ 202,93 Bi
Equit	US\$ 34,80 Bi Recurring
net profit (2012)	US\$ 6,22 Bi
Recurring net profit (3T13)	US\$ 1,78 Bi
Foreign Currency Long-Term	Moody's: Baa1
	Fitch: BBB+

## International presence of the largest private Brazilian bank | on June 30th, 2013



Notes: October, 2013. Source: Bloomberg / Currency Rate (11/01/13): R\$ 2,25

# Continuous Eletronic Audit

Continuous Eletronic Audit at Itaú-Unibanco



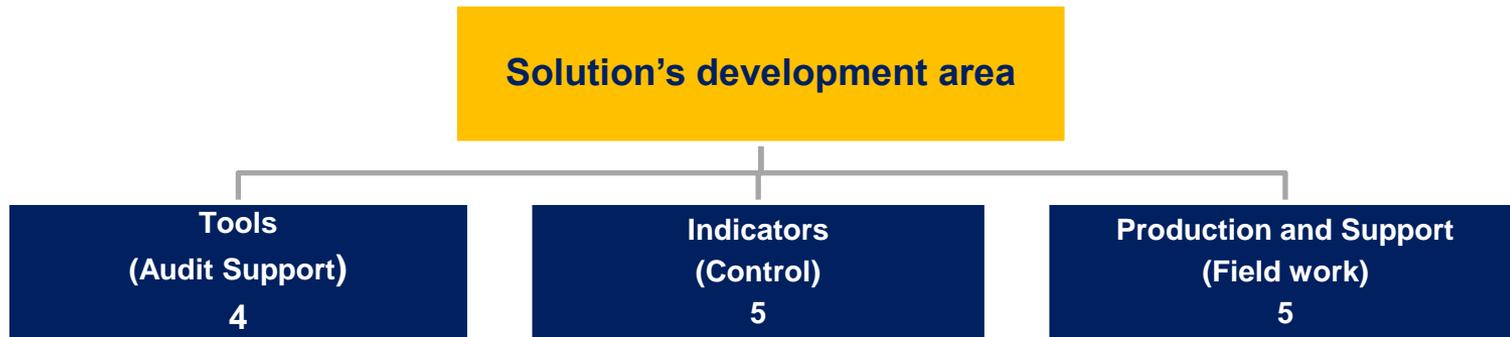
In the second half of 2008, two of the largest financial institutions in Brazil, Itaú and Unibanco, merged to form the largest banking conglomerate in the Southern Hemisphere.

We teamed up with Rutgers, through a partnership with Professor Miklos team. We developed several projects that later would form the backbone of the operating model that we currently have.

## Continuous Eletronic Audit at Itaú-Unibanco time line



Note: CAAT – Computer Aided Audit Techniques



## Mission

*“Be a reference in continuous auditing in Latin America. Through our process we seek to assist the internal audit department in identifying relevant risks, thereby helping to improve the level of the work planning to be performed, as well as raising the internal controls quality of the main risks of the institution.”*

## Through Continuous Eletronic Audit we want:

- Increase test coverage (comprehensive analysis instead of sample analysis);
- Increase timing analysis (perform analyzes on a date close to the cutoff date);
- Increasing efficiency in the execution of tests (more comprehensive analyzes with less human effort);
- Identify new risks through data analysis.

## Audit Framework



## Continuous Eletronic Audit

- Data Analysis
  - Indicator Analysis
  - Projects (consultants and internal)
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- CAATs
  - SAS / ACL (Support)
  - SAS / ACL (Environment maintenance)
  - Training
  - Monitoring (SAS / ACL environment)
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- Dashboard (monthly reporting)
  - Production (Indicators running)
  - Indicators Development

## Infrastructure

### **250 equipments with ACL NETWORK**

- 38 licenses of ACL Network to be used simultaneously
- 23 licenses of ACL Desktop
- 113 licenses of ACL AX

**11 TB available exclusive to do works on ACL and SAS**

## Training and Support

- 100% of internal auditors trained in ACL (since 2010);
- 50 internal auditors trained in SAS;
- 508 ACL/SAS support calls in 2013.

## Coverage

- 776 CAATs developed since 2011
- 34 risks monitored
- 82 active indicators

## Key Projects

### **Projects concluded**

- Branch monitoring and analytics
- Transitory Accounts
- Pay-office
- Ethical sales

### **Projects running**

- Credit Card (four views)
- Insurance
- Operacional Risks

## Training

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To improve the knowledge of our internal auditors on techniques of **data analysis** we asked professor Miklos to provide training on this topic in each of his quarterly visits to Brazil. So far we already had 7 different trainings with 10 classes considering a cumulative audience of 232 auditors.

Training given:

- **08/08/2012:** Introduction to audit analytics
- **10/18/2012:** Descriptive analysis and data visualization
- **03/12/2013:** An Innovate Course at Rutgers – Regression & linear models part of audit analytics
- **05/22/2013:** An Innovate Course at Rutgers – World scenario of continuous auditing
- **06/12/2013:** Text analytics
- **08/16/2013:** Linear models and their applications in business
- **10/24/2013:** Data anatomy

## Project: Credit Card

Risk evaluated	Expected Benefits
<ul style="list-style-type: none"><li>Financial losses resulting from lawsuits</li><li>Financial losses resulting from disputes, fraud and money laundering</li></ul>	<ul style="list-style-type: none"><li>- Actions founded: Audit focused on the main causes</li><li>- Actions unfounded: Indicator to assess the benefit in keeping the customer</li><li>- Predictive Analysis: Identify potential undesirable customers to the organization.</li></ul>
<ul style="list-style-type: none"><li>Credit Default</li></ul>	<ul style="list-style-type: none"><li>Losses reduction from default by improving the quality in the process of granting and maintaining credit.</li></ul>
<ul style="list-style-type: none"><li>Money laundering</li></ul>	<ul style="list-style-type: none"><li>Reducing legal risk and image risk through preventive action to preclude the use of credit cards for illegal purposes.</li></ul>

## Project: Operational Risk

Risk evaluated	Expected Benefits
<ul style="list-style-type: none"><li>not immediate monitoring of the evolution of the bank operating losses base</li></ul>	<ul style="list-style-type: none"><li>- Treat as predictive the operational losses of the bank</li><li>- Distribute in internal audit the operational losses curve, by business line, for use of the information in auditing.</li></ul>

## Project: Insurance

Risk evaluated	Expected Benefits
<ul style="list-style-type: none"><li>New project</li></ul>	<ul style="list-style-type: none"><li>New Project (benefits not captured yet)</li></ul>

## Note

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The main legacy of this partnership is in understanding the techniques applied by Professor Miklos and his team in the analyzes performed by then. In 2014, we will dedicate 10% of our budget hours to develop similar studies, using techniques we have learned over these years of partnership.

Every year we make substantial investments on the technical formation of our auditors. We also have a pioneering trainee program. In 2010 we started the first intern program class and we conclude the formation of the 3rd class in this year.

One of the major challenges we will have in 2014 is to understand the analytical techniques employed in the studies conducted by Rutgers and replicate them internally. We believe this is the path we must follow in order to identify new risks, those who are not so clear but become crystal clear when we look under an analytical perspective.

We believe that this partnership will lead us to achieve this goal. Observe, understand, replicate and improve.

## The Auditor of the Future

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We believe that developing the concepts of continuous auditing, we are preparing our Internal Audit for the future. The auditor should be a professional with great ability to generate results through analysis of large volumes of data.

The continuous electronic audit must be forefront in the use of techniques of data analysis with the aim of identify new risks, those risks that are not detectable through traditional audit approach and thereby help in defining the scope of the work undertaken periodically by the internal audit department.

Through continuous electronic audit we can help internal auditors to develop some skills such as:

- 1) Excellent analytical thinking
- 2) critical thinking
- 3) power of persuasion
- 4) inquisitive person
- 5) global mindset



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