A Work Project, presented as part of the requirements for the Awards of a Master's Degree in Finance from NOVA – School of Business and Economics

DESIGN OF A BALANCED SCORECARD-TYPE MANAGEMENT SYSTEM FOR A BACK-OFFICE DEPARTMENT IN A BANK

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Abstract

In contrast to most studies of BSC in the Banking Industry, which focus on the BSC at a branch and corporate level, the present Work Project (WP) designed a BSC-type management system for a back-office department of a Bank that handled areas such as project management, quality, internal control and procurement. Objectives under the MBO system and connected to incentives in place were misaligned with the Bank's prime goal of reducing the cost-to-income ratio, a problem which this WP sought to solve. Also, the present WP proposes a hybrid approach to BSC design.

Keywords: Balanced Scorecard, Bank, Back-office Department, Case study

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I - PURPOSE OF THE WORK PROJECT

The purpose of this work project (WP), which consisted of a direct research with internship, was to design a Balanced Scorecard (BSC)-type management system for the Performance & Transformation Department (henceforth DTP), a back-office department of Banco Internacional do Funchal, SA (hereafter treated as 'the Bank'). Such BSC should complement the performance measurement system (PMS) being used at the Bank and which was Management-by-Objectives (MBO) tied to compensation incentives. At the start of the present WP, the Bank was undertaking a major lay-off plan and rearrangement of its organizational structure which resulted in the birth of DTP as the merger of three former back-office departments in the Bank.

DTP manager wanted to provide the Bank's Board of Directors (henceforth, called the Bank's top management) with a dashboard[1] displaying the Key Performance Indicators (KPIs) of DTP. In order to determine which of them were key, DTP manager decided to design and implement a BSC. Furthermore, this manager was made responsible for supporting the design of the future BSCs in all the other back-office departments of the Bank, such as the Information Technology (IT), Operations and Human Resources Departments. Therefore, the design of the BSC for DTP should serve as a pilot project before the design of the BSCs in other departments took place.

In the next section, the literature on the BSC is reviewed. Section III outlines the methodology followed to develop this WP. Section IV depicts the WP findings such as a brief description of DTP, the MBO and the incentives system in place at the Bank. Section V portrays the BSC designed by the researcher for DTP, and finally, Section VI lists recommendations and the main contributions of the present WP.

[1] I.e., a one-sheet with a set of KPIs intended to facilitate decision-making and performance evaluation of the department by the Bank's top management

II - LITERATURE REVIEW ON THE BSC

1) Core concepts

The BSC was originally conceived by Robert Kaplan, an academic from Harvard Business School, and David Norton, a consultant, as a set of critical measures/indicators that would provide the companies' top management with a broad view of the business performance (Kaplan & Norton, 1992; 1993). Later on, what was seen initially as a mere performance measurement system (PMS) turned into a strategic management system (SMS) as companies started to use the BSC to link strategy with actions (Kaplan & Norton, 1996).

A BSC includes financial and non-financial measures, which common feature is to be key for the fulfillment and measurement of the company's objectives. Therefore, such measures or indicators are named KPIs and should be between 15 and 25 in each BSC (Kaplan & Norton, 2008). The company's objectives and KPIs to measure their achievement are grouped in four different perspectives: Financial, Customer, Internal Processes and Learning & Growth. The financial perspective aims to answer the question 'How do we look to our shareholders' and establishes the long-term financial goals for each business or functional unit. All the three remaining perspectives will have an ultimate impact on this perspective. In the customer perspective, managers are supposed to identify the customers which the business or functional unit serves and make sure that it delivers a strong value proposition[2] to those customers. The third perspective deals with the internal processes in which the firm or functional unit must excel at in order to make sure it delivers the promised value proposition to its clients. The fourth and last perspective is the learning & growth perspective, which essentially

[2] Value proposition is an explicit promise made by a company (or divisional/business unit) to its customers that it will deliver a particular bundle of value creating benefits (Buttle, 2009).

focuses on three distinct capacities needed to create long-term improvement and growth in the organizations: human resources, IT systems and organizational culture and values (see, among others, Atkinson et al., 2012). Although the BSC proposed by Kaplan & Norton (1992) has these four perspectives, very often private and/or governmental organizations using the BSC have more or less perspectives, as well as name them differently (see Mendes et al., 2012, Weir et al., 2009 and Singh & Kumar, 2007). Moreover, Parmenter (2002) suggests that the four perspectives of the BSC should be complemented by an employee satisfaction and environment/community sections.

The objectives in the BSC compose what is called a strategy map and must be both consistent and mutually reinforcing. This means that strategy must be represented as a chain of cause-and-effect relationships among the objectives included in the strategy map (Kaplan & Norton, 2008). Companies can divide their strategy map into 3 to 5 strategic themes, i.e. vertical slices consisting each of a distinct set of strategic objectives. In companies with different departments/divisions, a set of strategic themes is firstly defined for the overall company, and then departments/divisional managers customize the objectives of each theme to local conditions and resources (Kaplan & Norton, 2008). An example of a strategic theme is “To improve operational efficiency and quality”.

Kaplan and Norton observed that some companies started to use the BSC as a broader framework to manage strategy through four processes, namely, Translating the Vision, Communicating and Linking, Business Planning and Feedback & Learning (Kaplan & Norton, 1996; 2008). The first process, Translating the Vision, aims at clarifying the vision of the company or of the functional/divisional unit by gaining consensus on what the strategy is and translating it into a BSC. The second process, Communicating and Linking, consists of communicating the strategy translated by the BSC to the collaborators, as well as linking the achievement of performance measures to compensation plans (Ahn, 2001). Business Planning follows where targets are set, initiatives defined and resources allocated to those initiatives. The fourth process, Feedback and Learning, enables the firm to analyze if strategic objectives are being achieved and to take action (Kaplan & Norton, 2008).

Yet, according to Speckbacher's (2003, p. 362), "*the BSC concept is not a static one*", which led them to classify the BSC in three types. A type I BSC is where a combination of strategic financial and non-financial measures is grouped into different perspectives. A type II BSC adds to its type I cause-and-effect relationships to describe strategy (i.e., a strategic map). At last, a type III BSC adds action plans, targets and linkage to incentives to the type II BSC. The BSC can also facilitate change processes[3] (see, among others, Kaplan & Norton, 2001 and Singh & Kumar, 2007) both at corporate and department levels (Cooper & Ezzamel, 2013; Parmenter, 2002). Last, but not the least, Parmenter (2002) suggested the development of a Governance BSC which contains the most critical KPIs for the corporation/company as a whole to be reviewed by top management.

2) Other Performance Measurement Systems

Other PMSs such as MBO and Budgeting can be used by companies. An MBO is a system in which superiors and subordinates work together to define individual goals which are in line with those set up for the enterprise (Mamoon, 2013). BSC and MBO systems are similar to the extent that both require collaborative work within all ranks of

[3] A change process can be, for e.g., the fusion of various departments within a company.

collaborators to set goals across the organization which are congruent with each other. Dinesh & Palmer (1998) point out that failure to meet the aforementioned goal congruence requirement, thereby using these systems as individual performance appraisal systems rather than overall goal congruence systems, is the foremost reason of failure of the systems. Regarding Budgeting, which Drury (2012, p. 359) defined as "*the implementation of long-term strategic plans for next year through the use of comprehensive financial plans*", Malmi (2001) found that most companies tend not to integrate it with the BSC. The latter is developed independently from the budgeting process, though the BSC targets can be set and the performance of the KPIs monitored with the help of the budget.

The next subsection summarizes some of the BSC literature on the Banking Industry.

3) The BSC in the Banking Industry

Al-Najjar & Kalaf (2012) developed a BSC for performance measurement at the corporate level of a regional bank in Iraq. The authors also designed a strategy map with the help of the Bank's top management and computed an overall BSC score to measure the Bank's performance. The overall BSC score was computed out of a thousand and corresponded to the sum of the scores of all twenty BSC measures measured in a scale of 10 to 50[4]. Still with regard to the strategy map, Aranda & Arellano (2010) studied the power of it as a communication tool in a savings bank. In this field experiment, the Bank's middle managers were divided in two subgroups: the first subgroup had access to a BSC with a strategy map while the second had access to the same BSC without its strategy map. The authors concluded that the first subgroup showed higher

[4] For instance, in the case of the measure 'Participation in Development Programs' of the Learning & Growth perspective of the BSC, a range of 41-48, 49-56, 57-64, 65-72 or 73-80 participating employees implied a score of 10, 20, 30, 40 or 50, respectively.

consensus/agreement with top management with respect to the measures of the BSC than the group whose access was restricted. In yet another study on how to build a BSC for a large public sector bank in India (Pandey, 2005), the Bank's senior management conducted a SWOT analysis, selected a strategic theme and designed a BSC for the chosen strategic theme along with a strategic theme map.

Concerning the impact of implementing the BSC, Davis & Albright (2004), who investigated several bank branches, concluded that those that implemented it showed superior financial performance than those that did not. Albright et al. (2001) also implemented a BSC at bank branch level to boost financial performance, namely to increase loan balance, deposit balanced and noninterest income[5].

Finally, Vola et al. (2009), who designed BSCs for a co-operative credit bank both at the corporate and branch levels, found difficulties in aligning the corporate BSC with the branch BSC due to the lack of data at the branch level. The authors further advised the implementation of an MBO system linked to incentives to force branch managers to take decisions that have impact on the BSC measures.

III – Methodology followed in this WP

As previously mentioned, this WP consisted of a directed research with internship done between the 8th of September and the 10th of December, 2013 in a specific organizational unit of a bank, i.e., DTP. Its manager wished to know which KPIs needed to be developed to facilitate decision-making and performance evaluation by the Bank's top management. Thus, the researcher acted as an "actor" (Ryan et al., 2002) as he was a very active participant in the design of a BSC to DTP, coordinating meetings,

[5]Loan balance is the euro-amount a bank branch lent to its customers, deposit balanced the euro-amount of deposits from customers and noninterest income the euro-mount charged in fees to customers.

producing support documents for them and ensuring that the deadlines for the various phases of the project were met (design plan of the BSC in Appendix I).

The main sources of the collected evidence were semi-structured interviews, participation in meetings, external documentation and internal archival records. Semi-structured interviews[6] took place at the start of the project so that the researcher could get a better grasp of DTP's functions. DTP's manager and four team managers reporting to him (see DTP organizational chart is in Appendix II) were interviewed with each interview taking one hour on average (see appendix III for the list of interviews). To ensure the credibility of the collected evidence, data triangulation was adopted by interviewing different people with different tasks at DTP (see Ryan et al., 2002 and Yin, 2009). Note-taking, rather than tape-recording, occurred during the interviews.

After the initial round of interviews, a BSC design plan was devised and proposed by the researcher to DTP's manager. After the approval of such plan, the main evidence source became participation in meetings (Ryan et al., 2002) with team managers in which KPIs for the BSC were proposed and with DTP's manager to select and/or eliminate the proposed KPIs or add new ones in order to better align them with strategy. This process of KPI collection and refinement/filtering took several iterations and was followed by the definition of strategic objectives and targets for each KPI and how often they should be measured. This is a bottom-up approach that differs from the approach recommended by Kaplan & Norton in which the setting of objectives precedes the setting of KPIs which, in turn, measure the fulfillment of those objectives. As it proved too difficult for team managers and DTP manager to source strategic objectives at the start of the field work, the researcher opted to use this inversed approach which he

[6] Although there was a standardized set of questions, there was also leeway to explore further issues deemed relevant for the project

called bottom-up (starting from the bottom – the setting of KPIs – to the top – the association of strategic objectives to those KPIs).

Finally, external documentation (e.g. Bank of Portugal Notice nr.5/2008 and COSO Internal Control - Integrated Framework), as well as internal archival records (e.g. Financial Statements and Governance Report, DTP's Budget, Internal Risk Report, the Bank's organizational chart, Statute of DTP and the Quality Policy) were analyzed by the researcher.

IV – The WP findings

1) Description of the MBO, Budgeting and Incentives Systems in use at the Bank

Regarding the MBO system in place, department's objectives[7] were jointly set between the Bank's top management and each department manager on a quarterly basis and then cascaded down respectively to each team manager within each department (see DTP organizational chart in Appendix II) and to their subordinates. The fulfillment of all these objectives is evaluated respectively by the Bank's top management, department manager and each team manager on a quarterly basis. The department manager Performance Score (PS)[8] coincides with the overall department PS and the team manager PS coincides with the overall team PS. Drawing on Drury (2012), DTP can be defined as a cost center as its managers are responsible just for costs incurred in the department. Moreover, the Budgeting and MBO systems (see table A and B in figure I) in use at the Bank are connected through a mandatory objective set up for each department within the MBO system which is 'To meet the Budget'. Each quarterly

[7]In the MBO system at the Bank there were objectives at department level (DTP), team level and individual level.

[8] A Performance Score (PS) results by weighting all the objectives scores in the Performance Evaluation Sheet (PES)

assessment generates a Performance Evaluation Sheet (PES) both at department, team and individual levels with an associated Performance Score (PS) (see tables B, C and E in figure I).

To determine which employees receive bonuses, a Bonus Score (BS) has to be determined by weighting each subordinate PS against her/his team, department and Bank PS. To compute the BS of the team managers, the team PS is weighted against the department and Bank PS, and, for the department manager, the department PS is weighted against the Bank PS. Bank PS includes, among others, financial measures to ensure that employees are less likely to receive bonuses in case the Bank underperforms financially. Just the employees scoring above a given BS (e.g. threshold of 3.5, see figure I table F for scores) get a lump-sum bonus. Also, a competency-based evaluation per collaborator takes place once a year and has no impact on bonuses (Appendix IV).

Among the shortfalls appointed by the DTP's manager to the MBO system used in the Bank are: the lack of alignment of the departments' (for instance DTP) objectives with the Bank's strategy (as in Dinesh & Palmer, 1998) and the setting of non-quantifiable objectives, which change every quarter do not allow period-on-period comparisons. Therefore, the BSC intended to complement the current MBO system by integrating a set of objective and quantifiable objectives, which should be aligned with the Bank's strategy and periodically tracked.

A

BANK MASTER BUDGET	
Department	**Budget**
Department A	EUR 9999
Department B	EUR ...
Department C	EUR ...
...	EUR...
TOTAL	**EUR ...**

Connecting the Budget to the MBO system

B

Department A PES*				
#	**Objective**	**Score**	**Weight**	**Subtotal**
1	To meet the budget	2	25%	0.5
2	To perform task A	3	10%	0.3
3	To perform task B	4	15%	0.6
4	To perform task C	1	15%	0.15
5	To perform task D	4	15%	0.6
6	To perform task E	2	10%	0.2
7	To perform task F	3	10%	0.3
			PS	**2.65**

* PES stands for 'Performance Evaluation Sheet'

...

...

Cascading objectives..

C

Team A PES*				
#	**Objective**	**Score**	**Weight**	**Subtotal**
2	To perform task A	3	70%	2.1
3	To perform task B	4	30%	1.2
			PS	**3.3**

*equals Team A manager PES

Team B PES				
#	**Objective**	**Score**	**Weight**	**Subtotal**
4	To perform task C	1	50%	0.5
5	To perform task D	4	50%	2
			PS	**2.5**

∑ weights of a PES equals 100%

D

BANK FINANCIAL INDICATORS			
Objective	**Score**	**Weight**	**Subtotal**
Sales target	1	70%	0.7
Credit Impairment	2	30%	0.6
		PS	**1.3**

Performance Score (PS) is the overall score of a PES

E

Subordinate 1 PES				
#	**Objective**	**Score**	**Weight**	**Subtotal**
2	To perform task A	3	100%	3
			PS	**3**

Subordinate 2 PES				
#	**Objective**	**Score**	**Weight**	**Subtotal**
3	To perform task B	4	100%	4
			PS	**4**

Subordinate 3 PES

Subordinate 4 PES

F

Description of Scores	
1	Performance below expectations
2	Performance correponded to expectations
3	Performance above expectations
4	Performance way above expected

Figure I: Illustrative example of the MBO and the Budgeting system at the Bank [9]

[9] weights of objectives at the bank, department, team and individual level were invented by the researcher

2) Brief profile of the department under study

DTP is organized in four different teams (see Appendix II for DTP organogram):

1) The Projects Team, which members have multidisciplinary backgrounds and implement (1) compliance, efficiency or revenue-oriented projects and (2) incremental improvements initiatives (IIIs) in all departments of the Bank. Compliance-oriented projects result of compliance requirements, such as those from FATCA[10]. Efficiency-oriented projects pursue cost reductions such as making available a digital bank account statement on *Banif@ast*[11] to the Bank clients (an eco-friendly project which saves expenses with postal services) whereas revenue-oriented projects aim at increasing Bank revenues. An example of the latter is enlarging the products portfolio for trading through Banif Trader[12] which enables the Bank to charge more fees to its clients (see appendix V for further examples of projects). IIIs are implemented to simplify day-to-day operations of the bank branches and boost branch agents' level of satisfaction. Twelve collaborators of six commercial departments[13] in the Bank propose IIIs at a monthly meeting such as the dematerialization of documents when validating the opening of a new bank check account (see appendix VI for further IIIs). Apart from the implementation of projects and IIIs, the Projects Team also implements Internal Control Recommendations.

2) The Quality Team, which (1) elaborates and revises internal rules and (2) undertakes quality-related initiatives. 75% of its full-time employees (FTEs) work on internal rules (see appendix VII for different categories of rules) and the remaining 25%

[10] Foreign Account Tax Compliance Act which complies banks to report information regarding American citizens' bank accounts
[11] The Electronic Banking Platform of the Bank on the web
[12] A Bank's platform allowing clients to trade financial products online
[13] Norte, Sul, Madeira, Açores, Corporate Banking and Electronic Banking. Each of these departments, excepting the last one, manages a network of branches in a given geographical area.

in quality-related initiatives such as the elaboration of the questionnaires about the level of satisfaction of the internal and external clients and delivering the results to various departments in the Bank (appendix VIII), doing the follow-up of the customers' complaints[14] and publishing 'monthly insights' on the most complained issues (see appendix IX for an example). Regarding external client complaints, the quality team also helps each branch Manager to solve the situation with the client.

3) The Internal Control Team, which deals with the implementation of internal controls in the Bank. The Regulator (Banco de Portugal), as well as the External and Internal Auditors, Compliance and Risk Departments in the Bank, identify the potential risks in its different departments or processes and make recommendations to mitigate those risks (examples in appendix X). Then, the Internal Control team does the follow-up by: (1) establishing the risk owner[15]; (2) determining mitigation action plans[16]; (3) monitoring the implementation progress of these plans (requesting a 'state of progress report' to the risk owner); and (4) verifying the final implementation of each action plan by asking for evidence to the risk owner. In terms of operational risk, this team updates a database, named *SAS® OpRisk Global* database, that keeps track of past operational losses (due to frauds for instance) incurred by the Bank. In addition, a yearly 'Self-Assessment Workshop' is also undertaken by this team, in which collaborators from all departments of the Bank are asked to point out potential risks not yet detected, which when relevant, are registered in the database. This database will enable the Bank to potentially move from the current Basic Indicator Approach (BIA) to the Advanced

[14] All satisfaction questionnaires have a field in which the external client can write a complaint. Most complaints concern customer service at the branches.
[15] One or more persons in a given department who can mitigate the potential risk
[16] With a timeline of the various phases for implementing the recommendation

Measurement Approach (AMA) to measure operational risk. In so doing, the Bank believes that it will save substantial amounts of capital to cover operational risk.

4) The Procurement & Performance (P&P) Team. In what concerns procurement, this team buys goods and services to all departments of the bank within the accounting heading 'Other Administrative Expenses' (OAE) of the P&L Statement. Each department in the Bank can make acquisitions out of the budget just up to a certain amount without permission of the Bank's top management. Most acquisitions of goods out-of-the budget approved by the Bank's top management are then done by the P&P team. The objective of the Bank is to leverage its bargaining power with suppliers, as well as to avoid unnecessary and duplicated acquisitions. In what concerns performance, the team is responsible not only to develop a Management Information System[17] (MIS) and BSCs for all departments of the Bank (e.g. Operations and IT) but also to control the execution of the budgets (i.e., variance analysis according to Drury, 2012) of Personnel, General & Administrative and Amortization (i.e., OPEX) costs of all departments in the Bank. Thus, actual and budgeted costs are compared and each department is asked to justify variances (deviations). At last, this team is entrusted to design the BSCs for all departments of the bank, after the pilot project at DTP and carried out by the researcher is tested.

[17] A dashboard with more than a hundred performance indicators for a given department. Unlike a BSC, a MIS lists all indicators and not just the ones that are key for the Bank/unit.

V –The BSC designed for DTP

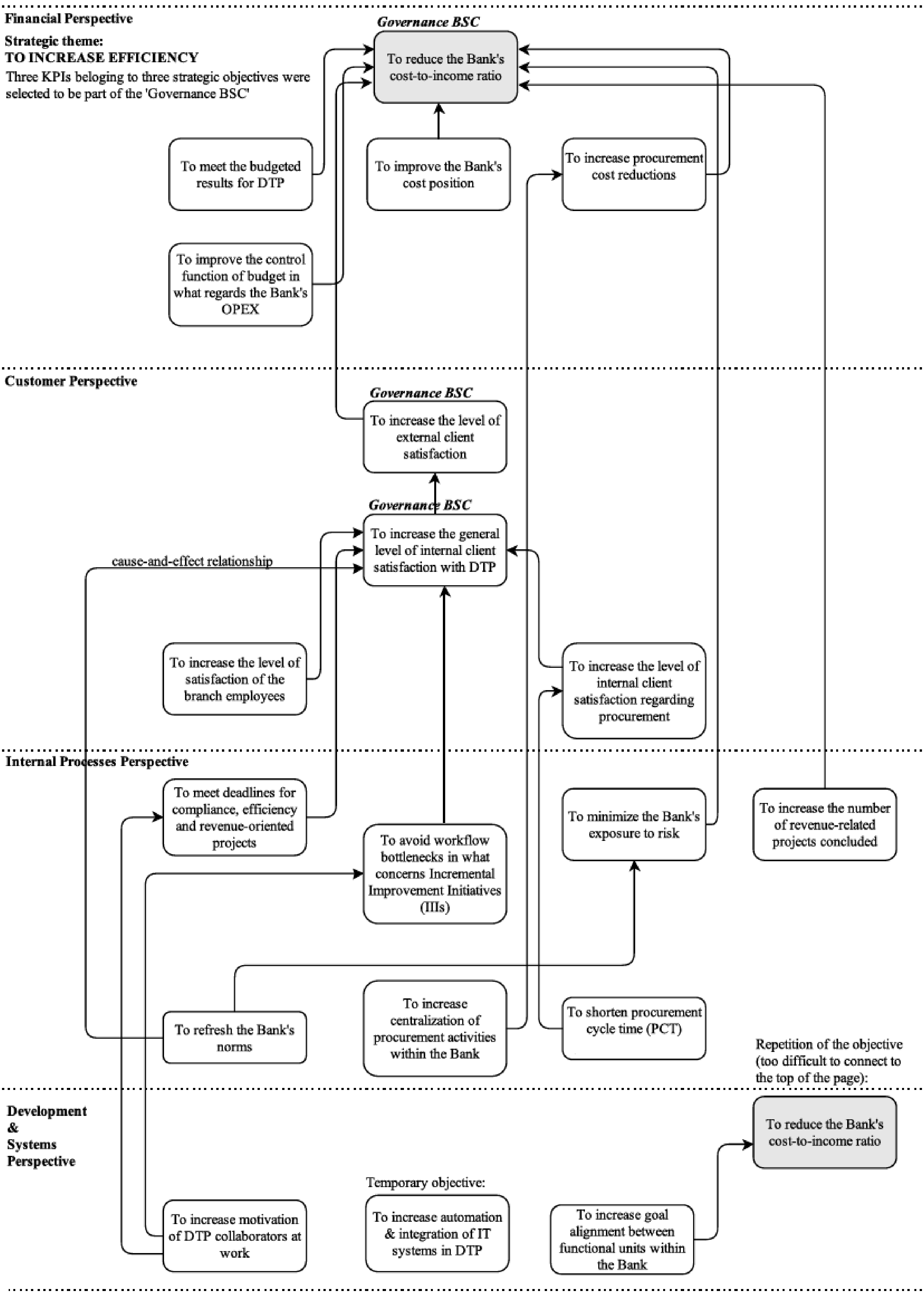
When designing the BSC for DTP, both processes of “Translating the Vision” and “Communicating and Linking” (Kaplan & Norton, 1996; 2008) took place.

“Translating the vision” meant to define a strategic theme, strategic objectives and KPIs [18] (Kaplan & Norton, 2008). Then, the selected KPIs were disseminated to everyone in DTP, enabling the “Communicating process” to take place, BSC objectives were integrated in the MBO system linked to incentives at the department level, which also enabled the “Linking process” mentioned above.

The ultimate strategic objective of the Bank for which DTP wanted to contribute was ‘To reduce the Bank’s cost-to-income ratio’, which must make part of the Bank’ strategic theme ‘To increase efficiency’. This strategic objective was integrated in a strategy map developed by the researcher and approved by DTP manager to gain consensus/have the agreement of DTP’s team managers in what concerns the selected KPIs (as suggested by Aranda & Arellano, 2010). Moreover, and inspired by Parmenter (2002), the researcher suggested three of the strategic objectives (see objectives with ‘Governance BSC’ above them in the strategy map) to be included in a future Governance BSC to be periodically reviewed by the Bank’s top management. In the future, as further departmental BSC are developed, the Governance BSC should contain the most critical KPIs of the BSC of each department, but not surpassing 25 KPIs overall, as recommended by Kaplan & Norton. In fact, the Strategy Map of DTP is shown in the following figure II:

[18] As the researcher had no contact with the Bank’s top management in what concerns strategy formulation, the strategic theme and its strategic objectives were defined by him with the help of the DTP’s manager, by observing team managers’ day-to-day work and based on some internal documentation.

Figure II – DTP Strategy Map



To measure the execution of the strategic objectives, nineteen KPIs were selected. Furthermore, DTP BSC intended to improve the Bank's financial performance (as evidence by the strategic theme chosen). In fact, the BSC has proved to be useful for such purpose in the Banking Industry as in Davis & Albright (2004) and Albright et al. (2001). Besides, the DTP's manager decided to name the fourth perspective as 'Development & Systems Perspective'. In doing so, a non-standard BSC was created as in Mendes et al. (2012), Weir et al. (2009) and Singh & Kumar (2007). 'Development & Systems Perspective' was thought to better reflect the importance of IT systems in detriment of HR and organizational culture[19], which, according to Atkinson et al., 2012, are the three capacities needed to create long-term improvement and growth in the organizations. Finally, the design of BSC for DTP followed a hybrid approach as it was both:

(1) top-down as focused on a specific strategic theme defined by the research together with DTP manager (as recommended by Kaplan & Norton, 2008 and Pandey, 2005);

(2) bottom-up, inferring strategic objectives from KPIs instead of the opposite process recommended by Kaplan & Norton in which KPI setting follows Strategic Objectives setting (revisit section III to see methodology followed in the design of DTP BSC);

Now follows the KPIs and objectives included in the Strategy Map (Figure II above). For each KPI there is a KPI code (#), a detailed explanation, its frequency of production and an accumulated two years target. The Performance Team will be in charge of collecting and entering KPI inputs into the system[20].

[19] HR and organizational culture are issues under the responsibility of the HR department.
[20] Innovway is the IT application supporting the BSC and is provided by an external software house.

Persp.	Strategic Objective	# KPI	Key Performance Indicator (KPI)	Detailed explanation of the KPI	Frequency	Target 2 yrs
FP	To reduce the Bank's cost-to-income ratio	1	Percent variation of cost-to-income ratio of the Bank	Ratio of operating costs to operating revenues, which is widely used in the Banking industry. The lower the ratio, the more efficient is the bank.	Quarterly	8%
FP	To meet the budgeted results for DTP	2	Percent deviation from budgeted results	DTP should meet the budget for the period. Percent deviation is computed as [actual costs - budgeted costs]/[budgeted costs]	Quarterly	0%
FP	To improve the Bank's cost position	3	Euro amount in cost reductions accruing from projects and Incremental Improvements Initiatives (IIIs)	Only actual cost reductions in the Bank's budget of more than EUR 1K[21] will be considered in this KPI. The Projects team has in hands roughly 50 projects and 100 IIIs to be implemented. Information to produce this KPI comes from the business case sheet of each project in which cost reduction projections are made. Although projects can produce one-off or permanent cost reductions in the Bank's P&L, for the purpose of this KPI cost reductions are considered just once (in the financial year the project or III is implemented).	Quarterly	EUR 100K
FP	To increase procurement cost reductions	5	Euro amount of cost reductions accruing from negotiation in procurement	As said before, DTP centralizes the procurement function of the bank in what regards Other Administrative Expenses (OAE). The proposed KPI applies only to cost savings in repurchases of goods and services. Even if the cost of goods or services repurchased (re-contracted) is lower due to the fact that the good/service has lower quality or slightly less features than the product acquired last year, it is still considered to be a cost saving. In case the Bank simply stops acquiring/contracting a given good or service, the cost saving is not allocated to DTP. When the P&P Team detects duplications (e.g. the same exact consulting service is being acquired by two different departments of the Bank), the suppression of one is considered to be a cost saving. In case the supplier lowers prices by chance, it is also considered a procurement cost reduction. Cost Reduction = Actual Purchasing Price – Last Price Paid	Quarterly	EUR 750K

[21] 'K' stands for thousands. Therefore, EUR 100K stands for a hundred thousand euros

FP	To improve the control function of the budget in what regards the Bank's OPEX	3	Percent deviation from the Bank's budget in what regards OPEX	As previously mentioned, OPEX include Personnel, General Administrative and Amortizations Costs of all departments of the Bank, which DTP is in charge of monitoring. As such, the department should be penalized if actual OPEX costs overrun those budgeted for the period and rewarded if budget execution occurs as expected. The formula used to compute this KPI is [actual costs - budgeted costs]/[budgeted costs]*100%	Quarterly	0%
CP	To increase the level of external client satisfaction	7	External Client Satisfaction Index (ECSI)	Survey undertaken by the bank through Banif@st call center. This is a benchmarking exercise as the Bank performance is compared with its competitors regarding: Quality of Communication, Word of Mouth, Client's Perception of the bank, Expectations, Perceived Quality, Front-office Customer Service, Banif@st Customer Service, Perceived Value, Loyalty, Problems, Commercial Relationship, Suggestions and **Overall Appreciation of the Bank**. All questions are answered by the client on a scale of 1 to 10 (following the internationally recognized Net Promoters Score (NPS). This KPI reflects the average score of the Overall Appreciation of the Bank parameter.	Quarterly	7.5/10
CP	To increase the general level of internal client satisfaction with DTP	8	Index of Satisfaction of Internal Clients (ICSI)	In this survey, DTP is evaluated by the departments with which it most often interacts. In such way, evaluations based on a significant number of interactions are guaranteed. The parameters of this survey are evaluated on a scale of 1-10 and cover areas such as Quality of Communication, Hard Skills, Efficacy and Cooperation & Proactivity, as well as the **Global Satisfaction level** with DTP. The first parameter is assessed through questions regarding friendliness on phone answer and answers to e-mails. Hard Skills are evaluated through questions regarding the perception the other departments have of DTP’s know how, professionalism and rigor. Efficacy questions how other departments evaluate DTP meeting deadlines, how fast it answers solicitations and its capacity of adaption to urgent and unexpected situations. Finally, the Cooperation & Proactivity section of the survey evaluates issues such as availability, preoccupation with others' needs, cooperation in problem resolution and proactivity in the quest of better solutions for problems. This KPI reflects the average score of the Global Satisfaction level parameter.	Semiannualy	8.5/10

CP	To increase the level of satisfaction of the branch employees	9	Index of Satisfaction of the Commercial Network	As mentioned before, implementation of IIIs is meant to improve branch managers' satisfaction. Therefore, a specific survey must be addressed to these internal clients. This survey contains two questions to be answered by twelve commercial in a monthly meeting. The questions are (A) "Did the implementation of the Incremental Improvement Initiative (III) meet your expectations in the last month?" and (B) "Was the implementation of the III beneficial to the commercial network in the last month?". Both questions are answered on a scale of 1-10 where 1 means "strongly disagree" and 10 means "strongly agree". An average of the score of 24 responses (12 respondents times 2 questions per respondent) is the Index.	Monthly	8/10
CP	To increase the level of internal client satisfaction regarding procurement	10	Index of Internal Client Satisfaction with goods (services) procured (contracted)	This KPI evaluates the level of satisfaction of internal clients with the goods/services acquired/contracted by the P&P team. This survey contains several questions which are grouped in sections but just the last one, named global satisfaction level with services and goods provided, is considered for the purposes of this KPI	Quarterly	9/10
IPP	To meet deadlines for compliance, efficiency and revenue-oriented projects	11	Number of projects overdue	All projects have internal deadlines to be concluded. If the Projects Team complies with deadlines, no projects will be overdue. Thus, this KPI serves as a measure of productivity. Delays in projects make internal clients unsatisfied and, in case of compliance-related projects, lead to fines charged by the regulator.	Quarterly	0
IPP	To avoid workflow bottlenecks in what concerns Incremental Improvement Initiatives (IIIs)	12	Maximum # of IIIs to be concluded in the pipeline	What distinguishes projects from IIIs is the amount of man-hours necessary for implementing them and technical complexity. Projects are multi-departmental, longer and more complex than IIIs. IIIs in the pipeline mean those which were initiated and are waiting for conclusion. This is another productivity KPI as it leads the collaborators to increase the outflow (# of IIIs concluded) when the volume of IIIs inflow is high in order to maintain the stock within the target.	Monthly	100

IPP	To minimize the Bank's exposure to risk	13	# of high level risks identified in the internal control report	The Bank of Portugal demands the preparation of an Internal Control Report (ICR) by the bank to identify the risks to which it might be exposed (Strategic, Liquidity, Operational, Market, Exchange and Credit Risks), as well as recommends the implementation of internal controls. The Internal Control Report presents both existing and potential risks, which can be classified as high, medium or low in terms of criticality. High risks are those with most adverse impact in a bank capital and profits in case a risk event occurs. Also important to note that risks at a certain point in time are those pre-existing not yet materialized and newly appointed potential risks. The job of DTP Internal Control team is to ensure that recommendations are being implemented for the risks detected. # of high level risks at the end of the period = # of potential risks existing at the beginning of the period + # of new potential risks detected - # of potential risks mitigated through the implementation of internal controls.	Monthly	75
		14	# of medium level risks identified in the internal control report	This KPI comprises the number of medium-level potential risks existent at the end of the period.	Monthly	575
		15	Percent variation of the number of operational loss events	Refers to the number of events that resulted in operational losses registered in SAS® OpRisk Global database.	Monthly	-50%
PPI	To increase the number of revenue-related projects concluded	6	# of revenues-related projects concluded	Unlike cost reductions, revenue increases are more difficult to quantify. Thus, this KPI focuses on the number of revenue-related projects and not on the additional amount of revenue created. Nonetheless, projects should be deemed to have an impact on revenue of at least EUR 10 000 to be considered in this KPI.	Semiannualy	10
IPP	To refresh the Bank's norms	16	Average time (in days) to publish a norm	Time that goes from the moment a norm starts to be elaborated or revised to the moment of publishing it on the Bank’s intranet. For a norm to be published, approval from the Bank's top management is needed. Circulars are excluded from this KPI as monitoring the time it takes to elaborate them is not worthwhile since circulars are residual and very quickly elaborated. There are no restrictions regarding the topic of the norms this department produces. The formula applied to this KPI is [∑ time needed to elaborate each norm]/[# of norms elaborated]. Data input coming from ACE	Monthly	12

				project software.		
		17	Average age (in years) of the Bank's norms	It is an objective of the Bank to have up-to-dated domestic norms. Out-of-dated norms increase operational risk. [∑ age of each norm]/[# norms]	Monthly	2
IPP	To increase centralization of procurement activities within the Bank	18	Additional p.p. of OAE intermediated by DTP	Only Other Administrative Expenses (OAE) are considered in this KPI. P.P. stands for Percentage Points.	Quarterly	5%
IPP	To shorten procurement cycle time (PCT)	19	Average # days of PCT	This KPI measures the average amount of time to process all orders placed with the P&P Team. It goes from the moment a purchase requisition is placed with the P&P Team until the moment in which the order is sent to the supplier (request for quotation). There is not a minimum amount that an order has to have to go through the P&P Team.	Monthly	30
DSP	To increase motivation of DTP collaborators at work	21	Employee Engagement Index (EEI)	This survey assesses DTP employee satisfaction in dimensions such as Performance Evaluation, Professional Career, Communication, Job performed, Perception on the functioning of other departments, Sentiment of belonging, Work Realization, Relations with bosses, Personal & Professional Relationships and Compensation. The last question of the survey, in which the collaborators make an overall assessment of its satisfaction with the job, is the input of this KPI.	Annual	6.5/10
DSP	To increase automation & integration of IT systems in DTP	20	Added # of KPIs automatically computed and forwarded to the BSC application (Innovway)	At the end of the current WP which only focused on BSC design and not in its implementation, most KPIs were entered manually by the Performance Team into the BSC software application. This KPI insures that, in a short period of time, most KPIs of DTP BSC are automatic and do not have to be entered into the BSC software app manually.	Weekly	1
DSP	To increase goal alignment of functional units within the bank[22]	22	# of additional departments in the Bank with BSC implemented	As previously mentioned, DTP is in charge of designing and implementing the BSC in all departments of the Bank.	Quarterly	1

FP – Financial Perspective; CP – Customer Perspective; IPP – Internal Processes Perspective; DSP – Development & Systems Perspective

[22] This KPI is of a temporary nature.

Drawing on Speckbacher et al. (2003), the BSC designed for DTP during this WP can be classified as a type-III BSC (the most sophisticated of the three variants developed by those authors) since it includes objectives grouped into four perspectives and mapped in chains of cause-and-effect relationships, as well as associated KPIs and targets and linked to the incentive system (Ahn, 2001). For the sake of length of the present report, initiatives are not part of it.

Finally, it is worth noting that this BSC facilitated the lay-off plan and rearrangement of the organizational structure undergone by the Bank (i.e., a change process according to Singh & Kumar, 2007 and Kaplan & Norton, 1996), which was the birth of DTP. This change process aimed at increasing the productivity of DTP collaborators and leading them to do different tasks than those done in the different departments from which they came.

VI) Recommendations and main contributions of this WP

In contrast to most studies reviewed in the Banking Industry, which focus on the BSC at a branch and corporate level (Albright et al., 2001; Davis & Albright, 2004 and Pandey, 2005), the present WP designs a BSC for a back-office department of a Bank. Also, the present WP gives guidance to practitioners seeking advice on how to overcome difficulties in sourcing strategic objectives at the start of the BSC design process, suggesting the use of the hybrid approach outlined in section III and V.

Also, when implementation will occurs, which is not part of the present WP, milestones must be set. For instance, in case of KPI #1, eight milestones must be set (e.g. 1% reduction per quarter). Apart from that, weights (at the department, team and individual level) and four performance levels (such as below, equal, above and way above expectations) have to be set for each milestone as in Al-Najjar & Kalaf (2012) to match the existing MBO system (see figure I). However, full integration of the BSC with the MBO system linked to incentives at the Bank is a topic for further research.

It is also worth to note that had the researcher had access to more information on strategy, namely from the Bank's top management, as in Pandey (2005) in which the Bank's top management had a strong involvement in the BSC design process, a BSC even more integrated and geared towards the fulfillment of the Bank's objectives could have been designed. An alternative is to develop the BSC department-by-department and from each department choose the most critical KPIs to form a Governance BSC as suggested by Parmenter (2002). This is also a topic for further research.

VII) Reference list

Ahn, Heinz. 2001. "Applying the Balanced Scorecard Concept: An Experience Report." *Long Range Planning* 34 (4) (August): 441–461.

Al-Najjar, Sabah M., and Khawla H. Kalaf. 2012. "Designing a Balanced Scorecard to Measure a Bank's Performance: A Case Study." *International Journal of Business Administration* 3 (4) (July): 44–53.

Albright, Tom, Stan Davis, and Aleecia Hibbets. 2001. "Tri-Cities Community Bank: A Balanced Scorecard Case." *Strategic Finance* 83 (4) (October): 54–59.

Aranda, Carmen, and Javier Arellano. 2010. "Consensus and Link Structure in Strategic Performance Measurement Systems: A Field Study." *Journal of Management Accounting Research* 22 (1) (December 1): 271–299.

Atkinson, Anthony A., Robert S. Kaplan, Ella Mae Matsumura, and S. Mark Young. 2012. *Management Accounting Information for Decision-Making and*

Strategy Execution, sixth edition. Boston: London: Pearson.

Buttle, Francis. 2009. *Customer Relationship Management : Concepts and Technologies*. Amsterdam; London: Butterworth-Heinemann.

Cooper, David J., and Mahmoud Ezzamel. 2013. “Globalization Discourses and Performance Measurement Systems in a Multinational Firm.” *Accounting, Organizations and Society* 38 (4) (May): 288–313.

Davis, Stan, and Tom Albright. 2004. “An Investigation of the Effect of Balanced Scorecard Implementation on Financial Performance.” *Management Accounting Research* 15 (2) (June): 135–153.

Dinesh, David, and Elaine Palmer. 1998. “Management by Objectives and the Balanced Scorecard: Will Rome Fall Again?” *Management Decision* 36 (5/6) (May): 363.

Drury, Colin. 2012. *Management and Cost Accounting*, 8th ed. Hampshire: Cengage Learning.

Kaplan, Robert S., and David P. Norton. 1992. “The Balanced Scorecard--Measures That Drive Performance.” *Harvard Business Review* 70 (1) (February 1): 71–79.

———. 1993. “Putting the Balanced Scorecard to Work.” *Harvard Business Review* 71 (5) (September): 134–147.

———. 1996. “Using the Balanced Scorecard as a Strategic Management System” *Harvard Business Review* 74 (1) (February): 75–85.

———. 2001. “Leading Change with The Balanced Scorecard.” *Financial Executive* 17 (6) (September): 64–66.

———. 2008. “Mastering the Management System.” *Harvard Business Review* 86 (1) (January): 62–77.

Littler, Kevin, Phil Aisthorpe, Robert Hudson, and Kevin Keasey. 2000. "A New Approach to Linking Strategy Formulation and Strategy Implementation: An Example from the UK Banking Sector." *International Journal of Information Management* 20 (6) (December): 411–428.

Malmi, Teemu. 2001. "Balanced Scorecards in Finnish Companies: A Research Note." *Management Accounting Research* 12 (2) (June): 207–220.

Mamoon, Zafor. 2013. "Management Control System - MBO." *International Journal of Business & Management* 8 (5) (March): 82–88.

Manjit, Singh, and Sanjeev Kumar. 2007. "Balanced Scorecard Implementations - Global and Indian Experiences." *Indian Management Studies Journal* (11): 21–39.

Mendes, Paula, Ana Carina Santos, Fernando Perna, and Margarida Ribau Teixeira. 2012. "The Balanced Scorecard as an Integrated Model Applied to the Portuguese Public Service: A Case Study in the Waste Sector." *Journal of Cleaner Production* 24 (0) (March): 20–29.

Pandey, I. M. 2005. "Balanced Scorecard: Myth and Reality." *Vikalpa: The Journal for Decision Makers* 30 (1) (January): 51–66.

Parmenter, David. 2002. "Winning KPIs Revisited." *New Zealand Management* 49 (9) (October): 49.

Raravi, Prasanna, Virupaxi Bagodi, and R. G. Mench. 2013. "Critical Success Factors: Service Industries." *SCMS Journal of Indian Management* 10 (1) (January): 100–107.

Robert K. Yin. 2009. *Case Study Research: Design and Methods*, 4th ed. Los Angeles, Calif: SAGE.

Ryan, Bob, Michael Theobald, and Robert W. Scapens. 2002. *Research Method and*

Methodology in Finance and Accounting, 2nd Ed.. London: Thomson Learning.

Speckbacher, Gerhard, Juergen Bischof, and Thomas Pfeiffer. 2003. "A Descriptive Analysis on the Implementation of Balanced Scorecards in German-Speaking Countries." *Management Accounting Research* 14 (4) (December): 361–388.

Thompson, Kenneth R., and Nicholas J. Mathys. 2013. "It's Time to Add the Employee Dimension to the Balanced Scorecard." *Organizational Dynamics* 42 (2) (April): 135–144.

Vola, Paola, Laura Broccado, and Elisa Truant. 2009. "Performance Measurement under Balanced Scorecard: The Case Study of a Co-Operative Credit Bank in Piedmont." *Economia Aziendale Online 2000 Web* (3) (July): 131–152.

Weir, Erica, Nadine d' Entremont, Shelley Stalker, Karim Kurji, and Victoria Robinson. 2009. "Applying the Balanced Scorecard to Local Public Health Performance Measurement: Deliberations and Decisions." *BMC Public Health* 9 (1): 127.

A Work Project, presented as part of the requirements for the Awards of a Master's Degree in Finance from NOVA – School of Business and Economics

SUPPLEMENTARY APPENDICES

of the Work Project

DESIGN OF A BALANCED SCORECARD-TYPE MANAGEMENT SYSTEM FOR A BACK-OFFICE DEPARTMENT IN A BANK

JOAO PEDRO ROCHA PAIS #613

A project carried out under the supervision of:

Profª Inês Cruz

6th of January, 2014

APPENDIX I - Plan for Designing the BSC at DTP

Phase A

Description: To understand functions and specificities of activities developed by the different collaborators of the department.

Participants: Team managers, DTP manager and researcher

Phase B

Description: To source and select KPIs among team managers

Participants: Team managers, DTP manager and researcher

Phase C

Description: To source and select KPIs among team managers

Participants: Team managers, DTP managers and researcher

Phase D

Description: To define measurement frequencies, measurement units as well as to select/elaborate any questionnaires needed

Participants: Team managers, DTP manager and researcher

Phase E

Description: To define targets for KPIs

Participants: Team managers, DTP manager and researcher

Phase F

Description: To analyze the interrelations among the MBO, Budgeting and Incentive Systems

Participants: DTP manager, HR manager and researcher

Phase G

Description: Mega Workshop of presentation of the Balanced Scorecard

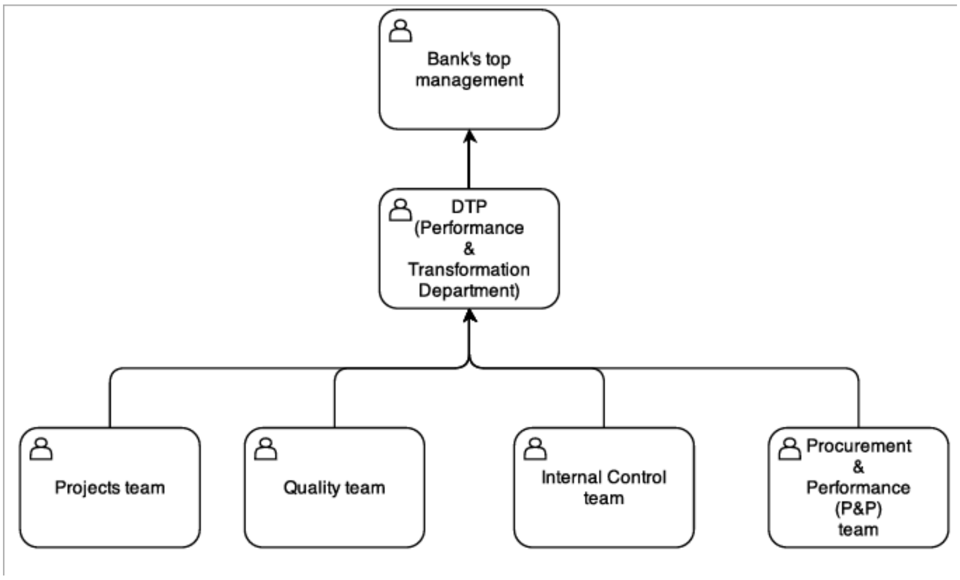
Participants: All collaborators of DTP and researcher

◄ Set ~ October 2013 ~						Nov ►
Dom	**Mon**	**Tue**	**Wed**	**Thur**	**Fri**	**Sat**
20	21 A Kick-off meeting	22 A	23 A	24 A	25 A	26
27	28 KPI Brainstorming meeting	29 B	30 B	31 B	31 B	30

◄ Oct ~ November 2013 ~						Dec ►
Dom	**Mon**	**Tue**	**Wed**	**Thur**	**Fri**	**Sat**
					1 B	2
3	4 C Final KPIs	5 C	6 C	7 C	8 C	9
10	11 D 1st BSC draft	12 D	13 D	14 D	15 D	16
17	18 E 2n BSC draft	19 E	20 E	21 E	22 E	23
24	25 F To present targets	26 F	27 F	28 F	29 F	30

◄ Nov2013 ~ December 2013 ~					Jan2014►	
Sun	**Mon**	**Tue**	**Wed**	**Thu**	**Fri**	**Sat**
1	2 G -	3 G	4 G	5 G	6 G	7
8	9 Mega workshop	10	11	12	13	14
15	16	17	18	19	20	21

APPENDIX II - Organizational Chart of DTP



APPENDIX III - List of interviews done

Date	Function of the interviewee	Length of the interview
7-10-2013	DTP's manager	70 minutes
9-10-2013	Projects team manager	55 minutes
15-10-2013	Quality team manager	45 minutes
17-10-2013	Internal control team manager	75 minutes
22-10-2013	Performance & procurement team manager	60 minutes

APPENDIX III - Competency-based Evaluation

Collaborators are evaluated against soft skills such as Leadership & Team Development, Management Best Practices, Persistence & Resilience, Planning & Organization, etc. Depending on the hierarchical level of the collaborator, competencies assessed differ.

APPENDIX III - Examples of Projects

Project 1 – Software application that will enable the control of credit lines given to clients.

Project 2 – Report Control Project (efficiency-oriented project)

This project intends to create an IT Software that monitors and controls the timely delivery of all reports the bank is bound to deliver to the various supervisory entities. This project will remember each report owner to send the report of its responsibility in due time, reducing the amount of fines the bank pays.

Project 3 – Fast Pay Project (revenue-oriented project)

Development of a new product of payment management which involves credit in the form of overdrafts, confirming and bank guarantees.

Project 4 – Special Assessment Program – Management of Distressed Loans (compliance-oriented project)

Special Audit promoted by the Bank of Portugal and undertaken by Oliver Wyman with the purpose of assessing the efficacy of management of problematic credits Evaluation of strategies and policies implemented to manage problematic credits.

Project 5 – FACTA Project (compliance-oriented project)

American authorities require from foreign Financial Institutions the provision of information relating clients which are classified as "US Person". This project implies the adaption of IT systems, processes and procedures of the Bank.

Project 6 – Anti-Money Laundering Project (compliance-oriented project)

Adaption of systems and internal procedures to accommodate all requirements relating the law of the Law on the Prevention and Fight against Money Laundering and Terrorist Financing

Project 7 – Banif Trader – 2nd phase (revenue-oriented project)

Enlargement of the number of markets and financial products available to trade namely derivatives.

APPENDIX III - Examples of Continuous Improvement Initiatives

CII 1 – Management of check paper

Before: The branch assistants had to print and fill daily in a form (hereafter called *checks form*) the number of bank checks issued, received, cancelled, delivered and in stock regardless of **having requesting checks or not.**

After: The filling of the *checks form* just occurs in days that movements with checks occur.

Advantage: reduced administrative burden

CII 2: Search for information on the Intranet of the Bank

Before: It used to be difficult to find all relevant information relating a given product on the Bank's Intranet due to the lack of the feature "product" in the search engine.

After: It as added the criterion "search by product" which allows users to search for all relevant information relating a given product.

Advantage: Branch assistants can search for information by product when facing difficulties understanding the characteristics of a sophisticated financial product

CII 3: Validation process of a new bank check account opening

Before: the time it took for a new bank check account to be running was long due to the need of sending the originals of the contract and other documents to the Operations department in Lisbon. Due to difficult weather conditions in the Portuguese islands, the originals used to take several days to reach Portugal mainland. Some customers, mainly immigrants, given to time constraints in Portugal, would give up opening a new bank account.

After: The dematerialization of the process of a bank check account opening allowed the process of verification by the Operations Department to occur sooner than it would had the originals had to be sent by post services.

Advantages: Process of opening a bank check account was quickened. Costs were saved in postal services, physical file, equipment and consumables such as paper and toner. Additionally, administrative workload was reduced and quality service to the internal and external client was improved.

APPENDIX IV - Different Categories of Norms

Categories	**Description**
Manuals	Explain products and software applications to users
Norms	Describe the functions and responsibilities of each department of the Bank among other issues.
Circulars	Short notice to employees regarding any issues
Forms	Hand-writing forms such as bank account opening form and check paper inquiry form.
Policies	Such as the quality policy, sustainability policy and risk management policy.

APPENDIX VIII - List of Questionnaires Monitored by DTP

Questionnaire 1: Index of Internal Client Satisfaction with goods (services) procured (contracted)

Questionnaire 2: Index of Satisfaction of Commercial Network

Questionnaire 5: Helpdesk satisfaction questionnaire

Questionnaire 6: Index of Satisfaction of Internal Clients (ICSI)

Questionnaire 7: External Client Satisfaction Index (ECSI)

APPENDIX IX - Examples of Issues Approached in Past 'Monthly Insights'

Explanation: A monthly insight shows a common external client complaint and explains how agents in the branches should behave to avoid future complaints on the same issue.

Hypothetical Monthly insight example: Gives instructions to branch managers on how to answer the phone to clients after a complaint was made by an unsatisfied client

APPENDIX X - Examples of Internal Control Recommendations

ICR1: Software application of trading department should limit amount of money transacted by employee per day to EUR100 000.

ICR2: A double check by a superior is recommended on the accounting impairment application