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OPERATIONAL RISK ADMINISTRATION – ESSENTIAL COMPONENT OF PUBLIC DEBT MANAGEMENT EFFICIENCY

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Abstract *In public debt management department, the components of risk such as market risk, credit risk, refinancing risk and liquidity risk are relatively well known; operational risk is however, less well known and an area that has not been given much attention to by government debt managers in developing a risk management framework. This paper highlights the operational risk approaches as applied to public debt department and attempts to present a framework for debt managers to manage operational risks while undertaking public debt management operations. Developing an operational risk management framework can be an evolutionary process as it will take time and effort to not only identify and understand the risks but also the mitigation techniques in an environment that is constantly changing. There is no need to try to do everything perfectly from the outset. This article shows that the operational risk management framework can be developed and applied incrementally as techniques improve and staff begin to understand the risks and mitigation technique of public debt management.*

Key words:
operational risk management, public debt management, risk champion, debt managers

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1. INTRODUCTION

Public debt managers are exposed to a wide range of possible risks that could be divided in two important components: financial risks and operational risks. Financial risks, such as interest rate risk and currency risk, are central to developing and maintaining a debt management strategy grounded in cost-risk analysis. As such, public debt managers spend a considerable amount of effort identifying, evaluating and mitigating those risks. Awareness of operational risks is often less developed. Operational risks are typically broader in scope and are not only concerned with government debt offices. However, their impact can be significant for public debt managers given the volume of financial transactions and payments performed on a daily basis.

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, June 2004). [5] In debt management operations, the categories of risks, such as market risk, the exchange rate and interest rate risk, credit risk, refinancing risk and liquidity risk, are relatively well known, but the operational risk is not. The area has not been given due attention to by government debt managers in developing a risk management framework. Government debt management departments are responsible for managing the costs and risk of the government's debt portfolio, which is often the largest financial portfolio in the country. As such, it is very important that public debt management departments develop policies and procedures to manage the risks that they face, namely, market risk, credit risk, refinancing risk, liquidity risk, and operational risk. This partly reflects the high value of the financial transactions involved and the consequences of substantial financial loss including on debt service costs. But there is potentially also severe reputational and political damage associated with operational error or failure.

2. MATERIALS AND METHODS

Under Basel II (International Convergence of Capital Measurement and Capital Standards: A Revised Framework, June 2004), operational risk is defined as "the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events." [5] The definition explicitly includes legal risk, but excludes strategic and reputation risk. What is necessary is a framework in order to ensure an efficient management of public debt and to elaborate an appropriate toolkit for managing it. Awareness and attention of operational risk is low in many countries, or is perceived as something applicable only to the private sector. Moreover, it attracts little attention by senior management because it is not seen as important or a priority. The problem of course is that operational risk is a wide umbrella, often seen as covering everything except for market, credit, refinancing, and liquidity risks. Unlike market or credit risk, operational risk is mainly endogenous to public debt management department.

More importantly, operational risks are more difficult to manage as the embedded risk cannot be captured and measured in the same way as market and credit risk. In addition, market or credit risks can be effectively managed by a relatively small number of debt managers in the public debt management, normally in the front and middle office, whereas operational risks must be addressed at all levels across all of government debt management operations. The Basel II definition as mentioned above includes legal risk but excludes strategic and reputationrisk. The strategic and reputation risk, however, can be caused by both bad operational risk management and an unexpected consequence of an informed decision. An inappropriate strategic decision due to lack of adequate training of staff and lack of system support is an operational risk,while an informed strategic decision based on a reasonable cost/risk analysis that still resulted in aloss for the government is an ordinary business risk. Both can of course affect the reputation of the government. It is useful to consider the principles for operational risk management within the context of the legal and managerial structure that shapes and directs the operations of the public debt department. It includes the legislation that defines goals, authorities, and accountabilities. It also embodies the management framework, covering issues such as the formulation and implementation of a debt management strategy, operational procedures, quality assurance practices, and reporting responsibilities. The governance structure for operational risk management may be quite extensive with an operational risk committee, audit committee, a management committee, and an advisory or decision-making board.

Developing an operational risk management framework can be an evolutionary process as it will take time and effort to not only identify and understand the risks but also the mitigation techniques in an environment that is constantly changing. There is no need to try to do everything perfectly from the outset. The framework can be developed and applied incrementally as techniques improve and staff begin to understand the risks and mitigation techniques. For the framework to succeed, it is extremely important to develop a culture of risk awareness across the public debt management and ensure that all staff are involved in developing and implementing the framework.[1]

The first stage involves senior management understanding and signaling to all staff in the public debt management the importance attached to operational risk management and the need for their participation and ongoing cooperation. The principles as outlined above that will be followed in the management of operational risk need to be made clear to all staff and embedded into day-to-day public debt operations. Each line manager needs to be made responsible for operational risk management in their own business area. It is advisable that a risk champion from the middle office be appointed to take overall responsibility for operational risk management. The risk champion will lead and guide the process across the public debt management, coordinate reporting to senior management, and develop the appropriate operational risk management policies and procedures and control environment. Ideally the risk champion would have relevant background or experience, although this will often not be possible. There are, however, opportunities for professional training in operational risk management and business continuity planning which could be considered. Once the structure has been established, the development and maintenance of an operational risk management framework for a public debt management should follow a process, as understanding document activities, identifying, assessing and measuring risks, developing risk management strategies, implementing capabilities, monitoring and very important to continue the improvement of it. The risk champion should then report to senior management on the greatest exposures, the risk management techniques to mitigate, control, or limit the risks, the actions that are recommended to address the greatest exposures, and an estimate of costs. Senior management can then assess the cost-risk trade-off before making decisions or seeking approval from higher level. The risk assessment and operational risk management strategy approved can be documented in the public debt department operational risk management plan. A business continuity or disaster recovery plan can be incorporated in the plan or maintained as a separate document. The risk champion can oversee the implementation of measures approved by senior management and incorporate into the wider risk management monitoring and control policies and procedures for the public debt management. [3] This process may comprise: training program for managers and staff to understand their roles and responsibilities in compliance with the operational risk management policies and procedures, and possibly introducing risk-reduction objectives for each member of the public debt management, raising awareness with external parties to cover all activities external to the public debt management of the operational risk management framework and seek their cooperation in monitoring and reporting and, where possible, requiring these service providers to meet the same operational risk management standards as the public debt management introducing operational risk management into service level agreements or a memorandum of understanding with third party providers and contracts with external suppliers, developing control tools that are documented in procedures, technical and other manuals and monitored by the public debt management, risk monitoring, developing, maintaining and annual testing of the business continuity and disaster recovery plan. [2]

The monitoring process assesses the presence and functioning of the operational risk management policies and procedures over time through a combination of ongoing monitoring activities and specific evaluations. Ongoing monitoring occurs in the normal course of public debt management operations; it is the responsibility in the first instance of line managers, with coordinating responsibility assigned to the middle office/risk monitoring and compliance unit/risk champion. The scope and frequency of specific evaluations depends on an assessment of risk and the effectiveness of ongoing monitoring procedures. The specific evaluations could be undertaken by external audit. It is necessary to report regularly to senior management on the risk profile, identifying areas that are improving or deteriorating, and priorities for mitigating action. An important element of monitoring performance is reporting of incidents or exceptions to senior management, normally as part of a risk monitoring and compliance report. For serious incidents or events, it may be necessary to identify badly managed risks and the action needed to avoid repeating such incidents. Many incidents may often be the fault of management failing to develop an adequate control environment rather than the individuals that may be deemed directly responsible, indeed for this to work effectively a no blame culture is important. One course of action is to identify which line manager has the lead responsibility for managing and controlling each of the identified risks, and then ask each line manager to report periodically on the risks for which they are responsible, whether these have increased or reduced, and whether and what action should be taken. In this way, the line managers are involved in the process which ensures buy-in of the business areas across all public debt operations.

The middle office risk monitoring and risk champion will be responsible for collecting the reports together with the preparation of exception/error reports, and summarising the key points and main risk drivers. Changes in the risk profile since the last monitoring assessment should be noted. The report would go on to make recommendations for consideration by senior management.

3. RESULTS AND DISCUSSIONS

Risk management is central to the debt manager's task. Risk depends on exposure to future events, however driven, with exposure depending both on the probability of the event happening and its impact if it does. Risk management is about identifying and assessing these risk factors, and deciding whether and how to respond to them and mitigate their impact. Among the risks managed by debt managers, market risk has perhaps received the most attention, the risks associated with changes in market prices, such as interest rates and exchange rates, on the cost of the government's debt servicing. Also important is rollover risk, which depends on how interest rate volatility interacts with the redemption profile, and liquidity risk, the ability to access cash in a short period of time. Both can be seen as a category of market risk. Credit risk, the impact of a failure of a counterparty, may be important in some cases. The debt manager's task is to assess the magnitude of these risks, or the sensitivity of outcomes to changes in the risk factors, and develop a strategy for managing the trade-off between expected cost and risk. Operational risk is perhaps the least understood of the debt management risk categories. But it is no less important. The public debt department will be directly responsible for stewardship of very substantial government liabilities and for managing a large value of transactions, probably much more than any other governmental body. The large sums involved mean that any risk exposure can have damaging financial consequences including on debt service costs. But there is potentially also severe reputation and political damage associated with operational error or failure, reflecting on the competence of the debt managers or of ministers.

Operational Risk is considered problematical, or is least understood of the risk categories, or is endogenous to the institution –it cannot be captured and measured as easily as credit and market risk. The management processes are complicated, is linked to the nature and the complexity of the activities, to the processes and the systems in place, and to the quality of the management and of the information flows, it has many sources, a lack of discipline, unstable or poorly designed procedures, inertia, change, greed, lack of memory or knowledge, overconfidence, all factors which cannot be easily quantified, monitored, and reported upon. But Management of operational risk is very important and should preview the failure of transaction - processing systems is a major risk exposure, heavy reliance on IT – reduces human error, but exposes new risks, pressures to reduce costs, increasingly sophisticated financial products, new technologies accelerate market activity and increase interconnectivity, bringing new security concerns, increasing regulatory requirements that have highly explicit compliance expectations, all of which put pressure also on public sector.

Indicators of best operational risk management (ORM) are: operational risk management practices should be repeatable, it should be linked into day-to-day business, and hence to continuous improvement mechanisms built into the operational risk management cycle. Policies and procedures should be fully embedded in working practices, with active top management support. Data history should be built up gradually to enable effective trend analysis. ORM falls short of best or good practice where it is no more than an 'add-on' in terms of practices, policies and procedures, it is a product of the operational risk management function only, and then rolled out for a selected number of departments or processes.

The ORM function coordinates the operational risk management process on a day-to-day basis and establishes the framework for reporting and evaluating results, facilitates and monitors the risk-response process, escalating problems as necessary. The function typically evolves over time, from being the main driver to being a facilitator or consultant. This shift requires both: the active support of senior management and strong operational risk function, to enforce a formalized and standardized approach for the implementation of ORM practices across the organization.

As recommendations it can be proposed:

- Control activities must be planned at all levels throughout the organization and the responsibilities for their execution and follow-up clearly defined;
- The responsibility for developing and implementing risk-response action plans it is for management representatives;
- Monitoring is undertaken in parallel and is semi-independent of the ORM function in so far as is evaluating the effectiveness of the ORM process itself.

ORM is a key component of the overall governance structure, is a formal, structured response to managing the internal environment and the external factors influencing it. Explicit attention to the risk culture, closely linked with human resources development and evaluation practices and explicit responsibility allocation for ORM objectives to employees across the organization should be an integral part of communication & monitoring activity. Also, the degree of top management attention is an initial indicator of an organisation's ORM maturity level and to establish an effective support structure for mature operational risk management practices. This includes providing leadership in interpreting and translating often intangible governance considerations into a practical policy ORM in a Debt Office. Senior management must signal to whole office the importance attached to operational risk management and to appoint a "Risk Champion" someone in middle office who will take OR responsibility. The risk champion leads and guides the process throughout the office; and coordinates reporting to management, develops the control framework; acts as “consultant” to line managers; and monitors and chases progress. Suggested process for risk champion is to identify risks and assess key exposures, prepare a high-level summary of risks that is consistent across the office, as a way of identifying priorities for management, monitor risk events, regularly review and update of the risk profile, collect risk data in a series of workshops across the office. Important that everyone is involved, including the more junior staff - helps to develop risk understanding and a risk culture and coordinate with internal audit; inform external audit. Risk champion should rate each risk for both likelihood (low, medium, high) and impact (low, medium, high) and plot the combinations on a matrix. Most serious risk exposures are those of high likelihood and large impact. Ideally scoring done separately before and after the mitigating controls, and decide whether the residual risk can be further reduced or is unavoidable. Risk champion reports to management on greatest exposures, together with the control actions that have been taken or might be taken in future and refresh data periodically with repeat workshops. [4]

Also, reporting is very important. Risk champion should report each incident or exception –summary in reports to senior management, report regularly to senior management on the risk profile, identifying where improving or deteriorating; and priorities for mitigating action, indentify which manager has the lead responsibility for managing and controlling each of the identified risks. The responsible one should ask each manager to report periodically on the risks for which they managing - whether these have increased or reduced, and whether and what action should be taken. Risk champion collects the reports together with the error reports, and summarises the key points for senior management, with recommendations. Risk management should be a holistic and comprehensive process within a Public debt management department (PDMD). A larger PDMD would have its own senior management risk committee or enterprise risk management framework to define its risk policies, covering market and credit as well as operational risk, to monitor exposures and identify the trade-off between risk and operational goals. Within this context, the exposures associated with operational risks and the importance of developing policies and procedures for managing those risks have been drawn to debt managers’ attention. However, their implementation in practice has, for various reasons, been deficient. Operational risk management is difficult and may be seen as unfashionable and of relatively low status in the high pressure and politicised environment faced by many debt managers. Responding to this gap, the World Bank has recently published a guidance note on operational risk management in government debt management.[2]

Good practice calls for the development of operational risk management policies and procedures that give senior managers a clear oversight of key operational risks, and for necessary actions to manage these risks in a way that is consistent with wider debt management objectives. A very good example is General Directorate of

Public Finance (GDPF) when has developed an operational risk management framework that is in line with good practice as widely adopted across the financial services industry internationally, while also taking into account the somewhat different objectives of a public sector body. One of the challenges is what data to collect and how to collect them. A key objective of ORM is to provide actionable information to allow decision-makers to assess the true extent of risks in order to determine the way forward. Incident reporting is crucial. If that can be linked with actual loss data, so much the better; but as argued above, not if such financial calculations are simply a distraction. Moreover, many significant incidents do not result in serious direct losses. Incidents should be analysed to risk drivers and to risk exposures. It will be helpful to design a standard template for incident reporting, and build an internal database that lists all incidents attributable to operational problems. It is good practice to score incidents (critical, significant, minor etc); and monitor over time the process of assessment, agreed action and its implementation by management. There are often two problems in practice:

a) In more analytical areas the concept of an error or incident may be less clear cut. For example, in Turkey there was also initially some uncertainty about who should report errors when more than one unit was involved in the process. Ideally it is the originating team not the impacted team that should report the incident.
b) The way of the PDMD may make staff reluctant to report incidents if they fear that it will affect their prospects or performance assessment. It is very important that there is a "no-blame" culture; and management should be seen both to insist on a report and to avoid anything in the way of reprisal. Constant reminders will probably be necessary at first.

In Turkey incidence reporting has improved as staff have gained reassurance from the attitude of management. Persistent error of course is to be discouraged; but more often than not it will be management's fault – because of insufficient training, poorly targeted checking or inadequate system design. The risk team can use its own information and informal sources as a ways of encouraging and monitoring the completion of reports. Risk awareness takes time to develop, and once established it must be reinforced. Basic training should be given to new personnel, with all staff being given periodic refreshers. Incident reports are only one part of the reporting processes; they say nothing about exposures that have not materialised in the period. Incident reports should be backed both by managers' own assessment of the risk profile in their area – and whether it was deteriorating or improving. Also helpful are key risk indicators as potential indicators of risk exposures. For a more understanding of standard risk management process these are the usual stages:

- <u>Risk Identification</u>: As mentioned earlier, understanding the risks specific to public debt management area is key, but there are also many potential risks that affect and need to identify all of them, both those that are recurring and those that can be one-off events. The identification process needs to involve staff from all levels if possible, bringing a variety of backgrounds and experiences to make a cohesive result

- Risk Assessment:
  Once the risks have been identified, they need to be assessed. This needs to be done from both a quantitative and qualitative perspective and factors like the frequency and severity of occurrence need to be taken into consideration. The assessment needs to prioritize the management of these risks in relation to those factors.
- Measurement and Mitigation:
  Mitigating these risks is the next stage, with controls put in place that should limit the PDMD exposure to the risks and the potential damage caused by them.
- Monitoring and Reporting:
  Any Operational Risk Management plan must have something in place for the ongoing monitoring and reporting of these risks if only to demonstrate how effective the plan has been. Most of all, it's to ensure that the solutions put in place are continuing to be effective and doing their job in managing the risks.

4. CONCLUSIONS

The importance of operational risk management in public debt management department is not in doubt. The benefits are difficult to measure, as they can be defined strictly only in terms of what did not happen. But they are very important, useful and clear enough:

- a better understanding of risk and more informed and improved decision making, with greater focus by senior management on what is important;
- more effective and efficient risk management processes and controls, and speedier corrective mechanisms, all underpinning the protection of the government balance sheet and transactions;
- an enhanced external reputation, which potentially brings benefits in the PDMD or treasury's interaction with, for example, the central bank and market intermediaries;
- a stronger and more risk-aware culture internally, with wider business planning benefits in terms of focus on objectives and collaborative work within the PDMD.

In the Turkish Treasury, there were some early benefits as some high risk exposures were brought into focus and new control mechanisms were developed accordingly, particularly in the IT and disaster recovery areas. [3] Staff gave their full support once they realised that the new framework made their work easier and reduced the number of mistakes and errors. They also found it useful to use the ORM framework and tools to convey their needs to the senior management. The experience in Turkey and in other PDMDs shows that such benefits can be achieved with a proportionately modest resource cost. The procedures outlined are not only consistent with good international practice, taking into account the distinct public sector characteristics of a PDMD, they are also flexible, and can be applied proportionately to size, activities, risk appetites and capability. In Turkey, the cost includes the staff of the operational risk management department (ORMD) and the time taken by the working groups, to which some management time must be added. All staff will be involved in periodical updating of the data, incident reporting etc.; but much of the continuous reporting and summarising work will be the ORMD's responsibility. For a smaller PDMD, it might identify an existing member of the middle office as risk champion, and establish a working group, engaging all staff directly to draw up the initial matrices through two or three workshops. Whatever the scale and resources, the support of senior management will be critical, and, at the end of the day, ORM helps them to meet their and the entity's objectives.

ORM is a key component of the overall governance structure, the structured internal processes of specifying objectives, making decisions and monitoring performance within the wider environment, including the strategic objectives and accountability processes applying to the PDMD itself. The degree of top management attention is arguably an initial indicator of an organisation's ORM maturity level. Full integration and recognition of ORM requires senior management:

a) to offer attention to the risk culture, closely linked with human resources development and evaluation practices;

b) to present leadership in interpreting and translating often intangible governance considerations into a practical policy;

c) to give responsibility for ORM objectives to employees across the department;

d) to ensure that ORM is an integral part of communication and monitoring activity;

e) to embed fully policies and procedures in working practices.

Some thought also needs to be given as to how the ORM function relates to related functions, such as internal audit and a separate compliance function if there is one. The internal audit function should be independent of the ORM function, not least because part of its role is to evaluate ORM processes, and should report to the head of the PDMD. It should be governed by an audit charter that gives the unit sufficient authority and freedom. Many PDMDs will be too small to have a dedicated internal audit function and they will in practice share that of the wider ministry of finance. Compliance is the process for ensuring that procedures and controls are consistent with rules and regulations and also that they are properly operated. It should be an opportunity to review regularly the risk profile and reassess priorities in the light of changes in the environment and risk events. These management needs must mesh with the procedures that operate at working level, the preparation of risk registers, the development and operation of controls and the preparation of procedures that embody them. The approach set out here is designed to be consistent with good practice but to take account of the constrained resources of many PDMDs and their integration in wider ministerial or governmental organisations. The first step is to identity an individual in the middle office to lead the process –

often referred to as the “risk champion”. More developed PDMDs will have an ORM professional; others will need to identify an official who will be tasked to organise, develop and drive forward the framework, advise line managers as required, maintain risk data and report to senior management on the risk profile. In the smallest PDMSs, this official may have other middle office responsibilities.

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