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Risk Based Premiums in Deposit Insurance

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1) Introduction to Deposit Insurance and Risk Based Premium

Deposit insurance is a protection provided by a deposit insurance authority (deposit insurer) to ensure that deposits up to a certain amount (coverage limit) are reimbursed to depositors in the event that a Deposit Taking Financial Institution (DTFI) fails and it is unable to meet its obligations to depositors.

Deposit Insurance System includes deposit insurer and its relationship with Member Institutions (MIs) and financial safety net participants that support deposit insurance functions and resolution processes. Examples for such safety net participants other than deposit insurer include, Central Bank, Bank Supervisory Authorities, Resolution Authority, etc., MIs are the participants in Deposit Insurance System. Deposit Insurance Systems maintain Funds of two main types, i.e., ex-ante (fund is accumulated through regular collection of premiums with the aim to meet future obligations and cover the operational and related costs of deposit insurer) and ex-post (funds to cover deposit insurance obligations are only collected from surviving MIs after failure of MIs).

In the case of Sri Lanka, Deposit Insurance Authority is the Sri Lanka Deposit Insurance and Liquidity Support Scheme established by Sri Lanka Deposit Insurance Scheme Regulation No.1 of 2010 (as amended) (the

Regulation). MIs include all Banks and Finance Companies licenced by the Central Bank of Sri Lanka. In terms of the Regulation, Sri Lanka Deposit Insurance and Liquidity Support Fund (the Fund) has been established, which is an ex-ante fund and the initial capital to the fund has been provided by the Central Bank of Sri Lanka from the Abandoned Property Fund Account and Voluntary Deposit Insurance Fund, which was ceased to be in operation with the establishment of Sri Lanka Deposit Insurance and Liquidity Supports Scheme. Thereafter, the main source of funding to the Fund would be through regular premiums collected from the MIs.

2) What is Risk Based premium?

There are two main types of premia systems in deposit insurance i.e., flat rate premia and differential premia, which are also called risk based premia. Under flat rate premia all MIs are required to pay premia calculated applying same premia rate irrespective of the risk profile of the MI or risk posed by MI. Flat rate premium systems are easy to understand and administer. Under risk based premia systems, different MIs are required to pay premiums calculated using different rates, depending on their risk profile.

Objectives of having risk based/differential premium systems are,

- a). To provide incentives for MIs to adopt sound risk management practices.
- b). To differentiate MIs according to their risk profiles.
- c). To enhance the fairness of the premium payment method, i.e., differential premium systems should ultimately result MIs with higher risk profiles paying higher premiums than MIs with lower risk profiles.
- d). Broadly, risk based premium systems are to promote system stability through enhancing sound risk management practices by MIs.

Administering and operating of a risk based premium system is much more difficult compared to flat rate premium systems. However, considering the above objectives successful implementation of risk based premium system is more appropriate.

It is generally implied that risk based premium system would help to control moral hazard in deposit insurance. However, based on the research finding of Prescott (2002), concluded that risk based premium systems are not enough to control moral hazard.

3). Deposit Insurance Funding and Risk Based Premiums – Applicable Best Practices

The International Association of Deposit Insurers (IADI) and Basel Committee on Banking Supervision (BCBS) have issued Core Principles for Effective Deposit Insurance Systems, which acts as benchmarks to be followed by any effective Deposit Insurance Systems. There are 16 such revised core principles to be followed by effective Deposit Insurance Systems. Further, core principal No.09 gives principles on sources and uses of deposit insurance funds. In terms of principle 9, the deposit insurer should have readily available funds and assured funding mechanisms necessary to ensure prompt reimbursement of depositor claims. Further, responsibility for paying cost of deposit insurance should be borne by MIs. Essential criteria given under core principle 9 in brief are as follows,

- i). Deposit insurance funding should be ex-ante basis and funding arrangements should be clearly defined and established by the law/regulations.
- ii). MIs are responsible for funding the Deposit Insurance System.
- iii). Initial funding is permitted to help establish a deposit insurer. Further, any initial fund provided by the Government may be repaid before deposit insurer reduce all or part of premiums.
- iv). Assured and prearranged emergency liquidity funding mechanism should be set up by the deposit insurance law itself. Further, such arrangements should be in place in advance to ensure effective and timely access when required.
- v). After establishing ex-ante deposit insurance fund, target fund size should be determined on clear basis, consistent and transparent criteria, and should be subject to periodical review. Further, a reasonable time framework should be set to achieve target fund size.
- vi). Deposit insurers are responsible for sound investment and management of its fund.
- vii). Deposit insurer may hold funds in the Central Bank and deposit insurer should establish rules to limit investing significant funds in banks (MIs).
- viii). When deposit insurer is not the resolution authority it has the option within its legal framework to use its funds for resolution provided certain specific conditions are met.
- ix). Should deposit insurance income/collection be taxed by the Government, the rate should be neither punitive nor disproportionate to other corporate taxes, nor unduly hinders the accumulation of the fund.
- x). If the deposit insurer uses differential premium systems, is essential that:
 - a). The system for calculating premiums is transparent to all participating banks;

- b). The scoring/ premium categories are significantly differentiated; and
- c). The ratings and rankings resulting from the system pertaining to individual banks are kept confidential.

Further to the above mentioned core principle No.9 and essential criteria provided by IADI and BCBS, IADI has also issued General Guidance for Developing Differential Premium Systems (2011). In terms of such General Guidance, the following should be taken into consideration when developing risk based/differential premium system;

- Primary objective of introducing differential premium system should be to provide incentives for banks/MIs to avoid excessive risk taking and introduce more fairness into premium calculation method.
- It is important to self-assess the state of economy, current monetary and fiscal policies, state and structure of the banking and financial system, public attitudes and expectations, strength of prudential regulation and supervision, legal framework and soundness of accounting and disclosure regimes before establishing differential premium system.
- Approaches used to differentiate risk and assign premiums should be; effective, utilise wide variety of information, be forward looking, and be well accepted by banking/financial system participants and safety-net participants.
- Deposit Insurance authority should have necessary authority to adopt such system, consistent, accurate and verifiable resources and information availability and information used needs to be validated.
- Transition issues needs to be properly addressed.
- The bases and criteria used in differential premium system should be transparent to all participants and designers of such system need to maintain balance between desire to promote accountability,

discipline and sound management through disclosure and needs to ensure confidentiality of information.

- Differential premium system should be reviewed, updated and fine tuned from time to time if necessary.

4) Approaches to Establish Risk Based/ Differential Premium Systems

There are number of approaches available in general, in establishing risk based/differential premium systems. Three of such basic approaches can be summarised as follows,

A) Quantitative Criteria Approaches

These approaches try to use measures that are factual and data driven, to categorise MIs for premium assessment purposes. Some qualitative criteria approaches rely on only one factor to assess risk while others combine a number of factors. Generally, information for the Quantitative approach criteria is collected through on-site, off-site and supervisory processes. Information such as Capital Adequacy, Earnings, Asset quality etc, are collected for mis approach. Another quantitative method is expected loss pricing model. This model considers probability of default of the MI, the exposure of deposit insurer to that MI and the size of loss that deposit insurer might incur. Main shortcoming of the quantitative criteria approach is that its effectiveness is highly dependent on the quality, reliability, timeliness and adequacy of historical data.

B) Qualitative Criteria Approaches

This approaches generally rely on number of qualitative factors to categorise MIs into different categories for premium assessment purposes. Basic method used is reliance on some form of regulatory and supervisory judgment or rating system and information on adherence to guidelines, standards, compliance to supervisory or deposit insurance requirements. These assessments usually provide an indication of the risk profile of the MI. Under this method high level of judgement is employed in determining weights and qualitative

factors. Hence they tend to be less transparent.

C) Combine Quantitative and Qualitative Criteria Approaches

These approaches use both qualitative and quantitative measures to categorise MIs for premium assessment. This approach can be seen as the most widely applied method by different jurisdictions.

In terms of the guidance provided by IADI, whatever the chosen approach, it should be effective at differentiating MIs into appropriate risk categories, able to utilize variety of different information, be forward looking and be well accepted by MIs and safety net participants.

Table 01 : Premium assessments by western countries

Country	United States	Canada	Argentina	Belgium	Denmark	Ecuador	Ireland	Norway	Peru	Russian Federation	United Kingdom	France	Germany	Greece	Italy	Portugal
Flat rate																
Differential rate	x	x		x	x	x	x	x	x	x	x	x	x	x	x	
Combination			x													x

Source: Annual Survey 2019 of International Association for Deposit Insurers (IADI) (as of year-end 2018).

Table 02 : Premium Assessments by Asian countries

Country	Japan	Korea	Kenya	Hong Kong	Philippines	Singapore	Malaysia	Thailand	Vietnam	Chinese Taipei	Indonesia	India	Pakistan	Bangladesh	Sri Lanka
Flat rate	x		x ¹		x			x	x		x	x	x		
Differential rate		x		x		x	x							x	
Combination										x					x

1 Differential premium rate is implementing from 2020

Source: Annual Survey 2019 of International Association for Deposit Insurers (IADI) (as of year-end 2018)

5) Application of Risk Based/ Differential Premium Systems by Other Jurisdictions

In terms of the IADI Annual Survey Data 2019, application of risk based/differential premium rates by Deposit Insurance Systems in Western Countries and Asia, can be observed as in the following tables. Accordingly, it is evident that the majority of the Deposit Insurance Systems in the western part of the world follow risk based/differential premiums while in the Asian countries, it is mixed. Countries like Malaysia, Korea, Hong-Kong and Singapore apply differential premiums while others such as India, Japan, Vietnam, Indonesia, Philippine etc, are currently applying flat rate premium system.

Methodologies applied for risk based/ differential premium assessment by Deposit Insurance Systems in different jurisdictions

Some countries are following differential premium assessment systems and their methodologies/ approaches are different to each other, as shown below.

1. Malaysia

In terms of the IADI General Guidance for Developing Differential Premium Systems (2011), Deposit Insurance

System in Malaysia is applying differential premium assessment system and the approach is a combine quantitative and qualitative criteria. Accordingly, a score out of 100 will be given for both quantitative and qualitative criteria. Further, based on the total score obtained, MIs are classified under four different categories and depending on the category, different premium rates will be applied. Summary of criteria used, the scores assigned and premium categories are depicted by the Table No.03 and 04, respectively.

Table.03 : Summary of Criteria and Scores

Criteria	Maximum Score
Quantitative Criteria	60
Capital Adequacy	20
Risk-weighted Capital Ratio	10
Core Capital Ratio	10
Profitability	15
Return on Risk-weighted Assets Ratio	8
Mean Adjusted Return Volatility	7
Asset Quality	15
Net Impaired Loans to Capital Base Ratio	8
Total Impaired Loans Ratio	7
Asset Concentration	5
Aggregate Sector Asset Concentration Ratio; and Residential Property Asset Concentration Ratio	
Asset Growth	5
Risk-weighted Assets to Total Assets Ratio; and Total Asset Growth Ratio	
Qualitative Criteria	40
Supervisory Rating	35
Other Information	5
Total	100

Table.04 : Scores and Premium Categories

Score	Premium Category
≥ 85	1
≥ 65 but < 85	2
≥ 50 but < 65	3
< 50	4

Source: IADI General Guidance for Developing Differential Premium Systems (2011), Pg.53 -54.

2. Nigeria

Nigeria Deposit Insurance System, which was initiated with flat premium system moved to differential premium method. They aggregate risk premium depending on quantitative and qualitative parameters to a base rate. Under the quantitative parameters, Capital Adequacy, Asset Quality and Liquidity have been considered. The qualitative parameters include poor retention rate, Late Rendition of Returns, Financial Misreporting, Poor Risk Management System and non-implementation of examiner's recommendations, (Source: IADI General Guidance for Developing Differential Premium Systems (2011), Pg.58-59)

6) Implementation of Risk Based Premium System for Sri Lanka

Deposit Insurance System for Sri Lanka was established in 2010 and in terms of the applicable law (the Regulations), premium assessment involves is a combination of flat rate and differential premium systems. Accordingly, all Licensed Finance Companies, irrespective of their risk profile, is charged at a flat rate of 0.15% per annum. In the case of Licensed Banks, depending on the capital adequacy ratio, two different premium rates are applied, i.e., if the capital adequacy ratio is $\geq 14\%$, applicable premium ratio is 0.1% per annum and if the capital adequacy ratio is $<14\%$, the applicable premium ratio is 0.125% per annum.

However, it can be seen that in the case of Sri Lankan banks, only quantitative and single criteria i.e., status of Capital Adequacy has been considered for risk assessment and it cannot reflect the entire risk profile of the bank. Therefore, it is appropriate to consider more quantitative factors to reflect the bulk of the risks of a bank, such as asset quality, liquidity and earnings. Further, combination of quantitative and qualitative criteria approach would reflect a better risk profile of the bank.

In the case of Licenced Finance Companies, differential premium system to represent risk profiles would be more appropriate. However, considering the differences

terms of levels of supervision and business models of banks and finance companies, similar parameters with similar scoring categories to determine differential premium rates may not be applicable for all MIs of Sri Lanka Deposit Insurance and Liquidity Support Scheme.

The Method applied by Nigerian Deposit Insurance System as explained in section 5. Under which, existing premium rates can be considered as base rate complemented by a system of adding additional basis points to represent different risk parameters may be considered, for deposit insurance system of Sri Lanka.

However, guiding principles stated under section 3 should be taken into account to improve the existing premium assessment system to a more comprehensive risk based/differential premium system, by considering factors such as availability and quality of information, confidentiality of such information, administrative capability of such differential premium system, and primary objective of providing incentives for banks/MIs, to avoid excessive risk taking by bank/MIs and to introduce more fairness into premium calculation method.

Conclusion

Risk based/differential premium systems should be established by taking into account certain factors such as the state of the economy, current monetary and fiscal policies, current state and the structure of the financial system of the country. Further, objectives of a risk based/differential premium system should be to encourage banks and financial institutions to avoid excessive risk taking and to introduce more fairness into the premium assessment system. There are different approaches available for differential premium systems such as quantitative criteria approaches, qualitative criteria approaches and those that combine quantitative and qualitative criteria. However, whatever the approaches used to differentiate risk, they should be effective, utilise variety of relevant information, be forward looking and well accepted by bank and non-bank industry and safety net participants. It is observed

that a majority of western countries are currently applying such risk based premium systems and in Asian countries, both flat rates and differential rates are applied. A well-managed transition process can contribute to the success and acceptance of differential premium system. Once such a system is implemented, the system should be reviewed, updated and fine tuned from time to time.

In conclusion, to ensure soundness of the Sri Lanka Deposit Insurance and Liquidity Support Fund, the implementation of risk based premium system providing incentives to avoid excessive risk taking and to have more fairness into premium collection system, would be more appropriate to the present context of Sri Lanka.

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Coordination between Public Debt Management and Monetary Policy

The Global and Sri Lankan Experience

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Introduction

The need for efficient management of public debt has been widely accepted in the global context as accumulated high levels of public debt along with bad management could lead to rapid deterioration of economic prospects of a country. Traditionally, public debt has been managed either by the government itself or by the central bank globally. Concerns have been raised whether the management of public debt by the central bank has a conflict of interest as modern central banks' main role is the conduct of monetary policy, i.e. maintain interest rates at appropriate levels to preserve low and stable inflation, while the debt managers' objective is to raise debt at lowest possible cost. The strategies implemented to achieve these two distinct objectives could be contradictory at times. Accordingly, related discussions have led to the fundamental question of whether the management of public debt has to be completely separated from the conduct of monetary policy. However, according to the literature, such separation without proper coordination among policies may deteriorate economic conditions of a country depending on the status of country specific factors, such as

economic conditions, size of government budget deficit, size of public debt, strength of institutions as well as the maturity of the financial market. In Sri Lanka, as the fiscal agent and banker of the government, the Central Bank (CBSL) has been entrusted with the responsibility of management of public debt by the Monetary Law Act since 1950 while the conduct of monetary policy has been the core function of the CBSL. Current debt level in Sri Lanka is substantially high in comparison to regional peers as well as accepted norms. However, a healthy coordination between debt management and monetary management prevails presently. The choice of the institutional framework for public debt management in Sri Lanka was also in the discussion in the past.

This note attempts to shed some light on the discussion on coordination of public debt and monetary management in the global as well as the Sri Lankan context. Remaining sections explain the functions of a debt manager, conduct of monetary policy, conflict and coordination between debt management and monetary policy, the establishment of a separate debt management office, global experience, the Sri Lankan experience and a brief summary of the discussion.

Functions of a debt manager and institutional arrangements

Typical key functions of debt management can be classified as follows: forecasting, planning, accounting, primary issuance of debt, debt service payments, development of secondary markets, payments and settlement and dissemination of information (Kalderen, 1997). These functions are carried out by different agencies in different countries. Generally, the finance ministry obtains authority for borrowing and debt management from the Parliament, and delegates the work among relevant agencies.

Three types of institutional arrangements for public debt management can be identified in the current global practice. Most common and natural location to carry out debt management is under either the central bank or the ministry of finance. In some countries, the central bank is the sole agent of the government in carrying out the policies and instructions laid down by the ministry of finance while in some countries, the ministry of finance either does the work itself with a separate department or delegates work to a treasury agency under its direct supervision. In other countries, on the contrary, the debt management has been delegated to an institution with greater-than-average degree of autonomy, which is typically called a debt management office. These separate agencies normally report to the ministry of finance while they are given independence to carry out their daily routine operations. These autonomous agencies act towards meeting the government borrowing requirements within well specified risk limits and efficient and liquid money and capital markets (Sundararajan, V, Dattels, P and Blommestein, H. J., 1997).

Conduct of monetary policy

The primary objective of the modern central banks is to maintain low and stable inflation. Central banks conduct monetary policy to achieve this objective. Monetary policy is the process by which a central bank manages the supply and the cost of money in an economy. The key tool that the central banks utilise to achieve the price stability objective is the policy interest rates at appropriate levels through which it manages the liquidity in the market. It is widely accepted that the monetary policy decisions have to be taken independently to achieve the mandate of price stability successfully

Conflict and Coordination between public debt management and monetary management

The fundamental conflict between debt management and monetary management arises through the determination of interest rates (Sundarajan et al, 1997). Debt manager's objective is to raise debt at the lowest possible interest rate with a prudent degree of risk, while monetary policymaker's objective is to stabilise price levels by altering interest rates. These objectives can be conflicting with each other at times. For example, an increase in interest rates, as part of anti-inflationary policy, has immediate impact on the cost of borrowing, which affects negatively on the public debt management. Another conflict of interest, as Blommestein and Turner (2012) specify, is the fact that the advanced knowledge of interest rate path by central banks may induce the bank to adjust the securities issuance schedule accordingly.

Prudent policy coordination is vital to maintain macroeconomic stabilisation and financial market development while lack of proper coordination may raise uncertainty among private sector resulting in increases in borrowing cost. The

degree of policy coordination depends on the institutional framework and the operational arrangement of debt management. In developed countries, with advanced, liquid financial markets, policy coordination can normally be achieved through market forces. This is supported by the independence of the central bank to maintain price stability and transparent fiscal policy and debt management process (Sundarajan et al, 1997). However, in developing economies, where in general, financial markets are shallow and illiquid, budget deficits are high and government's financing options are limited, a close coordination of monetary, fiscal and debt management policies is essential to support the common objectives relating to stabilisation and market developments (Blommestein and Turner, 2012; Blommestein and Thunholm, 1997; Filardo et al., 2012). At the policy level, implications on monetary management has to be examined thoroughly before adopting debt management strategies while at the operational level, liquidity conditions and maturity structure need to be properly investigated before implementing the borrowing programme. Francesco and Leonardo (2019) finds that the lack of monetary and fiscal coordination in the presence of a large stock of debt may lead to detrimental economic conditions.

The idea of establishing a separate debt management office

There are advantages as well as drawbacks of setting up a separate debt management office. First and foremost, as against central bank handling debt management, the conflict of interest arising from coordinating both debt management and monetary policy dissipates. This preserves integrity and independence of the central bank. Additionally, by having a separate debt management office, the government makes clear that debt management

is not part of monetary management. Further, it improves debt management by entrusting the debt management functions to portfolio managers with expertise in modern risk management techniques (Forkerts and Landau, 1997; Singh, 2013). The main drawback of a separate debt office is, it might complicate things, rather than improving, if capital markets are underdeveloped. Under such circumstances, raising debt purely through the market mechanism at the lowest possible cost would be challenging. Accordingly, establishing an autonomous debt office, without proper coordination among monetary and fiscal authorities may lead to difficulties in mobilising funds for the government at the optimal combination of cost and risk, while complicating the conduct of monetary policy. This issue is likely to aggravate in times of economic crisis, where borrowing volumes are high while markets are volatile.

Global Experience

Following debt crises in early 1980s and late 1990s, policymakers paid special attention to public debt management and the discussion on separation of debt management from monetary policymaking. Many countries in Europe, including Belgium, Ireland and Portugal, decentralised debt management functions mainly to reduce the debt service costs. Australia, Finland, Germany, Netherlands and USA have a treasury agency to carry out debt management functions. In these countries, the requirement of government securities by the central bank to conduct open market operations are informed to the finance ministry through a coordination committee. Debt management offices are established in Sweden and Ireland, among other, where the finance ministry obtains the authorisation for borrowing from the Parliament and gives instructions to the debt office.

In India, the discussion on separation of debt management from the Indian central bank, the Reserve Bank of India (RBI), has a long history. The proponents for separation state such an arrangement will resolve conflict of interest, reduce the cost of debt, facilitate debt consolidation and increases transparency. However, then Governor of RBI, Mr D. Subbarao mentioned in 2011 that those advantages are overstated while claiming that market borrowings are the major source of central government's deficit financing which exceeds the absorptive capacity of the market.¹ Accordingly, separation of debt management from RBI will loosen the link between central government and state government making borrowings difficult. However, in the Budget speech 2015, Indian finance minister had proposed to set up a Public Debt Management Agency within the finance ministry which has not yet been fully executed. Presently, India has set up a Public Debt Management Cell within the Department of Economic Affairs as an interim arrangement before setting up an independent and statutory debt management agency namely the Public Debt Management Agency (PDMA). However, the way forward is not clearly communicated to the market.

Especially aftermath of the global financial crises, scholars and interested parties were of the view that with the rising debt levels, debt management can no longer be viewed as a routine function which can be delegated to a separate debt office. The argument was that the debt management should have a proper coordination with fiscal and monetary management (The World Bank, 2017). Further, with the widespread use of quantitative easing, which is an unconventional monetary policy strategy of buying assets from the market to

transmit the monetary policy stance immediately and fully, Goodhart (2012) states that the policy of debt management interacts heavily with monetary policy.

Sri Lankan Experience

In Sri Lanka, the management of public debt is broadly performed by the CBSL as provided by the MLA. Specifically, the management of domestic government debt and foreign commercial debt has been assigned to the CBSL, since the inception of the CBSL in 1950, while management of foreign concessional funding has been carried out by the External Resources Department of the Ministry of Finance.² The Parliament has the authority to determine the overall annual borrowing limit. The Public Debt Department (PDD) of the CBSL issues debt instruments and handles all matters relating to managing, recording and servicing of domestic and foreign commercial debt while servicing of other foreign loans.³

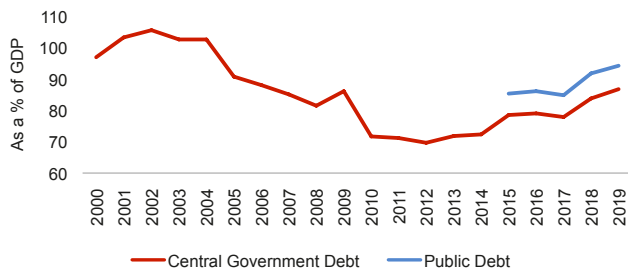
The domestic debt management strategy in Sri Lanka is decided by the Domestic Debt Management Committee (DDMC) comprising senior officials of the Ministry of Finance and the CBSL, including the Directors of the PDD (Chairman of the Committee), Economic Research Department (ERD) and Domestic Operations Department (DOD). The ERD of the CBSL is responsible for providing monetary policy recommendations to the senior management while DOD is responsible for monetary policy implementation. The DDMC meets monthly, and a market based strategy is adopted by considering market conditions,

² Servicing of foreign concessional debt is, however, performed by the CBSL.

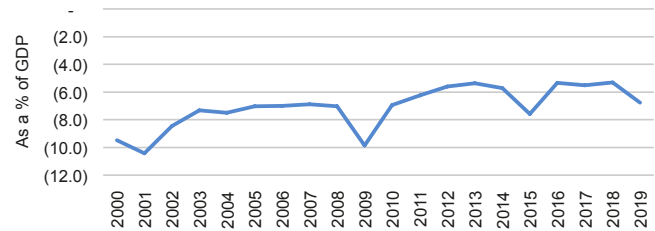
³ The objective of public debt management in Sri Lanka, as defined by the PDD, is to ensure that the government's financing needs are met at the lowest possible cost consistent with a prudent degree of risk, and to develop and strengthen the government debt securities market, while enhancing its efficiency and maintaining its stability

¹ See http://www.business-standard.com/article/economy-policy/rbi-against-setting-up-of-separate-debt-management-office-111050900163_1.html

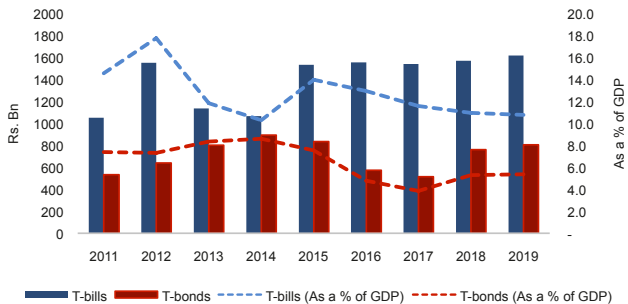
Central Government and Public *



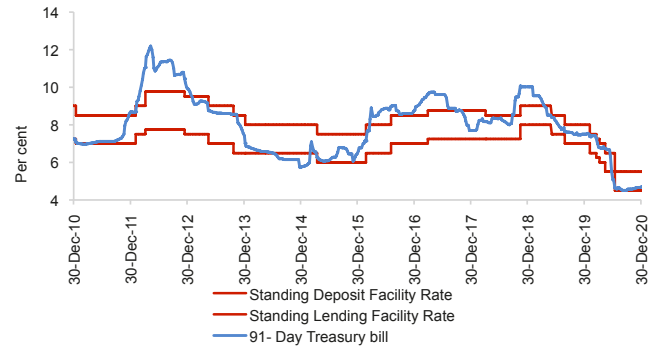
Budget Deficit



T-bill and T-bond Gross Issuances



Treasury Bill Rates and Policy Interest Rates



Source: Central Bank of Sri Lanka

* The public debt stock includes central government debt, outstanding Treasury bonds issued for restructuring of State Owned Enterprises, foreign project loans received by SOEs, public guaranteed debt and outstanding international bonds issued by State Owned Enterprises.

government cash flow requirements, the maturity profile, risks in the debt portfolio including monetary developments and inflation. Further, the regular tender boards, which decide the auction outcomes of domestic debt instruments, are also represented by the Directors of ERD and DOD.

As discussed above, the fundamental conflict arising through determination of interest rate is valid in the Sri Lankan context as well. The objective of public debt management is to ensure that the government's financing needs are met at the lowest possible cost (interest rate) consistent with prudent management of risk while the objective of monetary management is to maintain low and stable inflation. The policy rates are set by the CBSL such that low and stable inflation is maintained, while that course of action determines the cost of the public debt.

There are many reasons to demonstrate that there should be a very close coordination between public debt management and monetary management in Sri Lanka. Sri Lanka has been running a high budget deficit over the years resulting a substantial government debt stock. The budget deficit since 2000 was 7.1 per cent, on average, while central government debt was above 68 per cent of GDP. The government securities market dominates Sri Lanka's capital market with a sizeable share of value of the market assets. In 2019 alone, the government issued Treasury bills and Treasury bonds amounting to 16.1 per cent of GDP in gross basis (see the chart pack below).

The Sri Lankan capital market is not deep and liquid compared to its peers, and there is no sophisticated derivatives market, an efficient price discovery process, a central counter party clearing house or

sophisticated secondary market electronic trading.⁴ This immaturity of the capital market in Sri Lanka and exceedance of borrowings of the absorptive market capacity were evident in the primary market for government securities where large spreads in the bids could be observed within an auction while excessive variations in interest rates could be observed in adjacent weekly or monthly auctions. Further, this hypothesis is supported by the total or partial rejection of government securities auctions in the past. Additionally, at times of global crises, especially at the recent global financial crises, it has been observed that yield rates of government securities had moved away drastically from the monetary policy rates.

Summary

With increasing debt levels, public debt management has become a widely debated topic. Related discussions, in global as well as domestic context, led to the fundamental question of whether the management of public debt has to be completely separated from the conduct of monetary policy while also emphasising the importance of coordination between monetary and public debt management related policies. However, according to the literature, such separation without proper coordination among policies may deteriorate economic conditions of a country depending on the status of country specific factors, such as economic conditions, size of the government budget deficit, size of public debt, strength of institutions and the maturity of the financial market. In the Sri Lankan context, the CBSL is responsible for the management of the public debt. Sri Lanka has been running high budget deficits, maintaining high public debt stock and under developed capital markets. In this

4 The CBSL is in the process of establishing an electronic trading platform and central counterparty clearing house for government securities market.

backdrop, a loose link between debt management and monetary policy may be detrimental to the effective implementation of both policies. Hence, it is imperative that a strong coordination between monetary and public debt management remains even if the management of public debt is separated from the CBSL. In the case of separation, a high level committee, including representations from the CBSL and Ministry of Finance, could be established to formulate debt management policies as well as to direct operational level decisions until the country matures with sufficiently deep and liquid financial market and the government adopts a proper fiscal consolidation programme.

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Risk Management at Central Banks

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As policy makers, central banks pursue a public interest mission of delivering price stability and financial system stability. As public corporations and service providers, central banks must also ensure that they are efficient and well managed entities that care about sustainability. In the process of pursuing these diverse objectives, central banks are exposed to a wide array of risks. Given the important responsibilities of central banks, they must strive to identify all possible risks, their potential sources and establish one point of collection for this information, to ensure that all risks are addressed in a systematic manner.

Risk Exposures of a Central Bank

Broadly, risk exposures of a central bank can be classified as strategic, financial and operational. Strategic risks relate to the factors that could prevent the Central Bank from fulfilling its mission, i.e. on meeting the objectives set out in its strategic plan (monetary policy, financial system stability policies, the agency functions, communications, etc.) Financial risks include those emanating from investment decision making, such as credit risk, market risk, liquidity risks etc. (management of the international reserves and the public pension fund). Operational risks refers to the direct or indirect financial losses or reputational damage arising from inadequate internal processes, people and systems or from external events. Materialization of any of these risks may have a severe impact on the central bank's balance sheet and reputation. Thus, risk management, being "the coordinated set of activities to direct and control an organization with regard to risks", comprises an essential part of a central bank's day to day activities.

Systematic Risk Management for Central Banks

All entities face many uncertainties and challenges in the management of their day to day activities. Uncertainty presents both risk and opportunity, with the potential to erode or enhance the value of the entity. Traditionally, risk management had been a decentralized function at most central banks, with the departments and divisions taking responsibility for evaluating their own risks, in silos. Managing risks in silos gives rise to a host of issues, including duplication of risk mitigation efforts, gaps in the analysis of risks, lack of a process to aggregate critical risks, absence of sharing risk information across the organization, etc. The key factor to the success of an entity is to understand the different kinds of risks involved and to address them in a timely manner. By using a systematic approach to effectively deal with these uncertainties and associated risks and opportunities, central banks could enhance their capacities and increase their value over time. Thus, central banks, are increasingly adopting Enterprise-wide Risk Management (ERM) Systems to incorporate risk management into the central bank's agenda and decision making processes.

Enterprise-wide Risk Management for Central Banks

ERM process comprises a systematic approach to identifying, monitoring and managing potential risks throughout an organization, to minimize their potential impact. The process considers risks of an organization within the context of the environment in which it operates, its strategic objectives, business strategies, risk culture, risk tolerance capacity, etc. to

ensure proper risk management and internal controls are in place. Recognizing the need to integrate the different risk types and evaluate them collectively, in order to see the “big picture”, ERM systems break away from the silo based management practices to one where all the risks should be reported through a defined channel. ERM considers risks across the entity, their interconnectedness, and their combined impacts to support the management actions, through established methodology and documentation requirements for identifying, assessing and treating risks in a consistent manner, across the organization. The ERM process also instills discipline for decision making through a layered framework which clearly articulates the delegation of authority, supported by policies, procedures, systems, etc., and is effected by people at all levels to ensure in line with the agreed upon risk appetite. ERM also helps the effective management of risks through the establishment of oversight and control, and strives to shape risk principles and culture, through the establishment of risk management / risk governance frameworks. This way, ERM systems strive to protect and enhance the tangible and intangible assets across the bank, to safeguard its long-term viability and reputation.

Risk Governance / Management Structure

Risk governance applies the principles of good governance to the risk management process. The formal structures used to support risk-based decision making and oversight across all operations of the central bank comprise functional reporting as well as risk information sharing and administrative reporting, between the Monetary Board, the Central Bank management, the various risk management and oversight committees and the employees, through which the Central Bank’s objectives are achieved. A high level Executive Committee that maintains integrated oversight on both, financial and nonfinancial risks across all locations of the Central Bank. This Committee usually functions under the close monitoring of the Monetary Board, or as one of its Sub-Committees. Effective oversight over financial and non-financial risks are needed to ensure

all risks the central bank is exposed to are identified, analyzed evaluated, treated and reported in line with the Risk Management Policy Statement and that they are managed within the parameters specified by the Risk Appetite /Tolerance levels. Risk management framework is the structured process used to identify potential threats to the central bank and to define the strategy for eliminating and/or minimizing the impact of the risks as well as the mechanisms to effectively monitor and evaluate the strategy. The Chief Risk Officer (CRO) is the key person with focused responsibility for driving the overall risk management process by providing leadership, vision and direction for ERM, developing the appropriate framework and policies, and communicating a clear vision of the bank’s risk profile to the Monetary Board and other key stakeholders. CRO typically reports directly to the Governor or respective Board level Risk Oversight Committee.

Risk Management Policy Statement

Implementing ERM requires a formal written risk management policy statement, outlining the framework, responsibilities and process to assess and mitigate risks. The policy forms an integral part of all activities and processes carried out within the Central Bank, to fulfill its objectives and strives to inculcate a risk aware culture within the Central Bank. Ideally, the Risk Management Policy specifies the kinds of risks that are acceptable and level of risk that the organization is willing to accept to meet its objectives (Risk Appetite) and provide clarity on the boundaries of the risk appetite (Risk Tolerance). A clear Risk Appetite Statement ensures that all staff are aware of the risks that are not acceptable and helps propagate a culture of informed decision making amongst the staff. At the Monetary Board level, risk appetite statements tend to be rather high-level, outlining the broad framework within which more detailed appetite frameworks should be developed and implemented at the departmental, divisional and functional levels. The risk appetite statements should be reviewed regularly, and updated in light of actual experience, changes in strategy or external developments.

Implementing ERM: Top-Down and Bottom-Up Risk Management

The Monetary Board, which has the overall responsibility for the management of risks, sets the “Tone at the Top” in terms of risk appetite, risk culture, and ensuring that an appropriate risk management framework is in place. Setting the “tone at the top” is often referred to as “top-down risk management” as the messages trickle down through the layers of management to those at the bottom of the entity. However, the Monetary Board can only deal in broad parameters. Thus, for the top-down risk management of the entity to be effective, it must be supplemented with the “bottom-up risk management”. That is, there must be a regular flow of information up to the board level on risk decisions, risk exposures, risk profiles, and actual values compared to the thresholds specified by the relevant policies and guidelines. In addition, any issues, concerns, and high risk situations must be escalated to the Monetary Board for its guidance or approval. In this context, it is useful to adopt a common risk taxonomy for the institution, to ensure that all are on the same level of understanding when discussing specific risks.

Risk Management - Three Lines of Defense Risk Management Model

Central banks generally apply the “Three Lines of Defense” risk management model, where the operational managers/business units form the first line of defense, and the risk management and internal audit departments constitute the second and third lines of defense, respectively. The operational managers/business units are responsible for managing their own risks. They are expected to understand their roles and responsibilities, carry them out correctly and completely, and implement corrective actions to address process and control deficiencies. The second line is created by the oversight functions, made up of compliance and risk management. They have to independently monitor, assess and report risks through the independent committee structure. Further, these functions set policies, define work practices and oversee the business frontlines with regard to risk and compliance. The third and final line of defense is

that of auditors and Monetary Board Members. Both internal and external auditors regularly review both the business frontlines and the oversight functions to ensure that they are carrying out their tasks to the required level of competency. The Governor, as the head of the Monetary Board, receives reports from audit, oversight and the business lines, and will act on any items of concern from any party. It is the responsibility of the Monetary Board to ensure that the three lines of defense are operating effectively and according to best practice.

Implementing Three Lines of Defense Model

The Three Lines of Defense model is best implemented with the active support and guidance of the organization’s governing body and senior management, who are collectively responsible and accountable for setting the organization’s objectives, defining strategies to achieve those objectives, and establishing governance structures and processes to best manage the risks in accomplishing those objectives. According to the Institute of Internal Auditors, risk and control processes of the Three Lines of Defense model should be implemented as follows;

- Each line of defense should be supported by appropriate policies and role definitions.
- There should be proper coordination among the separate lines of defense to foster efficiency and effectiveness.
- Risk and control functions operating at the different lines should appropriately share knowledge and information to assist all functions in better accomplishing their roles in an efficient manner.
- Lines of defense should not be combined or coordinated in a manner that compromises their effectiveness.
- In situations where functions at different lines are combined, the governing body should be advised of the structure and its impact.

Normally, risk management is strongest when there is coordination and sharing of information among the

three separate and clearly identified lines of defense, to ensure the objectives of the organization are achieved in an efficient and effective manner.

Interrelations between Strategic Planning, Risk Management and Internal Audit

Since all policy making converges at the strategic planning level, developing synergies with those in charge of strategic planning can be highly and mutually beneficial. The strategic planning function with its forward looking nature is helpful in sounding out potential future risk areas. By the same token, the risk management function which sits close to the day-to-day business activities of the organization can provide valuable insights for those in charge of strategic planning process. Internal audit is helpful in evaluating and giving assurance in risk management processes and in the reporting of key risks, and challenging management's decisions on risk in general. However, in the same measure, it is important to identify what roles internal auditors should not take on, such as setting the risk appetite of the institution and imposing risk management processes. Similarly, sharing information with internal audit would pave the way for a more efficient and effective audits. For example, risk management staff could sit with the strategic planning staff to discuss each departmental strategic/action plans and identify risks in pursuing/ implementing such strategies. Risks identified in this manner could be communicated to the management for them to take appropriate actions to mitigate these risks. These risks could provide the basis for the internal audit staff to pursue risk-based-audits.

Risk Management Process

The effective management of risks involve more than merely “putting out the fires” arising from problems, but finding a way to prevent their recurrence. Since the risk environment is constantly changing, it is important to revisit the risk management process from time to time and systematically apply management techniques to help assess and treat risks. All risks have common ground in that they can be traced back to their root causes. Root Cause Analysis is a

systematic process for identifying the root causes of problems and events and for devising an appropriate approach to respond to them. Root causes can be identified by asking the right questions about why the event happened. It is also important to understand the likelihood of occurrence and the severity of the potential impact, to prioritize the risk management function.

Typically, risks with low likelihood of occurrence and low impact are generally accepted, and does not require a response. The risks bearing high likelihood of occurrence and significant impacts typically form the “danger zone”; implying these risks must be addressed with some sense of urgency, by either placing preventative controls designed to reduce the likelihood or through corrective controls that are aimed at mitigating the impact of risk events. For the risks falling in-between these two extremes, actions can be designed to mitigate the likelihood of occurrence or reduce the impact of risk events. Alternatively, the activity could be discontinued altogether to eliminate the risk; or the risk could be transferred to another party. Sometimes, the best response to certain risks is simply to accept the risk.

Risk Controls and Residual Risks

Risk controls are a key component of the strategy that helps keep potential losses in check. The risk tolerance of an entity is useful for gauging the level of controls that is required. Risk control methods include avoidance, loss prevention, loss reduction, separation, duplication, and diversification. As the name implies, risk avoidance is deemed to the best form of risk control in view of the 0 percent probability of suffering a loss. Loss prevention is a technique that limits, rather than eliminates the loss. Loss reduction is another technique that not only accepts risk, but accepts the fact that loss might occur as a result of the risk. Separation involves dispersing key assets, which ensures that if something catastrophic occurs at one location, then the impact to the business would be contained to that location. Duplication essentially involves the creation of back up plans; particularly with respect to information technology systems. Diversification is a risk control measure that allocates

resources amongst different classes, so as to minimize the impact. Sometimes, even after applying controls, the risk may prevail in residual form. A robust control environment allows the Central Bank to operate with low residual impacts.

Financial Risk Management

Central banks are also involved in fund management activities and are responsible for ensuring that proper systems and procedures are in place to effectively manage its exposure to financial risks. The Strategic Asset Allocation (SAA), which defines the overall risk return profile of an investment portfolio, serves as the key driver of long term investment success. SAA comprises several tranches, the objectives of which are matched with the various fund management objectives. Critical factors of SAA includes investment objectives, currency composition (if any), risk tolerance levels, investment horizon, investment beliefs and assumptions about the performance of capital markets. MB approves the Investment Policy Statement (IPS) and Investment Guidelines (IG) stipulating the principles and parameters for the asset allocation, risk tolerance, policy benchmarks, rebalancing strategies and active risk management techniques. Central banks also monitor the investments on a continuous basis through a variety of risk metrics. While market risk is monitored using Duration, Value at Risk, etc., the credit risk is evaluated using credit ratings issued by International Credit Rating Agencies, Credit Default Swaps Prices and other careful monitoring of news about the entities in which the CBSL has invested in. Financial risks pertaining to fund management activities are submitted to the relevant Investment Oversight Committee.

Risk Culture

Culture drives behaviors of staff, individually or collectively, in their decision making and following through by taking necessary actions. Appetite statements and frameworks are of little value if the staff do not understand, respect or implement them. Clear risk appetite statements and robust risk management frameworks can also be undermined by

inappropriate behavior of staff. Failing to escalate warning signs that risk is increasing, disregarding required procedures, bypassing individuals that are likely to reject proposals and interpreting requirements in such a way that rules and restrictions are deemed to be not applicable, are behaviors that expose a central bank to higher risks beyond the tolerable level; some of which may take years before they are found out. Thus, it is important that the management clearly delineates the acceptable behaviors and take prompt action against inappropriate behaviors. Failure to do so may lead to adverse consequences. Transparency in praising acceptable behavior and condemning/punishing unacceptable behavior can strengthen the risk culture.

Risk Decision Making

The essence of risk management is the timely recognition of risk and the ability to choose the most appropriate measures to mitigate it. Well-designed efforts to look ahead to the next three to five years often help identify many important risks in the operating environment. As the pace at which the world is evolving increases, people are sometimes forced to make decisions faster; often under much uncertainty or outright ignorance, as there is not enough time to assess all information. Although historic risk profiles can be useful in this endeavor, it is also important to challenge the assumptions that go into decision making framework. Peter Bernstein of 1996 Best Seller on risk *Against the Gods* maintains that there has been “persistent tension between those who assert that the best decisions are based on quantification and numbers, determined by the patterns of the past, and those who base their decisions on more subjective degrees of belief about the uncertain future”. While some tend to view risk management as more of an art because they don’t feel a precise answer is needed to be able to make a decision as people in these roles are looking for directional information to guide their decisions. Measuring what has happened in the past, logging events, cataloguing and building risk registers are all fact based and therefore seem to be more scientific. Collecting data from disparate sources, ensuring that it is in the same

format for easy comparison, applying rules, policies, procedures is all clear cut and should be a science. With “Art” being the analysis and decision-making based on intuition, expertise and a holistic view of the organization and with “Science” referred to as the decision-making based on objective, quantitative measures, risk management could be construed as a mixture of both, that require the structure that only a scientific approach can bring to analyze what has happened before and learn from it. However, insight and imagination are important when thinking about what the future might bring, and human logic and instinct are essential to make the right decisions in the right situation.

Risk Management at times of crisis

As central banks strive to strike a balance between its roles as policy makers and regulators, risks associated with the policy decisions of the central banks could create uncertainties for its stakeholders and for the economy. The late recognition of these risks could propagate imbalances in the economy. The failure to mitigate these imbalances on a timely basis would often require disruptive adjustments. Once a crisis erupts, the nature of risk changes, calling for further action by the policy makers, central banks must shift gears to prioritize crisis management to mitigate its immediate impact. Although unconventional methods and untested interventions are prescribed to propel the economy forward to a new steady state, their inherent risks must also be monitored on a continuous basis. At the same time, given their regulatory functions and supervisory powers, central banks should strive to set an example for the banking community and the financial system, by being the first to introduce new approaches and adopt best practices among the financial community. Given that there are no “risk-free” institutions, a properly designed risk management framework for the central bank, to deal with risks, without losing sight of its two main objectives of price stability and financial system stability, would serve as a pillar of confidence and trust in the financial system as well as the economy.

Conclusion

Implementing ERM at central banks would provide a fuller picture of risks that could influence their future outcomes of its objectives. Traditionally, central banks are seen by the public as conservative institutions. Thus, good reputation is key to its success in achieving policy objectives. However, in times of crisis, the central bank is typically required to take on additional risk in its policy making capacity. Thus, risk management should be integrated with strategic planning and internal audit in order to better manage a central bank’s business and reputation risks. Regardless of how the Three Lines of Defense model is implemented, senior management and governing bodies should clearly communicate the expectation that information be shared and activities coordinated among each of the groups responsible for managing the organization’s risks and controls. The essence of risk management is the timely recognition of the risk and the selection of the most appropriate measures to either tolerate, mitigate or eliminate the risk. ERM combines a Top-Down Approach and a Bottom-Up Approach; to ensure all risks are within the Risk Appetite and Risk Tolerance levels for the entity set by its Board and management. Typically, ERM frameworks are built into the organizations, where the risk culture of the organization plays a key role. With the increasing volatility and integration of risks from different areas, it is important that central banks have appropriate ERM framework in place to ensure the reliability of risk management processes and systems to safeguard its long-term viability and reputation. The risk management function should also have appropriate capabilities to fulfill its mandate, including the right mix of skills, competencies, tools and systems, timely monitoring and reporting on risk exposures and action plans at all levels. Overall, risk management for central banks are a dynamic function that should be continuously improved upon, with experience and periodic reviews; via audits and external assessments.

What is the Role of a Forensic Audit?

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Numbers of deceitful activities and fraudulent financial transactions have been accelerating year after year around the world. By now, these fraudulent activities and transactions are more sophisticated and complicated than ever. Consequently, businesses and organizations are exposed to a high risk of fraudulent activities and falsified business transactions. This was proven through several corporate accounting scandals and high profile corporate frauds which happened over last couple of decades throughout the world. Few examples for such cases are Enron scandal, WorldCom scam and Sathyam Computers fraud. These types of corporate scams and fraudulent activities are one of the main reasons for the development of forensic auditing as a growing industry as it is today.

What is Forensic Audit?

In general “forensic” means “appropriate to use in a court of law”. A forensic audit is a systematic approach to examine, inspect and evaluate financial and other relevant records of an organization or an individual in order to derive evidence that can

be used in a court of law or legal proceeding. In other words, it is an application of investigative and analytical skills for the purpose of resolving financial issues, crimes and scams in the standard that is required by the court of law. Instead of a regular audit, generally a forensic audit is preferred if there is a probability that the evidence composed would be used in a court of law.

Forensic audits necessitate the expertise and qualifications in the fields of frauds, accounting, auditing procedures as well as applicable legal framework of such an audit. In addition, it requires special skills mainly in the areas on finance, information technology, quantitative methods, forensic digital imaging and research.

How Forensic Audit Activities Evolved?

Activities in relation to forensic auditing were not formally described until 1930s. Frank Wilson, a certified public accountant who worked for the US Inland Revenue Service in 1930s, is credited for giving birth to forensic auditing. He was assigned to investigate the transactions of a criminal named Al

Capone, who was involved with a number of illegal activities. Detailed analysis and investigations of the financial records revealed an income tax fraud committed by Capone. Based on these investigations, Capone was charged for Federal income tax fraud. Capone owed the US government \$215,080.48 from illegal gambling profits. He was guilty of tax evasion and sentenced for 10 years in prison. As per the published information, this is the first instance of what is now recognized as forensic auditing.

Since then, the forensic auditing profession has significantly evolved. This development has been considerably influenced by the changes in the societies, economies, litigation practices and through the development of technology.

When reviewing the history, it is evident that the ‘Sarbanes-Oxley Act of 2002’ of the United States of America provided a greater impact on the forensic auditing profession. Even though this legislation was meant to facilitate the functions of the internal auditors and the organizational management, it brought about new opportunities for the forensic accounting profession. Upon the enactment of this legislation, the demand for forensic auditors has

increased, due to its protection over the whistle blowing.

With the evolvement of the subject, the activities relating to the forensic auditing also expanded to cover wider areas, including money laundering, fraud examination, asset tracing, criminal investigations, misreporting of financials, misappropriation of funds, recovery of proceeds of serious crimes, financial misconducts and manipulations. Therefore, in order to ensure the professional quality of the subject and to maintain the ethical conduct of the professionals, various organizations have been established by various countries. For an example, the American Board of Forensic Accounting was established in 1993 in the United States of America. The Forensic Auditors Certification Board (FACB) of England and Wales was established in 2016 in the United Kingdom.

Further, the development of forensic auditing subject compelled the introduction of different types of qualifications by different institutions. In order to maintain and improve the quality of the forensic auditing subject, these institutions are playing a vital role. Few of such qualification awarding institutions with respective qualifications are given below.

Name of the Qualification	Qualification Awarding Institution
Certified Forensic Auditor	Forensic Auditors Certification Board of England and Wales, UK
<input type="checkbox"/> Certified Professional Forensic Accountant <input type="checkbox"/> Certificate in Forensic Accounting <input type="checkbox"/> Certified Fraud Specialist	International Institute of Certified Forensic Accountants, USA
Certified Fraud Examiner	Association of Certified Fraud Examiners, USA
Certified Forensic Accountant	American Board of Forensic Accounting

Name of the Qualification	Qualification Awarding Institution
Certificate Course on Forensic Accounting and Fraud Detection	Institute of Chartered Accountants of India
Financial Forensic Accounting Qualification	Institute of Singapore Chartered Accountants
Certified in Financial Forensics	Chartered Professional Accountants Canada
Certified Forensic Accountant	Institute of Certified Forensic Accountants
Certified Public Accountants with Financial Forensics Credentials	Certified Public Accountants, USA
<input type="checkbox"/> Diploma in Forensic Auditing <input type="checkbox"/> Bachelor of Science in Applied Forensic Auditing <input type="checkbox"/> Post-Graduate Diploma in Applied Forensic Auditing <input type="checkbox"/> Master of Science in Applied Forensic Auditing <input type="checkbox"/> Doctor of Philosophy in Applied Forensic Auditing	Institute of Forensic Auditors of Zimbabwe
Associate and Fellow Membership	Institute of Forensic Accountants of Pakistan
<input type="checkbox"/> Certified Forensic Accountant <input type="checkbox"/> Fellow Forensic Accountant	Institute of Forensic Accountants of Nigeria

Continuous improvement and development of the forensic auditing subject tempted many large accounting firms to establish separate forensic audit divisions within their institutions. As per the published information, few of such accounting firms are as below:

Earn and Young	Baker Tilly
KPMG	Moore Stephens
PricewaterhouseCoopers	Mazars
1. Deloitte Touche Tohmatsu Limited	Haines Watts
Grant Thornton	Crowe Clark Whitehill
BDO	Saffery Champness
RSM Tenon	Begbies Traynor
Smith & Williamson	UHY Hacker Young

Why are Forensic Audits Needed?

Forensic audits are involved in many activities as follows:

- **To investigate frauds** - A planned unlawful or criminal activity with an objective to obtain financial/personal gain to a particular party is called a fraud. It is an intentional misleading activity which is designed to provide the wrongdoer with an unjustifiable gain. Frauds can be found in any area, including the areas on banking, real estate, investment, insurance, tax etc. and at present, it is very common in the financial sector. Fraudulent activities could be carried out by individuals as well as by business organizations.
- **To examine corruption** - Corruption is a form of dishonesty or fraudulent conduct undertaken by a person or an organization entrusted with a position of authority, to acquire unlawful benefit or misuse of power for one's personal advantage. It includes activities such as bribery, pressure, cronyism, favoritism, parochialism, benefaction, influence marketing, misappropriation and misuse of power.
- **To investigate asset misappropriations** - This is one of the most widespread forms of deception. This includes activities such as; misappropriation of cash, making of payments to non-existent employees/suppliers, submission of fabricated invoices, misusing of assets, robbing of stocks/inventories etc.
- **To examine misstatements of financial statements** - Misstatement of financial statements means showing a good financial performance than its actual status in order to achieve some objectives such as to receive continuous bonuses, to show achieving of targets, to obtain salary increments and

promotions etc. Misstatement of financial statements happen through an intentional falsification of accounting records, omission of expenses, overstatement of revenue, omission/understatement of liabilities, non-disclosure of relevant information, or not applying required financial reporting standards.

Forensic Auditing Process

Process of a forensic audit is also similar to a regular financial audit. It includes phases on accepting the engagement, planning the audit, conducting of substantive procedures including digital forensics, collecting evidence, writing the report and with an additional phase for a forensic audit, i.e. a possible court attendance.

At the engagement acceptance phase, the following facts need to be considered by the forensic auditor. In order to carry-out a honest and impartial investigation, forensic auditor should always be an independent party from the client, its management as well as from its related parties. Thus, when an auditor receives an invitation to conduct a forensic audit, the first step should be to assess whether the auditor is independent and also whether the auditor has the capability, including necessary skills, expertise, knowledge and required forensic tools to carry-out such an audit. Only when the forensic auditor is satisfied with such arrangements, the invitation for the audit should be accepted.

During the planning phase, the auditor will plan the audit in order to achieve the following objectives;

- Identify the fraud
- Assess the period during which the fraud has happened

- Learn how the fraud was covered/concealed
- Identify the wrongdoers of the fraud
- Quantify the suffered loss, as a result of the fraud
- Gather relevant evidence that is acceptable in courts
- Suggest actions and measures to avoid such frauds happening in the future
- Conduct discussions and interviews with employees and related parties
- Review electronic evidence such as voice recordings, telephone records etc.
- Analyze other documentary evidence such as minutes, accounting records, vouchers, bank statements etc.

In addition, it is important that the forensic auditor is required to take adequate safeguards to ensure that the collected documents and other evidence are not damaged, not changed or not reformed by anyone.

Conducting of substantive procedures means the practical aspects and field work of the forensic audit. This is where the auditor reviews the entire process documentation and information of the institution or individual that is subject to the audit. In order to observe the facts and to make conclusions, forensic auditor will evaluate the effectiveness of internal controls, carry-out analytical procedures, perform software programs, including digital forensics and conduct interviews as necessary.

The outcome of the forensic audit process is the final report. It is the one that the client uses as evidence in the court if the client chooses to file a case. At a minimum, the report should include;

Evidence gathered during the evidence collecting phase should be adequate and acceptable enough to prove the identity of the wrongdoers as well as to support the details of the fraud. In addition, documentary proof should be available to back the calculation of suffered loss and the parties affected by the fraud. A logical flow of evidence will help the court to understand the fraud and the evidence submitted. To gather evidence, the auditor may use following techniques:

- Findings and observations of the audit
- Description of how the fraud was executed
- A summary of the collected evidences
- Suggestions and recommendations to avoid similar frauds in the future

- Test internal controls to identify the flaws that allowed the fraud to happen
- Apply computer-assisted audit techniques to identify the timing and location of particular details that have been changed in the computer system
- Use digital forensics and forensic data analysis

When compared to other types of audits, most important and unique feature of the forensic audit is the necessity to support court proceedings. The forensic auditor needs to be present during court proceedings to explain the evidence collected and how the team identified the suspects. Auditor should be able to simplify the complex accounting issues and calculations and should be able to explain the case in a layperson's language in the court so that persons who have no understanding of the terms of legal, accounting or auditing can understand the fraud clearly.

Role of the Forensic Auditor in Today's World

Specialized skills together with specific litigation knowledge of the forensic auditor is more demanding in today's context due to several reasons.

- **Support complex litigations**

Investigations of many of the today's financial scams require specialized knowledge to reveal same. Forensic auditors can shed light by unveiling complex financial frauds and communicating them in a way that judges, lawyers and the clients can understand.

- **Support investigations carried out by Governments**

Forensic accountants' investigative abilities can be used not only in standard civil disputes, but also in larger financial investigations conducted by governments. This service is useful in investigations of tax cases, investigations relating to misuse of public funds and tracing of public funds, examinations on stock market/government securities market manipulations, etc.

- **Facilitate prevention of fraud and improve risk management**

Nowadays both the State and private sector organizations are increasingly demanding forensic auditing experts' support in implementing and guiding fraud prevention measures. Precautionary measures and preventive actions are worth more than spending money on investigations and litigation later once fraud happens. Forensic accountants may be requested to assess the effectiveness of internal control environment and through series of internal audits, they will be able to identify possible drawbacks in the systems.

Forensic accounting is an exciting and rewarding job. These professionals use their knowledge, expertise and investigative skills to identify financial frauds, provide analysis which will be helpful for law cases and to minimize future large-scale scandals.

Published Forensic Audit Cases

Most of the time, it is challenging to find examples of forensic accounting cases in the public domain since the details of such cases are generally kept reserved. However, there are few high profile cases that have been published.

- **Al Capone's Taxes**

As described earlier, Al Capone was one of the most famous gangsters of the 1920s and 1930s and he was able to evade best FBI (Federal Bureau of Investigation) agents and investigators. However, the famous gangster was finally brought down by an accountant.

- **Sir Paul McCartney and Heather Mills Divorce**

Sir Paul McCartney is a famous English singer. When he divorced, there was a dispute over how much money he actually had in his possession. He claimed that his assets worth around £400 million. However, according to his wife, Heather Mills, he had assets worth around £800 million. Therefore, she appointed a team of forensic accountants to examine the worth of his assets and filled a case. However, as per the judgment of the court of law McCartney's assets worth £450 million and not around £800 million.

- **Robert Maxwell's Misappropriation**

Robert Maxwell, European publisher, had been misappropriating funds from shareholders, and clients for a number of years until he died in 1991. As soon as he

passed away, his company went bankrupt since it was mostly built on fraudulent funding and loans. A team of forensic accountants spent 14 years to solve the entire mess and revealed that Maxwell had misappropriated approximately \$1 billion.

- **The Enron Scandal**

The Enron scandal may be one of the most famous securities scams in the history. Between the mid 1980s and 2001, Enron's accounting team together with its executives were smart enough to hide millions of losses in failed projects through creating Special Purpose Entities "SPEs". After the stocks of the company has fallen from over \$90 to \$1 within a year, the Securities and Exchange Commission commenced an investigation. After a careful examination of the financial statements of Enron by the forensic accountants of the Securities and Exchange Commission, it was found that number of creative accounting techniques were used by Enron. These creative accounting techniques included; hiding of debts, inflating of stock prices and falsification of financial records.

- **The WorldCom Scam**

WorldCom was a telecommunications company that showed good performance and growth prospects during 1990s. Due to the overall decline in the industry as well as the failure of some proposed mergers, the company's situation deteriorated during 2000s. As the situation deteriorated further, in order to maintain current stock prices, the management of the company turned to fraudulent accounting methods in an attempt to mask the reduction in earnings. This was signaled to the auditors. Later it was found by the auditors that the management of the company has passed fraudulent entries for the

value of more than \$3.8 billion. These entries included booking of recurring expenditure as capital expenditure and inflating revenue through bogus unallocated income accounts.

- **The American International Group (AIG) Inc - AIG Headquarters Scam**

This scam happened during December 2000 to March 2001. In order to create a false reinsurance policy, in December 2000, AIG entered into a series of fraudulent transactions with another company called "General Reinsurance Corporation". Ultimately based on series of investigations by forensic experts, AIG was found guilty of accounting fraud based on fraudulent transactions.

Forensic Audits in Sri Lanka

Forensic auditing profession is a comparatively new field in Sri Lanka where the expertise and skills are yet to be developed. Institute of Chartered Accountants of Sri Lanka is playing an important role in building up the expertise and skills in this field. Numbers of certificate programmes and training sessions have been introduced by the Institute in this regard. Together with these developments, many large accounting firms also making arrangements to establish their own forensic audit units within their organizations.

The Central Bank of Sri Lanka has recently conducted few forensic audits using the expertise of forensic auditors who are having an international experience and a global practice. These audits were initiated by the Central Bank of Sri Lanka in compliance with the recommendations given in the "Report of the Commission of Inquiry Appointed to Investigate and Inquire into the Issuance of Treasury Bonds during the period from 01.02.2015 to 31.03.2016". Further, this report contained details about a digital forensic audit conducted by the Criminal Investigations Department of Sri Lanka Police based on telephone call records of several

parties connected to the Treasury Bonds issuances during this period. As per the publicly available information, this is the first digital forensic audit conducted in the history of Sri Lanka.

In addition, there were number of occasions where the auditors in Sri Lanka carried-out forensic audits in order to meet the requirements of regulators of financial institutions as well as to meet the requirements of financial institutions themselves in various scales. Auditor General’s Department is also taking some steps to carry-out forensic audits within their scope in the public sector. However, very limited information is publicly available in respect of the contents, observations and recommendations of these audits.

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