RESHAPING THE RISK MANAGEMENT ON TRADING BOOK OF BANKS: AN EXAMINATION OF CURRENT PRACTICES

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An important learning outcome of the global financial crisis of 2007-8 was the realisation that financial institutions could face unexpected risks from their trading activities highlighting weaknesses in the capital treatment of banks[1]. However, a supervisory regime had been introduced as far back as 1996 requiring banks and investment firms to have adequate regulatory capital to cover the risks arising from the transactions held in their trading books[2]. This regime, introduced as a part of the Basel II Capital Accord, offered the option of either following a standardised approach or an internal models approach to decide on the quantum of capital needed to face the risk. Large banks preferred the second approach since it gave them substantial flexibility for deciding the capital needed to cover risks. This flexibility permitted banks and traders to under-price credit risks and thereby maintain regulatory capital at levels below the requirements[3]. The regulators in the major markets failed to detect it in time due to the absence of right information at the right time[4]. After these deficiencies came to light, action was taken by the Basel Committee to introduce a set of revisions to the market risk framework in July 2009[5]. The continued work by the Basel Committee in this area has resulted in the release of two publications, one in May 2012 and the other in January 2014 prescribing a new capital framework applicable to member country banks to cover their trading book risks[6].

Risks arising from the trading books of financial institutions are becoming important for Sri Lanka due to two reasons. First, Sri Lanka has projected that its economy will reach the size of USD 100 billion by 2016 from USD 67 billion in 2013 and its per capita GDP will elevate to USD 4000 level making it cross the threshold of the lower bound of upper middle income countries[7]. Second, Sri Lanka is presently engaged in a financial sector consolidation programme to create a few large financial institutions that are capable of withstanding external

1 Fundamental Review of the Trading Book, BIS, May 2012 p 8.
2 Prato, Oliver (2006), 'Better Capturing Risks in the trading book', *Financial Stability Review*, Bank de France, No 8 p 52.
3 Mills, Daniel Quinn, (2009) *The World Financial Crisis of 2008-2009,* published by the author, p 65.
4 Ibid, p 72.
5 Fundamental Review of the Trading Book, op cit. p 1.
6 Ibid and BIS (2014) Fundamental Review of the Trading Book: A Revised Market Risk Framework, January 2014.
7 http://www.cbsl.gov.lk/pics_n_docs/02_prs/_docs/speeches/speech_20140117e.pdf and http://www.cbsl.gov.lk/pics_n_docs/09_lr/_docs/directions/bsd/BSD_2013/bsd_LCB_Up_to_30_Nov_2013.pdf, p iii

shocks appropriately and raising funds from foreign sources[8]. These two factors are expected to make the country's financial system sophisticated, with more engagement in trading activities as against the traditional banking activities. Hence, an appropriate risk-mitigating regulatory capital regime has become the requirement of the day.

This paper is divided into four parts. In Part I, a discussion of the differences between the trading book and banking book of banks is presented. Part II will be devoted to unearthing the developments of the supervisory and regulatory treatment of the Trading Book in line with the amendments made by the Basel Committee on Banking Supervision. Part III will present the appropriate regulatory framework for banks in Sri Lanka in the light of the recommendations made by the Basel Committee. Part IV will present a summary and major conclusions drawn from the study.

Part I: The Trading Book and the Banking Book of a bank

In the case of a financial institution, the operations are broadly broken into two, one trading activities and the other, banking activities. These two operations are recorded in two types of books and treated differently in accounting as well as in risk management[9]. Accordingly, trading activities are recorded in the Trading Book and banking activities in the Banking Book.

The acquisition of assets by banks purely for trading purposes falls into trading activities. Some examples are shares, bonds, debentures and derivative products which a financial institution will buy or sell in the market when the prices are favourable to it in an attempt at making profits or avoiding losses based on the new information available, a process known as portfolio readjustment. Hence, they are vulnerable to changes in market prices or market opportunities and deserve special treatment. To facilitate this special treatment, they are recorded in a separate book.

The Banking Book on the other hand records all banking activities that are kept till maturity. They include loans made to corporations and individuals and a financial institution will depend on the regular income flow that comes from the acquisition of such assets. As long as the borrowers keep payment of interest and repayment of the principal up to date, there is no risk to the financial institution.

The following table summarises the key differences of the two books.

8 Ibid.

9 A detailed description of the difference between the two types of books has been provided by Hull, John C, (2012) *Risk Management and Financial Institutions,* Third Edition, Wiley: New Jersey, p 35. This section draws heavily on John C Hull.

Table 1

Key Features of the Trading Book and Banking Account

Type	Trading Book	Banking Book
Nature of transaction	Acquired with a view to reselling in the market	Acquired for earning interest and therefore kept till maturity
Types of assets	Shares, bonds, debentures, commodities, Treasury bills, Treasury bonds, derivative products, foreign currencies	Loans to corporate and individual customers in the form of overdrafts, temporary financial facilities, term loans,
Marking to market requirement	Should be marked to market daily and therefore the book has to be adjusted continuously to reflect the market conditions	Not marked to market, but if the borrowers have defaulted the payment of interest or repayment of principal, such loans are categorised as non-performing loans
Portfolio readjustment	Done regularly to avoid losses or make profits based on the new information available	Not done regularly, but if a particular loan facility has become unprofitable, it could be sold to a factor at a discount to avoid losses
Value recorded in the book	Current market value daily adjusted by marking to market	Historical cost of purchase adjusted periodically for loss-loans
Handling of unprofitable assets	Selling in the market at a discount	Treating as loan losses and charging to P & L account
Value at risk (VaR) calculation	Calculated at 99% confidence level over a 10 day time horizon	Calculated at 99.9% confidence level over a one year time horizon

Source: Prepared by the author by drawing on John C Hull, op.cit.

The accounting requirement 'marking to market' is also known as 'fair value accounting'[10]. Under this system, financial institutions are required to value both assets and liabilities recorded in the Trading Book and available for trading in the market at a fair value. As against the fair value accounting, all assets and liabilities that are not available for trading in the market and recorded in the Banking Book should be maintained at the historic costs unless there is reason to believe that the principal or the interest or both will be defaulted by the respective liability holders[11].

Part II: Supervisory and regulatory treatment of the Trading Book

The Basel Committee on Banking Supervision has been tracking the risk factors which make banking institutions vulnerable to external shocks since it was formed in late 1970s[12]. However, in the initial stage the Committee was concerned about the risks arising from the separation of supervisory responsibilities between the host country and the home country with respect to banks operating across national borders. Subsequently, in early 1980s, the Committee devoted its resources for issues arising from capital adequacy requirement as an insurance against the failure of banks[13]. However, the capital adequacy requirement was fixed with respect to a bank's Banking Book plus off-balance sheet activities which are not recorded in any major book of accounts disregarding the risks that could arise from its trading activities[14]. Accordingly, the capital adequacy requirement which came to be known as Basel Accord I was agreed upon in 1988 and came to effect among the Group of 10 countries in 1992. Over the years, other countries too joined in adopting Basel I.

When the market risks relating to trading activities became important, Basel Committee introduced an amendment to the 1988 Accord in 1996 and made effective in 1998 taking the trading activities too into account in fixing the capital adequacy requirements[15]. In terms of this amendment, transactions in the Trading Book consisting of equities, bonds, debentures, foreign currencies, derivative products and commodities had to be revalued daily marking the value to the prevailing market prices[16]. Under this amendment, the credit risk capital charge from the 1988 Accord continued to apply to on- and off-balance sheet items in the trading and banking books. Some items in the trading book were excluded, such as equities and debt traded securities, as well as positions in commodities and foreign exchange. A market risk charge that measured the risks individually with respect to each type of asset in the trading book was also introduced to account for the risk inherent in trading[17].

10 Hull, John C, op.cit. p 265.
11 Ibid. p 268.
12 Davies, Howard and Green, David, (2008), *Global Financial Regulation: The Essential Guide,* Polity Press: Cambridge, p 35.
13 Ibid. p 36.
14 Ibid. p 38.
15 Hull, John C, op.cit. p 265.
16 http://erikjohansson.blogspot.com/2012/05/1996-basel-amendment.html (accessed on 24.3.2014)
17 Ibid.

While a standardised approach was outlined for small banks, large and well established banks with better risk management capacity were permitted to use an internal model-based approach to decide on the capital charge needed for arresting the risks arising from the Trading Book[18].

When these regulatory capital requirements were insufficient to maintain the global financial system stability, the Basel Committee came up with a new accord in 2004 which came to be known as Basel II[19]. In terms of Basel II, two additional supervisory features were added to banking supervision framework in addition to a strengthened capital requirement. These additional features were supervisory oversight by banking regulators and subjecting banking firms to market discipline so that banks with unfavourable market records were to be penalised by the markets. However, the capital requirement on trading activities remained unchanged from the 1996 amendment.

The global financial crisis of 2007-8 drew the attention of the Basel Committee as well as the bank regulators to the inadequacy of the existing regulatory framework to address the risks arising from unconventional trading activities undertaken by financial institutions[20]. As the BIS has remarked "the level of capital against the trading book exposures proved insufficient to absorb losses"[21]. When the matter was brought to notice of the Basel Committee, it issued an amendment to the Basel II Accord in 2009 as an immediate response to the crisis which came to be known as Basel 2.5[22]. There were five key market risk standards introduced under the revision in 2009 as follows[23]:

1) Introduction of an Incremental Risk Charge (IRC): Since the previously approved 10 day Value at Risk (VaR) was not sufficient to capture the credit risk arising from the trading book exposures, additional capital charges were recommended to capture both credit risk and credit rating migration risk. Additional Capital Charge was fixed by taking a one year horizon at 99.9% confidence level following the treatment recommended for the Banking Book.

2) The introduction of stressed VaR: This was intended to take account of additional risks arising from the stresses which a portfolio will go through in specific times.

3) Alignment of the treatment of securitisation exposures across the banking book and the trading book: This has accommodated the possible correlation among assets in the trading book and also with the banking book.

4) Improved risk factor coverage of internal models: This has required banks to explicitly measure all risk factors in their VaR models that are relevant for pricing purposes or justify their omission.

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18 Hull, John C, op.cit. p 266.

19 Ibid. p 268.

20 BIS, (2013), *Fundamental review of the trading book: A revised market risk framework,* (October) p 1.

21 Ibid.

22 BIS, (2012), *Fundamental review of the trading book,* (May) p 10.

23 Ibid.

5) Enhanced prudence valuation guidance: Under this the scope of the prudent valuation guidance was extended to all assets subject to fair value accounting, including those in the Banking Book as well.

BIS has noted that the introduction of Basel 2.5 has led to an increase in the capital requirement by 6.1%[24].

The introduction of Basel 2.5 was an immediate response to the crisis and the weaknesses in the prevailing regulatory framework were still there in the global financial system. BIS has identified seven such weaknesses as follows[25]:

1) The lack of coherence in the framework
2) Non-addressing of the boundary issue
3) Non-capturing of the market liquidity risks in a uniform manner
4) The upholding of the notion of bank-specific risks
5) Unaddressed problems in the standardised approach
6) A lack of a credible option for withdrawal of model approval
7) The non-clarification of the relationship between the capital charges for Credit Valuation Adjustment (CVA) and the trading book regime

The second paper by BIS (2013) has outlined its intention of carrying out two types of reforms relating to capital adequacy of banks arising from the trading book activities[26].

1) Stress calibration: Though capital is sufficient during periods of significant market stress, that may not be so during severe financial crises. Further, there has not been a necessity to insist on high capital when the systems go through a procyclical stage. Thus, the Basel Committee has expressed its desire to calibrate the capital with the market stresses so that when it is needed most, more capital will be insisted but when it is not so needed, the requirement will be relaxed.

2) Move from VaR to expected shortfall (ES): Instead of going by a fixed VaR, it has been proposed by the Basel Committee to introduce a new concept called ES based on the measure of the riskiness of a position by considering both the size and the likelihood of losses above a certain confidence level. The proposal suggested is to use a 97.5% ES for the internal models-base approach instead of the previous 99% confidence level used in the VaR approach. The same system will be used for the stress calibration outlined above.

With these two revisions, the Basel Committee has expected to set up a single stressed measurement for capital adequacy in the banks.

An important assumption made in the previous approaches to trading book risks was that banks are in a position to exit an asset at any time when it faces a market risk because

24 Ibid, p 11.
25 Ibid, p 11-2.
26 BIS (2013) p 3.

there is enough market liquidity to exit or opportunity to hedge an asset. But the developments during and after the financial crisis showed that this assumption was not correct[27]. Hence, two approaches have been proposed by the Basel Committee to address the issue of having varying degrees of liquidity in the market.

1) Incorporation of 'liquidity horizons' in the market risk metric: A liquidity horizon has been defined as the time required to execute transactions that extinguish an exposure to a risk factor without moving the price of a hedging instrument in conditions of market stresses. The time may vary from 10 days to one year depending on the nature of the asset involved. This is in accordance with the direction in Basel 2.5 where it was stressed that varying liquidity ratios should be used when adding an IRC to capital adequacy.

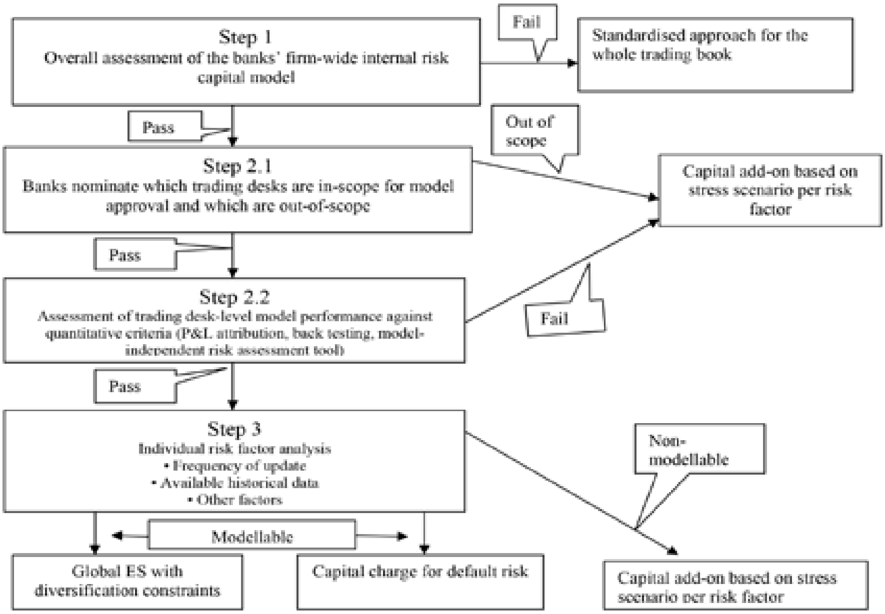
2) Introduction of adding more capital or capital add-ons when liquidity risk premia jump up: This requires the identification of desks that trade particularly illiquid, complex products and incorporating them into the model used to calculate the capital adequacy requirements.

The Basel Committee had earlier recommended that large banks with adequate internal risk management methods should be permitted to use internal models-based approach to calculate the capital adequacy requirement. All others should follow the standardised approach[28]. BIS (2013) has presented a decision box as to how financial institutions should be selected for internal models-based approach or standardised approach[29].

Accordingly, banks have to follow several steps of testing before they are judged for the two approaches prescribed by the Basel Committee as reproduced here as Figure 1.

27 Ibid. p 4.
28 Hull, John c, op.cit., p 268.
29 BIS (2013) p 24.

Figure 1: Process for determining eligibility for internal models-based approach



Source: Bank for International Settlements (2013)

It is unlikely that any Sri Lankan bank, based on their current internal risk management capabilities will pass all these tests and become eligible to use internal models-based approach. Hence, they have to go by the standardised approach for some time until they have developed their internal risk management capabilities.

Part III: The current practice in Sri Lanka

Sri Lanka has not strictly followed the recommendation of the Basel Committee that banks should maintain a Trading Book and a Banking Book separately. Instead, the regulations issued by its Bank Supervision Department have classified the two areas of operations of a bank in the traditional classification, namely, Investment Account and the Trading Account, both pertaining to the investment activities of a bank in equities, bonds and debentures, foreign currency balances etc. Accordingly, the requirements have been laid down in the Direction on the Prudential Norms for Classification, Valuation and Operation of Banks' Investment Portfolio as follows[30]:

30 http://www.cbsl.gov.lk/pics_n_docs/09_lr/_docs/directions/bsd/BSD_2013/bsd_LCB_Up_to_30_Nov_2013.pdf, p 170

a) With effect from 31 March 2006, all Licensed Commercial Banks are required to classify their investment portfolio under two categories: *i.e.,* the Investment Account and the Trading Account. All banks are required to maintain two separate books of accounts for this purpose.

b) Banks should decide on the category of investment at the time of acquisition and the decision should be documented. Classification is not a free choice but is based on facts and the management's intent at the date of purchase. Transfers between categories after initial recognition are restricted.

In addition following guidelines were issued in relating to Trading Account

a) All securities acquired for the specific purpose of trading on a regular basis (at least every quarter), to take advantage of the short-term changes in market prices and yields, shall be classified under the Trading Account. The classification of trading assets is based on original intention and these are not transferred to the Investment category because intention subsequently changes.

b) Securities held in the Trading Account must be revalued or marked to market on a daily basis. In the case of securities for which daily prices are not available, banks are advised to mark to market at least on a weekly basis. Where two-way quotes are published (eg.: Rates for government securities), the middle rate should be adopted.

c) Any gains or losses on the sale of investments held in the Trading Account should be taken to the Profit & Loss Account.

The transfer of securities between portfolios will generally not be permitted, except under specified circumstances. This is to limit the opportunities to manipulate the recognition of gains or losses or to mask changes in market value.

Part IV: Summary and conclusions

The initial banking regulations introduced by BIS for adoption by member countries did not touch upon the risks arising from the trading activities of banks. Hence, the capital adequacy requirement had been fixed by reference to a bank's lending activities which are now recorded in the Banking Book of a bank, though off-balance sheet activities had been incorporated in the risk metric used for calculating capital adequacy. However, along with the global banking crises that took place in 1990s first and in the first decade of 2000 later on an unprecedented scale, attention was drawn to the risk factors that arise from the trading activities of a bank. Accordingly, in an amendment issued by the Basel Committee in 1996 and became effective in 1998, the trading activities were incorporated into the calculation of the capital adequacy requirements by making it mandatory for banks to mark to market their trading book on a daily basis. Since then, in Basel II, Basel 2.5 and Basel III, the regulatory requirements on the trading activities of banks have been streamlined. However, the calculations involve tedious risk management methods and it is unlikely that banks in developing countries, including Sri Lanka, will be able to meet the challenges before them. Accordingly, it is necessary for banks to train their staff in the new art of calculating capital adequacy requirements on a priority basis. Unless this is attended to urgently, banks will not be able to reshape their operations to meet challenges posed to them by changing times. It is always beneficial for banks to be proactive rather than being reactive in preparing themselves for the changes that take place in the market.

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