Guidelines to Emerging Market Regulators Regarding Requirements for Minimum Entry and Continuous Risk-Based Supervision of Market Intermediaries

Final Report

EMERGING MARKETS COMMITTEE
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EXECUTIVE SUMMARY

The last two decades witnessed significant growth and dynamism in global capital markets. This growth created new markets, exchanges and intermediaries and also led to the emergence of progressively complex financial products and instruments. Structural improvements helped develop large and complex financial structures, promoted financial engineering and exploited new avenues of financial leveraging that was accompanied by greater risk appetite and infusion of information technology. The supervision of these complex structures also made parallel transitions to meet the requirements of the new necessities, evolving from an initial emphasis on ensuring compliance with laws and rules, towards a much more comprehensive approach designed to ensure proper management of all the risks associated with complex institutions.

This evolving market scenario combined with the need for better allocation of limited supervisory resources, prompted regulators to find improved methods of identifying, measuring and mitigating risks posed by the new breed of market participants and the new financial products. Consequently, increasing number of IOSCO members are now moving away from a rigid rules-based system of regulation to a system that is more reliant on the supervisor's discretion and professional judgment through adoption of a risk-based supervisory structure. This includes licensing (minimum entry requirements) and capital requirements, risk assessment frameworks and inspection methodologies.

The International Organization of Securities Commissions' (IOSCO) Emerging Market Committee (EMC) meeting held on 5 December 2007 in Dubai mandated the EMC's Working Group 3 on the Supervision of Market Intermediaries (EMCWG3) to develop, for emerging markets regulators, *Guidelines for Minimum Entry Requirements and Continuous Risk-Based Supervision for Market Intermediaries*.

The supervision of market intermediaries has three broad objectives: to protect client assets from insolvency of the intermediary or appropriation by the intermediary or its employees; guard against defaults and sudden disruptions to the market, either through sudden insolvency or settlement failure; and, to ensure that intermediaries are fair and diligent in dealing with their clients. Regulation, therefore, sets licensing standards (limiting the market place to those with sufficient resources and qualification), prudential standards (protecting against sudden financial failure), internal controls and risk management standards (reducing the possibility of default or to appropriate client assets), and business conduct rules (ensuring proper handling of client accounts).

However, while risk-based supervision holds out the hope of a more flexible and targeted regime which can adapt to fast changing market developments, it also places pressure on supervisors who are expected to address these new challenges, through:

- the use of supervisory discretion;
- corporate governance; and
- assessment of supervised entities' risk management.

To accomplish the assigned mandate, EMCWG3 undertook a survey of the EMC member jurisdictions to analyze their practices and approaches on *Minimum Entry Requirements and Continuous Risk-Based Supervision for Market Intermediaries*. The outcome of the survey revealed that supervision of intermediaries is an area that needs to be strengthened by the regulators. Although minimum entry requirements have been established in almost all the surveyed jurisdictions through licensing standards and some form of supervisory framework is in place but many regulators still need to improve their effective oversight of intermediary's activity and require setting up detailed standards for internal controls and risk management along with adequate prudential requirements.

This report covers the entry standards and risk-based supervision framework for market intermediaries in Emerging Market Committee members. Based on the study of risk-based supervision approaches amongst securities regulators in emerging markets members, WG3 distilled the approaches/guidelines on risk-based supervision. Individual regulators will be required to tailor their risk-based supervision approaches to suit the circumstances that are specific to their own markets.

Guideline on Risk-Based Supervision

1. Systematic planning for Risk-Based Supervision approach;
2. Identification and assessment of relevant risks; and
3. Appropriate allocation of supervisory resources.

EMCWG3 recognizes that the implementation of risk-based supervision is not without challenges. Some of the challenges identified relate to the skills gap of regulatory staff; ability to identify and define relevant risk types and risk mitigants; obtaining comprehensive risk profiles of capital market intermediaries; subjectivity involved in determining risk scores; and applying a consistent risk rating methodology across all financial institutions.

Regulators will have to build capacity to address these challenges.

1 OVERVIEW AND OBJECTIVE

A. Introduction

In the recent past, the capital markets in both emerging and other jurisdictions have grown significantly and remained dynamic. This growth stimulated the development of new financial instruments and increased the depth and breadth of the markets. Financial institutions became more complex and internationally active with global markets becoming more interdependent. The phenomenon of globalization brought many benefits; but as recent events suggest; it also brought new challenges to financial stability.

Globalization and the growing complexities of financial and capital markets that cater to the demands of a wider and more sophisticated pool of investors have prompted regulators in many jurisdictions to measure the risks posed by the new breed of market participants and financial products. These developments have necessitated that regulators undergo a paradigm shift in their supervisory philosophy and regimes. One trend is a shift away from post-event rule-based approaches which focus on the detection of violations and non-compliance, to risk-based approaches which are more proactive, risk-focused and continuous. In light of the ever increasing complexities of market participants' activities, IOSCO is also encouraging regulators to move towards risk-based supervision.

Recognizing that finite regulatory resources can only be allocated to an enlarged capital market and the pool of intermediaries, IOSCO members have increasingly – especially since the late 1990s – adopted or looked towards a risk-based approach in their supervisory techniques. Risk-based supervision has recently been gaining prominence as the majority of supervisors in significant financial centers around the world now employ some form of risk-based supervision. Given the acknowledged shortage of supervisory resources worldwide, such risk-based supervisory techniques may include, but are not limited to, risk-based approaches towards licensing, minimum capital requirements, risk assessment frameworks and inspection methodologies.

B. Objective of the Report

The report is envisioned to broadly examine the current regulatory architecture applicable on entry requirements of the market intermediaries and the approaches adopted by the regulators to assess, monitor and mitigate operational, market, credit, financial, compliance, legal and other risks in different jurisdictions so as to optimally utilize the regulatory resources. The adequacy of infrastructure in terms of administration, technology, financial and human resources adopted by emerging market jurisdictions to monitor the market intermediaries is also covered in the report.

The report is expected to provide emerging market regulators with a greater understanding of the factors affecting risk-based supervision. Additionally, this report provides a review of the perspectives and experiences of different regulators in formulating policy and operational initiatives to enhance risk management standards and procedures in their markets.

The objective is to undertake both quantitative and qualitative assessments of minimum entry requirements and risk-based supervision of market intermediaries in emerging markets and to develop guidelines on risk-based supervision framework for emerging markets regulators, with the following specific intentions:

- To share existing practices for supervision of capital market intermediaries that would be consistent with the *IOSCO Objectives and Principles of*

Securities Regulation, in particular, principles 21, 22 and 23[1]; and

- To profile the application of risk-based supervision in EMC members; and
- Develop Guidelines for risk-based supervision of capital market intermediaries and outline the challenges faced.

The survey responses are summarized in Annex II to this Report. The Annex sets out the summary of responses received from various jurisdictions and attempts to abstract these on common grounds. The report primarily looks at the broad policy rationale for risk-based supervision of market intermediaries and seeks to distil and document practices of risk-based supervision framework amongst securities regulators and is not meant to be prescriptive. EMC members would be best placed to apply or adapt the framework taking into consideration the needs and stages of development of their individual markets, regulatory approach to supervision and also taking into account the market practices and legal requirements of the jurisdiction.

[1] IOSCO Principles 21, 22 and 23 of the *IOSCO Objectives and Principles of Securities Regulation* for market intermediaries respectively states the following:

> *21: "Regulation should provide for minimum entry standards for market intermediaries"*
>
> *22: "There should be initial and ongoing capital and other prudential requirements for market intermediaries that reflect the risks that the intermediaries undertake". and*
>
> *23: "Market intermediaries should be required to comply with standards for internal organization and operational conduct that aim to protect the interests of clients, ensure proper management of risk, and under which management of the intermediary accepts primary responsibility for these matters".*

2. SCOPE OF STUDY CONDUCTED

EMCWG3's research covers the risk-based supervisory framework of EMC members and focuses on the following capital market activities:

- securities/futures, broking;
- fund management/collective investment schemes (CIS) operations; and
- corporate finance advisory/underwriting.

For the purpose of this study, the term

> "regulators" refers to regulators of the capital market activities particularly those listed above.
>
> "market intermediaries" includes those who are in the business of managing individual portfolios, executing orders, dealing in or distributing securities and providing information relevant to the trading of securities. These include securities brokers, mutual funds and CIS operators and investment advisors.
>
> "risk-based supervision/approach" refers to the application of risk assessment methods such as sensitivity analysis, stress testing and risk monitoring techniques to identify the likelihood of an (negative) event and its impact on the system in the process of the risk assessment and risk management.

A. Assessment Methodology

A survey questionnaire was circulated among EMC member jurisdictions to obtain feedback in order to analyze their practices and approaches on *Minimum Entry Requirements and Continuous Risk-Based Supervision for Market Intermediaries*. The survey was divided into the following eight parts:

1. Existence of overall regulatory infrastructure:
2. Assessment of operational risks
   - *a.* *Adequacy of administrative infrastructure*
   - *b.* *Adequacy of information technology infrastructure*
   - *c.* *Adequacy of financial infrastructure*
   - *d.* *Adequacy of human resource infrastructure*
   - *e.* *Adequacy of risk management infrastructure*
   - *f.* *Disclosure requirements*
   - *g.* *Other areas pertaining to operational risk assessed*
3. Assessment of market risks
4. Assessment of credit risks
5. Assessment of financial risks
6. Assessment of compliance risks
7. Assessment of legal risks
8. Assessment of other risks

B. Surveyed Jurisdictions

EMCWG3 would like to acknowledge EMC members from the following jurisdictions for providing valuable information pertaining to their jurisdictions:

S. No.	Jurisdiction	Regulatory Authority
1.	Bulgaria	Financial Supervision Commission (FSC)
2.	Chile	Superintendencia de Valores y Seguros (SVS)
3.	China	China Securities Regulatory Commission (CSRC)
4.	India	Securities and Exchange Board of India (SEBI)
5.	Jordan	Jordan Securities Commission (JSC)
6.	Lithuania	Securities Commission (SC)
7.	Malaysia	Securities Commission (SC)
8.	Mauritius	Financial Services Commission (FSC)
9.	Mongolia	Financial Regulatory Commission (FRC)
10.	Morocco	Conseil Deontologique des Valeurs Mobilieres (CDVM)
11.	Nigeria	Securities and Exchange Commission (SEC)
12.	Oman	Capital Market Authority (CMA)
13.	Pakistan	Securities and Exchange Commission of Pakistan (SECP)
14.	Poland	Polish Financial Supervision Authority (PFSC)
15.	Romania	Romanian National Securities Commission (RNSC)
16.	South Africa	Financial Services Board (FSB)
17.	Taiwan	Financial Supervisory Commission (FSC)
18.	Thailand	Securities and Exchange Commission (SEC)
19.	Turkey	Capital Markets Board (CMB)

EMCWG3 released the draft report, titled *Guidelines for Minimum Entry Requirements and Continuous Risk-Based Supervision for Market Intermediaries* for comments/feedback from EMC members during the IOSCO Annual Conference 2009 in Tel Aviv. Comments were received from the jurisdictions of Malaysia, Romania, Taiwan, India, Nigeria, Bangladesh, Argentina and Chile. EMCWG3 has incorporated the comments received and presented the final report to the IOSCO Emerging Market Committee Advisory Board for consideration at its meeting on 7 October 2009 and was very well received by members.

3. RISK BASED SUPERVISION APPROACH

A. Conceptual Evolution of Risk-Based Supervision

Risk-based supervision is regarded to have evolved during the 1990s. However, its roots can be traced back to experiences resulting from a number of financial crises that occurred in the 1980s. Traditionally, supervisors focused on rule based system that relied on review of transactions and historical performance, covering all operational areas regardless of any demonstrated or probable weakness. Results were evaluated with little emphasis on systemic controls or risk management. Subsequently it was realized that rule-based supervision may not be an effective tool for preventing financial crisis. This realization has led to the emergence of the risk-based approach to supervision where emphasis is placed on the process rather than on individual transactions and market intermediary's treatment is based on its risk profile and ability to manage the risk.

Risk-based supervision aims to promote transparency, providing early warning signals and encouraging the regulated entities to self evaluate their position at regular intervals. The risk profile of each intermediary determines the supervisory program comprising of off-site surveillance, targeted on-site inspections, prudential meetings and external audits and regulatory actions as warranted. A process of risk-based supervision involves continuous monitoring and evaluation of the risk profiles of market intermediary in relation to their business strategies and exposures.

In risk-based supervision, regulatory and supervisory resources are deployed in a more effective and efficient manner as it takes into consideration the risk profile of the individual financial institutions. Risk supervisory mechanics, in particular the on-site inspections, are undertaken based on the level or trend posed by each type of risk i.e. credit risk, market risk, liquidity risk, operational risk, legal risk, reputational risk, Anti-Money Laundering (AML) or Combating Financing of Terrorism (CFT) risk etc.

Ideally, risk-based approach to supervision employs methods such as sensitivity analysis, stress testing and other risk monitoring techniques to identify the likelihood of an (negative) event and its impact on the system in the process of the risk assessment and risk management. In the light of the above, developing and implementing risk-management systems for the capital market intermediaries requires precision and is important.

B. Risk Based Approach to AML/CFT

There is a certain level of KYC/Customer Due Diligence (CDD) requirements that must be undertaken for all customers, however if all customers are evaluated in exactly the same manner, firms can spend an inordinate amount of resources conducting Customer Due Diligence. This is where a risk-based approach with policies and procedures for identifying higher risk customers becomes imperative as some customers may pose a higher than average risk to the institution and thus require enhanced due diligence e.g. in the area of Money Laundering.

A risk based KYC/CDD approach ensures that resources are directed in such a manner that areas giving rise to greatest risks are given the highest attention. In doing so, the possibility of the scenario of a *tick box* approach arising is minimized. This also results in less hassle and bureaucratic *red tape* for lower risk customers and fosters a dynamic risk management environment that adapts to the changing risk profiles of customers.

C. Need for Risk-Based Supervision

Market intermediaries have incentives to take risk that maximize profit and increase shareholders' return on invested equity. This gives rise to creation of risky portfolios of assets and over leveraging, which in turn becomes a concern for regulators in the absence of appropriate risk management and control systems. To create a balance there is a significant need to appropriately regulate financial services providers to safeguard the interests of investors and other creditors of the financial system.

Prudential supervision accordingly fulfils a vital role of ensuring that institutions are financially sound and in a position to discharge their obligations to the investors. There is an over-arching goal of building investor confidence in the financial system as a whole and strengthening the economic foundation of the country. Risk-based supervision generally further refines this role of prudential supervision of the financial services sector.

In an environment where supervisors are faced with the scenario of regulated financial institutions becoming more complex and internationally active, and the international financial markets becoming more competitive, volatile and interconnected, regulatory and supervisory techniques can not remain static. These must evolve to remain effective and this evolution has resulted in the risk based approach to supervision. Need for risk-based supervision therefore, primarily emerged due to the regulatory objective to protect both the financial system and the consumers of financial services.

D. Objectives of Risk-Based Supervision

The objectives of the regulation can be placed under three broad headings and are:

- safeguard the <u>stability</u> of the financial system, especially the safety and soundness of the settlement system; and
- promote <u>efficiency</u> in the operational and compliance methods of market intermediaries; and
- provide adequate <u>protection</u> to customers of financial services offered by intermediaries.

The main objectives for the risk-based supervision evolving from the above supervisory objectives are to:

- better profiling of intermediary's risk position and its possible impact on the market;
- adjust the scope and intensity of supervision in relation to the level of risk exposed;
- integrated supervisory regimes-efficient use/effective allocation of scarce resources;
- a more pro-active approach; and
- promote confidence in the system as a whole.

A risk-based approach incentivizes intermediaries to manage their own risks. Regulators are expected to be capable to assess the intermediary's capacity to manage their risks and determine the extent to which this could have an impact on the regulatory objectives of financial stability, investor protection and the upholding of market integrity. Regulators have to make subjective judgments based on the outcomes of these assessments on where and how to prioritize supervisory efforts

4. RISK BASED SUPERVISION MODEL

A. Risk Faced by Market Intermediary

The supervision of market intermediaries originates with the identification and assessment of risks particular to the market. In general, the major risks that the market intermediary faces are:

(i) Portfolio risk;

- a. Interest rate risk;
- b. Market risk;
- c. Credit or counterparty risk;
- d. Financial risk;
- e. Liquidity risk;
- f. Mismatch risk etc

(ii) Entity risks;

- a. Operational risk;
- b. Management risk;
- c. Compliance risk;
- d. Financial risk;
- e. Legal and regulatory risk;
- f. Strategic risk;
- g. Contagion and related party risk etc

(iii) Systemic risks;

- a. Risk of negative spillover effects from other industries;
- b. Risk of economic downturn

B. Main Components of Risk-Based Supervision

All the regulatory regimes attempt to address the various risks identified above; however, there is extensive variation in the manner in which supervision is conducted. It may be due to a number of factors, like historical evolution of the system, the particular legal structure of the market, economic development in general and political and cultural environments. However, it is possible to identify the main components of risk-based supervision in most jurisdictions that include:

- i. Licensing Criteria;
- ii. Governance Rules;
- iii. Investment Rules;
- iv. External Audit /Insurance /Guarantees;
- v. Disclosure Requirements;
- vii. Minimum Capital and Reserves;
- viii. Winding up provisions; and
- ix. Sanctions.

C. Framework for Risk Management

In most of the risk based models the institutions are required to maintain the minimum framework for the risk management system, like:

(i) Minimum entry requirements
(ii) Risk models for identification, quantification and control of the risk;
(iii) Measurement of the volatility of the portfolio;
(iv) Stress testing requirements;
(v) Assessment of model risk;
(vi) Review of all the risks at regular intervals;
(vii) Possible risk mitigation measures;
(viii) Compliance with corporate governance;
(ix) Compliance with fit and proper criteria;
(x) Internal control systems;
(xi) System security requirements;
(xii) Confidentiality of information;
(xiii) Independence and enhanced role of auditors;
(xiv) Code of conduct for employees; and
(xv) Compliance culture and procedures.

D. Tools of Risk-Based Supervision Approach

The risk-based supervision should be a well-planned regulatory activity, which should have its objective of the promotion of the viability and financial soundness of market intermediaries. The tools which are associated with the risk-based regulatory approach include:

- <u>Market entry controls</u> - to provide some minimum level of assurance to customers about the financial soundness and integrity of market intermediaries;

- <u>Capital adequacy or solvency standards</u> - to ensure, on an ongoing basis, that market intermediaries have adequate capital to support the volume and nature of business undertaken and to provide a buffer so that unexpected or large losses within an institution do not immediately impinge on the interests of customers;

- <u>Close scrutiny of the quality and strategy of management</u> - to ensure that the management of market intermediaries has the necessary skills and probity to run the market institution;

- <u>Requirements for risk management controls</u> - to ensure that market intermediaries have appropriate systems for identifying, managing and monitoring risks that may threaten the ability of that institution to fulfill its obligations to counter-parties;

- <u>Reliance on professional experts such as external auditors</u> - to provide an independent check on the internal controls and processes of market intermediaries;

- Regular reporting and disclosure requirements - market intermediaries report to regulators to provide the information necessary for monitoring. Market discipline may be reinforced by enhanced public disclosure of this information;

- Better surveillance and enforcement powers for the regulator - to ensure that where problems arise, regulators have sufficient powers to remedy problems.

Jurisdictions that have adopted risk-based supervision usually apply a risk assessment model to assess and profile the risks of their intermediaries. A planned risk assessment model captures both qualitative and quantitative factors. The qualitative factors typically taken into account include the effectiveness of board and senior management, (human resource risks) its corporate governance (administrative risk), and the quality and independence of the risk management (systemic risk) and compliance functions (compliance risk). Quantitative factors may include the financial resources available (financial risk), capital adequacy, size of clientele (market risk) and the number of complaints (operational risk).

The approach for risk-based supervision, in general, emphasizes the identification, classification and categorization of the risks the institutions are exposed to and the risk management capacity in the overall assessment of the risk along with the determination of the probability and weighting of the major risks for each institution. The results of the overall risk assessment along with probability are used to assign an overall risk rating or risk scoring for each institution. In general, the risk rating is determined as “Impact x Probability”. While Impact rating depends on the size and the total assets of the institution, probability generally depends on the risk factors and the associated weights.

The purpose of the overall assessment is to measure the solvency of the intermediary. The institutions identified with high level of risk are dealt closely and at greater length. In the process of risk assessment a number of risk mitigants are identified like ‘Fit and Proper’ test of the Board, of the principal officer, auditor; effectiveness of operational management; system & infrastructure capabilities; adequacy of risk management strategies; compliance culture and procedures etc.

In addition to the qualitative and quantitative measures developed in the assessment of risk rating, Supervisors have also prescribed the methods to value the liabilities, minimum funding requirement, enhanced solvency, cost–effective contribution rate. They have also developed methodologies for scenario calculations for forecasting, stress testing or value at risk measure along with standard procedures for applying interventions.

E. Survey of Practices

Most of the jurisdictions that participated in the survey, have established some form of supervisory structures/systems to provide for risk-based supervision. The majority of the regulatory systems include the application of risk-assessment methodologies in order to determine the appropriate degree of supervisory attention in respect of a particular firm. Minimum entry requirements are mandated that may include managerial capacities, capital adequacy and compliance with existing regulatory requirements.

i. In **Malaysia**, within the Securities Commission (SC) risk-based supervision framework, a well defined self-assessment approach has been provided that enables the intermediaries themselves to evaluate their risk exposures, introduce/improve upon the necessary risk mitigating controls and to monitor their risk positions. Risk-based supervision framework categorizes risks into regulatory, corporate governance, operational, financial, legal, clients' assets protection, client relationship, human capital, products and services, and external, with a corresponding risk control for each risk. A Net Risk Scorecard is then generated by the regulator, which enables it to derive a key risk profile of the intermediary, taking into account the risk mitigation programmes (controls) implemented by the intermediary. In this respect, the intermediary is required to submit information to the SC on a periodic basis. Intermediaries with high overall or net risk score attract higher priority, greater coverage, time and resource allocation from the regulator.

The SC's Risk Profiling Framework considers risk from both qualitative and quantitative perspectives. The Risk Profiling Framework allows the prioritization of resources deployment and the focus is placed on intermediaries that require greater regulatory attention. From the quantitative aspect, the SC places emphasis on the risk-based capital adequacy requirements as well as other prudential and capital limits that are imposed on market intermediaries. Routine inspection and monitoring of broking intermediaries is conducted by Bursa Malaysia. However, in case of a breach of securities laws or any other laws, the issue is referred to the SC for further action. There are clear delineation between the examination/inspection coverage of the SC and that of the Bursa Malaysia.

ii. In **Thailand**, the Securities and Exchange Commission (SEC) uses Risk Based Assessment to assess the overall risks of an intermediary that is based on the potential impact of the intermediary's business operations to the market. SEC has supervision program (both on-site and off-site) that is finalized based on the result of risk and impact assessment of each regulated entity. The SEC, for this purpose, has adopted a structured risk-based approach, which takes into account both qualitative and quantitative factors. Qualitative factors taken into consideration include composition and quality of management, corporate governance, organizational structure and reporting lines, and the independence of risk management and compliance units. Quantitative factors inter alia include diversification and quality of investments, exposure size, the number of customer accounts, number of complaints, and capital adequacy. The SEC varies the frequency of inspections from at least once a year for a High impact and High risk intermediary to once every three years for a Low impact and Low risk intermediary.

iii. In **China,** the China Securities Regulatory Commission adopts a risk-based approach for supervision of market intermediaries that mainly focuses on compliance (compliance with applicable laws, legitimacy of business operations etc) and prudence (business performance, net capital status, balance sheet information etc). The liquidity risk, market risk, financial risk, operational risk and compliance risk are generally considered to assess an intermediary. A risk rating system exists that rates intermediaries according to their risk-management capacities and divided into 5 descending categories totaling 11 ranks: A (AAA, AA, A), B (BBB, BB, B), C (CCC, CC, C), D and E.

iv. In **South Africa**, the Financial Services Board (FSB) has a risk-based supervision framework which is an integrated approach to measures the risk areas in the entities it regulates against the regulatory objectives. It is a structured approach that systematically considers all of the key aspects of an institution's business and within each aspect look at the risks to that area of operation. FSB evaluates institution's risk profile, financial condition, risk management processes and compliance with applicable legislation. Risk ratings are done in terms of the risk-based supervision framework and determine the supervision approach. If the impact rating is high, then regulatory intervention is normally considered to be required.

v. In **Taiwan**, the Financial Supervisory Commission has adopted a comprehensive risk based supervision approach. Risk assessment for market intermediaries includes risk analysis and evaluation. While assessing the intermediary's risk influence, all risk elements are considered including; market risk, credit risk, liquidity risk, operational risk and other risks including legal risk, strategy risk or business risk and reputation risk. These risks are analyzed using the probability of risky events and the extent of its adverse impact. While evaluating the risk of intermediary the risk influence is compared with the set threshold to determine the priorities for risk control and select response measures. Risk measurement is undertaken using both quantitative and other feasible qualitative approaches according to the different types of risk involved. The risk management assessment uses five levels of assessment scale.

There is no single formula and various techniques of risk identification, measurement and mitigation are in practice among regulators who have implemented risk-based supervision. Some jurisdictions adopt elements or mix of both risk-based and rule-based approaches in their supervision and inspections.

vi. In **Bulgaria**, the Financial Supervision Commission apply compliance-based supervision; however, some elements of the risk-based approach appear whereby risk profiles of market intermediaries are drawn up in a structured manner through inspections, regular supervision and analyses. These risk profiles are used for comparisons and basis for planning an ongoing cycle of supervisory work and for possible interventions at individual institutions. When assessing market intermediaries, the risk elements taken into consideration are operational, credit, market and large exposures. However, there is no risk rating system

vii. In **Chile,** the Superintendencia de Valores y Seguros takes into consideration different possible risks factors depending on the past behavior of the market intermediary such as operational, credit and liquidity risks. Once a year, the riskiest intermediaries are selected through the Annual Audit Planning process. Before an intermediary's inspection is undertaken, there is a formal request of the information that is needed to create a preliminary vision of the riskiest areas. After that there is a planning period to define the process employed for the assessing how the risks of the areas reviewed are to be managed. The inspector's group assesses the risk after assessing the controls that mitigate the inherited risks assessed during the inspection. After the inspection, the conclusions are formally disclosed and explained to the supervised entity.

viii. In **Jordan**, the Jordan Securities Commission (JSC) takes several elements to assess the financial position and the management ability such as liquidity, credit risk and the ability of continuity. JSC identifies risks through monitoring of the trading and if the inspection and investigation reflect material violations remedial measures are triggered. JSC assesses weekly the position of intermediaries from the financial data submitted to determine the risk related to each intermediary.

ix. In **Morocco**, the supervision of market intermediaries by Conseil Deontologique des Valeurs Mobilieres (CDVM) is on a risk based approach. This approach draws specific information from either periodic reporting sent by intermediaries or inspections done by the CDVM. The three major risk categories taken into consideration include: financial risk; operational risk; and ethical risk. The rating system is built on the concept of risk category that is weighted based on the principle that greater the risk lower the rate.

x. In **Pakistan**, the main focus of current supervisory practices of Securities and Exchange Commission of Pakistan is to ensure compliance with regulatory framework which covers credit and market risk through exposure based limits and provisioning requirements. However during on-site inspection the adequacy of risks management system of the institutions is also reviewed.

xi. In **India**, the primary focus of risk management by Securities and Exchange Board of India (SEBI) has been to address the market risks, operational risks and systemic risks. SEBI has also developed risk management policies to mitigate these risks. Though no formal risk rating system for intermediaries has been evolved, but SEBI takes into consideration the risk profile of an intermediary for supervision besides compliance. The selection of entities for inspection is based on factors such as size of the entity, business mix/volume, systemic importance of the entity and its track record.

There are other jurisdictions that are currently using a rule based supervision approach and primarily evaluate the intermediaries based on the compliance with rules:

xii. In **Lithuania,** the Lithuanian Securities Commission (SC) has currently adopted a compliance based supervision approach but simultaneously seeks to implement and improve risk-based approach. Some of the risks considered while supervision are market risk, legal risk,- credit risk, operational risk, competition and business risk; adequacy of control measures, prudency of management and organizational culture, systemic risk, and risk of conflicts of interest. The SC carries out regular onsite inspections as well as on-going off-site supervision; at least quarterly reports are received. The relative emphasis is placed on each element on case to case basis. There is no specific guidance or quantitative measures, but de facto more attention and resources are devoted to risk elements that are deemed to be important or the probability of risks being high.

xiii. In **Mauritius,** the Financial Services Commission is in the process of implementing a Risk-Based Supervision for all its licensees. The project is currently being launched to the industry and is currently at its early stages of development. The risk-based supervision framework under development consists of different modules (10 in total). Some of them are: Data Collector, Impact Assessment, Risk Assessment, Score Analysis, Supervisory and Report.

xiv. In **Mongolia**, the Mongolian Financial Regulatory Commission (FRC) has not adopted risk-based supervision. However, risk elements such as credit risk, operational risk and Liquidity risk are taken into consideration while assessing market intermediaries. Risk identification is undertaken through compliance of rules and regulations.

xv. In **Nigeria**, the Securities and Exchange Commission is in the process of introducing risk based supervision. Emphasis is placed on both systemic and non systemic risks; specifically the exposures of firms, interest rate, structure, inflation and other similar factors. Currently, assessment is based on the provisions of laws and guidelines governing operations e.g. prudential guidelines. The inspections cover operational activities, depending on the function of the market intermediaries.

xvi. In **Oman**, the Capital Market Authority's supervision is not risk-based. However, credit risks and market risks are monitored through monthly Capital Adequacy Reports and ageing analysis of outstanding dues. Operational risks are examined and monitored though compliance reviews and reports. Equal emphasis is given to all other possible risk areas.

xvii. In **Poland**, the Polish Financial Supervision Authority supervises market intermediaries but the approach is not risk based.

xviii. In **Romania**, the Romanian National Securities Commission (RNSC) supervises intermediaries focusing on the compliance with the conditions according to which they were authorized and also capital requirements. In the case of any legislative requirements or client complaints; the RNSC undertakes specific monitoring activities such as the verification of the activities performed and any other relevant information and data.

xix. In **Turkey**, the Capital Market Board supervision is based on compliance to the rules and regulations and the jurisdiction plans to move towards risk-based supervision. Assessment of intermediaries is made based on the information submitted with the regulator.

5. GUIDELINES ON RISK BASED SUPERVISION

Based on the information shared and lessons learnt from the fact-finding survey of jurisdictions that already practice a risk-based supervision approach, the guiding principles on continuous risk-based supervision have been extracted that suggest practices when applying risk-based supervision methods, as well as useful factors and implementation steps to consider when adopting these practices in specific jurisdictions. The guiding principles cover the following areas;

1. Structured Planning for risk-based supervision/impact and probability assessments;
2. Identification and assessment of relevant risks (information collection, management and analysis; and
3. Allocation of supervisory resources (entry level, scheduled inspections planning and execution/communication of risk ratings to intermediaries, follow-up).

A. Structured Planning for Risk-Based Supervision:

Regulators develop a risk assessment framework to:

a) identify the relevant risks associated with intermediaries' businesses;
b) measure and assess these risks; and
c) evaluate the internal controls and risk management systems present in intermediaries to mitigate these risks.

Based on the risk assessment results, regulators develop supervision plans for the intermediary which priorities deployment of regulatory resources based on the risk profiles of intermediaries, the time and amount of on-site and off-site work for the range of intermediaries under their jurisdiction.

The risk posed by an intermediary is determined based on an evaluation of its relative size and significance (impact) to the market, as well as the adequacy of its internal controls and risk management to mitigate risks (probability of events occurrence needing regulatory focus) posed by its business activities. Before developing a risk assessment framework, the risks posed by intermediaries to the regulatory objectives of investor protection, market integrity, prudential soundness and systemic risk are also measured since the risk of an intermediary is the significance of its risks posed to supervisory objectives. An assessment is then made of the risks posed by an intermediary.

The risk assessment model should be reviewed and revised periodically to reflect changes in industry practices and developments in capital markets. The risk assessment model is updated regularly to capture new risks posed by new business practices and market developments, following inspections and other significant off-site observations.

B. Identification and Assessment of Relevant Risks:

In deciding on the risk factors relating to intermediaries for risk assessment, regulators should consider the relevance and significance of these factors. Relevant risk factors include: an intermediary's inherent business risks (type of activities, clientele and products) and inadequate internal controls (quality of risk management procedures and work done by compliance function). An effective risk assessment model uses both quantitative and qualitative risk factors, contributing to an intermediary's overall risk profile.

Criteria such as measurability and ease of data collection are also considered in deciding as to what risk factors need to be incorporated for the risk assessment. Data sources include statutory regulatory returns, external and internal auditors' reports, audit reports received from exchanges, self-assessment questionnaires and publicly available information. The following criteria may be considered in deciding what risk factors to incorporate into a risk assessment model:

- Measurability, i.e. whether the risk is quantifiable or can be objectively assessed;
- Ease of data collection and computation;
- The relationship of risk to its assessment is understood by regulators and the industry; and
- Flexibility to incorporate changes

C. Allocation of Supervisory Resources

Regulators have to maximize utility of their limited resources and sufficient attention has to be allocated to the market intermediaries. This regulatory attention could range from appropriate regulatory requirements, the number and types of statutory reports to be filed, priority for off-site and on-site supervision, to penalty for non-compliance. Where inspection powers are shared between the regulator and a Self Regulatory Organization (SRO), there is a need to coordinate supervision resources and schedules. If the SRO has a different risk assessment mechanism from the regulator, coordination and sharing of information should ensure that the inspection approach of the regulator and the SRO are effective and efficient for the mutually-supervised intermediaries.

To use an approach that determines the frequency and scope of supervision, regulators may use mechanism to translate risk scores and/or ratings for the allocation of regulatory resources. Such a structured mechanism for scheduling supervision provides consistent guidance on the frequency and scope of supervision across intermediaries. Allocation of regulatory resources is prioritized for intermediaries or areas that have higher risk and higher impact.

The total risk score/rating of an intermediary should be used to schedule the frequency of inspections for that intermediary. Inspection planning and inspection execution process takes into account the results of the risk assessment to determine the scope and focus of the inspection. Inspection checklists are used to ensure consistency of the areas inspected, and are adapted to suit the risks and specific objectives of each inspection.

6. REGULATORY CHALLENGES/ IMPLICATIONS TO IMPLEMENT RISK BASED SUPERVISION

While it is desirable to have such sophisticated models to supervise the industry, it is a matter for discussion as to whether the regulatory framework is ready to cope with such structures. The experience emerging from the pioneering countries, reflects that it is very difficult to move to risk-based supervision without a proper understanding of the expected change as it may need an entire reorganization of the prevailing regulatory framework and may also involve getting the right set of skills.

A. Change in organizational culture and modes of interaction

The risk-based approach to supervision may necessitate a change in organizational culture and the mode of interaction with market intermediaries. For regulatory bodies that have historically been more *rules* based, this can prove challenging, costly and time consuming. Given that risk-based supervision requires an entirely different approach to make qualitative judgements, different countries have adopted different structuring methodologies to suit to the new supervisory approach. Some countries created specialist divisions like Risk-Based Supervision & Enforcement Division and Research & Policy Division, whilst others introduced teams like Environmental Scanning Team, Clearance Team, Lead Teams; units like Specialized Supervisory Units, Specialized Anti-Money Laundering Units, Specialized Risk Units and Specialized Operational and Financial Risk Units.

B. Drafting of appropriate regulatory laws

Effective implementation of a risk based approach to supervision will require that laws, regulations, policies, manuals, and regulatory and supervisory practices should be so structured as to accommodate such a regime. Regulatory laws need to be crafted in a manner that allows them to be updated in light of changing environmental circumstances due to the fact that what was once the norm in a particular industry can change overnight and laws need to be able to keep up with this change. Also, associated rules and statements of guidance need to be drafted in such a manner that takes into consideration the varying nature and scope of licensees' activities. The markets are dynamic and so should be the regulatory structure.

C. A shift in the deployment of resources and extensive organizational restructuring

The risk based approach to supervision will likely require a deployment of resources away from low risk market intermediaries to higher risk market intermediaries. For others, it may mean a shift of resources away from one sector, to other areas of significance or may involve even more extensive organizational restructuring.

This, therefore, implies that the supervisory body must equip itself with appropriate technically skilled and experienced staff in order to understand and assess the risks posed by the entities that it regulates. Staff may also have to be *re-skilled* in the risk-based approach. There must also be appropriately developed and effectively deployed information technology systems, referring here to both hardware and software that is geared towards the risk ranking of licensees. In addition to this, supervisory authorities are expected to put in place adequate internal control systems and corporate governance processes along with adherence to fit and proper test.

D. Additional cost that should be associated with the benefit

As mentioned earlier, an organization moving more towards the risk based approach will likely incur considerable costs, as existing staff may have to be retrained or new resources acquired. Also, the re-skilling and changing of cultures do not occur overnight and this can result in patchy implementation of a risk based approach. To avoid occurrence of such a situation, safeguards will be required to be placed in the system.

E. Awareness Development:

The other major factors to be considered by the regulators is, making the industry understand the philosophy of risk-based approach. The purpose of the risk-based approach is to promote a risk culture in the industry with the intermediary conducting their own risk controls and monitoring, so that the supervisor only steps in where necessary. It is also very important for the regulator to be clear about the data requirements and its ultimate use so as to make the industry understand the approach

F. Validation by Different Stakeholders:

Market stakeholders should validate the risk-based supervision model adopted by the regulator. Validation can take place by formally presenting the annual report before the congress/parliament to share the supervisory approach, selection criteria and methodology of supervision resources allocation with the market agents. In this way, public conscience of potentialities and deficiencies in the supervisory approach can be taken into account.

G. Potential areas of weakness

It should be noted though that a risk based approach, while effective, is not without risks, given its reliance on market intermediary' internal controls and the work of other parties such as external auditors. There is also the possibility that the approach could potentially become simply another set of procedures to be followed. Simultaneously, the approach has the potential of process focusing more on the diagnosis rather than on the cure. Yet another risk is that there could be an inconsistency of approaches and regulatory overload. It should also be recognized that in the emergent economies both supervision schemes might be temporally coexisting in different segments of the intermediaries. Therefore, application of a risk-based approach with uniform risk management standards in the industry, should be thoroughly evaluated.

It is critical, therefore, that supervisors have mechanisms for monitoring and assessing the potential risks that a risk-based framework can create and for adjusting the framework and processes accordingly.

H. Change in Role of Intermediaries

The effectiveness of the risk based approach would invariably depend on intermediaries' preparedness in certain critical areas, such as the quality and reliability of data, soundness of systems and technology, appropriateness of risk control mechanisms and supporting human resources.

In order for the process to be successful, boards and senior management will need to engage in detailed discussions and be clear on the regulatory outcomes to be achieved. They will need to work in a constructive way and exercise good judgment on how the market intermediary can deliver on the desired outcome.

Intermediaries will have to adapt their behavior accordingly and re-orient their organizational structure in order to grasp the opportunities presented for increased innovation and more flexible operations, while at the same time fully appreciating their regulatory responsibilities and delivering against them. This will mean a shift in the focus from managing a legally driven process of compliance with detailed rules to managing the delivery of defined outcomes in a more flexible regulatory environment.

7. CONCLUSION

Risk-based supervision, can improve regulator's efficiency and effectiveness of regulatory processes by optimum utilization of supervisory resources. It also promotes a proactive compliance culture among market intermediaries. Development of sufficient regulatory capacity that ensures its effective implementation is, however, a challenge to this supervisory approach. With all its challenges, the successful implementation of a focused, proactive and efficient risk-based supervisory methodology that is able to evolve as the markets further develop (dynamic in character), is imperative in achieving the regulatory objectives of capital and financial stability, the maintenance of market integrity and the protection of investors.

EMCWG3 has identified and attempted to draw out some guidelines for effective implementation of a continuous risk-based supervision methodology that can be considered by the jurisdictions contemplating implementing a risk-based supervision methodology. The EMCWG3 would however like to stipulate that in implementing a risk-based approach to supervision and inspections, there is no standard or prescriptive set of rules that can apply across the board.

This report does not purport to recommend tools and methods as necessary or appropriate for all jurisdictions. Whether a given tool is beneficial for a specific jurisdiction can only be determined by the respective regulator keeping in mind its approach to supervision and taking into account the market practices and legal requirements of that jurisdiction. Individual regulators would have to tailor their systems to fit the circumstances of their own markets.

Going forward, EMCWG3 suggests that mechanisms be put in place within the emerging markets to develop interface for dialogue among EMC regulators that have implemented the risk-based supervision methodology for market intermediaries within their jurisdictions for sharing the experience and methodology with the regulators that plan to adopt the risk-based supervision methodology. Such interaction will enhance bilateral cooperation and initiatives within the EMC member jurisdictions.

Annex I

Questionnaire on Minimum Entry Requirements and Continuous Risk-Based Supervision for Market Intermediaries

General Instructions:

- Please type your responses for each question, in the space provided below the question.
- Where applicable, kindly also refer to applicable statutory provisions and/or precedent cases to support your answers.
- Mark "N/A" to questions which do not apply to you.

Introduction of Organization

Institution/Jurisdiction:
Country:
Contact Person:
Contact Details:
Phone No.:
Fax No.:
Email:

Existence of Overall Regulatory Infrastructure:

1. Does a minimum entry requirement for market intermediaries exist in your jurisdiction?

   Yes No

2. If yes, what are the criterions for minimum entry for market intermediaries in your jurisdiction?

3. Is there a comprehensive regulatory framework present which sets out the minimum entry criteria for market intermediaries?

   Yes No

4. If yes, give details of the regulatory framework governing minimum entry requirements for market intermediaries?

5. Does criterion for supervision of market intermediaries exist in your jurisdiction?

   Yes No

6. If yes, what are the criterion for supervision of market intermediaries?

7. Is your supervision criterion for market intermediaries, risk based?

   Yes No

8. Is there a comprehensive regulatory framework present in your jurisdiction which sets out the continuous risk based supervision criteria for market intermediaries?

9. What are the various risk elements such as credit risk, operational risk etc that are taken into consideration while assessing market intermediaries?

10. How are the various risk elements assessed and the relative emphasis placed on each element?

11. Is a specific risk rating system present in your jurisdiction?

    Yes No

12. If yes, explain in detail the risk rating system?

13. What are the criterions for identification of existence of risk?

14. What are criteria for assessment of the specific risks identified?

15. How is the adequacy of strategies employed by Financial Intermediaries to mitigate risk assessed?

16. Describe the overall methodology pertaining to risk based supervision adopted in your jurisdiction?

17. What is the frequency of such risk based supervision?

18. Does any onsite inspection of market intermediaries carried out in your jurisdiction?

    Yes No

19. If yes, provide details of the scope and methodology of such onsite inspection.

1. Assessment of Operational Risks

1. What are the key risk areas pertaining to operational risks faced by market intermediaries in your jurisdiction?

2. What factors are considered while assessing the risks faced by market intermediaries in this area?

3. Is there an established criteria for assessing operational risks faced by market intermediaries?

    Yes No

4. If yes, give details of the said criteria?

5. What are the risk mitigating controls pertaining to operational risk established by market intermediaries?

6. How are these controls examined and how is there adequacy or lack there off assessed?

7. How is the exception reporting methodology of the market intermediary assessed?

8. Give details pertaining to overall assessment of operational risks faced by market intermediaries and its weight age in the overall risk profile of the intermediary.

(A) **Adequacy of Administrative Infrastructure:**

1. What are the key risk areas pertaining to the administrative infrastructure of the market intermediaries?

2. How do adequacy of administrative infrastructure established by market intermediaries assessed in your jurisdiction?

3. Who are these key risk areas identified and how is the risk faced by these areas assessed?

4. What are the risk mitigating controls that are examined and how is their adequacy or lack there off assessed?

5. What other factors are considered while assessing the risks faced by market intermediaries in this area?

(B) **Adequacy of Information Technology Infrastructure:**

1. What are the key risk areas pertaining to the IT infrastructure of the market intermediaries?

2. How do adequacy of IT infrastructure established by market intermediaries assessed in your jurisdiction?

3. How are these key risk areas identified and how is the risk faced by the intermediary in these areas assessed?

4. What are the risk mitigating controls that are examined and how is their adequacy or lack there off assessed?

5. How is the efficiency of management reporting infrastructure of the intermediary assessed?

6. Is there any special emphasis placed on the level of automation adopted by a market intermediary?

7. What other factors are considered while assessing the risks faced by market intermediaries in this area?

(C) Adequacy of Financial Infrastructure

1. What are the key risk areas pertaining to the financial infrastructure of the market intermediaries?

2. How do adequacy of financial infrastructure established by market intermediaries assessed in your jurisdiction?

3. How are these key risk areas identified and how is the risk faced by these areas assessed?

4. What are the risk mitigating controls that are examined and how is their adequacy or lack there off assessed?

5. Are there any Capital Adequacy requirements for market intermediaries in your jurisdiction?

   Yes No

6. If yes, explain provide details as to the minimum requirement as well as manner and frequency of assessment of the same?

7. Is there any specific emphasis on assessment of the methodologies adopted by market intermediaries to combat money laundering?

8. How is the business continuity plan of market intermediaries assessed?

9. What specific requirements is there pertaining to maintenance of adequate books of records by an intermediary?

10. What other factors are considered while assessing the risks faced by market intermediaries in this area?

(D) Adequacy of Human Resource Infrastructure

1. Is there any minimum educational and experience requirement of top management of the market intermediary?

   Yes No

2. If yes, what are such minimum requirements?

3. Is there a compulsory requirement for the Training and Development of its employees by market intermediaries?

   Yes No

4. If yes, explain provide details as to the minimum requirement as well as manner and frequency of assessment of the same?

(E) Adequacy of Risk Management Infrastructure

1. How is the adequacy of risk management infrastructure of the market intermediary assessed?

2. What are the areas on which specific emphasis is placed while assessing the risk management infrastructure of the market intermediary?

3. Is there any specific requirement for market intermediaries to develop an overall risk management framework?

   Yes No

4. If yes, give details of such requirements and manner of assessment of fulfillment thereof?

5. What other factors are considered while assessing the risks faced by market intermediaries in this area?

(F) Disclosure requirements

1. What are the disclosure requirements pertaining to market intermediaries?

2. Do you require any:
   - Investigation Disclosure
   - Internal Review Disclosure
   - Criminal Disclosure
   - Regulatory Action Disclosure
   - Customer Complaint/Arbitration/Civil Litigation Disclosure
   - From the market intermediaries

(G) Other areas pertaining to operational risk assessed

1. What other areas are considered while assessing the operational risks faced by market intermediaries?

2. Give details of methodology of assessment followed in these areas?

2. Assessment of Market Risks

1. What are the key risk areas pertaining to Market risks faced by market intermediaries in your jurisdiction?

2. Is there an established criteria for assessing market risk faced by market intermediaries?

   Yes No

3. If yes, give details of the said criteria?

4. What are the risk mitigating controls pertaining to market risk established by market intermediaries?

5. How are they examined and how is their adequacy or lack there off assessed?

6. Give details pertaining to overall assessment of market risks faced by market intermediaries and its weight age in the overall risk profile of the intermediary.

7. What other factors are considered while assessing the risks faced by market intermediaries in this area?

3. Assessment of Credit Risks

1. What are the key risk areas pertaining to Credit risks faced by market intermediaries in your jurisdiction?

2. Is there an established criteria for assessing credit risk faced by market intermediaries?

   Yes No

3. If yes, give details of the said criteria?

4. What are the risk mitigating controls pertaining to credit risk established by market intermediaries?

5. How are they examined and how is their adequacy or lack there off assessed?

6. Give details pertaining to overall assessment of control risks faced by market intermediaries and its weight age in the overall risk profile of the intermediary.

7. What other factors are considered while assessing the risks faced by market intermediaries in this area?

4. Assessment of Financial Risks

1. What are the key risk areas pertaining to financial risks faced by market intermediaries in your jurisdiction?

2. Is there an established criteria for assessing financial risk faced by market intermediaries?

   Yes No

3. If yes, give details of the said criteria?

4. What are the risk mitigating controls pertaining to financial risk established by market intermediaries?

5. How are they examined and how is their adequacy or lack there off assessed?

6. Give details pertaining to overall assessment of financial risks faced by market intermediaries and its weight age in the overall risk profile of the intermediary.

7. What other factors are considered while assessing the risks faced by market intermediaries in this area?

5. Assessment of Compliance Risks

1. What are the key risk areas pertaining to compliance risks faced by market intermediaries in your jurisdiction?

2. Is there an established criterion for assessing compliance risk faced by market intermediaries?

   Yes No

3. If yes, give details of the said criteria?

4. What are the risk mitigating controls pertaining to compliance risk established by market intermediaries?

5. How are they examined and how is their adequacy or lack there off assessed?

6. Give details pertaining to overall assessment of compliance risks faced by market intermediaries and its weight age in the overall risk profile of the intermediary.

7. What other factors are considered while assessing the risks faced by market intermediaries in this area?

6. Assessment of Legal Risks

1. What are the key risk areas pertaining to legal risks faced by market intermediaries in your jurisdiction?

2. Is there an established criteria for assessing legal risk faced by market intermediaries?

   Yes No

3. If yes, give details of the said criteria?

4. What are the risk mitigating controls pertaining to legal risk established by market intermediaries?

5. How are they examined and how is their adequacy or lack there off assessed?

6. Give details pertaining to overall assessment of legal risks faced by market intermediaries and its weight age in the overall risk profile of the intermediary.

7. What other factors are considered while assessing the risks faced by market intermediaries in this area?

7. Assessment of Other Risks

1. What are the other risk factors faced by market intermediaries in your jurisdiction?

2. Give details pertaining to overall assessment of other risks faced by market intermediaries and its weight age in the overall risk profile of the intermediary.

3. Does your jurisdiction approach other jurisdictions for gathering information pertaining to supervision of market intermediaries?

   Yes No

4. If yes, what is the nature and frequency of such approach?

5. Will you disqualify the financial intermediary if the information received by a foreign authority comes negative?

6. What other factors are considered while assessing the risks faced by market intermediaries in this area?

Thank You

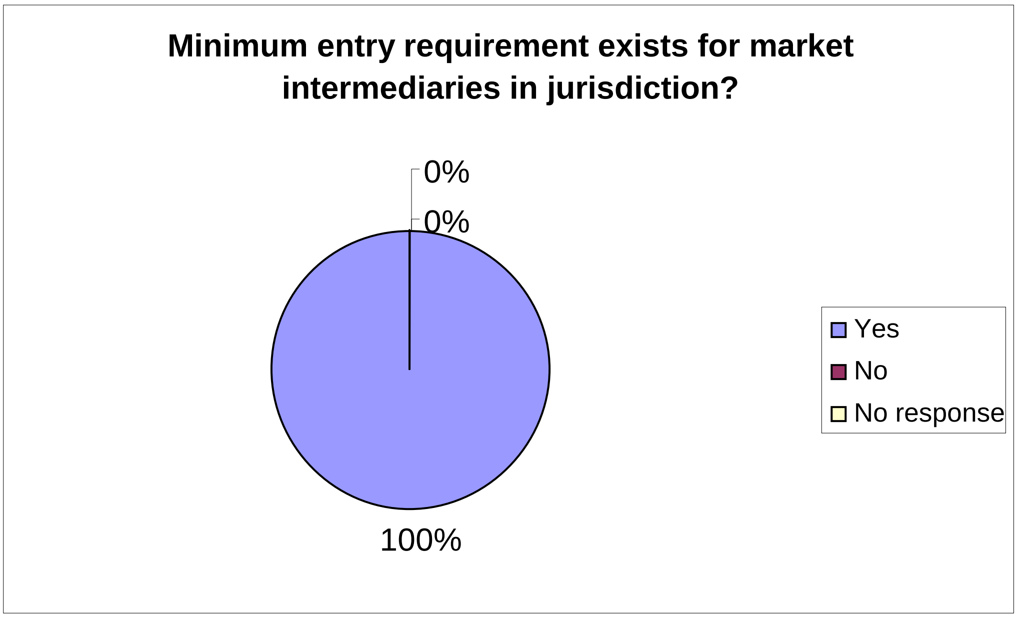
Annex II

Summary of Survey Responses

1. Part 1: General Section

1.1 Minimum entry requirements and criterions

All survey respondents have indicated the existence of minimum entry requirements in their jurisdictions. Some of the common criterions highlighted are adequacy of financial resources, management and organizational structure, business plan for viability, credit history, experience & competency, etc.



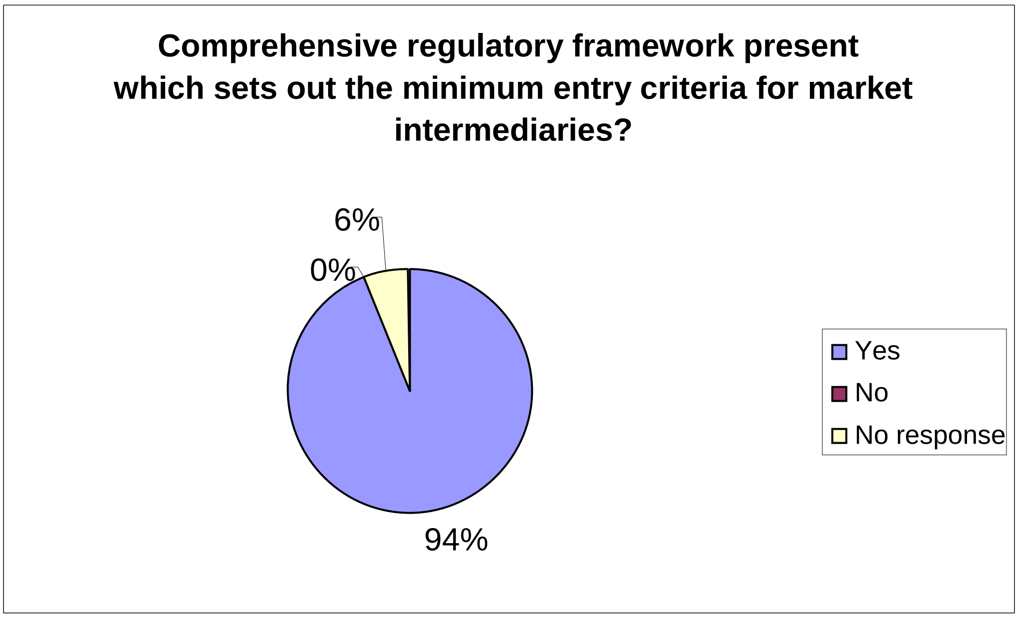
In Jordan, Bulgaria, Pakistan, China, Oman, Romania, Thailand, Morocco and Malaysia, the criteria for minimum entry requirements of market intermediaries include certain organizational requirements including management competency, shareholding composition, adequacy of financial resources, business model and scope of activities, etc. A detailed structure has already been laid down in the governing regulations on reporting principles and procedures, internal audit procedures and compliance with the securities laws.

Bulgaria also requires professional liability insurance while Jordan requires an un-conditional bank guarantee. In Turkey, among other criterion, it is the legal requirement that the hundred percent of the paid-in capital of the intermediary be fully subscribed and sponsors must be certified as never to have been subject to any legal prosecution due to bankruptcy and/ or infamous offence. India has defined a criterion for *fit and proper* test standards that is applied to all applicants seeking financial intermediaries' license. Chile and Lithuania place emphasis on knowledge of intermediaries related to securities brokerage business along with impeccable repute.

In Romania, the authorized financial intermediaries are required to submit the contract concluded with a financial auditor, fulfilling the common criteria set by the Regulator. In Pakistan, certain additional requirements are also applied like the minimum age limit of broker/ director, minimum educational qualifications and experience requirements of sponsors/ directors, along with a sound credit history. In South Africa, the key individuals and representatives of market intermediaries must meet the fit and proper requirements of honesty and integrity as well as qualifications and experience.

1.2 Comprehensive regulatory framework

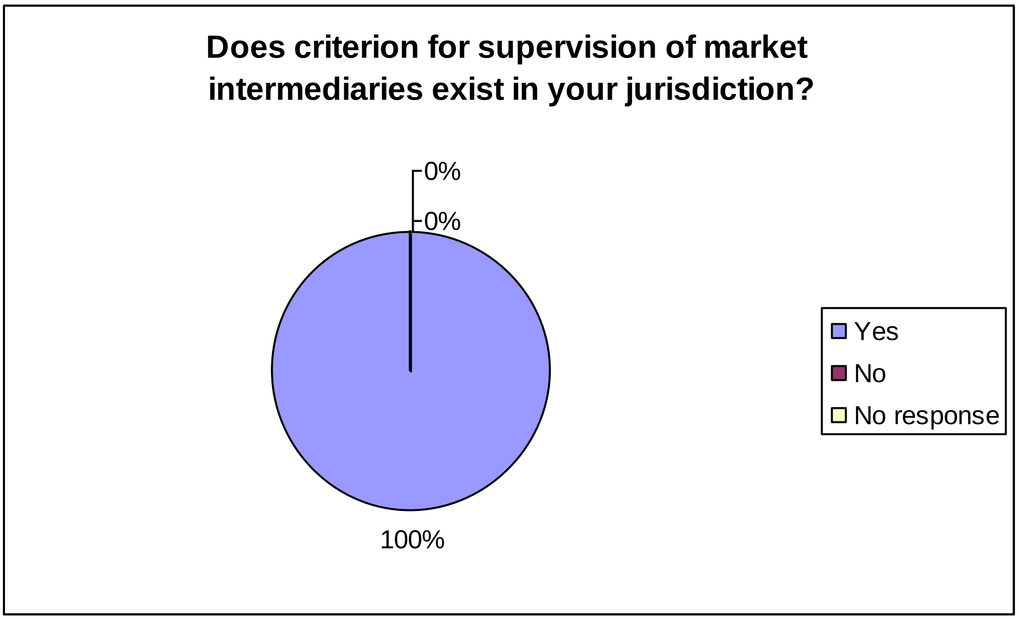
All respondents have indicated the existence of comprehensive regulatory framework in their jurisdictions which broadly encompass dealing in securities and future contracts, fund management, advising on corporate finance, investment advice, financial planning, etc.



All jurisdictions emphasize the capital adequacy and minimum capital requirements, financial capacity and credibility of founders of the intermediary. In Taiwan, additionally, a foreign securities firm which intends to establish branch offices within the territory of the Republic of China (R.O.C) is expected to possess sufficient international securities business experience, financial health and should not have been sanctioned administratively by its home country's regulatory authorities. In Pakistan, certain other laws and codes also apply like Code of Corporate Governance, and Companies Ordinance. In South Africa, Morocco, Pakistan and Jordan, the minimum entry criterion and fit and proper standards also exists through specific regulatory provisions.

1.3 Criterion for supervision of market intermediaries

All survey respondents have indicated the existence of criterion of supervision of market intermediaries. In some of the jurisdictions, the IOSCO Objectives of Securities Regulation are also taken into consideration in ensuring investor protection, fair, efficient and transparent markets and reduction of systemic risk. Some of the common criteria highlighted are adequacy of financial resources, management and organizational structure, and business plan for viability.



Some of the common criterions for supervision of market intermediaries in responding jurisdictions include capital adequacy requirements, compliance with legal requirements, inspections, inquiries and audits. In Lithuania, regulator's attention is devoted according to the market impact assessment, risk profile and size of the financial intermediary. Taiwan has an overall elaborate criterion for supervision of financial intermediaries which includes finance, business operation, merger, investment in foreign and mainland Chinese securities enterprises, administration of overseas branch offices and management of regulatory capital. In Pakistan and Jordan, all market intermediaries are supervised through an institutionalized process of on-site inspection and off-site surveillance.

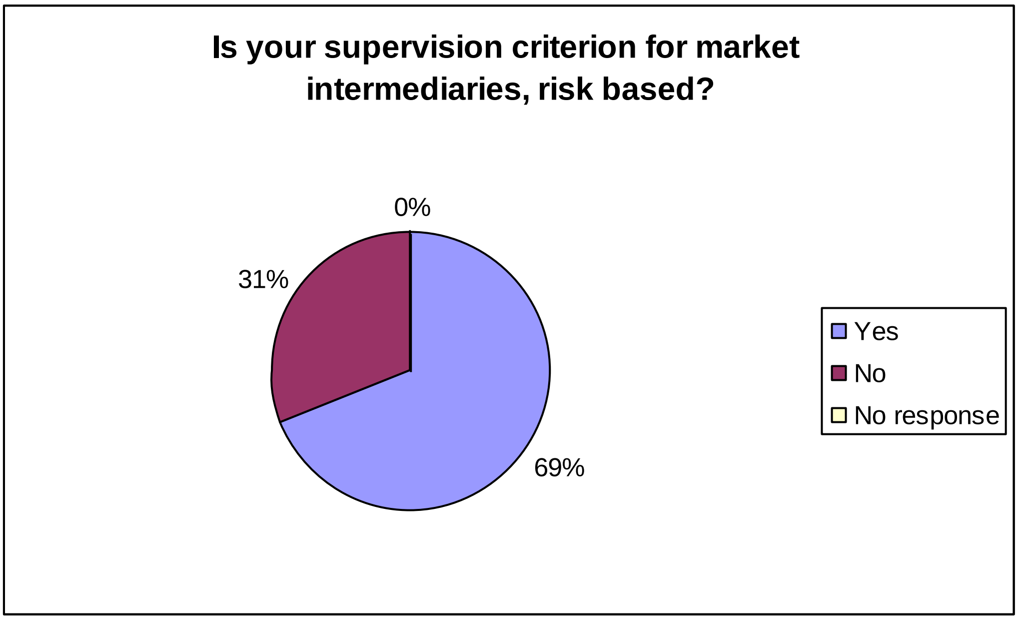
The intermediaries in South Africa are required to submit a regulatory compliance report on an annual basis as well as annual financial statements and audit reports. In Pakistan, a system audit of the business affairs of the intermediary has been made compulsory under the regulations governing systems audit, there also exists a Code of Conduct, prescribed under the law that applies to all registered intermediaries. Where regulator is of the opinion that an intermediary has failed to follow the Code it may, if this is in the public interest, suspend the intermediary and impose a fine as well.

In Pakistan, Members/Brokers are also required to comply with the provisions of Risk Management Regulations, Capital Adequacy, Exposure margins and mark to market losses, market wide/client wide position limits provided in the Regulations of the Stock Exchange.

In Bulgaria, periodic off site inspection is carried out through review of prescribed reports and financial statements. In case of deficiencies, on site inspection is carried out. In China, some of the criterions for supervision of market intermediaries are net capital requirements, client's capital for transaction and settlement, risk management system and internal control system of the financial intermediary and the requirements on information reporting and disclosure.

1.4 Risk-based supervision of market intermediaries

While a majority of the jurisdictions have indicated that their criterion for the supervision of market intermediaries is risk-based, some of the jurisdictions including Turkey, Oman, Lithuania, Nigeria and Poland do not have such frameworks. Bulgaria is partially using the *risk-based supervision approach, as the compliance based supervision is mostly applied in this jurisdiction.*



Romania has indicated that some of the criteria taken into account for supervision include breaches of the legislations in force, inadequacy of required capital, serious client complaints, internal control structures of the financial intermediary.

Pakistan and Malaysia have indicated that their risk-based regulatory framework is based on the capital adequacy requirements as well as other prudential and capital requirements imposed on market intermediaries i.e. stock brokers. Malaysia has also developed a Risk Profiling Framework which considers risks from both qualitative and quantitative perspectives that allows the prioritization of resource deployment with a focus on intermediaries which require greater regulatory attention. In Turkey, the non-compliance to the regulations is regarded as the alarm bell and triggers the supervision of risk situation at the financial intermediaries.

In India, the regulator continuously monitors the risk management policies for mitigating the market, operational and systemic risks. The regulator, based on liquidity and volatility of the securities impose requirements for margins on the intermediaries. Also, in order to avoid the risk exposure, trading limits and gross exposure limits are imposed. In Mongolia, the risk-based supervision method is being used but as yet has not fully adapted to international standards of risk-based supervision. In Pakistan, although risk-based supervision is being used to some extent, but the main focus of current supervisory practices is to ensure compliance with regulatory framework which covers credit and market risk through exposure based limits and provisioning requirements. In Bulgaria, through inspections, regular supervision and analyses, risk profiles of individual investment firms are drawn up in a structured manner and recorded within regulator's in-house database. This database permits meaningful comparisons, and provides a basis for planning an ongoing cycle of supervisory work and for possible interventions of institutions undertaking intermediation.

Part 2: Assessment of Operational Risk

2.1 Key operational risk areas faced by market intermediaries

Almost all surveyed jurisdictions have indicated the presence of certain operational risk areas faced by market intermediaries. Some of the major areas include systemic failures, procedural errors, personnel risks pertinent to illegal activities, administrative policies, failed internal processes, etc.

Malaysia, Turkey, Pakistan and Oman all have indicated that operational risks are systemic in character and mostly account for procedural errors and frauds by employees and malicious/ unauthorized usage of customer assets. While in India, Lithuania and Malaysia, inability to continue business due to disruption is considered as one of the major operational risk areas. Thailand accounts the inability to detect the misuse of clients' accounts and clients' assets as operational risks. In addition, Thailand also takes into account the properness in the systems, procedures and control function that market intermediary put in place in each of its business functions. In Pakistan, some of the key operation risks are internal and external frauds. In Mongolia, a major concern in operational risk is the lack of good management. In Jordan, China, Bulgaria and Morocco, some of the operational risks indicated are; lack of qualified human resources, deficient or lack of proper documentation and information system risks.

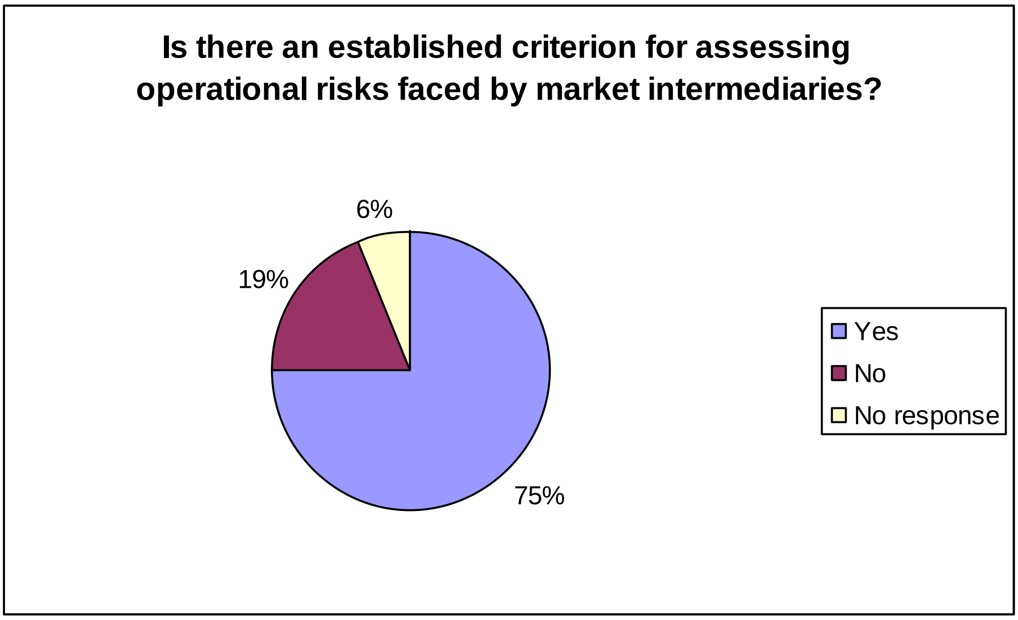
2.2 Factors considered while assessing operational risk

All surveyed jurisdictions have responded that certain specific factors are taken into consideration while assessing the operational risks faced by market intermediaries. Common factors include monitoring of internal systems, compliance procedures and quality controls.

Malaysia, Oman and India have placed the emphasis on the effectiveness of controls, surveillance inputs and internal processes. Improper or unauthorized transactions, inaccurate documentations and inadequate or failed internal processes are also some of the highlighted pointers. Chile has indicated that the history and background of the financial intermediary is important while assessing the operational risk. In Jordan, some of the considered factors are risk appetite of the intermediary and risks exposures from processes and systems. In Bulgaria, some of the factors considered in assessing the entity's exposure to operational risk are size and market share of the company, number of clients, number and volume of transactions executed. In Pakistan and China, some of the factors considered are scale of business, liquidity, financial resources and adequacy of relevant infrastructure.

2.3 Established criterion for assessing operational risk

Almost all surveyed jurisdictions except Oman, Jordan and Chile have indicated the existence of established criterion for assessing operational risks. These criteria primarily include internal audit policies and procedures on KYC, order taking, trading procedures, back-office operations and controls in authorization of transactions.



Malaysia has an elaborate system and specified criterion for assessing the operational risks that covers detection of procedural errors, avoidance of unauthorized access to records and avoidance of inability to continue business in case of disruption. In addition, operational risk is one of the risk charge components of the capital adequacy requirements for stock-broking companies. Turkey, Oman, India, Lithuania and Taiwan place special emphasis on the segregation of operational and functional jobs, monitoring of capital adequacy, compliance, regulatory environment and maintenance of transaction track records. In Morocco, some of the criteria used are risks that relate to quality of human resources available and experience of the senior management of the intermediary.

In Bulgaria, the capital charge is calculated for covering operational risk, using the two optional methods. The intermediaries are required to charge capital for covering exposure to operational risk. There are two optional methodologies for calculating the capital charge for operating risk. This includes Basic Indicator Approach that links the capital charge for operational risk to a single risk indicator (e.g. gross income) for the investment firm and standardized approach which uses a combination of financial indicators and institutional business lines to determine the capital charge. It can be concluded, that all investment intermediaries use the first methodology due its simplicity.

In Pakistan, some of the established criterions for assessing the operational risks are capital adequacy limits calculated on the basis of Net Capital Balance and risk measures under Risk Management Regulations of the stock exchanges.

2.4 Risk mitigating controls pertaining to operational risk

All surveyed jurisdictions have indicated the existence of risk mitigating controls pertinent to operational risks. Some of these controls are effective implementation of internal audit policies and procedures, insurance cover on losses, monitoring, compliance with the requirements of fit and proper under the rules, and compliance structure.

Turkey, Oman, India, Chile and Romania have placed emphasis on the establishment of internal inspection department which audits and examines the level of compliance, more focus on risk-based compliance/ monitoring plans, settlement/ trade guarantee funds and information disclosures/ reporting. In Pakistan and Jordan, some of the controls are regular periodic capital adequacy reports, status of compliance, business continuity planning, and compliance and internal audit function effectiveness, organization structure and complaints frequency and nature. In Pakistan and South Africa, insurance cover is also considered as one of the risk mitigating control.

In Bulgaria, some of the risk mitigating controls for the financial intermediaries are clear structures of the internal rules regarding the rights and obligations of the employees according to internal organization of the intermediary, a special emphasis is placed on the regular training of the staff on subjects related to financial theory and practice, risk management, relevant legal basis and information technologies. While in China, some of the risk mitigation controls are establishment of risk management committees and risk control department, fire-wall system among business departments and setting up of a ceiling for the maximum affordable market risks.

2.5 Adequacy and examination of risk mitigating controls

Almost all surveyed jurisdictions have indicated that the risk mitigating controls are being adequately examined. While regulators have provided guidance on such controls, in most of cases, these controls are of self-assessed nature. In some of the jurisdictions scoring and validation is done and on-site inspections also play a major role.

In Turkey and some other jurisdictions, the board of directors of the intermediary is responsible for conducting the internal audit, approve strategies and standards. India, apart from review of periodical submissions and inspections, follows the system of self-certification. South Africa, Jordan, Lithuania, Morocco and Chile, on the other hand, follow inspection process for assessment or adequacy or lack of controls. In Pakistan, the intermediaries involved in securities business are required to submit capital adequacy report and audited accounts while margins requirements and other Risk Management measures are provided in Risk Management Regulations of the Stock Exchanges.

In Bulgaria, the adequacy of risk management controls and procedures and its adequate application is assessed by the risk management unit. In China, the controls are examined through annual reports and other periodical reports, this examination is combined with off-site inspections and onsite inspections by the regulatory authority. Sometimes independent third-parties (usually accounting firms) are designated to conduct on-site inspections. While concurrent and post risk-feedback gathered are used to examine the adequacy and efficacy of inspections.

2.6 Assessment of exception reporting methodology of market intermediaries

Some of the surveyed jurisdictions have indicated the existence of exception reporting methodology. The existence of risk-based approach in conduct of examination and if a particular area is identified as posing high risk, the examination is done for that particular function/ operation.

Turkey has explained that the inspection report is kept with the financial intermediary for future references. In Oman, this requirement is embedded in the regulatory guidance and operational manuals. In some of the jurisdictions, like India, this is assessed on case to case basis, while in some countries, like Chile, it is considered as a part of internal control procedures. In Pakistan, this assessment is done during on-site and off-site inspections. In China, the exception reporting methodology is assessed by emergency management system.

2.7 Overall assessment of operational risk and its weight in risk profiling

While some of the jurisdictions have indicated the absence of risk-based supervision, majority have highlighted its presence. According to some of the jurisdictions the assignment of weights in risk profiling is dependent on the regulatory priority when the assessment is done. Although some of the jurisdictions have indicated a percentage distribution of 20 to 25 percent given to operational risks in overall risk profiling of the intermediary.

In Chile, there is no specific process to weigh operational risks, but the overall assessment relies on the chief inspector's defined criteria. In Lithuania, India, Oman and Malaysia, attention to adequate risk profile and weighting attribution depends on the severity of the case and is dependent on the regulatory priority when the assessment is done. In Taiwan, the intermediaries are required to establish and implement suitable monitoring and controlling mechanisms to prevent operational risk occurring in the course of trading process. In Pakistan, though the operational risk is rising due to size and nature of industry however any matrix to calculate and assign weight to operational risk has not been prepared so far.

In South Africa, the weighting differs from entity to entity, depending on the size of business, etc. In Bulgaria, the weighting of the operational risk is a variable depending upon the size of the investment firm, the market share and types of investment services provided. Also, the income of financial intermediaries is function of the factors assessed. Similarly in China operational risk and its weight in risk profiling is according to the scope of the business and liquidity of assets and liabilities of a securities company, risk-adjusted net capital is calculated and provisions are set aside for risks.

Part 2: Assessment of Operational Risk

Section A: Adequacy of Administrative Infrastructure

2. A.1 Key risk areas pertaining to administrative infrastructure

The surveyed jurisdictions have indicated inadequate human resource management, lack of organizational planning and communication mechanisms as the key risk areas pertinent to administrative infrastructure.

Oman has highlighted the resource constraints and standards policies for employment as administrative risk areas. India, Chile and Lithuania have indicated organizational culture and structure, management profile, technical and communication mechanism and other resources as risks to the administrative infrastructure. In Thailand, Mauritius and Mongolia, the key risks areas are conflicts of interest and the lack of *Chinese walls* between each unit like investment bank unit, brokerage unit and research unit. In Jordan, some of the key risk areas are lack of experience, in competence, knowledge levels of management, improper documentation, and systems deficiency.

In Bulgaria, some of the risk areas relevant to administrative infrastructure are inadequate organizational structure and unclear lines of management, etc. China has highlighted risks relating to administrative infrastructure, manipulation by substantial shareholders, insider control and even appointment of senior managers prior to approval by the regulatory authority and includes unsound corporate governance system, improper related-party transactions and transfer of benefits. While in Pakistan, physical risk of fire, theft and terrorism and risk of system and network failure are considered as key risk areas pertinent to administrative risks.

2.A.2 Assessment of adequacy of administrative infrastructure

The surveyed jurisdictions have indicated that adequacy of administrative infrastructure is broadly assessed through compliance to the established standards and regulatory principles which prescribe minimum standards and criteria.

Turkey and Oman have highlighted that the compliance to the regulatory requirements by the intermediary serve as the minimum standards for the assessment of adequacy of administrative infrastructure. In India, Chile, Jordan and Lithuania, periodic inspections and reporting are undertaken where adequacy of administrative infrastructure established by market intermediaries is also assessed. In Thailand, the adequacy of administrative infrastructure can be assessed through the examination of relevant documentations, for instance an organizational chart, job descriptions or conducting an interview with related personnel. In addition Thailand conducts on and off site inspections to ensure both information and physical segregation among each unit.

In Taiwan, the independence of the unit or the personnel implementing risk management is observed. Pakistan and Mongolia highlighted on and off-site supervision as well as compliance of fit and proper requirements. In China and Bulgaria, the investment intermediary must develop internal governance structure that includes well defined and transparent lines of responsibility, effective processes to identify, manage and monitor the risks and adequate internal control mechanisms, including sound administrative and accounting procedures. In Jordan, intermediaries comply with minimum requirement such as qualification, segregation of duties, good experience, competence, knowledge of management, and assessment of continuity of administrative infrastructure is done by investigation and inspection.

2.A.3 Identification and assessment of administrative risk areas

Some of the jurisdictions have briefly explained the methods of identification of administrative risk areas. These include comparison against the defined minimum regulatory requirements and inspection on case to case basis.

Turkey has indicated that it has defined the minimum benchmarks relating to encountering administrative risks. While Taiwan regards that risk areas are identified depending on a joint promotion and implementation effort from every department of the company. In Bulgaria, the unsound units for internal control, internal audit and risk management and/or weak communication between the different units of financial intermediaries are considered relevant for identifying and assessing the key risk areas. In China, the risks are identified by surveillance of internal compliance department and auditing department, while periodic and discrete inspections by the regulatory authority are also used to identify risk areas in regulatory compliance.

2.A.4 Mitigating controls of administrative risks

Most of the jurisdictions have highlighted the presence of risk mitigating controls like delegation of authority, segregation of functions, internal audit mechanism, minimum requirement benchmarks, mitigation of risk arising out of conflict of activities, etc.

In Turkey and Lithuania, functions are designated to the staff of intermediary with controls of internal auditing systems. In India, regulations stipulate *Chinese walls* between various activities to mitigate conflict arising out of multiple activities carried out by the intermediary and overlapping roles of key employees of the intermediary. While in Taiwan, an intermediary shall evaluate the efficacy of its risk management implementation, including whether the expectations of the board of directors are met, whether risk management is conducted independently, whether the risk management system is faithfully implemented, whether the overall risk management infrastructure is complete, and so on. In Thailand, Bulgaria and Mongolia, some of the risk mitigating controls include the examination of the line of authority, reporting line, separation of functions and access to critical information. In China, the internal control measures are also examined with respect to security management measures and risk disposal planning. The regulatory authority use onsite and off-site inspections to assess its adequacy.

2.A.5 Other factors in assessment of administrative risks

A few jurisdictions have indicated the background of the firm and its history of operations, reputation, and its incentive and bonus structures being offered to the senior management; as other factors while assessing the administrative risks faced by market intermediaries.

In Jordan, efficiency of the documentation is also monitored. In China, if any of administrative risks led to non-compliance activities, the regulator also inspect the credit records of the substantial shareholders and senior management.

Part 2: Assessment of Operational Risk

Section B: Adequacy of Information Technology Infrastructure

1. Key risk areas pertaining to IT infrastructure

Surveyed jurisdictions have highlighted IT system errors and frauds, data security and the loss resulting from system's failure as the key risk areas relating to IT infrastructure.

Malaysia, Bulgaria, Oman, China, India and Lithuania have highlighted that the prime issues with respect to assessment of operational risk with respect to adequacy of IT infrastructure are inadequate IT security and firewalls, various threats like physical, software, data, communication (encryption), network and login security, disaster recovery and business continuity planning.

In Chile, while the IT activities are outsourced, the key risk area is the safe custody of the records. In South Africa, the key IT risk areas include the adequacy of resources, procedures for implementation and procurement, effectiveness of security framework, and consideration as to whether the IT infrastructure in place provides an adequate platform on which to run the business of the intermediary.

2. Assessment of adequacy of IT infrastructure

Some of the assessment mechanisms adopted by the surveyed jurisdictions to assess the adequacy of IT infrastructure; are periodic reviews and testing, review of the system's integrity and third party verification of the system, project management and information security,

In Turkey, Oman, Bulgaria and Romania, the intermediaries are required to meet the minimum benchmarks already defined in the guidelines on compliance requirements. In Malaysia review of IT security features is done along with the procedures to detect unauthorized access or possible intrusion to IT systems and records. In India and Chile, the internal control processes and system audit reports are done together with the self-assessment approach. In Nigeria, overall speed and accuracy with which transactions are processed is considered against the defined benchmarks. In Jordan, the regulator determines minimum IT requirements that intermediaries must commit, in addition to the fact that it has the authority to deploy IT auditors in the case of violations. In Morocco, this is assessed either by periodic questionnaires or on-site inspections.

In Bulgaria, the intermediary must operate internal organization in compliance with the business pursued by it, including qualified personnel, equipment and software. In China, the adequacy is measured by self-evaluation of market intermediaries by self-regulating organization (SROs). Moreover, an independent third-party can also be mandated by the regulator to examine an intermediary IT infrastructure when necessary.

3. Identification and assessment of IT risk areas

The surveyed jurisdictions have indicated various methods for identification of the key risk areas like control assessment workshops, examinations assessments, discussions with the regulatory authorities, and self assessments.

In Oman, the intermediaries are required to report the details of risk areas, based on the prescribed regulatory guidelines. The inspectors then discuss these areas with the intermediaries and compare them with other intermediaries to suggest additions and modifications. In India, Lithuania, Jordan, Taiwan and Romania, the intermediaries are required to have the internal audit mechanism covering the existence, scope and efficiency of internal control systems, data security etc. In Mauritius, the key risk areas identified include the possibility to lose data as a result of unforeseen circumstances. In South Africa, some of the areas assessed are; structure of the organization with proper segregation of work, management and information security. In Bulgaria, the financial intermediaries are mandated to maintain back-up of all the information available in their system. Identification and assessment of IT risk areas in China are done via internal control systems, auditing and inspections are conducted by accounting firms. The systems are also assessed through SROs and the internal control mechanisms of the intermediaries.

4. Mitigating controls of IT risks

The surveyed jurisdictions indicate various risk mitigating controls that are examined to encounter IT infrastructure risks like periodic review of the system for integrity and security, minimum benchmarks, internal audit controls, back-up of systems, off-site storage facilities, etc.

In Oman, the minimum benchmarks have evolved through contributions from experts and comparisons by the regulatory inspection team between the practices adopted by different intermediaries. In India, Chile, Taiwan, Bulgaria and Lithuania, the internal audit mechanism is followed. In Thailand and Mauritius, in order to examine the risk mitigating controls, the regulator focuses on areas like system log files, appropriate business contingency plan (BCP) and effective compliance and audit function. In China, some of the IT risks mitigating controls include internal surveillance and external auditing of market intermediaries, while their adequacy is assessed through on-site and off-site inspections by the regulatory authorities. The sufficiency of safety measures for software, hardware, data, personnel management and technology are also assessed.

5. Assessment of efficiency of IT infrastructure

The surveyed jurisdictions have indicated examination of functions and operations for assessment of efficacy of the management reporting infrastructure of the intermediary.

In Malaysia, if a particular area is identified as to be posing a higher than average risk, the SC examines this particular function/operation of the intermediaries. The basis of assessment would be guided by identification of risks and adequacy of IT infrastructure. In China and Oman, the minimum benchmarks have evolved through contributions from experts and comparisons by the regulatory inspection teams between the practices adopted by different intermediaries. In India, Chile, Taiwan and Lithuania, the internal audit mechanism is followed to assess the efficiency of IT infrastructure. In Mauritius, the efficiency of management reporting infrastructure is usually gauged through the implementation of a contingency plan/ back up reporting system by the financial intermediary. In Thailand, the efficiency of management reporting infrastructure is being measured by the examination of relevant documentations (e.g. system log reports or log reports) and through an interview with related persons. In addition, Thailand also considers the timeliness of management report undertaken by the financial intermediaries. While in Bulgaria, the internal audit department, which is required to function independently, examines and evaluates the adequacy and effectiveness of the IT infrastructure of the financial intermediary along with internal rules and the established systems of internal organization, internal control, information storage, processing and accounting.

6. Emphasis on adoption of automation

The surveyed jurisdictions show a varied approach towards adoption level of automation. In some jurisdictions, automation is mandatory while some leave it to the discretion of the intermediary.

In Oman, automation is compulsory for certain functions undertaken by the intermediaries and these are tested by the Exchange, beyond the mandated functions, the firms have the discretion. While in Malaysia and Lithuania, it is up to the market intermediaries to decide the level of automation they want to adopt. In India, Chile and Taiwan, all market intermediaries are required to have seamless systems in place with an acceptable level of safety of the information for all kinds of risks. In Nigeria and Mauritius, a proper IT infrastructure and its back up system are regarded important to facilitate recovery of data in the event of an emergency and accurate investor data validation. In South Africa and China, it depends more on the type of entity as it is generally understood that automation will be more important in the case of large entities as in the case of sole proprietors.

7. Other factors in assessment of IT risks

Some of the highlighted risks pertinent to the IT infrastructure are potential system threats, maintenance issues, information security by the financial intermediary, information communication and back up plans, etc.

Malaysia has indicated that potential systemic spillover, availability and maintenance of system, information security and confidentiality issues, IT compatibility and backup plan tend to be more relevant to IT risk. In Oman, the computer systems are required to be identified and maintenance measures prescribed to ensure uninterrupted availability. This is to avoid failures at peak load timings when in fact it is most critical for the services to remain available to the clients. Taiwan regards development and maintenance of trading system, employee training about information safety as major IT risks. In Jordan, some of the other risks considered are unstructured IT functions like absence of formal user entitlement policies, absence of password protection, unclear responsibility and ownership for user accounts in the system, the absence of data integrity, installation of unauthorized program as well as copying of confidential information. In China, the risks arising from external technical attacks (for example, computer viruses, Trojans, etc.) on website and internal networks of the market intermediaries are also considered as substantive IT risks. The intermediaries are required to take into consideration the factor of IT compatibility and capability at time of launching of new businesses and new products.

Part 2: Assessment of Operational Risk

Section C: Adequacy of Financial Infrastructure

1. Key risk areas pertaining to financial infrastructure

All surveyed jurisdictions have highlighted the key risk areas pertaining to the financial infrastructure. One of the most quoted key risk area is the lack of financial resources and capital adequacy. Some of the other highlighted risk areas are liquidity, cash flow management and losses due to failed internal processes.

Malaysia has indicated that key risk areas with respect to adequacy of financial infrastructure include lack of strategic business plan, monitoring of financial resources and clients' exposure. In Turkey, Pakistan, Oman, Lithuania and Taiwan, liquidity risks and capital adequacy are regarded as the major risks. In India, delay in bringing sufficient funds to meet obligations is considered as a risk while in Romania key risk areas are the risk of loss resulting from inadequate or failed internal processes, systems and people, or from external events and actions. In Mongolia, the key risk areas are banking crisis, liquidity shortage, weak disclosure system and poor investors' education. In South Africa, the risks of intermediary's assets not exceeding its liabilities are considered to meet the fit and proper requirements. Other risks are type and nature of the intermediary's liquidity or asset/liability mix and the types of earnings of the intermediary.

In Morocco, some of the key risk areas considered are financial structure and commitment of the market intermediaries. In Bulgaria, the financial adequacy is verified by the internal audit and internal control unit. In China, some of the key risk areas are capital adequacy, safety of client's fund, sound and appropriate financial management, fund accounting, fund evaluation, fund operation, fund clearing and settlement.

2. Assessment of adequacy of financial infrastructure

All surveyed jurisdictions have indicated existence of the standards for assessment of adequacy of financial infrastructure. Some of them are presence of business and financial planning, compliance reporting, inspections and assessments.

In Malaysia, amongst other things, market intermediaries should have a strategic business plan which is reviewed by the board and supported by a budget. It also requires monitoring the prepared budget against the actual variances, exception reporting along with continuous monitoring of the clients' exposures. In Turkey, Oman, India, Chile and Romania, regular compliance based monitoring is undertaken. In Taiwan, Jordan, Morocco, Pakistan and Lithuania, adequacy of financial infrastructure established by market intermediaries are assessed through off-site examination; in addition, contingency plan is required to be proposed to meet the needs of funding arising from irregular or urgent conditions.

In Nigeria, the intermediaries are periodically required to submit to the regulator the capital adequacy certificates. In South Africa, the liquidity and earning are also considered along with the capital adequacy during assessment of financial risks. In Bulgaria, this is done through onsite visits and upon review of the various reports filed with the regulator. In China, the assessment of the adequacy of financial infrastructure is done as self-evaluation by intermediaries, inspection by SROs, evaluation by expert teams and supervision by the regulatory authority.

3. Identification and assessment of financial risk areas

The surveyed jurisdictions have indicated various methods for identification of the key risk areas like control assessment workshops, examinations assessments, discussions with the regulatory authorities, and self assessments, assessments of solvency ratios and overall profitability analysis.

In Oman, market risks on the intermediary's investments, credit risks on the amount due to the intermediary and operational risks are assessed, while in India risk areas are identified through daily reporting and on line monitoring by stock exchanges and periodic scrutiny of books of accounts through inspections. In Chile, Lithuania, China and Taiwan, the adequacy of risk associated with financial infrastructure is assessed through the examination of relevant documentations and inspections. In Jordan and South Africa, analysis of solvency ratios is considered apart from other methods. In China, onsite and off-site inspections by the regulatory authority are undertaken to assess the risks. External opinions, including those from the press reports, comments of experts and public complaints, are also accounted towards risk assessment.

4. Mitigating controls of financial risks

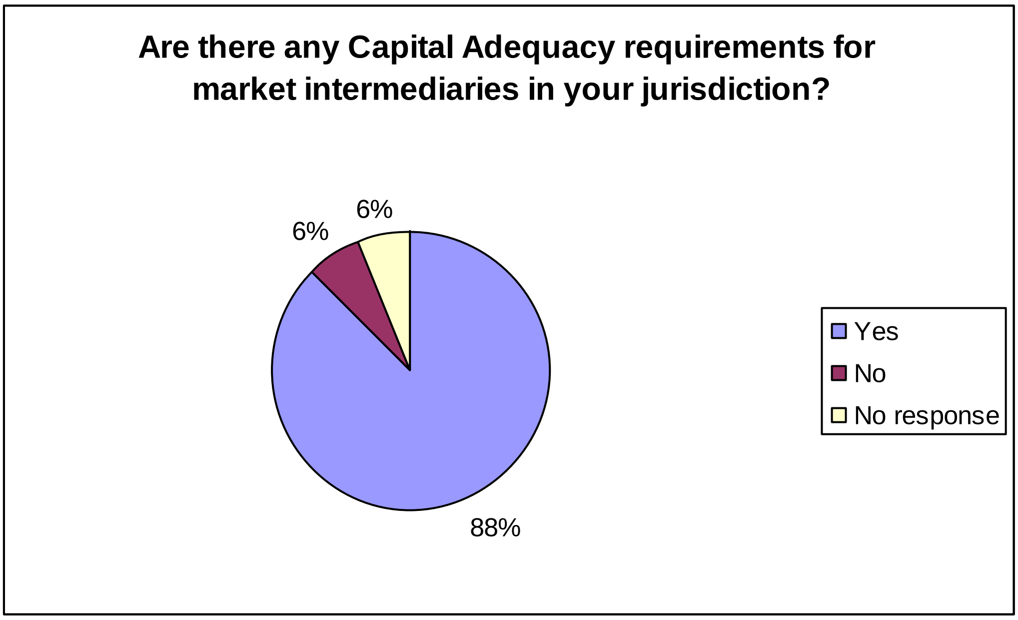
The surveyed jurisdictions have indicated various risk mitigating controls that are examined to encounter financial risks like minimum benchmark and internal audit controls.

In Turkey, the financial intermediaries monitor their own financial risks, while in Oman, Lithuania and India intermediaries are required to create appropriate procedures for accounting and financial control under prescribed guidelines and internal control mechanisms. In Taiwan, the intermediaries are required to establish various funding strategies against possible loss arising from lack of liquidity, or requirement of fund liquidity caused by incident in the market. In Thailand, financial intermediaries required to establish system and control in order to maintain the minimum financial requirement as financial intermediaries is required, on a daily basis, to maintain the minimum net capital. In addition**,** the focus is on proper written policies and procedures and effective compliance and audit function, while in Pakistan the financial risks are mitigated through review of effectiveness of systems and control through system and operational audit.

In South Africa and Jordan, financial ratios including criteria for solvency are examined. In Bulgaria, the application of rules and procedures, systems of preparation of reports, handling of money and orders are the controls applied to mitigate the risks. While in China, the stress test mechanism, dynamic risk warning and monitoring mechanism, periodic regulatory inspections, specialized inspections and professional inspections are applied to assess adequacy of controls almost on a monthly basis.

5. Capital adequacy requirements

All surveyed jurisdictions have indicated the presence of minimum capital adequacy requirements.



In almost all jurisdictions the intermediaries are required to report their capital adequacy on periodic basis or as required under the regulations. In Malaysia, the risk based capital adequacy requirements are designed to ensure stock broking companies have adequate capital to support the level of risk that they are exposed to. Usually a certain ratio or a percentage of the exposure is fixed as the minimum capital requirement. In Jordan, there are specified criteria for financial services licensing and registration that prescribe percentages. In Bulgaria, the intermediaries assess the minimum capital requirements on a daily basis following the internal rules and procedures. If the minimum requirements are out of the prescribed limits, the entities are to report to the regulator, so that appropriate measures are taken in order to bring the financial condition of the intermediary in line with the regulatory requirements. In China, there are distinct slabs of the capital adequacy requirements. The capital adequacy is assessed on a monthly basis, via the intermediary's issuance of capital adequacy statement and the off-site inspections by the regulatory authority.

6. Emphasis on assessment methodology to combat money laundering

Most of the surveyed jurisdictions have indicated the presence of assessment methodology to combat money laundering. These include prevention guidelines and standardized criteria for monitoring, etc.

In Malaysia, Oman, India, Lithuania and Taiwan, intermediaries are required to adhere to the Guidelines and Laws on Prevention of Money Laundering. Thailand has adopted the Financial Action Task Force (FATF) recommendations and issued the notification which set forth the minimum requirements as to how the companies implement their *Know-Your-Customer/Customer Due Diligence (KYC/CDD) process*, as well as requirements and guidance notes concerning how suspicious transactions should be identified and reported. In addition, Thailand's notification outlines the minimum requirements and guidelines for all securities companies by focusing on four key areas which are;

1. Internal policy and procedures to prevent money laundering and terrorist financing (AML/CFT);
2. KYC/CDD process;
3. Suspicious transaction reporting; and
4. Record keeping.

In Turkey, Pakistan and some other countries, intermediary institutions must under the law obtain the information on identity of their customers prior to opening an account. In Pakistan, Jordan, South Africa and Mauritius, the intermediaries are also expected to follow guidelines issued to safeguard itself against involvement in money laundering activities and other unlawful trades. The financial intermediaries in Bulgaria are required to adopt, internal rules for the control and prevention of money laundering, which are required to be approved by the state agency.

7. Assessment of business continuity plan

Almost all of the surveyed jurisdictions have indicated the assessment of business continuity methodology ranging from the plan development at the time of the incorporation of the intermediary to internal assessment and regular monitoring mechanisms.

In Malaysia, the front line regulator for the broking industry is responsible for the assessment of the business continuity planning. For non-broking intermediaries, the SC assesses the adequacy of such requirement. In Turkey, Taiwan and Lithuania, during the pre-authorization process, the intermediaries are required to prepare the business continuity plan. It has been observed that in Oman and Chile, the business planning is discussed during the assessment and inspection with the management of the intermediaries and these are compared across other intermediaries to suggest additions and modifications. In Mongolia, Morocco and Pakistan, through on-site inspections, it is reviewed whether the business plan of the regulated agencies is properly being implemented. In China, the business continuity plan is assessed from the aspects of capital adequacy, operational compliance and financial stability of market intermediaries on a monthly basis.

8. Maintenance of book of records by market intermediaries

All of the surveyed jurisdictions have indicated the presence of the requirement to maintain the book of records by market intermediary. Time-span for such requirements vary from 5 to 10 years along with the compliance requirements with laws and accounting standards

All jurisdictions require maintenance of the records of transaction, trades, orders, asset management and custody, such requirements, however vary from five years and up to 10 years. Regulations require maintenance of books of accounts and their safekeeping and also prescribe the type of books of records to be maintained and the manner in which they are to be maintained. In Mongolia, Mauritius, Jordan, South Africa and Pakistan, certain guidelines have been issued for maintenance of book of records by market intermediaries and auditors' are required to certify that books are being maintained as per statutory requirements. In China, some of the requirements are stipulated in the Accounting Standards for market intermediaries and mandatory accounting standards.

9. Other factors in assessment of financial risks

Some of the jurisdictions have highlighted other factors in the assessment of financial risks like exposure limits, reporting processes, financial landscape of global economy, etc.

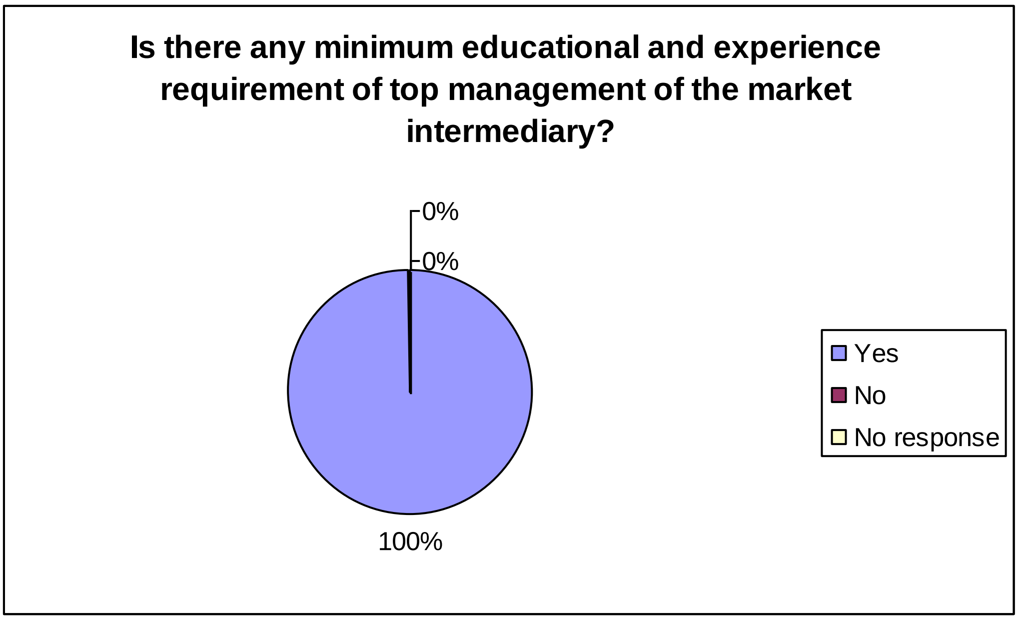
In Malaysia, exposure and prudential limits are imposed by the regulators which include limit with respect to single customer, single counter and gearing. In Oman, budgetary and financial reporting processes are also covered by the guidelines prescribed by the regulator. In Taiwan, the borrowing and guarantee of funds is considered while considering financial risks. In Pakistan, management capabilities/experience and functioning of various departments in the intermediary are assessed. In Morocco, the liquidity and customer deposit risks are also considered. Some of the other factors during the assessment of financial risk with intermediaries in China are entry into new markets, launch of new businesses and products (financial instruments) and change of economic environment.

Part 2 : Assessment of Operational Risk

Section D: Adequacy of Human Resource (HR) Infrastructure

1. Minimum educational and experience requirements

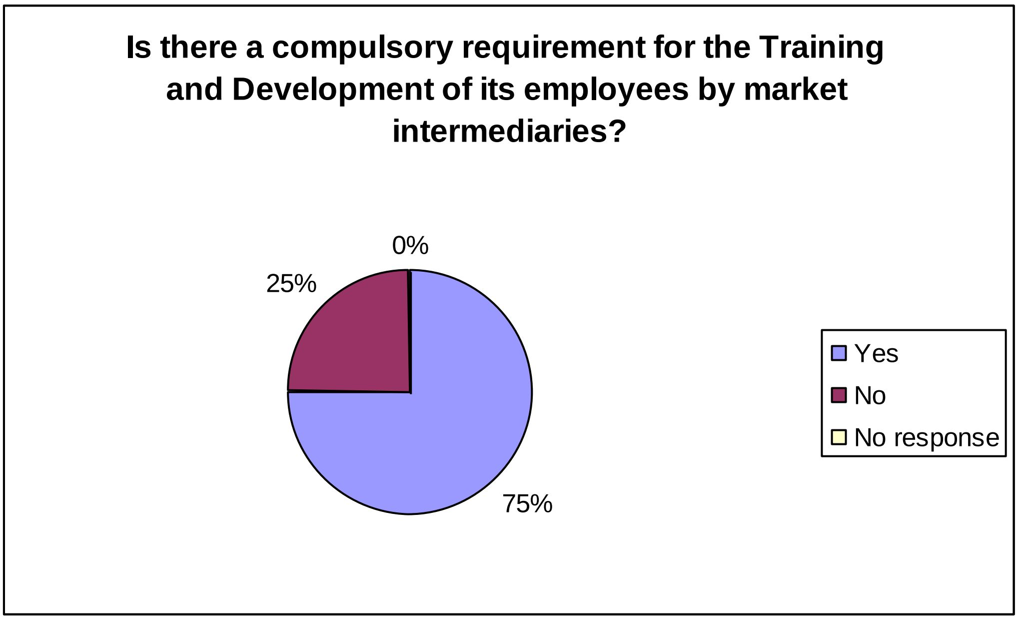
All surveyed jurisdictions have indicated the presence of minimum educational and experience requirements in their jurisdictions which range from specialized certifications / qualifications to university degrees.



In Malaysia and Turkey, the minimum competency requirements apply even to the directors of the financial intermediaries. In order to hold the license, the participants of the intermediary are required to hold educational qualifications in addition to work experience and passing the necessary examinations. While in some of the jurisdictions, there is no such educational or experience requirement. Chile is in the process of implementing the requirements of studies and experience, since the last legal reform to the Capital Market Law has established this type of requirements. In countries like India, Lithuania, Bulgaria, China, Taiwan and Romania, representatives of the intermediaries are required to at least hold a bachelors degree. Also in Thailand, Mauritius, South Africa and Pakistan, the senior management (e.g. director, manager, and any person with power of management) of broker/dealer and private fund management companies are required to have proper educational background such as a bachelor's degree or equivalent or having work experience of not less than five years. In South Africa, the experience required is of one or two years in the relevant field. In Jordan, the participants should have good reputation along with a bachelor's degree and pass the examinations set by the regulator. In Morocco, it is mandatory for the financial intermediary to prove the experience in the financial market activity**.**

2. Compulsory requirement of training and development

In most of the surveyed jurisdictions, with few exceptions, the compulsory requirement of training and development exists.



In Malaysia, the financial intermediary license holders must undergo the Continuing Professional Education (CPE) program and collect at least 20 CPE points annually in order to renew their licenses. Similarly in Oman, for renewal of the licenses, License Renewal Education Programme must be taken after every four-year period. India and Romania require special educational and training programs to be undertaken by the intermediaries.

In Taiwan, such educational services are held by the regulator or its appointed institution. In some countries like Oman, development of such training programmes is presently being undertaken. In Taiwan and Mauritius, continuous professional development & education is essential. In Thailand, the SEC requires marketing and research personnel to go through periodic refreshment courses. Marketing and research personnel who provide clients with recommendations for purchasing and selling of securities and derivatives products must go through refreshment courses once every two years. In Jordan, the intermediaries must undertake and pass a training program and also renew their registration annually. In China, there are some compulsory training requirements for the intermediaries or the practitioners in the securities industry. They are obliged to pass the SAC qualification examinations while directors, supervisors or other senior management appointed shall take qualification at least one business training recognized by the regulator for each 3-year period. The market intermediaries are also required to provide periodic professional trainings to practitioners. Pakistan has no compulsory requirements for the training and skill development of the employees of the intermediaries.

Part 2: Assessment of Operational Risk

Section E: Adequacy of Risk Management Infrastructure

1. Assessment of adequacy of risk management infrastructure

Most of the surveyed jurisdictions have indicated the existence of the risk management infrastructure in their respective jurisdictions which range from the establishment of pre-defined criteria to the examination of periodic reviews and reports.

In Malaysia, China and some other jurisdictions, the financial intermediaries are required to have a management committee and where applicable establish, maintain and exercise effective policies and procedures on risk management and have their own system of monitoring risk on a daily basis. In Turkey, the board of directors appoints one of its members, to be in charge of the internal control function as the "Board Member in Charge of Internal Control". In Oman, India, Pakistan, Chile and Romania, the regulators examine the periodic capital adequacy reports and compliance test reports submitted by the intermediaries besides examining operational procedures from time to time through on site reviews. In Pakistan, Bulgaria and Nigeria, this is done through on-site inspections. In Thailand, risk management policy must be in writing and must be approved by board of director of the company. In assessment of adequacy, Thailand will look into the written board policy and procedure regarding risk management of all areas and will make an assessment on how the companies follow those policy and procedure accordingly. Moreover, the companies also require to closely monitoring the adequacy of risk management infrastructure through compliance unit.

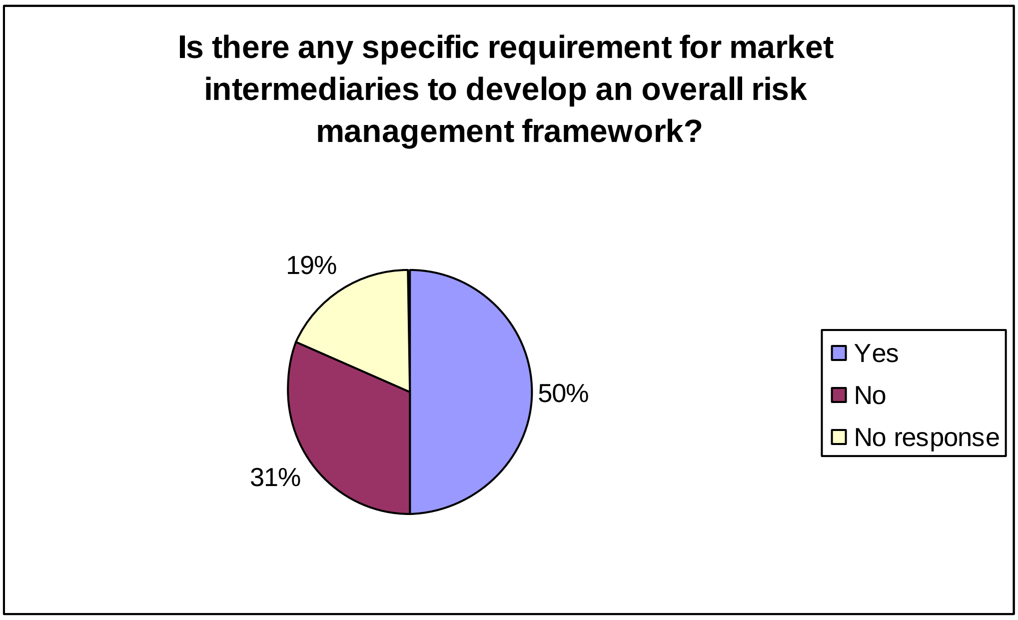
2. Areas of assessment of risk management infrastructure

Majority of the surveyed jurisdictions have indicated the areas of risk management of infrastructure in their respective jurisdictions like establishment of policies and procedures on risk management, etc.

In Malaysia, special focus for risk management is on the financial records and robustness of the risk management system. In Oman and India, market intermediaries are subject to adequate and ongoing capital and other prudential requirements. Further market intermediaries are required to have adequate and qualified people and well laid out internal systems. In Pakistan and Mauritius certain areas are assessed pertaining to risk management infrastructure which include senior management, composition of board, oversight of company's operations, business plans, budgets and performance of company and internal controls. In Thailand, an emphasis has been placed on the written policy (or manual or procedure, etc), which received an approval from the Board or Committee of the financial intermediaries, especially on the issue of risk management in preventing any damages caused by risks arising from business operation. This is to the extent that it does not disrupt the business operation of the securities company. All types of potential risks from business operation are taken into consideration by the risk management unit. In South Africa, some of the areas considered are high level risk policy and its management process. In Bulgaria, some of the areas assessed are the internal rules for risk management, their proper functioning in accordance with laws. Some of the areas where special emphasis is placed while assessing the risk management infrastructure are the appointment and performing of duties by the Chief Compliance Officer, General Inspector, Chief Risk Officer along with adequacy of surveillance, auditing personnel and integrity of internal control systems.

3. Specific requirements for developing risk management infrastructure

More than half of the surveyed jurisdictions have indicated the presence of the specific requirements for developing risk management infrastructure like frequent examinations, internal audits, and establishment of risk control units.



In Malaysia, the regulator has implemented a risk-based approach in conducting of examinations. In this regard, if a particular area is identified as posing a higher risk, the particular function/operation is specifically examined. In Turkey, Lithuania and Romania, the financial intermediaries are required to establish, maintain and improve their internal audit systems in accordance with the organizational structure. In some of the jurisdictions, like Nigeria, the concept is new but rapidly being adopted. In Pakistan, in terms of the requirements of the Code of Corporate Governance the Board of the fund Management Company is entrusted with the responsibility to put in place risk management policy. In South Africa, a similar code of conduct exists which emphasizes on resource deployment, procedures and appropriate technological systems that can reasonably be expected to eliminate risks as far as possible.

In Bulgaria, the intermediaries are obliged to develop and apply risk management rules and procedures. All risk types need to be defined, the procedure for risk identification, measurement, mitigation and assessment need to be developed and applied. Also the procedures are required to be monitored on a daily basis and upon failure or divergence with the rules initially set, the management body need to be informed, so as to take appropriate measures to eliminate the threat or minimize the effects of the risk in place. In China, intermediaries are obliged that the heads of business departments and branches conduct self-examination and self-evaluation on procedures and risk control measures. The regulatory authority conducts assessment by onsite inspections and also through off-site inspections.

4. Factors considered while assessing the risks faced by market intermediaries

Most of the surveyed jurisdictions have indicated the similar areas as discussed earlier while assessing the risks faced by market intermediaries.

In Oman, assessment is carried out based on specific risk areas mentioned for each of the activities, while in Chile, public complaints and inspection history are also observed. In Pakistan, some of the other factors considerd relevant to the assessment of risks are board and senior management oversight, effectiveness of policies and procedures, effectiveness of internal audit and compliance, and effectiveness of MIS. In South Africa, the compliance reports are evaluated. In Bulgaria, some of the factors considered are size of the intermediary, number of transactions and orders executed, number of clients, types of investment services and activities provided (depending on the type of license granted), trading venues, size of trading portfolio, financial instruments in trading and investment portfolio and amount of assets under management. In China, it is observed whether any such risks have already led to non-compliance activities in the past.

Part 2: Assessment of Operational Risk

Section F: Disclosure requirements

1. Disclosure requirements pertaining to market intermediaries

Most of the surveyed jurisdictions have indicated the disclosure requirements, depending on the area of operation of the market intermediaries to be made to the regulator and its customers.

In Malaysia, it is required that the market intermediaries should notify issues to the regulator that may affect the fit and properness of the firm or the firm's ability to meet the minimum financial requirements. In Chile, the intermediaries are required to submit certain specified information to the regulator on a daily basis, while in Lithuania; this submission is required on less frequent basis. Similarly, Taiwan also requires disclosures of not only the prescribed information, but also the information that relates to the risk management. In Pakistan, Jordan, Mongolia and Mauritius statutory disclosures are submission of financial statements, intimation of change in shareholding structure, appointments and resignation of directors and senior officers. In Thailand, statutory disclosures are submission of financial statements, intimation of change in shareholding structure, appointments and resignation of directors and senior officers and the report concerning business activities such as margin reports, capital reserve requirement report, and derivatives transaction reports, etc. The submission of those reports may be done on annually, bi-annually, quarterly, monthly, fortnightly, weekly or even daily. In Mongolia, and some other jurisdictions, market intermediaries must disclose such information to the regulator where some of information is public. In South Africa the disclosures require information on product suppliers and financial services. In China, some of the disclosure requirements are public disclosure to investors, the regulatory authority and SROs and information disclosed in accordance with laws is also released to the media designated by the regulator. It is also observed with respect to public disclosures, that people with insider information are obliged not to make any prior disclosures.

2. Requirements of various disclosures including:

- **a. Investigation Disclosure**
- **b. Internal Review Disclosure**
- **c. Criminal Disclosure**
- **d. Regulatory Action Disclosure**
- **e. Customer Complaint/Arbitration/Civil Litigation Disclosure**
- **f. From the market intermediaries**

Most of the surveyed jurisdictions have indicated the existence of the disclosure requirement relating to the regulator violations and investigations being conducted by the regulator.

In Malaysia and Turkey, criminal and civil/litigation disclosures are required from the intermediaries to be brought in the knowledge of the regulator. In Taiwan, Bulgaria, Mongolia and India, it is required in most cases to have all above mentioned disclosures. While some of the jurisdictions like Pakistan, Thailand, South Africa and Morocco require selective disclosures in some of the areas. However, these disclosures are not public disclosures. In Thailand, the regulator has the authority to request financial intermediaries to disclose all of the information. Some of the information, mainly the violation of the law, will be disclosed to the public such as criminal the disclosure of criminal offense and investigations taken by the regulator. In addition, the findings, as a result of investigation made on the financial intermediaries, will also be disclosed to the public. In Jordan and Pakistan the intermediaries provide monthly reports about any dealing in securities including sale or purchase thereof, by any of the related parties within seven working days from the end of the month in which the dealing took place.

Part 2: Assessment of Operational Risk

Section G: Other areas pertaining to operational risks

1. Other areas considered while assessing the operational risk

Some of the jurisdictions have highlighted the existence of certain miscellaneous risks like transaction handling, assets custody, etc.

In Oman, some of the other categories of operational risks considered are type of activity, annual expenses as per the latest financial statement etc. In Lithuania, decision making process, safekeeping of assets, incentives and inducements of senior executives, all the processes and procedures that are set in internal rules are considered as possible operational risks. In Pakistan and Morocco, management capabilities/experience and functioning of various departments in the intermediary are also considered as risk areas. In China, it is considered that operational risks also come from policy-change, fund operations and marketing and management.

2. Assessment methodology

Most of the assessment methodologies already defined above also pertain to operational risks.

In Oman, higher of either the 10% of the firm's minimum required equity or 25% of the annual expenses, as reported on most recent audited annual financial statements, including all deductions from revenue which enter into the calculation of net profit before tax, with the exceptions of investment losses and provisions for doubtful debts, are accounted as reserves on operational risks.

In Morocco this assessment is also done through organizational chart and procedure manuals, while in China, sensitivity-tests and walk-through tests are also undertaken.

Part 3: Assessment of Market Risk

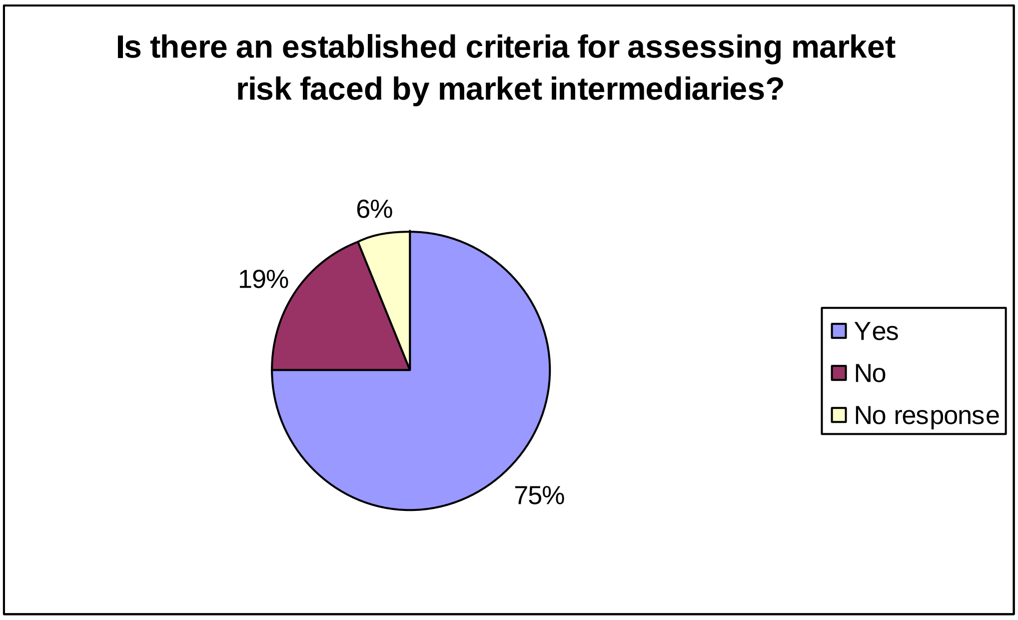
1. Key market risk areas faced by market intermediaries

The surveyed jurisdictions have indicated key areas to the market risks in their jurisdictions that include among others the position risk, large exposure risk and underwriting risk..

In Malaysia, position risk exposure risk and other risks for stock broking field are measured in the capital adequacy requirements. Turkey, Oman, India and Chile, primarily account for asset liquidity risk, exposure risks and interest rate risks. Market risk can also include the risks associated with the cost of borrowing securities, dividend risk, and correlation risk. In Pakistan, Nigeria and Jordan, the key risk areas pertaining to market risks include the fluctuation in the price of securities or the risk of the decline in value of securities, interest rate risk, price risk, exchange rate risk, settlement risk and concentration of exposure. In Thailand, the key risk areas pertaining to market risks include the fluctuation in the prices of securities or the risk associated with the decline in value of securities. Other risks involved interest rate risk, price risk, exchange rate risk, settlement risk and concentration of exposure as these risks may affect market intermediaries in order to maintain the minimum capital requirement. In Romania, the key risks are position risk, settlement risk, counterparty credit risk, foreign exchange risk, and commodities risk, related to trading book. Taiwan also consider changes in interest rates, foreign exchange rates, equity security prices, and commodity prices as the key risk areas. In Bulgaria, the decrease in the price of the financial instruments included in the trading book and the positions in the investment portfolio are regarded risks in case of dropping prices. In China, some of the key market risk areas are market fluctuation and industrial competition that can lead to market risks. Also, risks of investment research, investment decision-making, investment trading, risk evaluation, performance evaluation and etc. are considered.

2. Established criterion for assessing market risk

The criterion for assessing market risk has been established in most of the surveyed jurisdictions that include capital adequacy ratio, VaR margining and capital exposure requirements.



In Oman, Turkey and Malaysia (for stock broking), all position risks have to be marked to market and calculated using different weightings assigned to the various instruments based on capital adequacy ratios. In Pakistan, India and some other jurisdictions, some of the criteria to assess market risks are categorization of securities, VaR based margining system, mark-to-market margins, intra-day trading limits, real time monitoring of the Intra-day trading limits and Gross Exposure Limits. In South Africa, the risk appetite of the intermediary is also a criterion to assess market risk. In Jordan, the receivables that have aged more than three months and are not covered by stocks are also assessed.

3. Risk mitigating controls pertaining to market risk

While many risk management techniques adopted by the surveyed jurisdictions have been discussed above, some of the other ones are intermediaries' own risk management system, internal rules, etc.

In Turkey, the intermediary makes provisions against the possible fluctuations in the price of securities at the rate determined by the regulator. In Oman, intermediaries have their own controls to ensure that their capital adequacy stays at the acceptable level. In India, Thailand and Lithuania prescribed risk management frame work mitigates the market risk.

In Taiwan, intermediary establishes a feasible risk quantification model on daily basis, and compares the results with market risk limits. In Mauritius, complaints desk, internal procedure and control manuals, appropriate audit system and good corporate governance standards by the intermediary are considered as risk mitigating controls. In Pakistan, board and senior management oversight, internal committees and internal risk limits are the applicable controls. South Africa also applies investment committees and insurance cover.

In Bulgaria, clearly defined rules and procedures to monitor the positions for compliance with the investment intermediary's trading strategy including the monitoring of turnover and stale positions in the trading book are the controls applied.

In China, the usual risk mitigating controls are internal control systems, compliance systems and corporate governance controls. Also a dynamic system of risk control index supervision and remedy system along with sensitivity analysis of risk control indexes stress test is done.

4. Adequacy and examination of market risk mitigating controls

The methods for adequacy and examination of market risk mitigating controls in most of the surveyed jurisdictions include the assessment by the frontline regulators, periodic reporting and on-site inspections.

In Turkey, intermediaries are required to report whether they comply with regulatory requirements. In India and Malaysia, the frontline regualtors assess the market risk mitigating controls of broking intermediaries. In Pakistan, board and senior management oversight, internal committees and middle office functions are examined for assessing market risk mitigating controls. In South Africa, the risk examination controls are the assessment of the risk appetite of the intermediary, volatility and complexity of products, liquidity and size of the portfolios. In Chile, the models are checked against industry standards while in Lithuania, regulator assess the adequacy or lack of controls based on the information received from the intermediary.

In Bulgaria, the financial intermediary are required to have clearly defined policies and procedures for inclusion of positions in the trading book and overall management of the trading book for the purposes of calculating the capital requirements, consistent wih the provisions of law and according to its risk profile. Also, the intermediaries should establish and maintain systems and controls sufficient to provide prudent and reliable valuation estimates related to the trading book. In China, according to market and actual conditions of the market and the company, the regulator makes appropriate adjustment to the calculating methodology of net capital and other risk control indexes. The regulatory authority also conducts periodic or distinct inspections on risk control indexes and their generation process.

5. Overall assessment of market risk and its weight in risk profiling

Most of the assessment methodologies pertaining to market risk have been defined above.

In Oman, intermediaries are required to arrive at their net capital after factoring in the market risk in all their assets based on recommended haircuts. In Taiwan, to encounter the market risks, procedures for the verification, adjustment, and resolution of irregular and problematic transactions are put in place. In Mauritius, the weight of market risks may account for approx. 15-20% of the overall risk profile of the intermediary. In South Africa, the weight to market and operational is attributes as 10 percent. In Bulgaria, the weight in the overall risk profile of the intermediary is proportional to the size of the trading book and investment portfolio, as well as the trading strategy and characteristics of financial instruments included. Also in China, the regulatory authority requires the securities company to hire audit firms to audit its monthly net capital calculation table, risk capital calculation table and supervisory statement of risk control indexes.

Part 4 : Assessment of Credit Risk

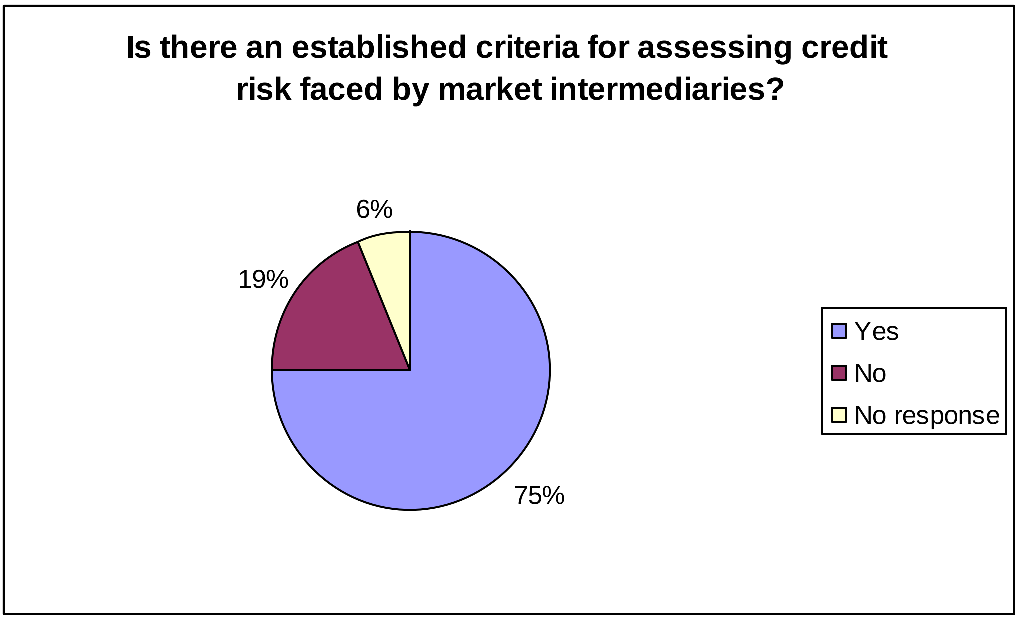
1. Key credit risk areas faced by market intermediaries

Most of the surveyed jurisdictions have indicated certain credit risk areas in their jurisdiction like counterparty risk whereby clients' default might happen.

Most of the jurisdictions account default of customers to perform their obligations and continuation to perform activities without adeaquate colletaral as credit risk. In Thailand and Pakistan, some of the key credit risk areas are frauds committed by the firms' client, as sometimes inexperience clients are trading complex financial products which could lead to their inability to re-pay the loan. In Bulgaria, risk of inability to collect receivables on time, risk related to repurchase agreements, risk of default related to debt instruments included in the intermediaries' portfolio are the key risk areas.

2. Established criterion for assessing credit risk

Majority of the surveyed jurisdictions have established criterion for assessing credit risk that include calculation of counter-party risk exposure.



In Malaysia, for stock broking field all counterparty risk exposure has to be calculated using different weightings assigned to the various instruments. Counterparty exposure can be reduced using collaterals and position netting methods. In Turkey intermediaries calculate *counterparty risk* by taking into account the deficit in collaterals. The provision for all types of risk (including counterparty risk) should be less than the own funds of market intermediary.

In Turkey, Oman, Malaysia, and Chile, specific rates are defined in the calculation of the counter-party exposure risk limits and hair-cuts. In Pakistan, credit risk is assessed during on-site inspection by measuring adequacy of provisioning, exposure concentration and analyzing client-level position limits. In Chile, there are specific ratios that puts cap on maximum debt level. In Mauritius and some other jurisdictions, credit risk is assessed from the financial data submitted by the market intermediaries. In Thailand, credit risk is assessed by using various methods, for example on-site inspection, off-site inspection or from the financial data submitted by the market intermediaries. Generally, market intermediaries must demonstrate that their written policies and procedures regarding client acceptance and consideration of client trading limit is efficient and appropriate for their types of businesses.

Furthermore, Thailand conducts assessment on a number of processes when it comes to managing credit risk (i.e. management of bad debt or the process in the revision of client's profile). The assessment made on compliance and audit working materials is also being assessed based on the effectiveness of compliance and audit unit in this area. In Jordan, assessment is done through analyzing the over aged account receivables and loans agreements. In Bulgaria, the intermediary charge capital for covering credit risk which is 8% of the total risk-weighted exposure.

3. Risk mitigating controls pertaining to credit risk

Most of the risks mitigating controls pertaining to credit risk have already been defined above.

In Turkey, the market intermediaries should calculate counterparty risk while in Oman ageing-analysis report is prepared. In India, controls include use of the state of the art information technology, compression of settlement cycle, T+2 rolling settlement, dematerialization and electronic transfer of securities, securities lending and borrowing, professionalism of trading members, fine-tuned risk management system, emergence of clearing corporation to assume counter party risk etc. These have improved efficiency of clearing and settlement in India considerably.

In Romania, in the event of the default, the counterparty is to liquidate, or to obtain transfer of certain assets, or reduce the amount of exposure and the amount of a claim on the credit institution. In most of the jurisdictions, securities firm shall have an appropriate credit assessment mechanism to evaluate how creditworthy its counter-parties are. In Thailand and Pakistan, the intermediaries are required to establish the methods and procedures for considering the application for account opening and entering into the agreement with the client in writing so as to avoid credit and loan management problems. In Jordan, the percentages on liquidity and receivables are defines so as to mitigate the credit risks. In Bulgaria, intermediaries are required to adopt policies and procedures which identify the risks to their activities and systems.

4. Adequacy and examination of credit risk mitigating controls

While the methods for examination of credit risk mitigating controls and assessment of adequacy in most of surveyed jurisdictions encompass the assessment by the frontline regulators, periodic reporting, ratio monitoring and on-site inspections.

In Turkey, the market intermediaries should calculate and disclose risk provisions and amounts of margin trading to the regulator, while in Oman ageing-analysis reporting is prepared. In Romania, on-balance sheet netting of mutual claims between the institution and its counterparty is recognised as eligible credit risk mitigation technique. In Nigeria, Mauritius, Pakistan and Thailand, it is assessed through off-site examination of accounts or through on-site inspection of the intermediary. In Jordan, the adequacy of assets and bank credits of the intermediaries are also assessed. In Bulgaria, the risk management policies are assessed for adequacy and applicability during on-site inspections.

5. Overall assessment of credit risk and its weight in risk profiling

In Oman, assessment of credit risks is done by the regulator through review of the internal guidelines or operational manuals and through discussions with top management of the intermediaries. In Mauritius, credit risks would account for approximately 10 percent in the overall risk profile of the intermediary. In Pakistan, any matrix to calculate and assign weight to credit risk has not been prepared. In Bulgaria, intermediaries are required to hold enough resources to cover the exposure to credit risk.

Part 5: Assessment of Financial Risk

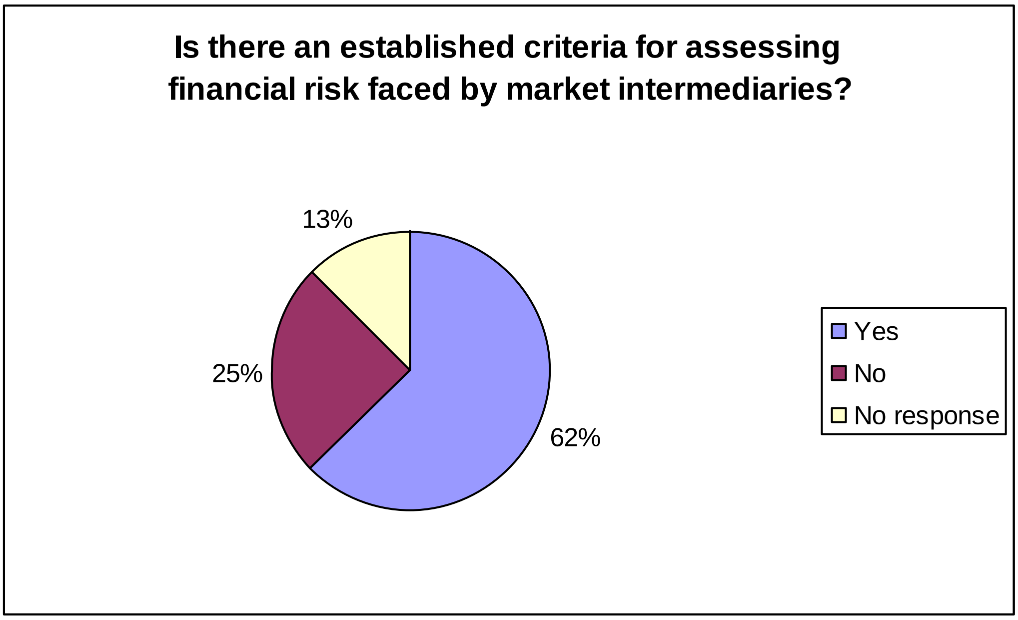
1. Key financial risk areas faced by market intermediaries

Most of the surveyed jurisdictions have indicated the key risk areas pertaining to financial risk already covered under credit and market risk. Some additional areas highlighted include the overall financial turmoil in markets and currency volatility.

In Turkey, turmoil in financial markets is considered as one the key financial risk areas while in Oman, Pakistan, Chile and Lithuania, the financial liquidity risks, level of indebtedness, improper hedging strategies and fluctuations in asset prices are considered as key risk factors. In Taiwan, intermediaries consider the amount and schedule of the fund required and prepare contingency plan to meet the needs of funding arising from irregular or urgent conditions. In Jordan, high level of accounts receivable without guarantee, high level of liabilities, low level of liquid cash and overage accounts receivables are considered as key financial risk areas. In China, sharp fluctuations of profits, small capital scale and lack of diversity in income source are some of the key risks areas.

2. Established criterion for assessing financial risk

Majority of the surveyed jurisdictions have indicated that criterion for assessing financial risk has been established which includes assessment through an initial and ongoing minimum capital requirement, liquidity & solvency ratios and maturity mismatches.



In Turkey, Malaysia, India and Taiwan, the financial risk is assessed through an initial and ongoing minimum capital requirement of the market intermediaries. Chile considers credit, liquidity and solvency ratios and review policies and controls as part of inspection process. In Jordan, liquidity ratios, owner's equity ratios and accounts receivable ratios are used as criterion to assess the financial risks.

3. Risk mitigating controls pertaining to financial risk

Some of the risk mitigating controls pertaining to financial risk in the surveyed jurisdictions are adequate capital and capital adequacy positions, hedging strategies, allowances for bad debts and policies for credit.

In Turkey and Malaysia, the financial intermediaries are required to report their capital and capital adequacy positions on periodic basis. In Taiwan, the intermediaries have to establish funding strategies against possible loss arising from lack of liquidity, or requirement of fund liquidity caused by incident in the market. In Pakistan and Thailand, some of the risks mitigating controls include policies and procedure, effective monitoring, compliance and audit function. In China, controls of business scale, increase of capital accumulation, widening channels of financing, internal inspection of the intermediary are some of the risk mitigating controls for financial risks. The intermediaries also hire auditing firm and submit periodic analysis and auditing reports to the regulatory authority.

4. Adequacy and examination of financial risk mitigating controls

The methods of examining the risk mitigating controls indicated by most of the surveyed jurisdictions are periodic checks on the capital adequacy positions, compliance disclosures and dedicated risk management units.

In Lithuania, overall assessment and adequacy or lack of controls is established during onsite visits and from the reports and data submitted by intermediary. In Jordan, these controls are examined by comparing the proposed allowance with the actual one. In Malaysia and Turkey, market intermediaries have to maintain the initial and ongoing minimum capital requirements and report it periodically. In Thailand, the adequacy of risk mitigating controls pertaining to financial risk is assessed through examination of policies and procedures regarding the ability to maintain minimum financial requirement. In China, the special working group on annual report analysis is set up while monthly off-site inspections are also conducted. The regulatory authority conducts inspections to assess its adequacy of internal control measures for risks.

5. Overall assessment of financial risk and its weight in risk profiling

Jurisdictions use various methods for overall assessment of financial risk such as formulas for calculation of risks and margins. In Taiwan, the intermediary assesses potential liquidity risk to the financial products through sensitivity analysis on different circumstances and evaluates possible cost of fund raising in various circumstances. In Pakistan, financial risk is assessed through onsite inspection however its weight age in the overall risk profile of the intermediary is not assessed. While in China, special taskforce composed of professionals from the regulatory authority and SROs is established to make risk evaluation on audited annual report of intermediary.

Part 6: Assessment of Compliance Risks

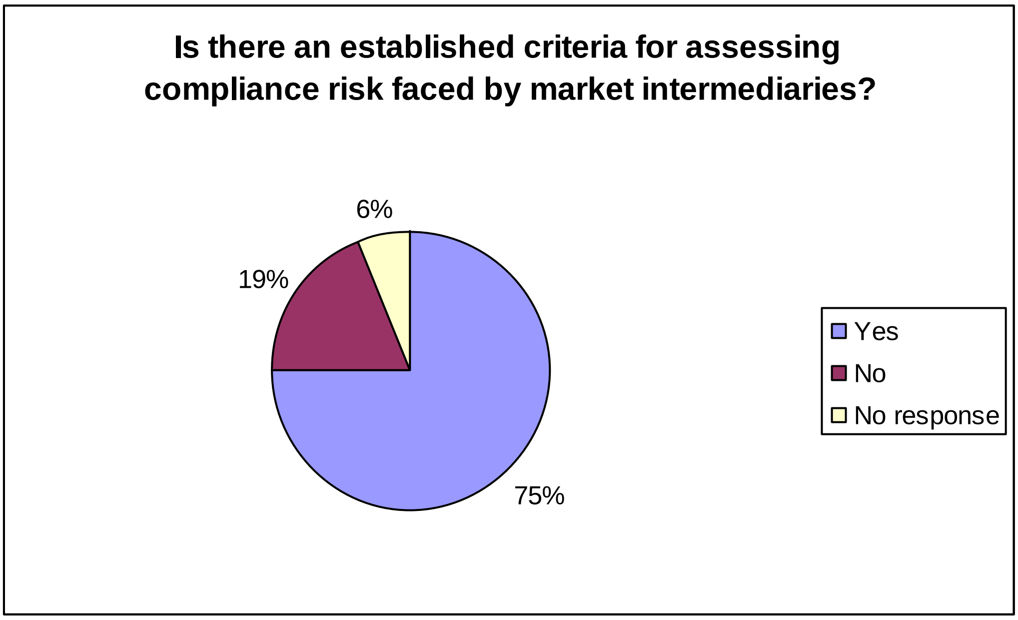
1. Key compliance risk areas faced by market intermediaries

Almost all the surveyed jurisdictions have indicated the compliance risk areas including among others the breach of securities laws and deviation from the regulatory guidance.

Some of the key compliance risk areas highlighted are lack of independence of the compliance officers from their management, the suitability of compliance officer background with the major needs of the compliance job and lack of awareness of the major compliance officer roles. In Malaysia, independence and authority of the compliance officer is considered as one of the main areas related to compliance risk while in India and Taiwan, the entire regulatory framework lays emphasis on high compliance standards from market intermediaries. Any non compliance with the regulations, acts, circulars are considered as the risk. In Pakistan Bulgaria and Nigeria, some of the key risk areas are internal as well as external frauds and regulatory non-compliance. In South Africa, cultural environment of the intermediary is also considered as a risk.

2. Established criterion for assessing compliance risk

Majority of the surveyed jurisdictions have indicated the existence of an established criterion for assessing compliance risk which includes compliance framework, qualified compliance officer and financial limits and norms.



In Oman and Malaysia, all market intermediaries need to have a compliance framework and qualified compliance officer. The compliance officer is responsible to ensure the market intermediary's compliance to securities laws, rules and guidelines and also to report breaches or irregularities. In Taiwan and India, the intermediaries are required to assess their compliance standards and follow certain financial limits to adhere. In Pakistan and Mauritius, assessment of compliance risks is enacted through scoring and validating supplemented by on-site or off-site inspection. In Morocco, some of the criterions are qualification and experience of the compliance staff and quality of compliance reporting. While in China, the provisions for the trial implementation of the compliance management of securities company is there.

3. Risk mitigating controls pertaining to compliance risk

Most of the surveyed jurisdictions have indicated the risk mitigating controls pertaining to compliance risk including the appointment of compliance officer and internal control mechanisms and policies.

In India, Taiwan, Bulgaria, Thailand and also many other jurisdictions, market intermediaries are required to establish internal control mechanisms for ensuring compliance with regulatory requirements on an ongoing basis. The intermediaries establish departments for regulation and compliance, to supervise compliance with the regulations and manage the compliance risk. Some of the other controls are the reports and linkage of the compliance officer to the board of directors of the intermediary.

4. Adequacy and examination of compliance risk mitigating controls

The methods of examining the risk mitigating controls are identification of particular areas and their respective examination, recruitment of compliance officer and policy assessment.

In Malaysia, if a particular area is identified as posing a high risk, the regulator will examine this particular function/operation. In Oman, it is required that ensures that all intermediaries either recruit a compliance officer or appoint a legal firm to carry out compliance reviews. In Chile and Lithuania, the overall assessment and adequacy or lack of controls are established during onsite visits. In Pakistan, the regulator assesses compliance and audit plan which set out the compliance or audit function. In Thailand, the SEC requires market intermediaries to establish compliance unit with recognizable and reliable standard. This compliance unit must also be independent from other units. The SEC assesses compliance and audit plan which set out the compliance or audit function in order to see whether or not the plans are approved by the management and included the majority of risks from business the company is undertaking. There must be sufficient number of qualified staffs who are capable of performing their function independently and in accordance with an audit plan. The compliance unit must pay close attention to the areas which are perceived to be high risk areas. In South Africa and Morocco, document discovery and scrutiny of files is undertaken for the purpose. In Bulgaria, the regulator reviews the inspections made by internal control department during the on-site inspections. The adequacy of compliance controls is examined in China internally as the intermediaries assign internal related department or external professional institutions for evaluation of effectiveness of compliance management. Its adequacy is assessed by periodic or non-periodic inspections by the regulatory authority.

5. Overall assessment of compliance risk and its weight in risk profiling

Jurisdictions use different methods for overall assessment of compliance risk ranging from purely regulatory priority of assessment to coordination between risk management and compliance departments.

In Oman, intermediaries are assessed continuously by the regulator through feedbacks from the compliance officer and the report. Regulations in India provide for appointment of compliance officer with respect to all regulated market intermediaries. Further, regulations also stipulate that the compliance officer shall report to the intermediary or it's Board of Directors, in writing, of any material non-compliance by the intermediary. In Taiwan, the intermediary checks the applicability of the internal regulations to ensure that they are forward-looking and flexible, and could avoid the adverse impact on operations caused by alteration of regulations. In Pakistan, apparently operational risk is on decreasing trend due to introduction of various controls like compliance function and internal audit. However any matrix to calculate and assign weight to compliance risk is still not in place. In South Africa, some of the factors in overall compliance risk profiling are relationships among various regulators within same jurisdictions, cultural issues and business ethics and type of compliance officer. In China, the non-compliance history of financial intermediary and compliance risk pitfall is checked while analyzing the risks and its formation.

6. Other factors while assessing compliance risk

Some of the jurisdictions have highlighted the presence of distinct compliance risks factors such as system spillovers, organization arrangements and issues because of the business environment. Other factors for assess intermediaries' compliance risk include nature and degree of non-compliance, harms to investors' interest, integrity of compliance rules in the intermediary and inspection cooperation with the regulatory authority.

Part 7: Assessment of Legal Risks

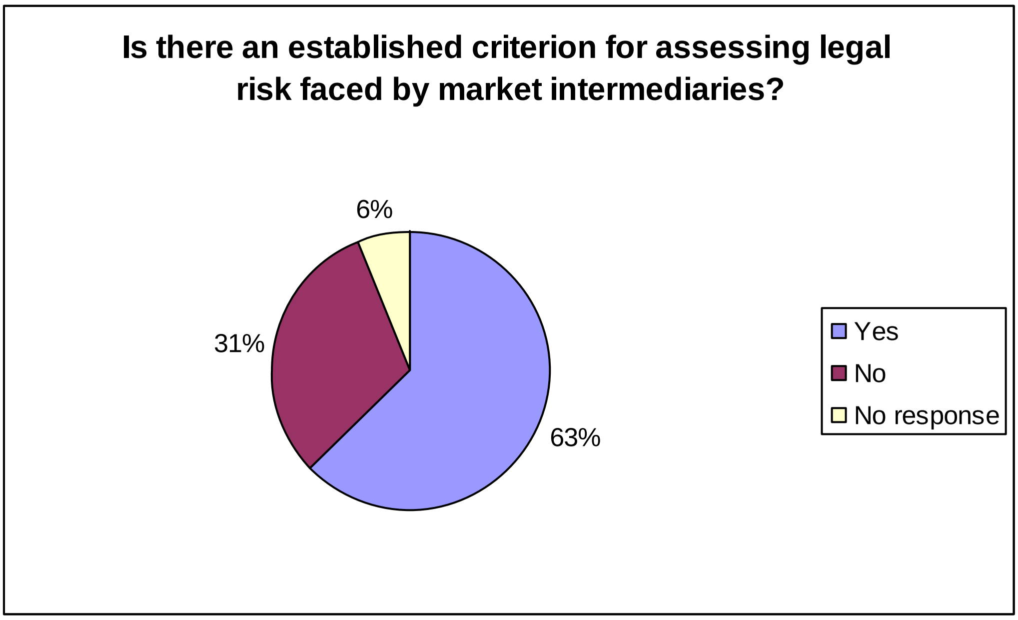
1. Key legal risk areas faced by market intermediaries

The surveyed jurisdictions have indicated the legal risk areas such as lack of documentation related to business activities and misinterpretation of laws and regulations.

In Malaysia, India and Chile, legal risk is viewed as part of operational risk which includes lack of documentation for business relationships/activities and legal action against the market intermediary. In Taiwan, legal risk is defined as the risk of loss resulting from nullification of a contract, which is caused by illegality of the contract, overstepping powers, neglect of clauses or incompletion of standards, etc. In Thailand and Mauritius, the key risk area also includes risk associated to the legitimacy of contracts entered into by the firm. In South Africa, the key risk areas are the type and nature of the intermediary's contractual agreements. In Bulgaria, some of the key legal areas are failure to enact appropriate policies, procedures, or controls to ensure it conforms to laws, regulations and other legally binding requirements. While in China, it may include financial losses or litigation caused by contract disputes with trading counterparts in business operation and management.

2. Established criterion for assessing legal risk

Majority of the surveyed jurisdictions have indicated the existence of an established criterion for assessing legal risk which includes general insolvency laws, overall risk management criterions and record keeping.



In Romania, maintaining adequate books of records by an intermediary is the criteria to assess legal risk. In Taiwan, the intermediaries establish suitable control procedures for legal risks. In Pakistan, some of the criteria include litigation cases, nature of activities, feedback from the industry, periodical reporting, on-site as well as off-site inspections and historical trends. In Bulgaria, upon registration and during on-site inspections, the adopted internal rules and procedures are checked for compliance with existing legal framework. In China, the intermediary is required to disclose the nature of contingent items in annotation of net-capital calculation table (pending actions, pending arbitrations or external guarantee), amount involved, reason, status, accounting arrangement of possible losses and expected losses.

3. Risk mitigating controls pertaining to legal risk

The surveyed jurisdictions have indicated the risk mitigating controls pertaining to legal risk such as establishment of legal departments by market intermediaries or having the contracts vet by a law personnel and contingency planning for the breach of contracts.

In Malaysia and Lithuania, internal rules and controls exist to mitigate legal risks. In Taiwan, intermediaries are required before entering a transaction, to confirm rights and responsibilities with their counter-parties and review legitimacy of the deal and legal documentation. In South Africa, nature and adequacy of insurance cover of the intermediary are termed as some of the risk mitigating controls. In China, the financial intermediaries are required to set up internal system and control measures to identify, evaluate and manage law risks in business operation and management.

4. Adequacy and examination of legal risk mitigating controls

Most of the surveyed jurisdictions have indicated the methods of examining the legal risk mitigating controls which include identification of particular areas and their respective examination and independent audit reports.

In Malaysia, China and some other jurisdictions, if a particular area is identified as posing a high risk, the regulator will examine this particular function/operation. In Turkey, the intermediaries send independent audit reports including the cases and prosecutions of the firm to the regulator. In Oman, Lithuania and Chile, as part of the inspection process, policies are reviewed and randomly checked against documentation. In Pakistan, Nigeria, Bulgaria and Thailand, assessment on the adequacy relating to risk mitigating controls is done by reviewing relevant documentations, periodical reporting, on-site inspection and off-site surveillance.

5. Overall assessment of legal risk and its weight in risk profiling

The jurisdictions use various methods for overall assessment of legal risk ranging from purely regulatory priority of assessment to overall assessment of the intermediary.

In Taiwan, the intermediary shall establish complete procedures to stipulate process before dealing with counter-parties, so as to ensure legitimacy of the deal. In Pakistan, legal risk is assessed through onsite inspection however its weight age in the overall risk profile of the intermediary is not assessed. In South Africa, the overall legal risk is assessed based on the rulings of the ombudsman, insurance cover and in the case of outsourcing, the service level agreement between the intermediary and the party to whom it has been outsourced, are also assessed. In China, intermediaries are required to deduct possible losses caused by contingent items (pending litigation, pending arbitrations or external guarantees) during net-capital calculation. If net capital still complies with regulatory requirement, it is considered that the legal risks are under control.

6. Other factors while assessing legal risk

Some jurisdictions have indicated complaints, market intermediary's history, and current litigations processes as other factors to assess legal risk.

Part 8: Assessment of Other Risks

1. Other risk factors faced by market intermediaries

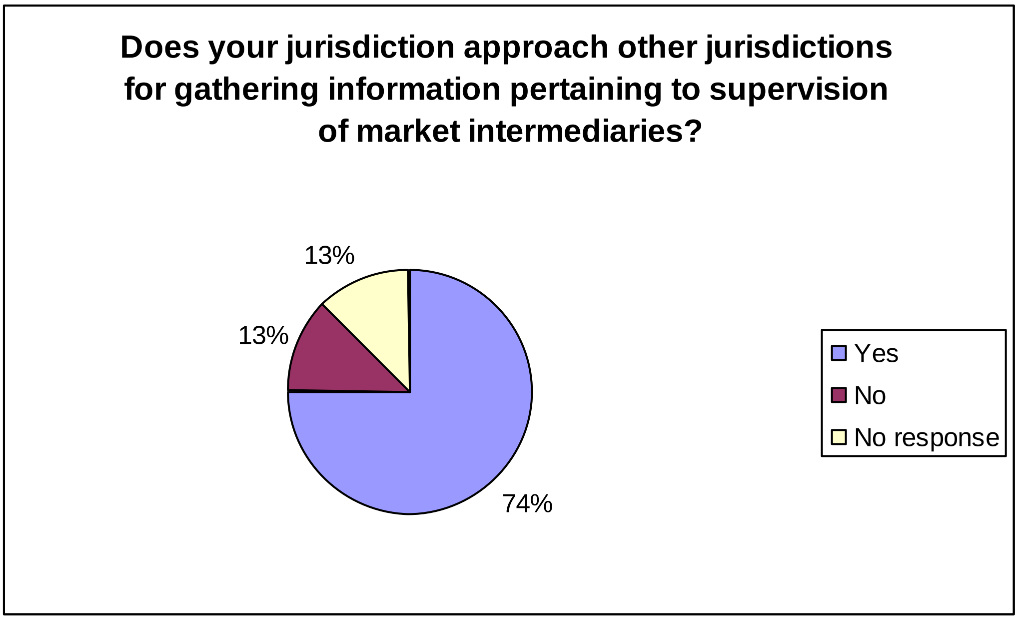
Majority of the surveyed jurisdictions have indicated the existence of emerging risks due to the rapidly changing scenarios of financial markets. Most of these risks are of general nature like overall financial crisis, lack of consumer awareness, liquidity shortages, strategy risks, market uncertainties, political risks, country risks, reputation risks, war risks and ethical risks. However, mostly these risks are not assessed.

2. Overall assessment of other risks and their weight in risk profiling

Some of the surveyed jurisdictions have indicated the methods of overall assessment of risks and their profiling which are regulatory priorities, methods of coping with other risk factors, monitoring a combination of internal reports, prudential reports and market information, assessing the senior management strategy, policies and practices to manage liquidity risk in accordance with the risk tolerance and liquidity management strategy. In Mauritius, as per the new risk-based supervision which the regulator has adopted, other risks will account for approximately 15-20% of the overall risk profile of the intermediary. In South Africa, some of the other overall assessment factors are nature of products/ services, treatment of clients, board management and staff and internal systems and controls.

3. Mutual cooperation among jurisdictions pertaining supervision of market intermediaries

Almost all of the surveyed jurisdictions have indicated that they approach other jurisdictions for mutual cooperation pertaining to supervision of market intermediaries. Such cooperation is usually on case to case basis and involves reading and examining foreign legal acts, guidance, exchange of views and information and if a foreign intermediary is establishing business in a local jurisdiction.



4. Disqualification of intermediary based on investigation outcome

Some of the surveyed jurisdictions have indicated that they may disqualify an intermediary based on the negative outcomes of the investigation and if the information is of serious nature sufficiently proving the malpractices.