# Chapter 6: COMPARATIVE STUDY OF GCC OIL COMPANIES

*Chapter Highlights*

*This chapter presents the comparative study of the six units of study (CASES) across the variables of the unit. The findings from the semi-structured questionnaire and subsequent discussions with the participants in the CASES are analyzed to deduce a preliminary conclusion. Responses were received from some oil entities and gas entities and both in some CASES via appropriate channels. All the participants in the entities have been assured of anonymity and confidentiality of their responses by the researcher; furthermore, participants have also categorically urged that entity specific names shall be avoided in the empirical analyses thereof. Therefore, the salient feature of this chapter is that, it also amalgamates the findings from all the GCC Oil and Gas Companies to facilitate further discussion and development in subsequent chapters.*

## Contents

## 6.0 Comparative Analysis

A comparative study of GCC Oil and Gas industry has been presented in this chapter, covering different aspects of ERM. This comparative study is based on the country wise case studies for the oil and gas industry developed in Chapter-5. The analysis is based on the variables mentioned below, based on which a risk management system is dependent, enterprise wide.

| No. | Variables | | Purpose |
|---|---|---|---|
| 1. | *Perception of ERM* | : | To understand the impressions of ERM in the entities. |
| 2. | *Driving forces of ERM* | : | To assess the ERM motivators in the entities. |
| 3. | *Existing ERM Model* | : | To appraise the existing risk management system design and limitations of the model in the entities. |
| 4. | *Implementing challenges* | : | To estimate the structural, operational and technical issues that impedes the effectiveness of an ERM system in the entities |
| 5. | *Performance metrics* | : | To assess the significance of the metrics in the ERM system in the entities |

A comparative analysis of the ***six GCC countries*** is presented based on the above mentioned five variables. In order to validate the analyses, ***National Oil and Gas Companies*** were contacted. Owing to the sensitivity of the information being sought and analyzed; and due to the prevailing corporate culture of the region, the specific entities being analyzed are not disclosed. Furthermore, information was collated after assuring participants that their responses will be treated as anonymous and confidential. Telephonic interviews were chosen to facilitate discussion of specific questions and immediate identification of any possible misunderstandings and ambiguities in findings. Some of the C-suite executives have turned down the request for information as a matter of company policy. In such cases it was difficult to obtain and validate the data. However, in such cases, inputs from middle management or equivalent staff and personal contacts from certain independent consultants were pursued to validate the analyses. *Owing to the above reasons, the analyses therefore amalgamates the overall findings and does not portray country-specific data, thereby maintaining ethical code of conduct with*

*regards to the assurance undertaken between the researcher and the participants in terms of the anonymity and confidentiality engagement.*

This analysis will lead to answers to the research questions and also recommend the ***Best Practice Approach*** for successful ERM implementation in the GCC Oil companies. Finally, this analysis will also substantially contribute in suggesting a practical and region-specific ***Action Plan*** for the GCC Oil industry and the Body of Knowledge in Enterprise Risk Management.

## 6.1 Comparison of the Perception of ERM

Analyses of the interview have recognized three emerging themes/ trends in the GCC Oil companies i.e.,

- ***Standardization:*** As a technique for documenting, reviewing and approving unique definitions, characteristics, and representations of data in accordance to some established procedures and conventions under a framework.
- ***Integration:*** A technique for aggregation of different parts to a holistic framework across a layer of organization and between layers of organization.
- ***Centralization:*** A technique that accumulates different data as an act of consolidating decision-making power under a central control within a framework.

The COSO ERM Model and the literature review have suggested very clearly in several sections/articles/commentaries that it is closely associated with the ***concept of integration***. Nevertheless, the study finds that the staff perception of ERM is seen differently across all the companies.

### Standardization

According to Brusse & Wenning (2007), Standardization is a ***consensus-driven activity***, carried out by, and for, the interested parties themselves – in this case the NOCs in GCC. It is based on openness and transparency within independent organizations, and aims to establish the voluntary adoption of, and compliance with standards. Despite its voluntary

and independent character, standardization however many times has an effect on a number of areas of public concern, such as the competitiveness of industry or the functioning of a single market environment. Therefore standardization can also play a role in regulatory policy. In all the CASES, ERM is not yet a regulatory requirement. According to International Standardization for Standardization, 'Standards ensure desirable characteristics of products and services such as quality, environmental friendliness, safety, reliability, efficiency and interchangeability - and at an economical cost. When products and services meet our expectations, we tend to take this for granted and be unaware of the role of standards. However, when standards are absent, we soon notice. We soon care when products turn out to be of poor quality, do not fit, are incompatible with equipment that we already have, are unreliable or dangerous.' Standards can be classified as follows:

- ***De jure standards*** which are part of legally binding contracts, laws or regulations i.e., De jure is when the rules are written down and carried out in the law.
- ***De facto standards*** which means they are followed by informal convention or dominant usage i.e., De facto is when the rules are implied but not written down.

**Integration**

According to COSO, over a decade ago, the Committee of Sponsoring Organizations of the Treadway Commission (COSO) issued ***Internal Control – Integrated Framework*** to help businesses and other entities assess and enhance their internal control systems. That framework has since been incorporated into policy, rule, and regulation, and used by thousands of enterprises to better control their activities in moving toward achievement of their established objectives. Recent years have seen heightened concern and focus on risk management, and it became increasingly clear that a need exists for a robust framework to effectively identify, assess, and manage risk. In 2001, COSO initiated a project, to develop a framework that would be readily usable by managements to evaluate and improve their organizations' enterprise risk management. The period of the framework's development was marked by a series of high-profile business scandals and failures where investors, company personnel, and other stakeholders suffered tremendous loss. In the aftermath were calls for enhanced corporate governance and risk management, with new

law, regulation, and listing standards. The need for an enterprise risk management framework, providing key principles and concepts, a common language, and clear direction and guidance, became even more compelling. COSO believes this ***Enterprise Risk Management – Integrated Framework*** fills this need, and expects it will become widely accepted by companies and other organizations and indeed all stakeholders and interested parties.

COSO acknowledges that, 'every enterprise faces a myriad of risks affecting different parts of the organization, and ERM facilitates effective response to the ***interrelated impacts, and integrated responses to multiple risks***.' THE COSO Cube consists of eight interrelated components. These are derived from the way management runs an enterprise and are ***integrated with the management process***. Integration is bringing together of the component subsystems into one system and ensuring that the subsystems function together as a system. COSO ERM Framework is more a 'Business Tool' with a spirit of integrating Corporate Risk Management rather than a 'Standard' as recognized by some of the GCC oil and gas entities.

**Centralization**

Centralization is the process by which the activities of an organization, particularly those regarding decision-making, become concentrated/consolidated within a particular location and/or group. It is the process of transferring and assigning decision-making authority to higher levels of an organizational hierarchy – such as head office or a corporate centre. Knowledge, Information and Ideas are concentrated only at the top and decisions are cascaded down the organization – departments or subsidiaries. Although these subsidiaries are enjoying certain degree of latitude by delegation (De-centralization), they are ultimately accountable to the Corporate Parent which is governed by a National Authority/Ministry in the CASES being studied. Centralization results in less empowerment for the Management although it does ensure the entity takes a consistent risk policy line.

Fig. 6.1 depicts the ***'Emerging themes'*** (Standardization, Integration and Centralization) in the perception of ERM in the various CASES vis-à-vis the ERM Implementation Progress. Some participants widely stated that the ERM is a concept closely associated with Standardization. However, the awareness of the ERM framework was less seen in the lower levels of the entity.

Among the participants who advocated for Standardization, some of the CASES broadly seem to attribute a 'risk management framework' as a ***de jure standard*** such as the API, ASME, ANSI, ASCE, BS, JIS and ISO standards. Most of these standards are extensively aimed at statutory requirements for technical compliance, formal legal requirements, technical uniformity, interoperability, quality and safety as the key area of focus. While other CASES broadly differentiate a 'risk management framework' apart from the conventional technical standards and have recognized the 'COSO ERM Framework' as a ***de facto standard*** and are also willing to consider other framework for future implementation.

Some participants widely stated that the ERM is a concept closely associated with centralization. Where the Oil and Gas value chain is controlled by one entity, which is central to all the major pieces of the hydrocarbon industry and placed as subsidiaries, Centralization was advocated. As an integrated oil major or as a centralized entity, it is entrusted with the central planning function of the industry and is seen as a

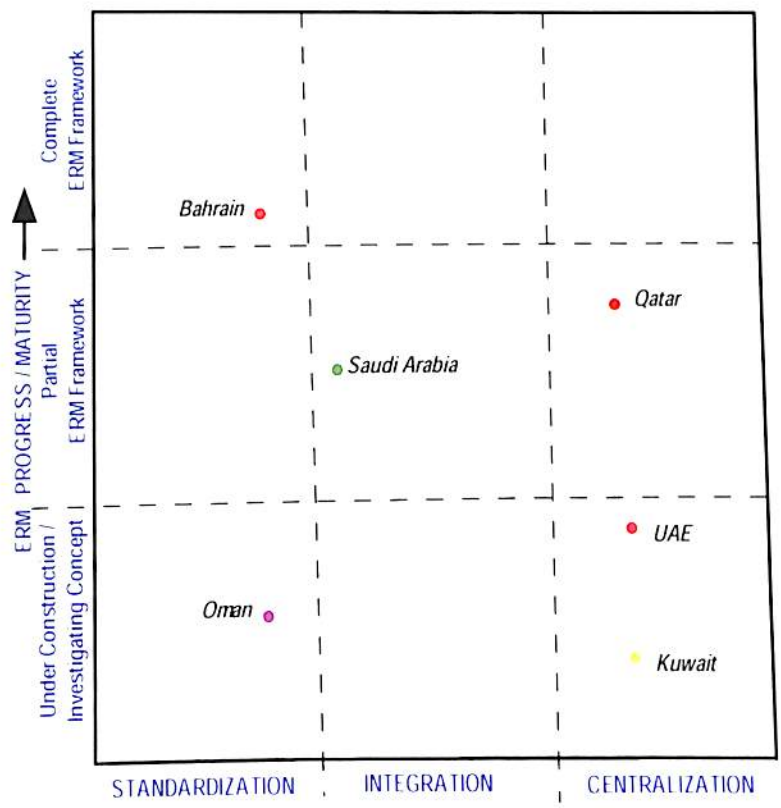

Fig. 6.1, Mapping of Emerging Themes in ERM

coordinating entity between various elements of the business value chain and the risk governance framework.

**Conclusions**

The analysis suggests that ERM does not emerge in GCC oil and gas companies in a consistent pattern. The understanding of what ERM represents differs from organization and also at different levels of management. ERM process needs to develop a common risk vocabulary so that the understanding of ERM is not just with the top echelon of the organization.

Furthermore, Standardization operates horizontally across a layer of an entity in terms of policies and resources to control the ERM process; while Centralization operates vertically to control the entire ERM process. Integration involves the use of standardization (horizontally) and centralization (vertically) and consolidates the ERM process across all layers of the entity.

## 6.2 Comparison of Driving forces of ERM

Analyses of the interview survey have identified the following top five emerging motivators for ERM in the GCC Oil companies, i.e.

- ***Corporate Governance***
- ***Leadership of the Chief Executive***
- ***Good Business Practice***
- ***Initiative of Board of Directors***
- ***Internal Audit Recommendation***

Some GCC oil companies have even acknowledged that they are embracing an ERM system as it ***'just makes good business sense'***. They further acknowledge that the other motivators for ERM can also be attributed to drivers like ***'Market Competition/ Competitive Advantage'***, ***'Changing Risk Landscape'***, ***'Investment Community***

*pressure' and 'Brand Image'*. While *'Volatile Economic Situation', 'Corporate Disasters', 'SOX Compliance', 'Globalization', 'Recent catastrophe in the organization'* and *'Pressure from Rating Agencies'* were regarded as almost insignificant considering the nature of business environment of most of the NOCs in GCC. *'Environment'* did not seem to be a motivator for ERM although most CASES have Petro-Strategies being driven by environmental challenges.

In the GCC, oil companies do not seem to feel pressured by regulators or rating agencies to adopt ERM. It also supports the general practice that banks and rating agencies do not actively demand risk management disclosures in the GCC oil companies. Most respondents stated that external issues like *'Interest Rates', 'Currency Inflation',* and *'Credit Worthiness'* were among the most usually included in the scope of ERM by Management Consultants; but they are relatively considered quite low in their importance. As NOCs, the Nationalization policy is applied in all industries including the oil and gas sector. The relationship between *'Corporate Social Responsibility'* due to their obligation to provide employment for nationals and *'Expenses/Loss due to inefficiency'* were not commented as they were (culturally) sensitive issues and participants refrained to comment. It also supports the common notion that most NOCs are not exactly run on a commercial basis and such risks are accepted in their Business Processes.

**Corporate Governance**

Among the C-suite executives, Governance is considered as a ***good starting point*** for ERM in all the CASES. There are three key players in Corporate Governance: Board of Directors, Management and Auditors (both internal and External). These players should be independent and have excessive due professional care in fulfilling their duties. The following common transgressions could lead to ***corporate reputation risks.***

- A passive, non-independent, and ***rubber-stamping*** Board of Directors.
- Management teams that place their personal interests above Company interest when conducting the affairs of the Company incur a ***systemic conflict of interest.***

- Absence of Audit Committees, ***business-oriented auditors*** & non-independent auditors with limited capability and authority to challenge management would inevitably condone board of directors and management breaches of their professional duties.

There are several elements necessary to, or at the very least serve to enhance, the effectiveness of a company's corporate governance system:

- An effective and independent Board and Audit Committee.
- Appropriate Internal Control and Risk Management Systems.
- A Corporate Culture that promotes a strong ethical environment and conforms to well-articulated and convincing Corporate Values.
- An effective internal and external Audit Processes.

Although implementing corporate governance best practices would result in additional costs, it must be emphasized that good corporate governance is not an option but an obligation, if stakeholders' interest is to be protected. Compliance costs become negligible when compared to the losses suffered because of flawed corporate governance practices. Corporate governance issues are receiving greater attention in both developed and developing countries, ***including the GCC*** as a result of the increasing recognition of the effects of corporate governance on ***companies' performance***, ***business continuity*** and their direct relationship to the contemporary ***corporate buzz word – 'ERM'***.

**Leadership of CEO**

Leadership of the CEO has added impetus and further momentum to ERM in all the CASES. Some of the entities mentioned that CEO is technically the CRO as he is the highest individual in command in an organization and he needs to ***evolve a leadership role*** in the roll out/implementation of the ERM below the organizational structure. However, C-suite executives need a balanced interdisciplinary team which is astute in managing a portfolio of risks in the GCC business landscape.

**Good Business Practice**

Good Business Practices also motivate entities to adopt ERM in all the CASES. However, some participants (Superintendents and Managers) feel that in some instances it distracts them from doing the most important issues. Nevertheless, senior executives in all CASES have strongly mentioned that the above is a ***factual motivator*** for ERM.

**Initiative of Board of Directors**

Most of the CASES agreed that while the CEO's mandate is on carrying out strategic plans for future profitability and motivating the Management to stay on course, and in such a scenario, the ***push for ERM implementation*** comes from the Board of Directors or even both.

However, while the Board should support ERM, it should not be over enthusiastic and should draw a line and focus on carrying out ***Board's oversight responsibilities***. Ideally, the Board should rely on its Management which is directed by the CEO and also derive its comfort from Internal Audit which has an advisory role.

**Internal Audit Recommendation**

All the entities in the CASES stated the use of both ***'Compliance based'*** and ***'Risk based'*** internal auditing approaches to establish best possible audit focus. Internal auditors are also required to monitor and evaluate the effectiveness of the entity's Risk management processes, including playing an advisory role to the Board and Line Management. Utilizing a systematic audit methodology for analyzing business processes, procedures and activities with the goal of highlighting organizational problems and ***recommending business solutions***, Internal Auditors have ***recommended the advantages of ERM*** Framework. As Internal Auditors report to the Audit Committee of the Board of Directors with administrative reporting to CEO, the leadership of CE also is essentially linked to the implementation of ERM in the business processes. While internal auditors are not responsible for the execution of company activities; they advise management and the Board of Directors regarding how to better execute their responsibilities. Furthermore,

periodic follow-ups and time frame tracking tools have further instilled a corporate need towards implementation of the ERM system.

**Conclusions**

The analysis suggests that the most significant driving forces/motivators for ERM in the GCC oil and gas companies are ***self fulfilling*** by virtue of the strong interconnection between and across the drivers - Corporate Governance, Leadership of the Chief Executive, Good Business Practice, Initiative of Board of Directors and Internal Audit Recommendation. A ***cause-and-effect scenario*** (Burt & Van der Heijden, 2003) that has been repeatedly feeding each other is evident in the nature of the drivers and therefore strategic thinking and corporate expectations are stronger, as a consequence driving a synergy within the entity to shape ***Organizational Futures*** coupled with ***Organizational Foresight*** (Burt & Wright, 2006).

## 6.3 Comparison of existing ERM Model

According to COSO ERM Framework, ERM model should consider all risks and should be holistic in nature. However, analyses of the interview have revealed that some CASES do not have a ***fully mature ERM model***.

**Current state of ERM**

The current state of ERM in some CASES is described as ***'Complete ERM Framework'*** and the ERM Effectiveness across the eight COSO ERM Components is fairly robust according to the participants. On the other hand, the ERM framework has not yet been presented to the Board of Directors and the participants have stated that their ERM system is ***'under consideration'*** for acceptance from Board level and above for effective Corporate Governance. However, the participants have also agreed that the significance

of Corporate Culture has a very significant influence in the implementation of ERM system.

The current state of ERM in other CASES is described as ***'Under Construction'*** and the ERM Effectiveness across the eight COSO ERM Components is yet to be evaluated. On the other hand, the ERM framework has been presented to the Board of Directors and the participants have stated that their ERM system is ***'Fully Accepted'*** at Board level and above for effective Corporate Governance. Furthermore, the participants have indicated that Corporate Culture seems to have a significance which is 'Somewhat significant' in the implementation of ERM system.

Furthermore, participants widely believed that, the entity's Mission and Vision statement does not consider the adoption of ERM. This is also proved by the findings in the CASE study on Corporate Ethos.

**Top 10 Risks**

In the CASES where a Risk Register was generated, the entity's Corporate Risk Register is logged out using in-house tools and is the master document of the entire COSO ERM framework implementation. The Corporate Risk Register recognizes the following risks as the top ten risks faced by the entity:

1. ***Disruption of refined products***
2. ***Fire or hazardous leakage resulting in environmental contamination***
3. ***Negative perception of Company's image***
4. ***Business Continuity Planning not being set out***
5. ***Process Safety Management not yet being implemented***
6. ***Inadequate exploration strategy upstream business***
7. ***Lack of team work and inter-disciplinary co-ordination***
8. ***Internal Financial Controls not effective to ensure expenses do not exceed budgets***
9. ***Refinery operations interruptions due to ineffective Maintenance of units***

*10. Inability to identify, plan and acquire skilled personnel*

Other prominent corporate risks which are specific to some CASES are the following:

- ***Smuggling of subsidized diesel bringing loss due to subsidies given on local fuels***
- ***Bank/funding crisis***
- ***Legal risks in various engagements***

Apart from the above risks, participants in some CASES confirmed that the Risk Register also provides a variety of information including Risk Owners and probability of occurrence. The types of tools used by the entity to implement ERM are through Risk Assessment Workshops conducted across the organization, Financial Modeling and Weighted average Score. There is a wide departure from the entity's ERM strategy and consequently the Petro-strategy. Furthermore, no significant information was available to understand the extension to the National Energy Policy as it was a culturally sensitive topic.

**Participation by Internal Audit**

In most CASES, the Internal Audit team ***'does not utilize'*** the collation of risks for determining their Internal Audit Plan. Even in CASES wherein ERM is believed to be attaining maturity, Internal Audit does not verify the ERM implementation process. The Risk Committee in one CASE derives only a passive support from Internal Audit. Similarly, in another CASE, the Internal Audit confirmed that they are participating in the ERM implementation which was contradicted in the response received from the ERM Project Leader of the CASE under study.

**Conclusions**

The most difficult section of the analyses was to get the participants to come up with the Corporate Risks and their existing Risk Model as this is the most sensitive area for any entity. Several follow-up discussions with indicative pointers to facilitate a discussion were presented to get as close to the business reality in these CASES.

The analysis suggests that the CASES exhibit inconsistent risk preferences. The limitations in the ERM Framework of the GCC oil and gas companies include the following:

- Ramifications due to a ***high degree of subjectivity*** in risk assessment with a predetermined probability of failure in a predetermined period of time.
- Weaknesses in quantifying emerging risks for the Petro-Strategies i.e., ***'All Risks'*** are not considered with a holistic approach to Risk Assessment.
- Unstable Risk Appetite which is varying with the changes in Board members as there is a strong relationship to ***'Corporate Culture'***.
- ***Unquantifiable risks*** lacked a scientific approach to quantify as all the CASES did not have the necessary expertise to handle such situations.

A ***'phase-gated mechanism'*** was evident in all CASES and the management decision is based on fixed parameters thereby obstructing the intrinsic flow of information from the Management and staff. Most importantly, the existing models did not have a mechanism to ***identify and exploit Lost Opportunities***. Furthermore, it was evident that the risks captured were not based on transient conditions of the business environment. It was mostly subjective and risk controls were decided on the end condition of an incident. The controls were based on certain ***'assumptions'*** and ***'givens'*** and the materiality of the risks presented could change based on the widespread weaknesses in ***evaluating the Board's Risk Appetite*** and thereby the Corporate Risk Tolerance Level.

There is soaring rhetoric in the entities in the implementation process of an ERM system but all the CASES did not emphasize on the establishment of an ***integrated framework model*** and the Risk Governance thereof. Furthermore, the CASES did not have a mechanism to motivate the management and staff with ***incentive schemes*** to motivate prudent measures in mitigating a risk or exploiting an opportunity. While the models had sufficient leeway to absorb the cultural sensitivity of the Middle East, it did not fully tackle the commercial and economic aspects of the business as a NOC.

## 6.4 Comparison of implementing challenges

Analyses of the interview survey, on identifying implementing challenges have been segregated into various segments – ***Structural*** challenges, ***Operational*** challenges, and ***Technical*** challenges. Subsequently, findings from a ***wider view analysis*** was taken up in all CASES and are presented along with the challenges in taking forward an entity to a stage ***'Beyond ERM'*** and the role of External Consultants, Specialty Consultants and plausible System Certification-like approach.

### Structural challenges

Analyses of the interview survey have identified the following top five emerging structural challenges for ERM in the GCC Oil companies, i.e.

- ***Risk communication: A consistent framework***
- ***Lack of Risk Awareness at Board level***
- ***Audit Committee***
- ***Corporate Culture***
- ***Linking risks to overall corporate strategy***

Some CASES have even stated that ***'Lack of Transparency'***, ***'Weak Risk Governance / Risk Committee'***, ***'Lack of Risk Awareness at Executive Management'***, and even ***'Disassociation between Internal Audit Plan and ERM findings'*** as significant structural challenges.

### Operational challenges

Analyses of the interview survey have identified the following top five emerging Operational challenges for ERM in the GCC Oil companies, i.e.

- ***Determining Risk Owners / Ownership***
- ***Risk Awareness at lower levels***
- ***Risk communication: Risk Culture***
- ***Risk Identification***
- ***Risk classification***

Some CASES have even stated that ***'Appropriate Risk Analysis Techniques', 'Risk Awareness at Middle levels', 'Allocation of Capital for Risk Response', 'Risk Communication: A common Risk language'*** and ***'Risk Communication: Across disciplines / departments'*** as significant operational challenges.

**Technical challenges**

Analyses of the interview survey have revealed the following top five emerging technical challenges for ERM in the GCC Oil companies, i.e.

- ***Data accuracy***
- ***Risk measurement***
- ***Determination of Risk Appetite***
- ***Risk Assessment***
- ***Risk Modeling***

Some CASES have even stated that ***'Data Storing', 'Data Adequacy', 'Determination correlation among various Risk classes'***, and ***'Determining Offset benefits in Risk Response / Strategy'*** as significant technical challenges.

**'Beyond ERM': Implementation challenges**

Notwithstanding the mandate on ERM implementation from Board level, a ***wider view analysis*** with a theme ***'Beyond ERM'*** was instigated by stretching Management Thinking in their ERM journey in all CASES.

Historically, entities had learned the value of good risk management early on and had established robust ERM systems. In the Finance sector, several businesses had the benefit of having an accounting scandal before SOX and Enron. Similarly, in the insurance sector, ERM has moved from a relative rarity just three years ago (2006) to common practice among insurers today. Such an adoption of ERM in the other business sectors is primarily due to taking their ERM system beyond Rating Agency, Basel, Solvency and SOX requirements.

Apart from implementing from a COSO perspective, the benefits and trade offs (if any) in the entities to ensure that they get the fullest value from an ERM system was explored in all CASES. It was investigated whether the GCC oil and gas companies utilize the ERM system further to integrate with the changing business environment utilizing the following business tools - Corporate Strategic Planning; Balanced Score Card Management System; Budgeting/ Budget Reviews; Application in larger context of implementing better TQM; and Application in larger context of implementing Six Sigma.

***'Disassociation between Corporate Business Plans & ERM findings'*** is felt to be 'difficult to comment' category as some CASES are utilizing the ERM findings in Corporate Strategic Planning exercise; while other CASES felt that their ERM maturity has not yet attained a status to think 'Beyond ERM'. This was also viewed as a structural challenge in most CASES.

In one CASE, participants mentioned that ***'Not seriously perceived as a priority by top management'*** as one of the primary reasons for not thinking Beyond ERM.

**External Consultants & Systems Certification**

An appraisal from external consultants on the adequacy of the ERM initiatives is essential and ERM developments in more than half of the CASES are not necessarily led by the Board; although ERM may be a Board initiative. They are on the other hand developed under the leadership of the CEO. External Consultants facilitate Middle East oil and gas companies in an effective ERM implementation. Nevertheless, prior to seeking a Board approval the Executive Management favour getting an evaluation preferably done by the Big Fours.

In some CASES, some participants (Management/Superintendent levels in technical, environmental, insurance) also felt that most Management Consultants hired for ERM Project advice are not technical or astute with energy industry knowledge and would benefit better when Specialty Risk Consultants who are active elsewhere are engaged.

This reinforces the message that ERM implementation is attracting significant attention around the world and that more resources are likely to be allocated to it in the near future and is also becoming more ***'sector specific'*** and perhaps even ***'specific to regions'***, globally. Furthermore, in some CASES, some participants also felt that a ***'systems certification-like'*** approach similar to the BS and ISO certification would facilitate the Middle East Oil and Gas Companies in having an effective ERM implementation in place. This suggestion was also typically visible in those CASES which view ERM as a Standardization process, further corroborating the ***'Management Thinking'*** as explored earlier.

**Conclusions**

The analysis suggests that the CASES exhibit a major weakness in Risk Communication as it poses structural, operational and technical challenges. Risk communication is not an isolated issue (Tansey, 2004) and it correlates with individual attitude towards risk and gets subsequently associated to the risk culture of the entity. Therefore, under Risk Communication, the following three areas were further articulated in the exploration -

- Risk Communication: Risk culture
- Risk Communication: A common risk framework
- Risk Communication: Across disciplines / departments

Furthermore, participants invariably agreed that Corporate Culture is a major barrier to effective communication.

A very unique aspect that throws a specific challenge in the Oil and Gas sector is the existing scenario on Oil Governance - with fragmented trinities in Corporate Governance comprising of ***Policy - Regulation – Operations*** which directly influence the effectiveness of ERM. Regulation of the oil business was after all developed from various primitive royalty agreements; to profit sharing with tax scheme; to total control and nationalization in all CASES. Regulatory orders were established to protect their sovereign assets, starting with laws that enabled the state (via The Ministry of Finance and Oil) to inspect the operators. Further on, another establishment in the form of a

supreme council (chaired by the ruling family) was setting out the petroleum policy. Adding to this the access to capital is through the Ministry of Finance which is separated from the Ministry of Oil/ Oil & Gas Authority depending upon the entity titles used in the individual CASES. In certain CASES, a Holding Company under the aegis of the Ministry of Oil is promoted to receive the revenues of the hydrocarbon sector. The above scenario is applicable to both upstream and downstream oil and gas segment. There is a significant weakness due to the lack of unequivocal demonstration of a comprehensive strategy that does not drive synergy in the oil sector governance. This is a very sensitive area and this causes a typical challenge in terms of ***Corporate Culture*** which has a direct impact while using a contemporary and sophisticated framework like ERM.

All CASES had a common aspect, as the portfolio of Risk Manager was occupied by personnel from the ***Finance background***. The challenges were further intricate due to the need of a multi-disciplinary blend of knowledge in the business. This aspect was also picked from the discussions. There was a need for holistic understanding of 'all risks' within the upstream and downstream oil and gas business value chain. Risk identification, classification, assessment, measurement and control are different and are ***discipline specific***. However, risk culture should instill the need to integrate all these disparate shreds of risk managers (silo management) in the Line Departments.

The specific challenge on the accuracy of data, measuring risks, assessing and modeling risks for a given risk appetite is difficult primarily due to the ***ignorance associated with the subjectivity*** attached to the events that could plausibly unfold. Some of the risks are quantifiable and some non-quantifiable. However, the significant outcome from the study is to understand that the risks are just *accepted*, simply *transferred* or *shared* among the stakeholder for a chosen Petro-Strategy. The exact approach is firm-specific and also culturally sensitive. Nevertheless, risk communication, corporate culture/risk culture and risk awareness need to be aligned through a common risk language to develop an efficient ERM system in all the CASES.

## 6.5 Comparison of the Performance Metrics

Analyses of the interview survey have acknowledged the interrelations between Business Value Drivers, Key Risk Indicators and Risk Metrics in the GCC Oil companies.

### Business Value Drivers

Analyses of the interview survey have identified the following top five major 'Business Value Drivers' in the GCC Oil companies, i.e.,

- ***Local gasoline consumption***
- ***Global Market Demand***
- ***Crude Prices***
- ***Explore new acreage***
- ***Mechanical availability***

Typical examples presented to the participants included advanced technology, reliability, cost control, reputation for customer service etc; but Business Value Drivers vary with the type of business and industry. Once business value drivers are identified, enhanced decisions can be made surrounding the business. The business models in the GCC oil and gas companies have not yet realized that 'ERM' can itself be a Business Value Driver. Furthermore, 'Market Share' would also be an appropriate Business Value Driver, which was not picked from the survey.

### Key Risk Indicators (KRI)

Upstream and Downstream Petro-strategies are generally driven in maximizing the above business value drivers. The KRIs identified below positively add value to the Value Drivers of the Business stated above.

- ***Revenue***
- ***Labour costs***
- ***Refining Margins / Crack Spreads***
- ***Capacity utilization***

- *Operational flexibility (to run any crude slate)*
- *Reserves Estimate*
- *Number of Near Misses*
- *Number of Accidents*
- *Breakdown time*
- *Protracted delivery (lead time)*
- *Contingency Plans*
- *Management oversight*

Key Risk Indicators is a measure used to indicate how risky an operation/activity/project is. KRIs may be tangible or intangible, but gives an early warning to identify potential event that may harm continuity of the operation, to better manage operational risks.

**Risk Metrics**

In some CASES, participants did not distinguish between Key Risk Indicator and Risk Metric; and believed that they basically meant the same. Participants stated that the 'Risk Metrics' used by the entity is primarily the ***Impact/ Likelihood Analysis*** and is derived from a financial, operational, compliance perspectives. Ideally this could be viewed as a Risk Assessment with more emphasis on Financial perspective and less emphasis on Strategic perspective. Furthermore, participants in some CASES stated that the entity is also using metrics like Cost of Risk (COR) and Return on Capital Employed (ROCE) depending upon the business process. The findings from traditional risk management systems like Reliability, HAZOP, HAZID, EHS and QMS ***'are taken'*** into account in the ERM system in some CASES.

## Conclusions

Improving risk management with a financial perspective is important, but integrating it with operational performance is critical. The analysis suggests that the CASES gravitate towards a ***Band Score*** with High, Medium and Low risk category. A significant

observation is that all CASES had given relatively less attention to the performance of the ERM system.

For Middle East Oil and Gas Companies to embrace a Risk Metric like 'Value at Risk' (VaR), entities should determine certain parameters which contribute in determining VaR i.e., a threshold value, time horizon and probability. Such parameters are difficult to set out in the CASES. VaR is the predominant 'Risk Metric' in other industries, nevertheless, VaR typically is a downside risk measure, and it typically ***focuses on losses and not on the lost opportunity***. While VaR is a popular risk metric to aggregate risk across an enterprise, it is also viewed with confusion as a risk indicator for risk measure. A deterministic approach to evaluating risk ignores all soft initiatives or soft measures and heavily depends on numerical measures like frequency, severity etc. Furthermore, participants believed that VaR is more applicable to investment projects and they need to further study this risk metric to confidently apply in the oil industry business processes as their ERM Model matures.

While the ultimate goal of ERM is to help Management in achieving Corporate Objectives (Dickinson, 2001), ERM is also an emerging hot topic and is maturing as a result of initiatives from at least two perspectives (Power, 2004; Dickinson, 2001; Dickinson 2005; Lam; 2003)

- ***Finance-driven shareholder value model***
- ***Compliance-driven risk governance model***

For the Middle East Oil Companies, when the focus is to increase shareholder value, some of the KRIs demonstrate added value in a tangible form. Participants seem to feel that financial indicators are given importance than non-financial indicators, solely because ERM is driven more from a financial perspective. However, when these entities focus on risk governance, the quandary over value creation is arguable; comparable to the dilemma of measuring the performance of a R&D unit adding value to the core business value chain. Nevertheless, the analysis further suggests that the CASES also utilized many types of Risk Metrics (typical of a silo management approach) and this could lead

to integrate the system across the upstream and downstream value chain to perhaps arrive at a uniform Risk Metric like VaR in the future.

----------END OF CHAPTER-6----------