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Rahat Munir
*Macquarie University*

Sujatha Perera

Kevin Baird



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**Keywords**
Change in performance measurement systems, Institutional theory, Banking sector, Strategic responses

# An Analytical Framework to Examine Changes in Performance Measurement Systems within the Banking Sector

Rahat Munir[1] ,
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## Abstract

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**Keywords:** Change in performance measurement systems, institutional theory, banking sector, strategic responses

**JEL Classification: G21, M4**

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1 Macquarie University, Sydney, Australia. rahat.munir@ mq.edu.au

## 1. INTRODUCTION

The banking industry has experienced major changes in recent times due to the impact of deregulation, advances in information systems and technologies, globalization, and more recently the global financial crisis triggered by the subprime turmoil in the United States (Kahveci & Sayilgan 2006; Lapavitsas & Santos 2008; Wignall & Atkinson 2010; World Bank 2005). Businesses that were regarded in the past as profitable and safe have come to be seen as uneconomical and reckless (Erturk & Solari 2007; PriceWaterhouseCoopers 2009). The speed and intensity with which the banking industry has changed, has led to phenomenal growth in international transactions, expansion of banking operations across borders, and the restructuring and consolidation of banks. Such growth in turn has prompted banks to seek new sources of income, use complex tools for risk assessment and mitigation, and have greater awareness of their costs and the productivity gains to be realised from work reorganisation and financial innovations (Bank for International Settlements 2006; Helliar, Cobb & Innes 2002; PriceWaterhouseCoopers 2009). Accordingly, in addition to the traditional banking products, banks have become more involved in volatile investment activities and financial instruments such as junk bonds, leveraged buyouts, commercial papers, mutual funds, derivatives and assets securitisation (Citigroup Annual Report 2000; Frei, Harker & Hunter 1998; World Bank 2008).

Banks have increasingly become subject to immense pressure from their stakeholders to improve performance, forcing them to re-examine their traditional management control approaches and technologies, strengthen their capital base, reduce their non-performing and toxic assets, bring down operational costs, enhance corporate governance and sharpen their customer centric initiatives (Frei et al. 1998; Helliar et al. 2002; Lapavitsas & Santos 2008). Moreover, the recent financial crisis which started in mid-2007 has forced banking institutions worldwide to grapple with reduced public confidence, heightened shareholder scrutiny and increased regulatory insight (Wignall & Atkinson 2010). Additionally, the introduction of risk-adjusted performance measurement guidelines by the Bank for International Settlements, the Basel Accords[2] and stringent supervisory control frameworks such as CAMELS[3] and CAEL[4], have resulted in the significant transformation of banks in respect to organisational structures, systems and strategies (Geyfman 2005; World Bank 2005).

In an attempt to support such changes, many banks have adopted technologically sound and sophisticated management practices (Bank of England 2003). The adoption of new technologies and management practices have led to concerns in regards to the suitability of their existing control systems, including

[2] Basel Accord I was released in 1988 which was later replaced with Basel Accord II in 2004. The Basel Accord II rested on three pillars: minimum capital requirements (pillar 1), guidelines on regulatory intervention to national supervisors (pillar 2) and new information disclosure standards for banks (pillar 3). In a response to the global financial crisis the Basel Committee has drafted Basel Accord III to replace Basel Accord II from 2012.

[3] The CAMELS framework involves analysis of specific groups of performance measures namely Capital adequacy, Assets quality, Management, Earning quality, Liquidity and Sensitivity (market risk).

[4] The CAEL framework involves analysis of four groups of performance measures namely Capital adequacy, Assets quality, Earnings and Liquidity.

performance measurement systems (PMSs)[5]. In particular, there is an increasing need to introduce changes to PMSs in order to develop and adopt innovative and robust solutions for management controls, new databases and new analytical ways to prudently assess costs, benefits and risks (Guerreiro, Alberto & Frezatti 2006; Hawkins & Mihaljek 2001; Karr 1997; PriceWaterhouseCoopers 2009). Banks are also being encouraged to adopt management accounting tools, such as activity-based management, customer profitability analysis, target costing, benchmarking, value based management and integrated PMSs[6] (Frei et al. 1998; Helliar et al. 2002; Khiaonarong & Liebena 2009; Kimball 1997).

It has become evident that in order to meet the challenges of the changing organisational environment, management control systems, within which PMS is a part, should be adjusted before they lose their relevance (Eccles 1991; Ferreira & Otley 2009; Ittner & Larcker 1998; Kaplan 1984; Modell 2007). A primary difference between banks that succeed and those that fail is the ability to respond to the pace of change[7] to scan and monitor their external environment, and to anticipate and adapt timely to continual change (Tanner 2009). Alternatively, the inability of banks to recognize the need for change and their fragile adaptation ability could contribute to a decline in their performance (Demirguc-Kunt & Huizinga 2000; PriceWaterhouseCoopers 2009). Hence, it is important that PMSs adapt to the recent environmental conditions as reflected in the following comments by Dixon, Nanni & Vollmann:

> *A good measurement system needs to be continually changed in order to remain effective. As one set of goals or objectives is satisfied, or as the set of measures becomes too gross to detect improvement, a new set need to be articulated, and the old set needs to be discarded or modified. This means there can never be a set of good performance measurement that is stable over time.* (1990, p4-5):

However, it seems that the link betwen the changes in the organisational environment and changes in PMSs is not a simple linear process. Specifically, organisations often prefer to maintain the status quo and are reluctant to implement required changes without a certain degree of coercion. Furthermore, even after a

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[5] In the management accounting literature there are various interpretations and explanations of the concept of PMS. Kaplan (1984), for instance, described a PMS as an information system that aims to provide financial signals in order to help management make decisions. In a similar vein, Marshall et al. (1999) describe a PMS as a development of indicators and collection of data to describe, report and analyse performance. Neely, Gregory and Platts (1995) considered a PMS as a process of quantifying both the efficiency and effectiveness of actions. Recently, in a more comprehensive perspective, Simons (2000) defined a PMS as formal information based routines and procedures that managers use to maintain or alter patterns in organisational activities.

[6] Examples of these systems are the Performance Measurement Matrix (Keegan, Eiler & Jones 1989), SMART Pyramid (Lynch & Cross 1991), Result and Determinants Framework (Fitzgerald et al. 1991), Balanced Scorecard (Kaplan & Norton 1992), Performance Prism (Neely, Adams & Kennerley 2002) and Comparative Business Scorecard (Kanji & Moura 2002).

[7] The research on organisational change regards change as a continuous, unpredictable process driven by environmental instability that organisations try to overcome through different modifications and adaptations (Burns & Vaivio 2001).

decision is made to introduce change, rather than passively accepting the change, organisational members may respond to such decisions in different ways. Accordingly, an awareness of the factors influencing changes in PMSs, the forms of pressure that enact change, and the way in which organisations respond to change efforts is required to fully understand changes in PMSs within banks.

While existing studies on changes in PMSs in banks address various issues in relation to changes, such as the process of change, its nature and outcome, they do not explicitly present a framework to analyse the factors that influence such change or consequential responses to such change attempts. A number of studies have developed analytical frameworks to examine similar issues (e.g. Kasurinen 2002; Burns & Scapens 2000; Waggoner, Neely & Kennerley 1999; Greenwood & Hinings 1996; Innes & Mitchell 1990) in manufacturing organisations, but their applicability to banks is limited due to management and operational specificities that are different from manufacturing organisations. Additionally, these frameworks suffer from a number of shortcomings. For instance, Burns & Scapens (2000), Greenwood & Hinings (1996) and Kasurinen (2002) state that many of the frameworks used to examine management accounting change do not help to explain complexities of the change process, and have failed to provide a holistic analysis of the macro-level context of an organisation as well as its institutional context. Further, managerial responses to the institutional pressures influencing change have generally not been addressed in these frameworks. Accordingly, the main motivation of this paper is to develop an analytical framework to examine changes in PMSs with a specific focus on the factors influencing the change and the responses to change efforts within the context of the banking industry. The paper draws on institutional theory, more specifically DiMaggio & Powell's (1983) notion of institutional isomorphism, and Oliver's (1991) typology of strategic responses to institutional pressures.

The remainder of the paper is organised as follows. Section 2 provides an outline of the theoretical underpinning of the framework developed in this paper. Section 3 then discusses the environmental factors that affect the functioning of banks. The institutional pressures that could influence changes in PMSs are discussed in Section 4, followed by a discussion of the strategic responses to institutional pressures in Section 5. Finally, Section 6 provides a summary of the paper and some concluding remarks.

## 2. THEORETICAL UNDERPINNING

Institutional theory has evolved into a body of literature encompassing multiple levels of analysis concerning change in organisations. It deals with how organisations are affected by forces which lie beyond its control (Hoffman 1999) and is built on the notion that institutional environments are socially constructed (DiMaggio & Powell 1983). Accordingly, the institutional environment and its participants play key roles in shaping organisational systems, structures and behaviours. Scott (1998, p12) explains that:

> *every organisation exists in a specific physical, technological, cultural and social environment to which it must adapt. No organisation is self-*

> *sufficient, all depend for survival on types of relations they establish with larger systems of which they are a part*.

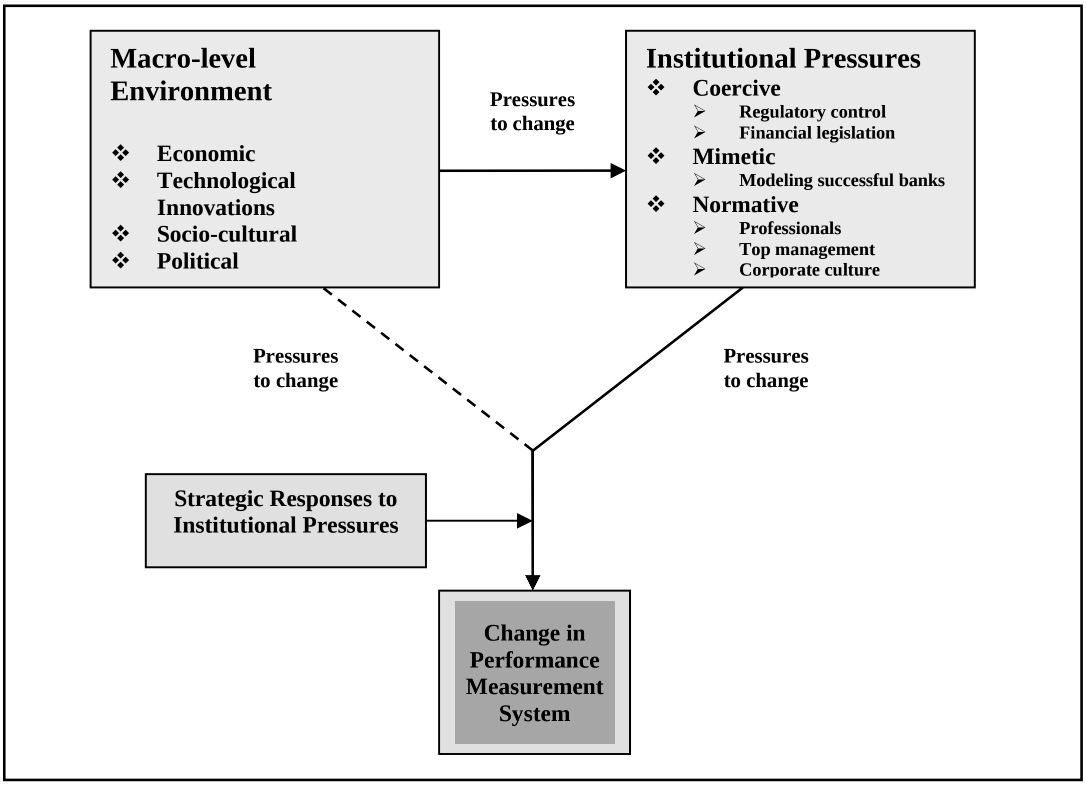
From this perspective, an organisation must comply with environmental changes if it is to receive legitimacy and continued societal support. Thus, the institutional environment is viewed as defining not only the appropriate organisational systems, structures and behaviours but also the manner in which they conform to institutionalised beliefs in society. While institutions are an integral part of organisational life, institutional theory treats institutions as largely exogenous to the organisation. Institutional theorists suggest that institutional theory can be applied to a variety of different organisations and many different levels of analysis, stretching from a macro-system perspective to an organisational sub-system perspective (Scott 2001). These levels are connected within an organisational field. DiMaggio & Powell (1983) introduced the concept of organisational fields to analyse the context of an organisation which includes closely related suppliers, customers, regulators, competitors or other important inter-organisational links which are important determinants of institutional pressures. DiMaggio & Powell (1983) further emphasise that the impact of institutional pressure is dependent on the position of a particular organisation within an organisational field. Over time, organisational fields are subject to change (Greenwood & Hinings 1996).

The mechanisms through which organisations adopt systems and procedures is termed institutional isomorphism (DiMaggio & Powell 1983). Isomorphism is "*a constraining process that forces one unit in a population to resemble other units that face the same set of environmental conditions*" (DiMaggio & Powell 1983, p149). They identify three mechanisms through which institutional isomorphism occurs, each with its own antecedents - coercive, mimetic and normative. "Coercive isomorphism" is the response to:

> *both formal and informal pressures exerted on organisations by other organisations upon which they are dependent and by cultural expectations in the society within which organisation functions* (DiMaggio & Powell 1983, p150).

Organisations are forced to change their systems and procedures directly as a consequence of changing legislation. This adherence to pressure helps the organisation to secure economic resources and legitimacy (Meyer & Rowan 1991). "Mimetic isomorphism" is the act of copying other organisations when organisations face uncertainty, and the way in which they "model themselves on other organisations" in order to overcome uncertainty (DiMaggio & Powell 1983, p151). In particular, ambiguous organisational goals and strategies or poorly understood technologies may cause organisations to model themselves on other organisations. Scapens (1994) argues that mimetic behaviour has a conformity element, wherein organisations adopt contemporary practices to legitimise their structures, systems and processes by appearing to be in control. "Normative isomorphism" is associated with professionalisation (DiMaggio & Powell 1983, p152), and arises when professionals operating in organisations are subject to pressures to conform to a set of norms, values and rules developed by occupational and professional bodies (Abernethy & Chua 1996). In this form of isomorphism, organisations feel obliged to adopt structures, systems and processes that have been advocated by dominant occupational and professional groups (Burns 2000). Informed by DiMaggio & Powell's (1983) notion of institutional isomorphism, this paper argues that banks may introduce change to their PMSs as a result of these three forms of pressure.

Figure 1
Analytical Framework for examining changes in performance measurement systems within the banking sector




However, DiMaggio & Powell's (1983) notion of institutional isomorphism does not address the possible organisational responses to change efforts (Oliver 1991) and the strategic behaviours associated with the consequential change (Covaleski & Dirsmith 1988). There have been calls advocating the extension of DiMaggio & Powell's (1983) notion of institutional isomorphism to include responses to the institutional pressures to analyse change (Greenwood & Hinings 1996). Oliver (1991) discusses the various strategies organisations appear to adopt in response to institutional pressures to change. While questioning the notion of institutional determinism, she argues that organisations respond to different environments by pushing them in differing directions due to diverse norms and expectations. Accordingly, conforming to institutional pressures is not an exclusive option, even if it might be tempting in order to gain legitimacy. The possibility of achieving gains through resistance is also argued to exist. Thus, it is argued that an organisation makes an active response to institutional pressures with the extreme option being to either conform or resist. Oliver (1991) presented a continuum of strategic responses with five types of responses (acquiescence, compromise, avoid, defy, and manipulate)[8].

Hence, the framework developed in this paper to examine changes in PMSs in banks draws from both DiMaggio & Powell (1983) and Oliver (1991). The proposed framework is depicted in Figure 1. The framework identifies a number of macro-level factors that affect the functioning of banks and the resulting institutional pressures which could lead to changes in their PMSs. The paper also recognises the influence of strategic responses when introducing change with the direction, nature and outcome of change efforts likely to be determined by the responses of the key organisational actors. Environmental factors that could have an impact on PMSs, and the institutional pressures that could lead to changes in PMS are discussed respectively in Sections 3 and 4, with the strategic responses of organisations to such changes discussed in Section 5.

## 3. ENVIRONMENTAL FACTORS THAT AFFECT THE FUNCTIONING OF BANKS

The literature suggests that changes in PMSs are influenced mainly by the macro-level environment of banks (Hussain & Hoque 2002) with the resulting changes improving not only the quality of information, thereby leading to increased productivity and accountability (Perera 2004), but also the ability to survive in a highly competitive environment (Cobb, Helliar & Innes 1995; Helliar et al. 2002). Hussain & Hoque (2002) suggest that changes in the macro-level environment could influence changes in the strategy and/or structure of banks, which in turn could lead to changes in management control systems, including performance measurement practices. The macro-level environment is an outer realm of banks which is outside their control. Innovations in management philosophies, trade liberalisation, new technologies, increased competition, changes in regulatory frameworks, and uncertain economic and political conditions have often been cited in the banking literature as major factors that influence the functioning of banks (Helliar et al. 2002). This study combines these macro-level factors into three categories, namely economic conditions, technological innovations, and socio-cultural and political environment.

### Economic Conditions

In recent years banks have faced an uncertain economic climate because of macroeconomic factors such as globalisation, liberalised deregulation, privatisation, and highly fluctuating, at times unpredictable, inflation and interest rates (Harker & Zenios 1998; Helliar et al. 2002; World Bank 2009). Such economic conditions place pressure on banks to improve performance (Burney 1999; Williams & Seaman 2002), and one area that could be used for that purpose is the PMS. Performance could be improved by using existing measurement and control systems more efficiently or by introducing new systems for that purpose (Brignall & Modell 2000; Hussain & Hoque 2002). For instance, the recent global financial crisis which started in 2007 has forced many banks to strengthen their PMS and internal management controls by integrating strategic planning, risk measurement and mitigation frameworks, and performance

[8] Explanation of these responses is provided in Section 5.

reporting systems in order to enable each business area to monitor its contribution, and deliver clearer, relevant and more consistent financial information (Bank of England 2008, p27-30). Anecdotal evidence suggests that volatile market conditions (e.g. fluctuations in interest rates, foreign exchange rates and equity prices) generate high risk for banks and threaten their earnings, capital, liquidity, and solvency. Effective risk management within banks demands accurate and timely risk quantification which can be assisted by an efficient PMS[9] (Bank of England 2008). Therefore, banks need more formal, detailed PMSs that not only establish stringent internal controls but facilitate prudent analysis that captures all activities which expose banks to risk and then measures the specific risks presented.

Banking was traditionally a highly protected industry with restrictions on domestic and foreign entry. However, progressively liberalised deregulation, both within countries and across national boundaries, has led to cut-throat competition between banks and other financial institutions (Hawkins & Mihaljek 2001). For example, GE Capital, the financial services subsidiary of General Electric and Tesco, offers financial services including credit cards, loans and insurance. As in other industries, the degree of competition in the banking sector is primarily driven by the need to create efficiency in financial services, the quality of financial products and the degree of innovation in the sector (Frei et al. 1998; Oberman 2006). In the face of these objectives banks are attempting to redefine their businesses. The traditional financial intermediation role of banks to provide loans and mobilise deposits has become a relatively less important part of the overall business, as banks are diversifying into a wider range of services (Lapavitsas & Santos 2008). Further, Claessens & Laeven (2003) and Hawkins & Mihaljek (2001) note that one of the catalysts for increased competition is the removal of ceilings on deposits rates. This deregulation measure has reduced sources of cheap funding for many banks and put pressure on their profits, thereby forcing them to price risks more realistically and to charge explicitly for previously free services (Berger 2003; Hawkins & Mihaljek 2001). The increased competition in the banking sector has not only facilitated the access of organisations and individuals to financial services and financing, but also eroded the market share of many banks. Consequently a substantial number of banks are entering into high risk ventures making it vital for banks to apply integrated PMSs and apply appropriate internal controls for different activities (Bank for International Settlements 2009).

The easing of restrictions on entry of foreign banks and the search for global markets for profit opportunities have led to a growing presence of foreign-owned banks in domestic markets in many countries (Gormley 2007; World Bank 2005, 2006). As a result, banks now increasingly look for sophisticated management tools to exploit new businesses. Foreign banks have introduced a range of procedures, technologies and experience that focus on credit, automated credit scoring, mass distribution channels and electronic lending platforms, such as credit card networks (World Bank 2006). They have been able to successfully compete against socially and culturally embedded domestic banks, partly due to their usage of superior technology and customer service (Lapavitsas & Santos 2008; Hitt & Frei 2002).

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[9] See for details: Operational Risk Management, Basel Committee on Banking Supervision (1998) and Risk Management in the New Regulatory Environment, Gartner Inc., (2003).

Notable examples of such banks include Citibank, Hong Kong Shanghai Banking Corporation and Standard Chartered Bank. These conditions in the economic environment suggest that the success, or even long term survival of a bank would depend upon the appropriate utilisation of resources as well as their control over the costs and quality of services.

The need for more comprehensive PMSs to assist organisations to operate effectively in today's competitive environment has often been emphasised by accounting academics and practitioners (Ferreira & Otley 2009; Chenhall & Euska 2007; Sulaiman & Mitchell 2005). A number of recent studies have also concluded that traditional PMSs are inappropriate given today's complex economic conditions, with such factors considered to be an influential factor in regard to the changes in PMSs in banks.

### Technological Innovations

The impact of technology on management accounting practices including performance measurement practices has been well recognized in the management accounting literature (e.g. Johnson & Kaplan 1987; Otley 1994). The literature suggests that the innovations in technology has contributed significantly to the expansion of the banking industry (Kimball 1997), with Kaplan & Norton (1996) arguing that the impact of information technology is even more revolutionary for service than manufacturing organisations.

Technological innovations play a pivotal role in the performance of banks. Technology provides an opportunity for banks to improve service performance in addition to providing a broader range of financial products and services. The literature on banking reveals that over the last two decades there has been a phenomenal increase in the offer of e-banking or e-finance products and services by banks, such as internet banking, debit cards, e-bill payments, smart cards and stored-value cards, in order to stay competitive (Allen, McAndrews & Strahan 2002). These advancements have allowed banks to innovate customer service and delivery channels, not only to fulfil the needs of customers, but also to achieve economies of scale and to increase competitiveness (Hitt & Frei 2002). Consequently, banks have increasingly started focusing on customer and product profitability analysis as key performance measures thereby requiring them to create existing and potential customers' profiles which become important to the decisions to lend, mobilise deposits and track movement of customers' accounts (Helliar et al. 2002; PriceWaterhouseCoopers 2009).

Additionally, transactions between banks and their depositors have mostly become automated, the role of bank branches has been significantly changed, the techniques of funds transmission have been altered, and new ways of managing accounts and making payments have emerged. Banking literature suggests that automation of transactions and the associated developments have radically changed the operational structure of banks and have contributed to steadily rising Automated Teller Machine (ATM) numbers, online transactions, and increased pressure on banks to expand investments in complex information technology infrastructures (Berger 2003). While these changes have created new fields of profitability for banks, the changes have also significantly enhanced risks for banks due to the enhanced volume of business activities and increased flow of information (Bank for International Settlements 2006). Against these trend, anecdotal evidence suggests, that many banks have been forced to adopt new types of performance measures, such as number of customers per ATM, number of transactions per ATM, number of faulty transactions, and number of ATM breakdowns, in order to foster control over business activities.

### Socio-cultural and Political Environment

The socio-cultural and political environment is generally characterised by the rules and requirements to which individual organisations must conform if they are to gain support and legitimacy (DiMaggio & Powell 1983). Scott (2001) suggests that political pressures generally result from changes in the interests of individuals or groups, and underlying power distributions that provide support for the existing institutional environment. Socio-cultural pressure is associated with differentiation of groups and the existence of heterogeneous or divergent beliefs and practices. The presence of these pressures undermines the stability of organisation, hence resulting in the gradual abandonment of a set of management practices within an organisation (Stark 1996). For example, in many Islamic countries, banks have been forced to introduce “profit and loss based or interest free” banking products, abandoning the “interest based” products to satisfy the fundamental belief (faith) of Islamic societies which prohibit charging interest (Ahmad 1993). Consequently, central banks in many Islamic countries have issued a separate set of prudential regulations for Islamic banking activities.

Alam (1997), Hoque & Hopper (1994), and Hussain & Gunasekaran (2002), among others, have identified a number of social and political factors which have forced changes in organisational structure and strategy such as political instability, resource scarcity and coalition amongst organisations. Within the banking literature it is argued that banks voluntarily, or some times obligatorily, follow international organisational standards/quality measurement stipulations determined by institutions, such as the Bank for International Settlements, International Standards Organisation (ISO) and the United Nations Organisation (UNO), and consequently adapt their performance measures to conform to the recommendation of such bodies (Holland, Lockett & Blackman 1997). For instance, the Bank for International Settlements has made it obligatory for the banks operating in developing countries to adopt performance measures and internal control standards set under Basel Accords if they intend to operate in international markets. Banks in these countries have also been encouraged by the Bank for International Settlements to extensively use their PMS in order to restrain the negative impact of political and social instability. Similarly, transnational institutions like the World Trade Organisation (WTO), World Health Organisation (WHO) and regional blocs also encourage banks to adopt practices that are consistent with international standards and practices. In considering the above factors, socio-cultural and political environments have a tendency of influencing performance measurement practices within banks.

The three categories of macro-level factors discussed in this section, namely economic conditions, technological innovations, and socio-cultural and political environments are considered to have a significant influence on banks' functioning. As a result, banks generally become more competitive, resilient to technological innovations and associated service capabilities, and responsive to socio-cultural and political needs in order to secure their survival and legitimacy. Such requirements have significant implications for PMSs within banks. Nevertheless, organisational responses to macro-level influences are often not spontaneous. The direction and the nature of responses to the influence of the macro-level factors could result from three types of pressures (coercive, mimetic and normative) which are discussed in the following section.

## 4. INSTITUTIONAL PRESSURES FOR CHANGE

Institutional theory suggests institutional pressures make organisations adapt in order to gain legitimacy (Covaleski & Dirsmith 1988). Pressures on banks to introduce change could occur in three forms namely coercive, mimetic and normative. This section discusses the way in which these pressures cause banks to respond to the macro-level factors discussed in the previous section.

### Coercive Pressure

Institutional theory suggests that some institutional fields contain powerful environmental agents who impose structural forms or practices on subordinate organisational units (DiMaggio & Powell 1983, 1991). Coercive pressures to change performance measurement practices could eventuate from other organisations upon which a particular organisation is dependent (DiMaggio & Powell 1983). For instance, in relation to the banking sector, prior research highlights the coercive influence exerted on organisations or on their behaviour through the central bank's regulatory control and financial regulations (Hoque & Hopper 1994, 1997; Hussain 2003).

#### *Central Bank's Regulatory Control*

Banks are required to function within the regulations and guidelines of central banks, such as prudential regulations and Basel Agreements. The Basel Accord II describes a more comprehensive measure and a minimum standard for capital adequacy that supervisory authorities are required to implement through rule-making and adoption procedures. It seeks to improve the existing rules by aligning regulatory capital requirements more closely to the underlying risks that banks face. In addition, the Basel Accord II was intended to promote a more forward-looking approach to capital supervision, one that encourages banks to identify the risks they may face today and in the future, and to develop or improve their ability to manage those risks. In order to comply with Basel Accord II many central banks introduced the CAMELS and CAEL frameworks to evaluate banks' performance (Asian Development Bank 2002; Hilbers, Krueger & Moretti 2000; Lall 2009). The failure to comply with the central bank's regulations and guidelines attracts financial penalties or cancellation of a banking license. Banks are, therefore, required to improve their performance measurement as well as internal control and risk measurement practices to be in accordance with the central banks' and Basel standards. The pressure to improve performance measurement will be far greater in the next few years after the implementation of Basel Accord III at the end of 2012. According to the new regulations under Basel Accord III banks will be required to: maintain higher tier-1 and tier-2 risk-weighted capital ratio; use a leverage ratio as a safety net: maintain higher liquidity: use higher risk-weightings for trading assets of the banks; and exclude most of the off-balance sheet exposures from capital (Lall 2009; Wignall & Atkinson 2010).

### *Financial Legislation*

Accounting bodies such as the Financial Accounting Standard Board (FASB) in the US and the international Accounting Standard Board (IASB) in the UK prescribe accounting standards, which in turn impact on the accounting systems upon which PMSs rely. Central banks require banks to follow the accounting standards and International Statements of Auditing (ISAs) and Audit Codes issued by the International Federation of Accountants (IFACs). The Basel Accord II requires that banks implement a progressive adoption of risk evaluation techniques. This has forced banks to transform their existing systems and procedures to accommodate the financial information requirements stipulated in the Basel Accord. Most of these changes have resulted in improvements in the disclosure of financial information arising from the reformulation of accounting rules for entries and reporting. These reformulations were designed to improve the informational quality of statements so that they accurately represented the true performance of the bank. The Sarbanes Oxley Act (2002) introduced in response to a series of corporate scandals in the US, requires organisations, in particular banks, to identify, assess and test the effectiveness of their key management controls and monitoring within the business to ensure greater accountability, transparency, and compliance with laws and regulations (Merchant & Van der Stede 2007).

## Mimetic Pressures

DiMaggio & Powell (1983) argue that in an uncertain environment, organisations will imitate others in determining appropriate behaviour. Patterning their own operational or decision making systems on the systems used by industry leaders is seen as a means of reducing uncertainty and risk, and enhancing legitimacy (DiMaggio & Powell 1983; Greve 2000). Banks that lack the ability to implement and utilise their own PMSs tend to copy publicly accredited best practice PMSs from other successful banks, or from manufacturing organisations (Fligstein 1985; O'Neill, Pouder & Buchholtz 1998). This tendency of modeling practices of successful organisations occurs from a desire to gain legitimacy from their operating environment, although the relationship of PMSs with strategy and performance can still be absent. Large and high performing banks serve as strong role models for other banking institutions (McKendrick 1995). Anecdotal evidence suggests that mimetic behaviour occurs through a number of formal and informal avenues. For example, by recruiting professional and well trained employees of other banks and using them to develop similar systems they had used in the past. Hence when macro-level factors require banks to change their PMSs, in order to gain legitimacy and to signal to stakeholders their intention to improve efficiency, in certain situations banks would copy best practices in the industry.

### Normative Pressures

According to DiMaggio & Powell (1991) normative pressure stems primarily from pressures from professionals. Professionalism refers to the collective struggle of members of an occupation, shared educational and professional experience, and infrastructure that establish norms of behaviour reflected in the management who make up institutions (DiMaggio & Powell 1991). In the banking sector, credit rating agencies, bankers' professional associations, and banks' training institutions reinforce normative expectations and impose standards, rules and values on banks. Normative pressures can be exerted by professionals, top management and the organisational culture prevailing in a bank.

#### *Professionals*

DiMaggio & Powell (1983) identify professionals as having the most dominant influence on organisational practices. Professional networks such as associations of accountants are known as an important source of isomorphism (DiMaggio & Powell 1991; Scapens 1994). In studying management control practices, Scapens (1994) regarded the influence of managers as an important factor in the adoption of new management practices. Hussain & Hoque (2002, p167) also acknowledge that "*the experience of professionals such as managers may also influence the design and use of a performance measurement system*". Thus, professionals in a banking context, including bankers associations and bankers' training institutions such as the Institute of International Bankers and the World Bank's Economic Development Institute, could have an influence on the PMSs that are used within banks.

#### *Top management*

Granlund & Lukka (1998) and Scott (1987) argue that top management often creates cultural forms consistent with their own aims and beliefs. These, in turn, influence organisational practices and systems, including PMSs. The existing literature suggests that board members and chief financial officers can influence changes in PMSs. For instance, Cobb et al. (1995) explicitly state that such individuals within banks are generally considered as significant change agents. Cobb et al. (1995) also found top management played a dual role in the bank's change process; on the one hand top management was the catalyst which initiated management accounting change processes, and on the other hand their leadership ability was found to be necessary to overcome barriers. Since PMSs are part of management accounting systems, top management and the power of strong individuals are recognised as factors that affect PMSs change as well.

*Corporate Culture*

Corporate culture, which refers to the combined beliefs, values, ethics, procedures, and atmosphere of an organisation (Pettigrew 1979), could influence the opinion of employees about work practices, commitment, respect for managers and attitudes towards providing service to the customer. The tradition of a particular industry and leadership within an organisation could strongly affect the culture of an organisation (Pettigrew 1979). For example, banks and bankers have a risk-averse nature, therefore they choose systems and procedures which minimise overall organisational risk. Hence, the manner in which a bank is managed is likely to be influenced by the beliefs, attitudes and behaviour of the employees towards adopting and using a particular procedure and system. If employees resist a particular change based on the corporate culture prevailing in the bank, it may lead to conflicts, negotiations and/or compromise.

The Basel Committee on banking supervision has also strongly emphasised that a bank's framework for managing operational risk must include the bank's appetite and tolerance for operational risk. The extent to which this is done is mainly contingent on a bank's corporate culture (Basel Committee on Banking Supervision 2004, p167). Corporate culture, therefore, seems to have a tendency to influence organisational systems in general and PMSs in particular.

## 5. STRATEGIC RESPONSES TO CHANGE EFFORTS

There is ample evidence in the literature that suggests organisations do not always passively conform to changes, and that their responses to change vary. Drawing on institutional theory and the resource dependence perspective[10], Oliver (1991) identified different strategic responses and tactics which organisations use in response to the institutional pressures for conformity. More specifically, Oliver (1991) proposed a typology of strategic responses to institutional pressures which shows that strategic responses to institutional pressures vary with the degree of resistance exerted by the organisation (See Table 1).

As shown in Table 1, at times, banks would passively respond (*i.e.*, acquiescence strategy) to change efforts, and such response may take different forms varying from unconscious habit-like adherence to rules or values to conscious compliance to norms, values or institutional requirements (Oliver 1991, p152). Such acquiescence is a strategic response that concurs with the idea of mimetic isomorphism. For example, most small local/domestic banks are likely to imitate the practices of major banks and foreign banks.

Alternatively, banks may take more active responses to institutional pressures (i.e. compromise strategy). Where inconsistencies exist between institutional expectations and objectives of the bank, banks are likely to apply balancing tactics (i.e. attempt to achieve parity among or between multiple

[10] The resource dependence perspective views an organisational environment as a bundle of resources which an organisation seeks to mobilise to reach its goals. In doing so, it exercises active choice of behaviour (Oliver 1991, p147).

stakeholders and internal interest), or pacifying tactics (i.e. monitoring a minor level of resistance to institutional pressure), or bargaining tactics (Oliver 1991, p153). Such responses are likely to arise particularly in relation to banks operating internationally. Bank branches located overseas might face a situation where the host banking sector's objectives are in dissonance with the organisational objective of the bank. For example, risk management practices, central bank's capital adequacy and liquidity requirements, and prudential regulations vary from country to country.

In some situations, banks may use an "avoidance" strategy in order to preclude the necessity of conformity (Oliver 1991, p154). To achieve this purpose they may use a number of tactics. For instance, concealment tactics which involve disguising non-conformity behind a façade of acquiescence, or buffering tactics which involve attempts to reduce the extent to which it is externally inspected, scrutinised or evaluated by partially detaching or decoupling its technical activities from external contact (Pfeffer & Salancik 1978; Scott 1987). A more dramatic avoidance response is 'escape', where a bank decides to exit the domain within which pressure is exerted, or significantly alter its own goals, activities or domain to avoid the necessity of conformity altogether (Oliver 1991). The literature provides evidence of banks operating overseas who have exited (escaped) or buffered themselves from the host banking sector due to an uncertain economic, financial and political environment. For example, in the late 1990s the Bank of America, J.P. Morgan and the Credit Agricole Indosuez banks pulled out of their operations in most of the East Asian countries (Fuller 1999).

Table 1: A continuum of strategic responses to institutional pressures

**Low**

Level of active resistance to institutional pressures

**High**

| Strategies | Tactics | Examples |
|---|---|---|
| Acquiescence | Habit<br>Imitate<br>Comply | Following invisible, taken-for-granted norms<br>Mimicking institutional models<br>Obeying rules and accepting norms |
| Compromise | Balance<br>Pacify<br>Bargain | Balancing the expectations of multiple constituents<br>Placating and accommodating institutional elements<br>Negotiating with institutional stakeholders |
| Avoid | Conceal<br>Buffer<br>Escape | Disguising nonconformity<br>Loosening institutional attachments<br>Changing goals, activities, or domains |
| Defy | Dismiss<br>Challenge<br>Attack | Ignoring explicit norms and values<br>Contesting rules and requirements<br>Assaulting the sources of institutional pressure |
| Manipulate | Co-opt<br>Influence<br>Control | Importing influential constituents<br>Shaping values and criteria<br>Dominating institutional constituents and processes |

**Source: Oliver (1991, p 152)**

Alternatively, a bank would ignore institutional rules and values, which challenge the existing rules and requirements (*i.e*., "defiance" strategy). The most aggressive defiance tactic is attacking the institutional pressures and expectations (Oliver 1991, p156). Rather than partially refusing to follow the newly recommended procedures (i.e. avoidance strategy), banks may decide to actively challenges such procedures (i.e. defiance strategy). Further, a bank would even focus on changing the content of the expectations themselves or the sources that seek to express or reinforce them (i.e. manipulation strategy). As a tactic, a bank may choose to co-opt the source of the pressure or direct more general influence tactics towards institutionalised values and beliefs, and the criteria of acceptable practices or performance. Banks also could apply controlling tactics whereby they exert efforts to establish power and dominance over those that are applying pressure on the banks (Oliver 1991, p157). For example, large banks tend to create cartels to lobby regulatory authorities to adopt certain practices that fit their needs.

Oliver's (1991) typology provides an appropriate conceptual basis for exploring the diversity of strategic responses that a bank may adopt in response to institutional pressures to change their systems such as PMSs.

## 6. SUMMARY AND CONCLUSIONS

The purpose of this paper is to develop a framework to analyse changes in PMSs within the banking sector, more specifically to examine the factors influencing changes in PMSs and the organisational responses to change efforts. Existing research provides only limited assistance to undertake such analysis particularly in relation to the banking sector. Lack of such research compromises the explanation and understanding of PMSs change in the banking sector. Such a research effort is even more crucial in the wake of the recent global financial crisis which has caused rapid changes in the banking environment.

The framework proposed in this paper and depicted in Figure 1 incorporates the concept of institutional isomorphism (DiMaggio & Powell 1983). In addition, the continuum of strategic responses to institutional pressures proposed by Oliver (1991) is used to increase the explanatory power of the framework, so that it allow a fuller understanding of the complexities of PMSs change phenomena within banks. The paper argues that the functioning of banks is subject to the influence of various macro-level factors (i.e. economic, technological, socio-cultural and political), and the resulting pressures which could take various forms (i.e. coercive, mimetic and normative) subsequently lead to the introduction of changes to PMSs. While banks may consider introducing certain changes to their PMSs because of the three forms of pressure discussed above, the change efforts may also be subject to direct pressure from certain powerful elements in the macro-level environment. Such influences may be exerted using informal avenues, and the nature and the extent of the recommended change could be the result of both formal (i.e. coercive, mimetic and normative pressures) and informal pressures (direct influence of macro-level elements). The paper argues that there is no universal way to manage the PMS change process, since both the institutional as well as macro-level environment play a significant role in the process of change in a PMS.

The paper also acknowledges that banks' responses to change efforts could vary between passive responses (i.e. acquiescence) to active responses (i.e. manipulation). It is important to view PMS change as a complex process, with unintended consequences and the potential to disrupt organisational life. Hence, those responsible for introducing change in the PMS need to consider how employees react to change in PMS.

The paper contributes in two ways. First, the framework developed in this paper could be used by managers and researchers to examine and understand changes in PMSs in banks which could also facilitate them in adopting and implementing performance measurement systems in an effective manner. Secondly, it makes a theoretical contribution by developing a framework to enable a systematic analysis of PMS change by drawing on two theoretical concepts, namely institutional isomorphism and strategic responses to change. These unique features distinguish the framework developed in this paper from previous approaches suggested within the management accounting literature (e.g. Burns & Scapens 2000; Greenwood & Hinings 1996; Hussain & Hoque 2002; Innes & Mitchell 1990; Kasurinen 2002; Waggoner et al. 1999). Other researchers may consider how they can adapt the framework to be applicable in other sectors.

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