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INSTITUTIONS, INSTITUTIONAL CHOICE, AND THE TRANSITION PROCESS IN EMERGING MARKETS

Abstract

This paper deals with two related themes. First is the importance of institutional choices and institutional structures to emerging market economies. Emerging market economies include a diverse set of economies, including both transition economies and those that with low economic development but with an established market-oriented economic system. Institutional choices in such areas as property rights, regulation, macroeconomic stabilisation, social insurance, and conflict management determine the set of policy choices available to these economies, and thus their ability to achieve a market-oriented environment conducive to sustainable long-term economic growth.

In emerging market economies in transition priority must be given to the establishment of appropriate institutional structures to guide on such issues as price flexibility, the sale of state-owned assets, the monetary policy financial system architectures, and fiscal, trade, and other key policy areas. Apparent constitutional contradictions between the move to liberalise markets and the need to re-regulate and increase government's discretionary power must be accommodated. In other emerging economies poor institutional capacity, leading to institutional failure—legal and judicial, regulatory, and reporting—is the problem. Thus institutional capacity building is the objective.

Emerging market economies may look to high-income market economies for guidance on best-practice with respect to legal and judicial foundations, securities and financial system regulation, corporate governance, and financial other forms of corporate disclosure. However, debate on the applicability of Western-style institutions is unavoidable. Characteristics of emerging market economies have potential implications for of institutional choice and success. This is the second major theme addressed in this paper. Preexisting practices, informal arrangements, organisational structures, societal norms, and economic capacity act to restrict the set of institutional options available to emerging market economies. Examples drawing on the impact of cultural and religious factors, basis of the legal system, the stage of economic development and capacity to fund reform, are discussed. This is in order to highlight the difficulties in achieving outcomes desired of institutional choices in the presence of each of these specific characteristics. This reinforces the need to consider on a case-by-case basis the relationship between institutions and the specific emerging markets in which they are planned to be established.

JEL Classification Numbers: K2, O1, P0

Key Words: institutional economics, constitutional economics, emerging market economies, transition economies, economic transition

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1. INTRODUCTION

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The establishment, or initial presence, of institutions appropriate to the efficient operation of markets is a principal determinant of the success of reforms in emerging market (including transition) economies. Thus, it is surprising that many introductions to the study of economics, and indeed many Western economists, simply take for granted that the underlying institutions essential to the creation of efficient markets for both productive factors and output exist. However, in emerging market economies it may be either the specific lack of institutions suited to promotion of the market, or the failure of the existent institutions—legal and judicial, regulatory, and reporting that is the problem. In the latter case institutional failure is reflected in institutions performing their designated functions inappropriately.

Institutional choices and institutional structures-part of the subject matter of institutional and constitutional economics-are important because they establish the boundaries for economic decision making. In doing so institutional structures define each society's available sets of economic decisions and achievable economic outcomes. Importantly for emerging market economies, is that through a process of constitutional negotiation they can adopt or modify institutional structures so as to more readily achieve desired economic objectives. However, when engaging tin this process it is important that no emerging market economy undergoing a transition process starts with a blank slate. Current practices, informal arrangements, organisational structures, and societal norms reflecting aspects of culture, religion, etc., must be recognised as impacting on the choice of institutional structures and outcomes. It also brings into question the universal applicability of Westernstyle institutions in emerging markets. The importance of institutional choices and the assumed applicability and superiority of Western-style institutional structures are the first and second issues dealt with in this paper.

The specific ways in which the unique characteristics of emerging market economies influence or determine the forms of institution adopted by these economies and/or the success of institutional choices are topics worthy of substantial research. Also worthy of consideration is the diversity of characteristics likely to have an impact on each economy's choices. Thus, the characteristics considered in this paper and in the remaining papers in this symposia issue reflect some of this diversity. The specific items addressed include: the impact of Islam on accountability and disclosure practices; assessment of the impact of changes in corporate governance on enterprise performance in an emerging economy; debate on whether a common law legal system provides a better base for encouraging financial development and economic growth than its alternatives—Scandinavian and German origin civil law, or French origin civil law; and the implications and impact of economic development on institutional choice. A summary completes the paper.

2. INSTITUTIONS AND INSTITUTIONAL CHOICES IN TRANSITION AND OTHER EMERGING MARKET ECONOMIES

As a student in postgraduate economics I recall the interest, even excitement, generated by our introduction to the areas of Institutional Economics and Constitutional Economics. This analysis was conducted within the context of an advanced course in the formulation of public policy. Our analysis of institutions recognised them as a set of rules established by society that impose limitations on free behaviour (Redek and Sušjan, 2005: 996). Thus, rather than study the outcomes available from the optimising behaviour of economic agents within a given set of institutional structures, we were to examine the institutions, their importance in shaping the economic outcomes that we observed, and whether these structures might themselves be altered, or replaced entirely.

Many years later, while engaged in teaching on methods for privatisation and financial system reform in Eastern Europe Economies, I drew upon these ideas in addressing the initial presence or establishment of institutions appropriate to the efficient operation of markets as one of the core issues determining the success of reforms in transition and emerging market economies. To my surprise (almost), this was an area often overlooked and poorly understood by many of my students, most of whom were relatively new to the advanced study of market economics and finance. Most of the Western undergraduate economics texts used by these students in their earlier studies, even those by highly respected authors, simply, and indeed often implicitly, assume that the underlying institutions required to support the operation of markets exist (e.g., Samuelson and Nordhaus, 1998). Indeed, most Western economists may be thought to simply take for granted the institutions essential to the creation of efficient markets for both factors of production and their associated output (North, 1997).

The importance of institutional choices and institutional structures lies in establishing the boundaries within which economic agents operate as they attempt to maximise the values of their utility or welfare functions. Institutions therefore define the set of economic decisions that are possible, and thus the outcomes that may be achieved by a particular economic system (North, 1990). More important, perhaps, is the recognition that just as we consider optimal choices within the constraints defined and imposed by existing institutions, so can we consider the optimisation of the institutions themselves, a constitutional negotiation, in order to more readily achieve socially-desired outcomes (Buchanan, 1990).

In achieving a post-transition market-oriented environment conducive to sustainable long-term economic growth the establishment of certain forms of institutions are thought to take precedence. These institutions include: property rights, regulation, macroeconomic stabilisation, social insurance, and conflict management (Rodrik, 2000: 4). Clearly good choices for the institutions dealing with property rights and the legal and regulatory environment

are essential to the success of the transition process. These are particularly important as enabling factors in the reform of state-owned enterprises (SOEs), especially in ensuring the separation of government from the management of SOEs and their restructuring in corporate form (Beim and Calomiris, 2001: 105-106; Zhu, 1999: 536-538; OECD, 2000: 14; Jevons Lee, 2001). Macroeconomic stability may be thought to support growth by enhancing the efficiency of operation of the market price mechanism. Finally, social insurance and conflict management assist growth by improving social cohesion (Redek and Sušjan, 2005: 998).

As well as institutional choices, economies in transition are faced with constitutional economic decisions as they attempt to transform themselves from planned into market oriented economies. The transition model has to provide guidance on price stabilization and price liberalisation, privatisation, institutional structure, the financial system and monetary policy, fiscal policy, international trade and foreign aid, and social policy (Marangos, 2005: 264). In addressing these issues it must cope with apparent constitutional contradictions between the move to liberalise markets and the need to re-regulate and increase government's discretionary power during transition (*op cit.*: 288).

Institutions are also a critical area when considering those economies, other than the special sub-set of transition economies, also classed as 'emerging market economies'. Following Šević (2005: 3) these emerging market economies may in general be characterised as having poor institutional capacity. These economies include those that, while not undergoing a transition from a planned to a market-oriented system for economic coordination, are attempting to emerge from being less-economically developed, a state defined by low per capital income, to being high-income economies.

Rather than a specific lack of institutions suited to promotion of the market, it is often the failure of the existent institutions—legal and judicial, regulatory, and reporting—that is the problem in emerging market economies. Institutional failure leads existing institutions to either undertake or discharge their designated functions inappropriately (e.g., see Šević, 2005: 3-7).

Inadequacies in the legal and judicial systems' recognition and protection of property and creditor rights, and clarification of ownership and control rights, reduce or preclude the enforceability of claims and contractual obligations. Unnecessarily complicated bankruptcy procedures hinder corporate restructuring. In this way inefficiency and ineffectiveness of the legal and judicial systems discourage investment, particularly from foreign investors, and promote delay and high cost in the resolution of claims associated with the reorganisation of business. Reductions in excess capacity, improvements through exploitation of economies of scale and scope, and the freeing of surplus resources by encouraging the exit of financially insolvent firms are thus delayed. Poorly developed accounting standards and a lack of transparency and disclosure in corporate reporting reduce the effectiveness of corporate governance mechanisms in aligning incentives of managers with those of enterprise owners. Poor accounting and disclosure practices will allow recognition of problems in financial performance to be deferred or hidden, and will also leave investors' requirements for greater information disclosure unmet. Weaknesses in the role played by those responsible for regulation and supervision of the market may lead to excessive risk taking by business, with increases in the level of bankruptcies having the potential to erode market stability (Šević, 2005: 5). Such systemic deficiencies preclude the 'low-cost transacting and credible commitment' needed to support the creation of efficient markets (North, 1997). Thus those emerging market economies that are not in the transition from planned to market economies are also faced with the need to make both institutional and constitutional economic decisions, institutional capacity building being the objective.

In their institution-building endeavours all forms of emerging market economy possess sets of both advantages and disadvantages. In theory the advantages lie in being able to observe institutional design in high-income economically-developed market economies. In doing so they may both attempt to adapt and adopt best-practice with respect to legal and judicial foundations, securities and financial system regulation, corporate governance, and financial other forms of corporate disclosure. This is part of the constitutional economic challenge facing emerging economies.

However, it must be recognised that any transition process, be it from planned to market economy or from low-income to high-income, is an evolution to a desired outcome: generally that of the highly economically-developed, market-oriented mixed economy. No economy undergoing a transition process starts with a tabula rasa. Thus the starting point for each emerging market economy is relevant to the path taken during transition and to the specific forms of institution chosen. Debate about the impact of culture, religion, and other factors on the applicability of western-style institutions and the underlying model for the legal structure is an unavoidable component of the constitutional economic debate. Pre-existing practices, informal arrangements, the structure of organisations, and societal norms, will be adapted so as to form part of the basis of the new institutional structure (Olson and Kahkonen, 2000: 28; Stark, 1996: 995). Given their importance, it is these characteristics of emerging markets, and their potential implications for choice of institutional structures and outcomes, that is the general domain of the papers in this volume.

3. Emerging market economy characteristics and institutional choices

The papers that follow in this symposia issue analyse the ways in which the unique characteristics of chosen transition and other emerging market economies influence or determine the form of institution adoption by these econ-

omies and, potentially, the success of these institutional arrangements. The topics covered reflect some of the diversity of characteristics likely to have an impact on each society's choices. These include: the impact of Islamic culture when it forms part of the foundation for determining principles of accounting, accountability, and disclosure practices, the latter being addressed in terms of environmental disclosure; an assessment of the impact on enterprise performance of corporate governance changes in an emerging economy; the debate regarding which of the main forms of legal system—common law, Scandinavian and German origin civil law, or French origin civil law— is the best basis for financial development and economic growth; and finally the implications and impact of China's stage of economic development on its institutional choices in reform of its banking system and accommodation of its policy-based non-performing loans (NPLs).

3.1. The foundations and principles of accountability under Islam

Under Islam mankind's role on earth is the stewardship of God's earthly possessions—all earthly things—and thus accountability has a central role in Islam. This is because accountability to God and the community for all activities is required of such a position of trust. The *sharia*, the divine law of Islam, provides the basis for development of a comprehensive ethic giving guidance as to the conduct of economic activity, organisation of business, and financial reporting requirements (Lewis, 2006). However, each of economics, politics, religious and social affairs fall under the jurisdiction of the divine law of Islam, the *sharia*, and thus under a legal system that complements the code of behaviour called for by the Holy Qur'an and the *hadith* (the authentic tradition). The accountability framework should, therefore, encompass a number of broad economic and social purposes marked by the concept of *shura* and the application of *shuratic* decision-making processes (Lewis, 2006).

Ideally the outcome of such a system will involve consultation and consensus-seeking. It will be accompanied by a framework of social ethics provided by the institution of *hisba*. Under this better governance and social action will result from the actions of each Muslim as an empowered individual. However, reality is often tempered by tradition which has a powerful role in Muslim lives. Kinship, friendships and personal relationships act to reinforce group orientation and duties. Hierarchies, rules and regulations based on the personality and power of the individuals who make them, may be more the norm. Corruption, also a problem in the non-Muslim world, has also been a problem in a number of Islamic countries (Lewis, 2006; Iqbal and Lewis, 2002). These outcomes stand in strong contrast to the moral certainty with respect to business ethics expected under Islam (Wilson, 2003).

It is the foundations and principles of accounting and accountability under Islam, considering both the ideal and the reality, which are the topics explored in the paper by Lewis. In undertaking his analysis Lewis provides a concise outline of the ideal basis for accounting and accountability, the principles of commerce, economic organisation, and financial reporting obligations under Islam. Rather than provide a formal conclusion, Lewis finishes his paper by considering characteristics of states in the Muslim world, other than those set forth by Islam, which may have limited actual achievement of the ideals in each of the areas discussed in the first sections of his paper.

3.2. The applicability of Western accounting practices within an emerging market economy

The increasingly legitimacy given to environmental concerns is reflected in international accounting trends through the increased emphasis being placed on environmental accounting and reporting. Environmental accounting involves the provision of information about the corporate impact on the environment to relevant stakeholders, and thus helps to satisfy perceived accountability obligations. The voluntary criteria of ISO 14001: *Environmental Management Standards* provides an example of an international consensus view on best practice regarding environmental management systems.

ISO 14001 holds that environmental and economic benefits will eventually lead to sustainable development, an issue of particular concern for emerging economies. The ISO standard is also considered to be specifically important for emerging economies desiring to become global economic players, given its potential to increase trade opportunities and strengthen markets (UNIDO in Husseini, 2001).

Yusoff and Lehman's paper explores the applicability of Western accounting practices within an emerging market economy. Specifically they examine international differences in corporate environmental disclosure practices. A theme of this research is how international accounting trends, including the increasingly legitimacy given to environmental concerns (eg, Lehman, 1995), impact on a developing market economy. To do this Yusoff and Lehman undertake a comparison of Malaysian and Australian companies in order to determine those factors that contribute to corporate environmental reporting outcomes, particularly motivations.

Of specific concern in an economy like Malaysia's are the factors that would lead to the successful implementation of environmental accounting technologies such as ISO 14001. Yusoff and Lehman consider and provide a detailed account of the potential role of stakeholder, accountability, governance, reporting and positive accounting theory in identifying these potential factors. In this case the emerging economy is also one where Islamic culture is an important consideration. Thus it is important to recognise that Islamic stakeholders have different values to those usually considered in the West, such as recognition of the importance of God, in whom the ultimate ownership

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of property lies. As discussed in Lewis (2006), Muslims consider themselves to be the stewards of private property. Money and property have to be harnessed for the common good. They must not be exploited, overworked, or left unused (Hamid, *et al.*, 1993: 142-143). Each of these ideals has important context in determining the suitability of Western accounting and disclosure practices for Malaysia and similar emerging economies.

To assess the impact of international reporting practices on Malaysian environmental reporting Yusoff and Lehman undertake a content analysis of Australian and Malaysian company annual reports. They find that in comparison to Malaysian companies, environmental disclosure by Australian companies has both greater depth and diversity of information. For Australian companies the major factors influencing environmental disclosure practices are financial performance and achieving ISO 14001 certification. For Malaysia the importance of ISO certification is confirmed, and it appears to be the sole factor. This is thought to reflect pressures imposed by Malaysia's ambitions to enter international goods and services markets. That there are not more factors behind the drive to adopt ISO 14001 in Malaysia may reflect its failure to recognise the stewardship role with respect to the environment required under Islam.

3.3. Legal origins, financial development and economic growth

The "law and finance theory" (La Porta, *et al.*, 1997, 1998) predicts a defined ranking for alternative law systems in terms of their basis for financial development and economic growth. First is the common law system, second Scandinavian and German origin civil law, and the last is French origin civil law. This ranking is based on the extent to which each legal system effectively protects against financial contract risks associated with informational asymmetry and moral hazard or outright fraud, and thus encourages share and bond investors to supply investment funds. Thus, to the extent that this ranking is correct, transition economies should give this research close consideration. This reflects the possible significance of chosen form of legal system for their long-term growth prospects.

To address the validity of the above ranking of legal systems Graff's paper revisits this "law and finance theory". Graff begins with a useful summary of each of the forms of financial system, the key points of the law and finance theory, the well-known literature on legal systems and investor protection associated with the data and analysis of La Porta, *et al.*, (1997, 1998), hereafter LLSV, and more recently acknowledged in an overview by Beck and Levine (2005).

Following the review of the familiar, Graff outlines views that are sceptical of the LLSV perspective. He begins with the argument that the investor protection theory associated with LLSV faces an identification problem. This is that the majority of common law countries have market-based financial systems, in contrast to the majority of civil law countries which have bank-based financial systems. As common law was generally imported together with the English financial system, along with a wider range of institutions from England, what LLSV attribute to legal origin might instead be understood as a result of the country's inherited financial system (Fohlin, 2000).

Graff then shows that one of the foundations of the law and finance theory does not hold empirically. This is that a common legal tradition implies a similar set of legal rules and procedures for investor protection. As the original LLSV data set lacks a low dimensional structure, Graff argues that the meaning attached to aggregation of its data is not obvious. Minor differences in indicator selection, weighting or scaling will have a significant impact on the LLSV aggregate measures. Graff then demonstrates that minor modifications in aggregating the original indicator set do indeed produce results that are very different from those brought forward in support of the theory and contradictory to the proposed ranking of the legal families in terms of investor protection. Accordingly, the validity of the LLSV anti-director rights and creditor rights indices for international comparisons of shareholder and creditor rights and the supremacy of the common law legacy in protecting investors is questionable (see also Graff, 2006).

Finally, Graff shows that recent additions to the theory's creditor rights indicators data pool by Djankov, *et al.* (2007) are eliminating the weak correspondence between business law and legal family suggested in the original analysis of the LLSV data set. The new data set on creditor protection by Djankov, *et al.* (2007) covers nearly three times as many countries. When analysed the Djankov, *et al.* (2007) data on creditor protection does not split into clusters that imply causality between corporate law and legal family. This suggests that the law and finance theory's claim that creditor protection is largely determined by the legal tradition of a particular country, as concluded by LLSV, has to be reconsidered.

3.4. Corporate governance and its impact on enterprise performance in an emerging economy

Corporate governance rules establish responsibilities, disclosure and transparency as primary corporate performance principles. Timely and accurate disclosure of financial and other performance indicators, ownership, and governance of the company are factors that are emphasised. While governance of companies may give priority to the interests of the shareholders, corporate governance principles increasingly recognise and support the role of other stakeholders in accordance with concepts of corporate social responsibility (CSR). Thus, this recognises that companies should be more broadly responsible for their impact across elements of society. In their move to adopt democratic social systems transition economies often adjust their requirements for corporate governance principles to reflect those established by developed countries. This reflects recognition by policy makers that both accountability and transparency have become key factors for a range of corporate stakeholders, including shareholders, other investors, buyers, and suppliers (Vitezić, 2006).

An example of guidelines for establishing such rules, representing common corporate governance standards and good practice for developed economies, is the Organisation for Economic Cooperation and Development's *OECD Principles of Corporate Governance* (Organisation for Economic Cooperation and Development, 1999; 2004), or *Principles*. The *Principles* is widely used as a benchmark by policy makers, investors, corporations and other stakeholders in assessing standards of corporate governance.

Recognition of the need for reform of corporate governance standards, and accounting standards more broadly, may be driven by either internal or external pressure groups. For example, international investors wishing to better guarantee their interests will have an incentive to push for improvements in these areas, as will domestic supervisors and regulators requiring improved disclosure to improve their ability to undertake their roles (Šević, 2005; Krzywda, *et al.*, 1995).

Regardless of the source of pressure for change, improvements in corporate governance and accountability are essential to those emerging economies that wish to attract additional, especially foreign, funds for growth. Even so, it is often thought that share prices are based mainly on financial performance in emerging countries where the capital market is underdeveloped. However, international surveys on the matter suggest that good corporate governance is rewarded with a valuation premium, and assist with attracting and retaining investors (Coombes and Watson, 2000: 77). Thus lower levels of institutional transparency may be seen as raising the cost of investing, and also as weakening the ability of a country to attract external capital (PricewaterhouseCoopers, 2003 cited in Miller, *et al.*, 2005: 166).

The paper by Vitezić explores the adoption of modern corporate governance principles and their impact on enterprise performance in the Croatian emerging economy. With this research she endeavours to increase awareness of corporate governance's importance to transition economies in a globally competitive market.

Vitezić starts by examining the implementation of sound corporate governance principles in Croatia, and identifying the degree of development of corporate governance through indicators. The particular focus in developing these indicators is the comparison between Croatian and average European board attributes. She finds that, after almost 15 years of privatisation, positive changes are evident in corporate governance practices in Croatia. In particular, the paper argues that there is little functional difference in board attributes between the Croatian and the average European boards, although the Croatian boards are less developed with respect to committee structures and remuneration disclosure. However, Vitezić notes that there are a number of shortcomings in, and different interpretations of, certain of these board attributes and roles. This reflects, in part, specific requirements of national legislation.

Vitezić then addresses the impact of corporate governance on enterprise performance, especially enterprise efficiency and the performance of privatised and new start-up enterprises. Analysis is based on statistical data, especially ROA and ROE, and data gathered by means of questionnaire. The quantitative influence of corporate governance indicators is difficult to assess, given the multitude of factors—social, cultural, political and economic—that impact on enterprise performance. However, Vitezić identifies the presence of an indirect qualitative impact of corporate governance on enterprise performance. Enterprises with corporate governance principles have better financial performance. Implementation of sound corporate governance principles in Croatia has had similar results on enterprise performance to that in developed countries. Thus the paper's survey results support conclusions reached in previous survey research on corporate governance's contribution to enterprise performance (e.g., Zahra and Pearce, 1989; Maassen, 1999; Kakabadse and Kakabadse, 2001).

Finally, while changes are evident in corporate governance practices in Croatia Vitezić's analysis of the Croatian case highlights an excessive focus on financial dimensions of performance. Less attention is given to the operational and social dimensions of enterprise performance. This reflects that economic development, knowledge, sociological, and cultural differences in emerging economies are still potentially limiting factors to the adoption of a comprehensive approach to enterprise performance measurement.

3.5. Economic development, financial reform, and choice of institutions in an emerging economy

China's government began the process of reform of its banking system in 1979 as an important component of its economic transition. Prior to initiating reform China's essentially mono-bank system acted as the government's treasury, allowing it to operate both its credit and cash plans, and issued China's currency (see Guo, 2002). Banking reforms undertaken over nearly three decades have altered its main functions so as to progressively develop a more commercially-oriented banking system. This is dominated by stock-market listed banks in which the state remains a majority shareholder.

During the post-1979 period the Chinese authorities established the People's Bank of China (PBoC) as a separate central banking institution responsible for monetary policy, and later the China Banking and Regulatory Commis-

sion (CBRC) to take over the role in oversight of the financial system from the PBoC. Four large national state-owned commercial banks (SOCBs) and three state-owned policy banks (SOPBs) were carved-out (spun-off) or created during this period (Guo, 2002; Leung and Mok, 2000). By 2006 all SOCBs, with the exception of the Agricultural Bank of China, had undertaken initial public offerings (IPOs); each became a joint-stock commercial bank, with minority foreign shareholders and a majority stake being held by the Chinese Government. China thus appears to have been successful in significantly reforming and transforming its banking sector.

However, during the mid 1990s a major obstacle in the path of the four national SOCBs becoming true commercial banks was the high level of exposure to bad debts in their balance sheets. These bad debts included the inheritance by the new SOCBs of a large stock of policy-based non-performing loans (NPLs). This required that significant funding and restructuring of the balance sheets of the SOCBs—asset rehabilitation—be important elements of the Chinese reforms. It was this process that was begun with the March 1995 passage of the *Commercial Banks Act*, which included requirements that SOCBs take responsibility for risk of loss and profitability, and make loans in accordance with the creditworthiness of the borrower and their ability to repay (Guo, 2002: 159-160). This was followed by a number of other rehabilitation efforts, including the first of several recapitalisation attempts, with a 1998 RMB 270 billion (USD 32.9 billion) injection of capital, and the 1999-2000 transfer of almost RMB 1.4 trillion in book value of NPLs to asset management companies (AMCs) (Ma and Fung, 2002).

It is these 1996-2005 experiences with China's restructuring and rehabilitation of its banking system that are evaluated in the paper by McIver. His focus is the gradualist approach to banking sector reform adopted by China, especially its accommodating approach to the NPL problem, and the institutional structures associated with this choice.

A gradualist approach raises the potential for considerable additional fiscal costs in resolving NPL problems relative to immediate resolution. This reflects the moral hazard effects associated with implicit guarantees, debt relief for financially distressed SOEs, and the potential for repeated recapitalisation associated with an accommodating approach (Honohan and Klingebiel, 2003). Why the Chinese government chose a potentially higher-cost strategy, through institutional structures that allowed delay to full recognition of the NPLs, is thus an important question. This is especially the case given China's apparently low levels of government debt and availability of a very large pool of foreign exchange reserves.

To add dimension to the discussion McIver outlines the level of NPLs relative to GDP (or total loans) for selected Asian and Eastern European countries. He then reviews China's experiences with managing its NPLs. Similarities between the Chinese and Eastern European transition economies' (EETEs') constraints and experiences with financial reform are highlighted. Differences between China's situation and the financial crises in the Asian crisis countries and Japan are also identified. The order of magnitude of the NPL problem, the inheritance by SOCBs of a large stock of policy-based NPLs, and contemporaneous restructuring of the financial sector and a state-owned enterprise (SOE) sectors suffering poor and deteriorating financial performance in the presence of soft-budget constraints suggests a strong similarity between the experiences of China and the EETEs. Discussion of the methods available for the reform and restructuring of banking systems, based on the experiences of the EETEs, thus appears justified.

The EETEs' reform experiences suggest a set of alternative approaches are available to bankers undertaking the restructuring and management of NPLs (e.g., see Saunders and Sommariva, 1993; Borish, Long and Noël, 1996; Claessens, Klingebiel and Laeven, 2001; Calomiris, Klingebiel and Laeven, 2004). These divide into legal remedies, based on use of bankruptcy and liquidation laws, and those based on the recontracting of non-performing debt arrangements (Saunders and Sommariva, 1993: 935). Given the availability of these options, McIver then considers those actually chosen for China's banking sector, the apparent rationale for the choices, benefits and costs potentially associated with the reforms, and whether the institutional choices made were optimal policy or represent budget constrained choices.

Consideration of China's choices in bank restructuring and rehabilitation show that it has given preference to alternatives that allow delayed recognition and payment of the costs associated with recapitalisation. This includes an extensive reliance on the use of Government restructuring agencies (the AMCs) and the internal loan hospital approach to manage NPLs. Thus it may have accepted higher levels of cost than with a more rapid resolution of the problems. This suggests an intergenerational transfer of some of the cost of the reform process associated with transition from the planned to a market socialist economy. McIver argues that this decision is budget constrained rather than optimal policy. Despite its apparently low levels of government debt, this decision reflects China's lack of either the budgetary or debt accumulation capacity to have enabled a more rapid resolution of its NPL problem early in the process of commercialisation of its banking system.

4. SUMMARY

The importance of institutional choices and institutional structures, the domain of institutional and constitutional economics, lies in the setting of boundaries, and definition of possible sets of economic decisions. These determine the possible outcomes for emerging market economic systems. Achievement of a market-oriented environment conducive to sustainable long-term economic growth requires a focus on institutions dealing with property rights, regulation, macroeconomic stabilisation, social insurance, and conflict management (Rodrik, 2000). Optimisation of (or improvement to) these institutions allows socially-desired outcomes to more easily be achieved by emerging market (including transition) economies.

However, optimisation (even achievement of significant improvement), is a complex task. Transition economies face difficult constitutional economic decisions in the transformation from plan to market orientation. Transition models must both address key issues and cope with apparent constitutional contradictions between the move to liberalise markets and the need to re-regulate and increase government's discretionary power during transition. Thus guidance is required on both price stabilization and price liberalisation, as well as privatisation, institutional structure, the financial system and monetary policy, fiscal policy, international trade and foreign aid, and social policy (Marangos, 2005: 264, 288).

Where institutions already exist in emerging market economies the problem is often one of poor institutional capacity, leading to institutional failure legal and judicial, regulatory, and reporting. Institutions either undertake or discharge their designated functions inappropriately (Šević, 2005: 3-7), precluding the 'low-cost transacting and credible commitment' needed to support the creation of efficient markets (North, 1997). Thus emerging market economies require the establishment of institutional capacity building as an objective.

All forms of emerging market economy possess sets of advantages and disadvantages in building institutional capacity and institutional structures. They may attempt to both adapt and adopt best-practice observed in high-income market economies with respect to legal and judicial foundations, securities and financial system regulation, corporate governance, and financial other forms of corporate disclosure. However, no emerging market economy undergoing its transition process starts with a tabula rasa. Debate on the applicability of Western-style institutions dealing with accountability, corporate governance, institutional choice, and the underlying model for the legal structure is unavoidable. Characteristics of emerging market economies have importance due to their potential implications for choice of institutional structures and success of outcomes. Pre-existing practices, informal arrangements, the structure of organisations, and societal norms, will be adapted so as to form part of the basis of the new institutional structure (Olson and Kahkonen, 2000: 28; Stark, 1996: 995). Economic capacity will also act to restrict the set of options available to emerging market economies.

Lewis, in his exploration of the relationship between Islam and accountability, explains that under Islam the accountability framework should, ideally, encompass a number of broad economic and social purposes. These are marked by the concept of *shura* and the application of *shuratic* decision-making processes. Economics, politics, religious and social affairs fall under the jurisdiction of the divine law of Islam, the *shari'a*, and thus under a legal system that complements the code of behaviour called for by the Holy Qur'an and the *hadith* (the authentic tradition). This suggests that better governance and social action should result, this reflecting the actions of each Muslim as an empowered individual. However, Lewis finds that reality is often tempered by tradition. In contrast to the moral certainty with respect to ethics expected under Islam relationships, and hierarchies, rules and regulations based on the personality and power of individuals, play a significant role in determining behavioural outcomes.

International differences in voluntary corporate environmental disclosure practices and the factors motivating reporting outcomes are considered by Yusoff and Lehman. They use content analysis to assess the applicability of Western accounting practices within an emerging market economy, Malaysia; an economy where Islamic culture is an important consideration.

Muslim stakeholders consider themselves to be the stewards of private property, recognise the need for its use for the common good, and that it must not be exploited, overworked, or left unused (Hamid, *et al.*, 1993). Thus, it might be expected that Western environmental disclosure practices, including examples such as ISO 14001: *Environmental Management Standards*, may be suited to use in the Malaysian context. However, Yusoff and Lehman find that the importance of ISO certification appears to be the dominant factor behind Malaysia's environmental disclosure, reflecting its ambitions to enter international goods and services markets. That there are not more factors behind the drive to adopt such standards may be associated with its failure to recognise the environmental stewardship role required under Islam.

Graff questions whether we should accept the apparent dominance of any particular style of legal system over another as the basis for financial development and economic growth. In doing so he provides a critical review and analysis of the validity of the "law and finance theory" approach built upon the seminal work of La Porta, *et al.* (1997, 1998). His focus is on whether creditor protection is largely determined by the legal tradition of a particular country.

Graff has several concerns with the "law and finance theory" approach which are addressed in his paper. First is the identification problem faced in testing the theory. This reflects that common law countries are more likely to have a market-based financial system than civil law countries, where a bankbased financial system is more likely. Thus the results may reflect the basis of the financial rather than the legal system. Second, is the empirical validity of the proposition that a common legal tradition implies a similar set of legal rules and procedures for investor protection. Minor differences in selection, weighting or scaling have a significant impact on the La Porta, *et al.* (1997, 1998) aggregate measures, and can lead to differences in the investor protection ranking of the various legal families. Finally, Graff considers new additions to the theory's creditor rights indicators data pool. These are eliminating the correspondence between business law and the legal family that could be found in the original data set.

Vitezić examines the implementation of modern Western corporate governance principles in Croatia and their impact on enterprise performance. This is timely given that nearly 15 years have passed since the start of Croatia's privatisation process. Her motivation is that accountability and transparency have become key factors for a variety of corporate stakeholders, increasingly so in a global market. Governance potentially impacts on: competitiveness in attracting investment funding, by increasing access to and reducing the cost of funds; and share prices, with good performance attracting a valuation premium.

Vitezić identifies the degree of corporate governance development in Croatia by use of indicators that compare Croatian and average European board attributes. She finds that there is little functional difference in board attributes between the Croatian and the average European boards, although Croatian boards are less developed and reflect specific requirements of national legislation. While difficulties exist in assessing the indicators' quantitative influence on enterprise performance, Vitezić identifies the presence of an indirect qualitative impact. Enterprises that have implemented sound corporate governance principles have better financial performance in terms of ROA and ROE. However, certain factors still limit a more comprehensive approach to corporate performance evaluation in emerging economies. These include sociological and cultural differences, the level of economic development, and knowledge.

China's choices in its restructuring of its state-owned banking sector and its management of its policy-based NPL problem are the concerns of the paper by McIver. After establishing the scale of the NPL problem relative to Asian and Eastern European experiences, he establishes the similarity between China's constraints and experiences and those of the EETEs. Thus he is able to draw on the financial reform alternatives that were available to China for bank restructuring and rehabilitation, both internal and external.

Consideration of China's choices, their rationale, potential benefits and costs, and whether they were optimal policy or budget constrained choices, shows that China has given preference to methods that allow it to defer, or more gradually recognise, the costs associated with recapitalisation—a gradualist approach. In particular, extensive reliance has been placed on the use of Government restructuring agencies and internal loan hospitals. Higher levels of cost than would result from a more rapid recognition of losses and recapitalisation of the banking system have been accepted. McIver concludes that the chosen set of institutional structures reflected China's limited budgetary or debt accumulation capacity, and thus its inability to fund a more rapid resolution of the NPL problem. The discussion in this paper and each of the other papers in this symposia issue make clear the impact of particular characteristics on either institutional choice or success in emerging markets. The conclusions reached in each author's contribution reinforce the need to consider the relationship between institutions and the emerging markets in which they are to be established on a case-by-case basis.

REFERENCES

Beck, T. and R. Levine (2005), Legal Institutions and Financial Development, *Handbook of New Institutional Economics*, Berlin: Springer, 251-271.

Beim, D. and C. Calomiris (2001), Emerging Financial Markets, McGraw-Hill/Irwin.

Borish, M., M. Long and M. Noël (1996), Lessons from Bank and Enterprise Restructuring in the Transition Economies of Europe and Central Asia, *World Economy*, **19**(1), 39-62.

Buchanan, J. (1990), The Domain of Constitutional Economics, *Constitutional Political Economy*, 1(1), 1-18.

Calomiris, C., D. Klingebiel and L. Laeven (2004), A Taxonomy of Financial Crisis Resolution Mechanisms: Cross-Country Experience, World Bank Policy Research Working Paper 3379.

Claessens, S., D. Klingebiel and L. Laeven (2001), Financial Sector Restructuring in Banking and Corporate Sector Crises: What Policies to Pursue? National Bureau of Economic Research (U.S.) Working Paper Series No. 8386.

Coombes, P. and M. Watson (2000), Three surveys on corporate governance, *The McKinsey Quarterly*, No. 4 2000, 74-77.

Djankov, S., C. McLiesh and A. Shleifer (2007), Private Credit in 129 Countries, *Journal of Financial Economics*, **84**, 299-329.

Graff, M. (2006), Myths and Truths: The "Law and Finance Theory" Revisited, *Review of Economics*, **57**, 51-67.

Guo, Y. (2002), *Banking reforms and monetary policy in the People's Republic of China*, Great Britain: Palgrave Macmillan.

Hamid, S., R. Craig and F. Clarke (1993), Religion: A Confounding Cultural Element in the International Harmonization of Accounting? *Abacus*, **29**(2), 131-148.

Honohan, P. and D. Klingebiel (2003), The fiscal cost implications of an accommodating approach to banking crises, *Journal of Banking and Finance*, **27**, 1539-1560.

Husseini, A. (2001), Industrial Environmental Standards and Their Implementation in the World, National Environmental Management Seminar (EM 2001), Kuala Lumpur, Malaysia.

Iqbal, Z. and M. Lewis (2002), Governance and Corruption: Can Islamic Societies and the West Learn from Each Other? *American Journal of Islamic Social Sciences*, **19**(2), 1-33.

Jevons Lee, C.-W. (2001), Financial restructuring of state owned enterprises in China: the case of Shanghai Sunve Pharmaceutical Corporation, *Accounting Organizations and Society*, **26**, 673-689.

Kakabadse, N., A. Kakabadse and A. Kouzmin (2001), Board Governance and Company Performance: Any Correlations? *Corporate Governance*, **1**, 24-30.

Krzywda, D., D. Bailey and M. Schroeder (1995), A theory of European accounting development applied to accounting change in contemporary Poland, *The European Accounting Review*, **4**(4), 625–657.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer and R. Vishny (1997), Legal De-terminants of External Finance, *Journal of Finance*, 52, 1131-1150.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer and R. Vishny (1998), Law and Finance, *Journal of Political Economy*, **106**(6), 1113-1155.

Lehman, G. (1995), A Legitimate Concern for Environmental Accounting, *Critical Perspectives on Accounting*, **6**, 393-412.

Leung, M. and V. Mok (2000), Commercialisation of Banks in China: institutional changes and effects on listed enterprises, *Journal of Contemporary China*, **9**(23), 41-52.

Lewis, M. (2006), Accountability and Islam, *Proceedings of the Fourth International Conference on Accounting and Finance in Transition: European and Asian Experiences and Public Policy Considerations*, Adelaide, University of South Australia, School of Commerce, 10-12 April 2006.

Ma, G. and B. Fung (2002), China's asset management companies, Bank for International Settlements, BIS Working Papers No. 115.

Maassen, G. (1999), An International Comparison of Corporate Governance Models, Amsterdam: SpencerStuard.

Millar, C., T. Eldomiaty, C. Choi and B. Hilton (2005), Corporate Governance and Institutional Transparency in Emerging Markets, *Journal of Business Ethics*, 59: 163-174.

North, D. (1990), Institutions, Institutional Change and Economic Performance,

Cambridge: Cambridge University Press.

North, D. (1997), The Contribution of the New Institutional Economics to an Understanding of the Transition Problem, WIDER Annual Lectures, March.

Organisation for Economic Co-operation and Development (1999), OECD Principles of Corporate Governance, Paris: OECD.

Organisation for Economic Co-operation and Development (2000), *China in the Global Economy: Reforming China's Enterprises*, OECD Economics: Emerging Economies in Transition, Paris: OECD.

Organisation for Economic Co-operation and Development (2004), OECD Principles of Corporate Governance, Paris: OECD.

Olson, M. and S. Kahkonen (2000), Introduction: The broader view, in Olsen, M. and S. Kahkonen, eds., *A Not-So-Dismal Science: A Broader View of Economies and Societies*, New York: Oxford University Press, pp. 1–37.

Redek, T. and A. Sušjan (2005), The Impact of Institutions on Economic Growth: The Case of Transition Economies, *Journal of Economic Issues*, 39(4), 995-1027.

Rodrik, D. (2000), Institutions for High Quality Growth: What They Are and How to Acquire Them, NBER Working Paper No. 7540, National Bureau of Economic Research.

Samuelson, P. and W. Nordhaus (1998), Economics, 16th edn., McGraw-Hill/Irwin.

Saunders, A. and A. Sommariva (1993), Banking sector and restructuring in Eastern Europe, *Journal of Banking and Finance*, **17**, 931-957.

Šević, Ž. (2005), Emerging Markets: Preferences, Risks, Performance..., *Economic Change and Restructuring*, **38**, 1-10.

Vitezić, N. (2006), Corporate Governance in Emerging Economy and its Impact on Enterprise Performance: A Case of Croatia, *Proceedings of the Fourth International Conference on Accounting and Finance in Transition: European and Asian Experiences and Public Policy Considerations*, Adelaide, University of South Australia, School of Commerce, 10-12 April 2006.

Wilson, R. (2003), Islam & Business Ethics, New Horizon, 132, August/September, 15-16.

Zahra, S. and J. Pearce (1989), Board of directors and corporate financial performance: a review and integrative model, *Journal of Management*, **15**(2), 291-334.

Zhu, T. (1999), China's Corporatization Drive: An Evaluation and Policy Implications, *Contemporary Economic Policy*, **17**(4), 530-539.

MERVYN K. LEWIS

The Foundations and Principles of Accounting and Accountability under Islam

Abstract

To a Muslim, God is the absolute and eternal owner of everything on earth and in the heavens. Mankind has been appointed His vice-regents on earth and entrusted with the stewardship of God's possessions. Because of this position of trust, accounting in the broad sense is central to Islam, since accountability to God and the community for all activities is paramount to a Muslim's being. Based on *shari'a* – the divine law of Islam – a comprehensive ethic can be formulated specifying how economic activity should be conducted, how business should be organized and governed, and how financial reporting should be made. Such obligations pose distinctive challenges to the implementation of systems of accounting and accountability under Islam. These issues, along with the inevitable gap between the ideal and the reality, are explored in this article.

JEL Classification Numbers: M4, P4, B0

Key Words: accounting, accountability, Islam, divine law

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1. INTRODUCTION: ACCOUNTING AND ACCOUNTABILITY

Accountability means that those in charge of economic resources must give account of their stewardship, irrespective of whether the transactions and resources in question are those of a government organization or a private sector entity. One of the major functions of an accounting system is to facilitate accountability in this sense. Such a stewardship function has been a regular feature of organized human activity from the earliest times (Brown, 1905; Brown, 1962; Stone, 1969). Originally prescribed at the level of the individual property owner, nowadays accountability would be specified in terms of an accounting by management (either public or private) to assist in the efficient allocation of resources by providing information, either for *ex post* monitoring of performance or for *ex ante* decision-making by those responsible for making investment decisions (Whittington, 1992).

However, a framework of accountability also has broader economic and social purposes and objectives and no more so than under Islam in which economics, politics, religious and social affairs – especially accounting – fall

under the jurisdiction of the divine law of Islam – the *shari'a*. The literal meaning of the Arabic word *shari'a* is 'the way to the source of life' and, in a technical sense, it is now used to refer to a legal system in keeping with the code of behaviour called for by the Holy Qur'an and the *hadith* (the authentic tradition). Calder (2002: 980) defines Islamic law as 'a hermeneutic discipline which explores and interprets revelation through tradition'. The Holy Qur'an (the revelation) and *sunna* (the Prophet's example as recorded in various *hadith* or the traditions), define clearly what is true, fair and just, what are society's preferences and priorities, what are the corporate roles and responsibilities, and also, in some aspects, spell out specific accounting standards for accounting practices.

In the Holy Qur'an, for example, the word *hesab* is repeated more than eight times in different verses (Askary and Clarke, 1997). *Hesab* or 'account' is the root of accounting, and the references in the Holy Qur'an are to 'account' in its generic sense, relating to one's obligation to 'account' to God on all matters pertaining to human endeavour for which every Muslim is 'accountable'. All resources made available to individuals are made so in the form of a trust. Individuals are trustees for what they have been given by God in the form of goods, property and less tangible 'assets'. The extent to which individuals must use what is being entrusted to them is specified in the *shari'a*, and the success of individuals in the hereafter depends upon their performance in this world. In this sense, every Muslim has an 'account' with *Allah*, in which is 'recorded' all good and all bad actions, an account which will continue until death, for *Allah* shows all people their accounts on their judgement day (S4:62). This adds an extra dimension to the valuation of things and deeds compared to those already embodied in conventional financial statements.

Thus the basic similarity between *hesab* in Islam and 'accounting' lies in the responsibility of every Muslim to carry out duties as described in the Holy Qur'an. Similarly, in a business enterprise, both management and the providers of capital are accountable for their actions both within and outside their firm. Accountability in this context means accountability to the community (*umma*) or society at large. Muslims cannot, in good faith, compartmentalise their behaviour into religious and secular dimensions, and their actions are always bound by the *shari'a*. Islamic law thus embodies an encompassing set of duties and practices including worship, prayer, manners and morals, along with commercial transactions and business practices.

2. PRINCIPLES OF COMMERCE

Muslims ought to conduct their business activities in accordance with the requirement of their religion to be fair, honest and just toward others. Business activity, in consequence, must be broadly inspired and guided by the concepts of *tawhid* (oneness and unity of God), *ihsan* (goodness), and *tawakkal* (trust in God) while regulated, within those boundaries, by a legal framework committed to values such as justice and the ban on *riba* (interest) and the prohibition of *ihtikaar* (hoarding) and other malpractices. In fact, a large number of Islamic concepts and values define the extent and nature of business activity (Rahman, 1994). There are many positive values such as *iqtisad* (moderation), *adl* (justice), *ihsan* (kindness par excellence), *amanah* (honesty), *infaq* (spending to meet social obligations), *sabr* (patience) and *istislah* (public interest). Similarly there are a number of values which are negative, and thus to be avoided: *zulm* (tyranny), *bukhl* (miserliness), *hirs* (greed), *iktinaz* (hoarding of wealth) and *israf* (extravagance). Economic activity within the positive parameters is *halal* (allowed and praiseworthy) and within the negative parameters *haram* (prohibited and blameworthy) which has to be moderated. Production and distribution which are regulated by the *halalharam* code must adhere to the notion of *adl* (justice). Collectively, these values and concepts, along with the main injunctions of the Holy Qur'an, provide a framework for a just business and commercial system (Lewis, 2007).

2.1. Business and economics

Just as Islam regulates and influences all other spheres of life, so it also governs the conduct of business and commerce. Many verses in the Holy Qur'an encourage trade and commerce, and the attitude of Islam is that there should be no impediment to honest and legitimate trade and business, so that people earn a living, support their families and give charity to those less fortunate. Nevertheless, Muslims should not allow their economic activities to dominate so that making money becomes a first priority and they neglect religious duties; in particular, all trading must cease during the time of the Friday congregational prayer. Nor must the future be overlooked: upon death one is expected to leave behind a family and descendants who perpetuate the law of God, a permanent contribution which will benefit the community, and a source of income for the poor and the needy and/or to generate job opportunities for future generations.

2.2. The Islamic work ethic

Islam requires every individual to work and to produce. Prophet Muhammad teaches: 'Never be lazy and helpless' (Rahman, 1994: 9). There is no good in an individual who does not want to produce and earn money. To Muslims, the unproductive hand is an unclean impure hand. According to Islam, work and investment are the only legitimate means of acquiring property rights (Askari and Taghavi, 2005). Thus, the route to economic achievement is hard work and assumption of risk. It is not through entitlement and inheritance. That is why Islamic law (by a detailed description in the Holy Qur'an) defines exactly how the estate is distributed after death. An individual's power of testamentary disposition is basically limited to one-third of the net estate

(ie, the assets remaining after the payment of funeral expenses and debts) and two thirds of the estate passes to the legal heirs of the deceased under the compulsory rules of inheritance, providing for every member of the family by allotting fixed shares not only to wives and children, but also to father and mothers.

Thus what Abbas Ali (2005: 52) describes as the 'Islamic Work Ethic', implies that work is a virtue in light of a person's needs, and is a necessity for establishing equilibrium in one's individual and social life (Nasr, 1984). The centrality of work and deed in Islamic thinking is succinctly addressed in the Holy Qur'an (S6:132): 'To all are degrees (or ranks) according to their deeds.' In this context, useful work is that which benefits others and society. Subsequently, those who work hard are acknowledged and are rewarded.

2.3. POVERTY AND RICHES

Pursuing economic activities and achieving economic progress via work and investment must, however, be rooted in moral and legitimate foundations. Islam preaches moderation and a balanced pattern of consumption. Luxury and over-consumption is condemned, as is poverty. Every being has a minimum requirement to be able to live in dignity. The system is balanced out through the act of *zakat* (almsgiving as an essential part of the system and faith). If this source is not enough, the Islamic government would apply a temporary tax on the rich and affluent to balance the budget as a religious duty (*fard kefaya*).

2.4. Communal obligations

Individuals are expected to feel socially responsible for others in the community. One cannot enjoy life while others cannot. In general, the aim of the Islamic economic system is to allow people to earn their living in a fair and profitable way without exploitation of others, so that the whole society may benefit. Islam also emphasises the welfare of the community over individual rights. Where Muslims live under a non-Islamic Government, *zakat* must still be collected from the Muslims and spent for the good of society.

2.5. Stewardship of resources

Mankind has been appointed God's vice-regent on earth and given the sacred duty of the stewardship of all natural and created resources. Ownership of property is therefore a trust (*amanah*) to be enjoyed conditionally so long as man follows the *shari'a* and remains worthy of the trust. People have the right to use natural and other resources for the benefit of mankind. But earth is a trust from God and should be looked after by those who have charge of it and who will ultimately be accountable to God for their actions. Rights to property in Islamic law may be divided into three categories – public property, state property and private property (Normani and Rahnema, 1995). Islam respects private property and the right of ownership is protected. Property may be acquired through inheritance, gift, purchase, or by taking up common property and/or things on it.

2.6. Ethical standards

Under Islam, the paramount rule in business is honesty and fair dealing (Hussain, 1999). A Muslim business person should therefore be a person of high moral values who would not set out to deceive or exploit others. Monopolies and price fixing are prohibited. Generally the market should be free and not subject to manipulation. This is so that people will not be exploited by the more powerful in business transactions. Those engaging in trade and commerce should behave equitably. Vendors of goods should not hide any defects in them, nor lie about the nor lie about the weight or quality of the goods. Dealing in stolen goods is prohibited. Hoarding is forbidden when the intention is to force up the price in times of scarcity and so profit at the expense of others.

Products should be useful and not harmful as defined in the Holy Qur'an and Islamic law. Trading and investment can only be undertaken in activities which are not prohibited in Islam (prohibitions include gambling, alcohol, pornography and anything that is harmful to society). Agriculture and employment is encouraged as is dignity of labour, and the prompt payment of a fair wage.

2.7. BUSINESS LAW

The general principle of the Islamic law of contract is contained in the Quranic verse: 'O you who believe! Fulfil all obligations' (S5:1). The definition of contract (*al-'aqd*) is similar to that in the common law, but is wider in that it includes dispositions which are gratuitous as well as endowments and trusts. A contract consists of an agreement made between two or more people. Islamic law provides freedom of contract, so long as the terms do not conflict with the *shari'a*. In particular, it permits any arrangement based on the consent of the parties involved, so long as the shares of each are contingent upon uncertain gain and are a function of productive transformation of resources.

The basic principles of business law are laid down in the four root transactions of: (1) sales (*bay*), transfer of the ownership or corpus of property for a consideration; (2) hire (*ijâra*), transfer of the usufruct (right to use) of property for a consideration; (3) gift (*hiba*), gratuitous transfer of the corpus of property; and (4) loan (*ariyah*), gratuitous transfer of the usufruct of property. These basic principles are then applied to the various specific transactions of, for example, pledge, deposit, guarantee, agency, assignment, land tenancy, *waqf* foundations (religious or charitable bodies), and partnerships, one of the main forms of business organisation, and the basis of much Islamic financing (Lewis and Algaoud, 2001; Hassan and Lewis, 2007). The other main type of enterprise is, of course, the modern corporation, and Islamic principles provide a clear conception as to how companies should be organized and governed.

3. ECONOMIC ORGANISATION

When Muslim countries emerged from World War II, the economic organization and business and commercial practices in operation were overwhelmingly those inherited from the Western colonial powers. The science of Islamic economics developed as a social discipline in response to this environment, with the aim of establishing or restoring Islamic authority in areas where Muslims increasingly were falling under the sway of Western ideas (Maudadi, 1975 [1947]; Ahmad, 1980; Nasr, 1994; Kuran, 1995). Islamic economics can be defined as a branch of knowledge that aims at analyzing, interpreting and resolving economic problems with reference to the methodology of Islam (Iqbal and Lewis, 2008). How firms are organized, directed and controlled, in short what is now called corporate governance, is one aspect of this broad agenda (Lewis, 2005). Yet, despite considerable interest in the topic of corporate governance recently by organizations such as the Islamic Development Bank (Chapra and Ahmed, 2002) and AAOIFI (2003), and the World Bank (Grais and Pellegrini, 2006), there is not even as yet a unified expression in Arabic to represent the meaning of corporate governance (Sourial, 2004).

By contrast, the English terminology has clear origins. The word 'governance' comes from the Greek word *kybernan*, meaning to 'steer', 'guide' or 'govern', which then passed etymologically from the Greek to the Latin *gubernare* and the Old French *governer*. At its broadest, governance – the act of governing – refers to the relationship between the governors and the governed, such as that between the government and the people, and has at its basis the decision-making powers ceded by individuals to those in authority so that the common interests of society can be served (Iqbal and Lewis, 2008).

This definition brings out the point that governance in all manifestations is essentially about decision- making: by whom, for whom, and with what resources. These three dimensions of decision-making apply irrespective of whether we are examining the governing of a nation or, as in this case, the governance of an organization such as a business enterprise.

While there may not be in Islam official juristic recognition of the concept of corporate governance as such, an examination of the principal legal sources of the Holy Qur'an and *sunna* reveals clear guidelines about decision-mak-

ing processes in an Islamic context. In particular, Islamic law and its distinctive Islamic institutions imply very different implications for decision-making than conventional approaches. Islamic corporate governance necessarily has a wide commission, with obligations extending beyond shareholders, financiers and management to suppliers, customers, competitors and employees, embracing the spiritual as well as the temporal needs of the Islamic community. Specifically, the concepts of *shura*, *hisba* and the *shari'a* supervisory process and religious audit establish the basic building blocks of a system of Islamic corporate governance and business organization. This framework becomes apparent when we consider the three dimensions of decision-making: by whom, for whom, and 'with what' resources and thus 'to whom' accountability is due for the use of resources.

By whom. The Holy Qur'an is very clear on the issue of 'by whom'. Consider the following verses:

'And consult them on affairs (of moment). Then, when thou has taken a decision, put thy trust in Allah.' (Al-Imran 3:159)

'Those who respond to their Lord, and establish regular prayer; who (conduct) their affairs by mutual consultation; Who spend out of what We bestow on them for sustenance.' (Ash-Shura 42:38)

In fact, according to The Presidency of Islamic researches in the commentary on Sura Ash-Shura, 'consultation' is the key word of the Sura, and suggests the ideal way in which a good man should conduct his affairs. The commentary goes on to note that this principle was applied to its fullest extent by the Prophet Muhammad in his public and private life, and was fully acted upon by the early rulers of Islamic society. The *Shura* or Consultative Council had its origins in pre-Islamic times where it comprised a council of tribal elders. Originally, it constituted an informal forum of deliberation where decisions were arrived at when discussing new problems. During these deliberations, the problems in question were thrown open for general discussion. Members of the council were invited to express their considered personal opinions, and these opinions were thrashed out until a consensus of opinions was reached. Islam introduced improvements in accordance with the moral principles enunciated by the Holy Qur'an (Stork, 1999).

Thus the basic message of Sura Ash-Shura, to 'live true in mutual consultation and forbearance, and rely on Allah', contains the essence of governance from an Islamic perspective. Those who wish to serve Allah must ensure that their conduct in life is open and determined by mutual consultation between those entitled to voice, for example, in affairs of business, as between partners or parties interested, and in state affairs as between rulers and ruled. Since the Holy Qur'an clearly mandates that any decision involving more than one party requires access and consultation on the basis of principles of *shura*, Islam encourages the participants to work together freely and frankly when arriving at decisions (Shaikh, 1988). Institution of a shuratic decision-mak-

ing process explains how decision-making in business and other activities can meet Islamic moral values. Decision-making is an important trust from God, and Islam demands from those holding this trust to engender truthfulness, justice, consultation and a spirit of consensus-seeking among participants during group decision-making. On the basis of *shura*, leaders must encourage others to participate in decision-making. An employee would be expected to contribute his or her knowledge to the formulation and implementation of the organizational vision, and consultative procedures should be applied to all affected ie shareholders, suppliers, customers, workers and the community (Baydoun, *et al.*, 1999).

For whom. 'For whom' is straightforward in Islam because the starting points are from Allah. The ultimate ends of business and economics, indeed any human activity, are to Allah, and the means employed should not deviate in any way from the holy law of Islam, the sharia. A code of approved social behaviour was developed by the Prophet Muhammad, and his companions were later appointed, when the Islamic community expanded in the early days of the Islamic state, to institutionalise, perpetuate and preserve the codes and ensure compliance with the principles of sharia. Under the early Abbasids (750 CE onwards), the institution of hisba was established to ensure compliance with the requirements of shari'a. An office of local administration, the office of the 'inspector of the market', continued into Islam from Byzantine times (Schacht, 1964). Its holder was given the title muhtasib (and his office called *hisba*), and the functions were Islamicised by entrusting its holder with discharging the collective obligation in the Holy Qur'an to 'encourage good and discourage evil', making the *muhtasib* responsible for enforcing Islamic behaviour in terms of community affairs and behaviour in the market, such as accuracy and honesty in business dealings. Duties traditionally carried out by the *muhtasib* include: correct weights and measures, fair trading rules, checking business frauds, auditing illegal contracts, keeping the market free, and preventing hoarding of necessities (Abdul Rahman, 1998).

Hisba, like the institution of *shura*, is a long-standing tradition of Islamic society that can be seen to represent a core element of Islamic corporate governance. The role of the institution became significant during the expansion of the Islamic state as the number of business and commercial activities expanded, exemplifying the nature and extent of the adoption of an ideal system of sacred law in early Islam. To what extent the office could be revived in its traditional form is problematical. Nevertheless, the institution of *hisba* survives in terms of the right of every Muslim, irrespective of the presence or absence of an officially appointed *muhtasib*, to come forth as a 'private prosecutor' or enforcer of Islamic standards of governance (Schacht, 1964: 52).

With what and to whom. The third plank of the Islamic corporate governance system is the process of religious supervision to guarantee that all of the enterprise's operations, contracts and procedures conform with the Islamic moral code. To a Muslim, all resources are God-given, and ownership of

wealth belongs to God. Individuals are only trustees and it is to God that accountability is ultimately due. The purpose of the religious audit is to assure both insiders and outsiders that God's law are being followed by the firm in its business dealings. The processes involved in religious supervision are illustrated most clearly in the case of Islamic financial institutions (Algaoud and Lewis, 1999), but the governance principles operate across the full range of business activities. The functions of the religious auditors, as spelt out in the organization's articles of association, are threefold. First, the religious supervisors give advice to the board and the management about the religious acceptability of the firm's contractual arrangements and new product development. Second, an independent report is provided to inform shareholders as to the compliance of management with Islamic principles and to the extent that the business is run Islamically. Third, there is an audit involved with the special almsgiving levy, zakat, to establish that the zakat fund is being correctly assessed and properly administered and distributed. In these various ways, the religious supervisory process will testify that the articles of association, stipulating that the organization run its business in accordance with Islamic law, are in fact met.

4. FINANCIAL REPORTING OBLIGATIONS

Shuratic decision-making procedures provide a vehicle for ensuring that corporate activities and strategies are fully discussed and that a consensus-seeking consultative process is applied within the firm and across shareholders, employees, suppliers, customers and other interested parties. The institution of *hisba* offers a framework of social ethics, relevant to monitor the corporation, with the objective to obligate the correct ethical behaviour in the wider social context. It also empowers individual Muslims to act as 'private prosecutors' in the cause of better governance by giving them a platform for social action. The third pillar of the system is the discipline provided by Islamic religious auditing, which is a device to: solicit juristic advice, monitor compliance with Islamic precepts, and collect *zakat*. This extra layer of auditing and accountability for resource use ensures that the enterprise operates as an Islamic concern.

Yet no system of governance, however well conceived, will influence organisational behaviour unless it is embedded in an appropriate ethical or moral climate and the principals involved in decision-making set the pattern in the priorities and attitudes. The same is true of the interface between the firm and the general community as reflected in the financial reporting obligations needed for full accountability to the *umma*. In an Islamic society, the development of accounting theory should be based on the provisions of Islamic law along with other necessary principles and postulates which are not in conflict with Islamic law. It goes without saying that Islamic law has very clear views on the basic principles as to how financial reporting and account-

ing practice should be undertaken in terms of objectives based on the spirit of Islam and its teachings (Lewis, 2001).

4.1. TRUTHFULNESS AND RELEVANCE

If the purpose of accounting information is to serve the public interest, it follows that in an Islamic context the *umma* has the right to know about the effects of the operations of the organisation on its well-being and to be advised within the requirements of *sharia* as to how this has been achieved. Accountability is thus interpreted as being, first and foremost, accountability to God through making information freely available. Truthful and relevant disclosure of information is important, in different aspects of Islamic life. There are responsibilities such as paying *zakat*, the calculation of which requires disclosure of the worth of assets and liabilities in terms of the religious obligation to succour the poor, for it indicates a Muslim's capacity to do so. Full disclosure is necessary for predicting future obligations and assessing investment risk.

Six verses in the Holy Qur'an refer to 'relevance'. One meaning of the 'relevance' referred to is disclosure of all facts (S2:71) '... Now hast thou brought the truth ...' also, based on (S4:135) 'O ye who believe! Stand out firmly for justice ...' Essentially, these are directives to call it 'how it is' in all things. Financial information is relevant from an Islamic viewpoint only when it includes the attribute of 'truth', and fair and accurate disclosure of the matters at hand. On this basis, doubt must arise whether compliance with the conventional accounting practice of being 'conservative' regarding asset valuation and income measurement can conform with *shari'a*, any more than would deliberate optimism and overstatement.

4.2. Adequacy of disclosure

Adequate disclosure requires that a financial statement should contain all material information necessary to make it useful to its users, whether it is included in the financial statements, the notes accompanying them, or in additional presentations. Since the Holy Qur'an discloses the truth and best way for living in the world (S5:16), so disclosure of all necessary information for the accomplishment of faithful obligations and the making of economic and business decisions consistent with that ethos is the most important tenet of an Islamic accounting system.

Sura 2:282-3 in particular puts commercial morality on the highest plane as regards the bargains to be made, the evidence to be provided, and the doubts to be avoided. Understandable information is an accountability necessity applicable to financial information in an Islamic accounting framework, in which the information is not to deceive the user, nor decrease understanding in such a way as to lead to a wrong decision. By decreeing that financial information should be disclosed part by part, materiality of financial affairs should be obvious in the context of the disclosure. In general, the materiality of accounting information in an Islamic framework is considered relevant if it is related to *shari'a* requirements.

4.3. ACCOUNT KEEPING

According to the Holy Qur'an, followers are required to keep records of their indebtedness:

'Believers, when you contract a debt for a fixed period, put it in writing. Let a scribe write it down fairly ... and let the debtor dictate, not diminishing the sum he owes ...' (S2:282).

Islam thus provides general approval and guidelines for the recording and reporting of transactions. Underpinning Islamic belief is the requirement that doubt and uncertainty be removed from inter-personal engagements. In business affairs, trading and the like, it clearly is evident that all parties' rights and obligations are to be fully documented for verification and exploration. Verses place an emphasis on recording material credit loans and transactions, and advise that these transactions should be signed by debtors (to acknowledge their indebtedness and the amount thereof), the ultimate in verification processes.

4.4. Accuracy and reliability

Askary and Clarke (1997) identify nineteen verses in the Holy Qur'an placing emphasis on the reliability of matter [2 (283), 3 (122, 159), 4 (58, 81), 7 (89), 8 (2, 27, 49, 61), 12 (11, 64, 66), 23 (8), 27 (39), 33 (72), 65 (3), 70 (32), 81 (21)]. As with every other aspect of Islamic secular life, reliability extends into the area of accounting. If published financial information is unreliable, many followers will be unable to accomplish their religious responsibilities; they will be unable to assess their capacity to assist the disadvantaged, or their capacity to pay *zakat*. If the managers of business entities are to be honest to the business entities' owners, *Sura* 4:58 indicates that they must produce true and complete, reliable, financial disclosure for them. This verse places an emphasis on making over trusts to their owners ('Allah doth command you to render back your Trusts to those to whom they are due ...)'. In other verses, there is an emphasis on the need to fulfil obligations.

4.5. Presentation

Reliable information must also be presented correctly and fully, including details of all the transactions undertaken. *Sura* 11:84-85, for example, says '... give full measure ...' True disclosure of financial facts, and the provision

of them without any deceit or fraud in order to satisfy users' requirements, is thereby essential for accomplishing such obligations and to facilitate the making of decisions on investment and business matters.

4.6. FINANCIAL STATEMENTS

Islamic financial statements must show the financial impact of financial transactions and other consequences of Islamic economic activities. Accurate changes in the financial position must be determinable from the balance sheet, along with how those changes arose from the income statement. Under Islam, the elements of financial position would include all items which are subject to financial evaluation, assets, liabilities and the residual benefits, based on the Holy Qur'an. Many verses in the Holy Qur'an deal with various aspects of property and assets. An Islamic asset includes all valuable property resulting from previous events belonging to the owner. Such an asset should not be usurped and if obtained in a lawful (halal) way has economic benefits for its owners. Lawful acquisition is a critical aspect of 'asset' in this context; rights to interest income are never recognised. Liability is defined in Islam either as a faithful obligation, or any debt to other persons or business entities. Again, in respect to both, the paying of interest is prohibited under the prohibition of riba (Algaoud and Lewis, 2007). Finally, equity in residual benefits is obtained directly from the financial evaluation and contrasting assets and liabilities. Legality is again an issue: sura 2:279 decrees that Muslim equity should not be mixed with unlawful (haram) properties.

5. THEORY AND REALITY

How are we to reconcile these religiously-derived principles with the practical reality of business and commercial life in Muslim countries? If Islamic principles were applied, business organization would be marked by the concept of *shura* and the application of shuratic decision-making processes involving consultation and consensus-seeking, along with the institution of *hisba* providing a framework of social ethics and empowering individual Muslims to act as 'private prosecutors' in the cause of better governance and social action.

This is the ideal. The reality is probably closer to what Abbas Ali (2005, p172) calls a 'sheikocracy': hierarchical authority, rules and regulations contingent on the personality and power of the individuals who make them, subordination of efficiency to personal relations and personal connections, indecisiveness in decision-making, informality among lower level managers and a generally patriarchal approach. Nepotism is often evident in selecting the upper-level managers. Tradition plays a significant role in the life of individuals and groups. Extended families, friendships and personal relationships reinforce group orientation and duties. Class origin and kinship is significant.
'The Arab executive lives in a society where family and friendship remain important and prevalent factors even in the functioning of formal institutions and groups. Consequently ... the Arab executive relies upon family and friendship ties for getting things done within his organization and society' (Muna, 1980, p12).

Such divergences between theory and practice has resulted in two responses (at least) among Muslims. One is a fatalistic acceptance of the *status quo*. Ali considers that Muslims, and Arabs in particular, hold two sets of identity. One is immediate, social and spatially particular. The other is historical, cultural and global (Ahmad, 1984). Violation of particular principles, cherished in the early days of Islam, is common because the basic aspects of the reality of Arab politics and organizations are the personalized nature of authority, tribalism, and fluidity and alternating fission and fusion of group coalitions and alliances (Ali, 2005: 124).

He argues that the two identities are reconciled by the Islamic equivalent of 'doublethink'.

'Doublethink, a term used by George Orwell [in the classic work 1984] for holding two contradictory beliefs simultaneously, in Arabia and other Muslim countries, depicts a condition where the ideal (Islamic principles) is held officially, but violated in practice. At the organizational level, this situation produces what Child (1976) calls mental cheating. Managerial behaviour, which remains strictly within the framework of the authoritarian and hierarchical structure of the organization, seeks to prepare subordinates to accept decisions already made by managers and to improve the individual manager's images in a society where Islamic and tribalistic values still have some important influence. The intention of managers, in this case, is not to create a situation of real consultation, but rather to create a feeling of consultation' (Ali, 2005: 122).

The other response is what Lal (1998) refers to as the call to purify Islam from all the corruptions that have crept in over the centuries into Muslim lives, and thereby recreate the 'golden era' of Islam. The period of the four rightly guided caliphs (Abu Bakr, Omar ibn-al-Khattab, Othman and 'Ali) is generally regarded as an ideal time, when Islam was practised perfectly and, with the dramatic conquests and the expansion of the Islamic state, it appeared that 'God smiled on Muslims' (Lal, 1998: 50).

The difficulty with this response is the potential for perpetual disappointment. As Lindholm (1996) observes:

'In the memory of Muslims ever since, this period appears as a divine ordered social formation flowering under the benign regime of the community's duly elected representative — the Caliph.'

'Muslim thought is saturated with longing for a return of this idealized era when ordinary men and women are imagined (in the soft glow of collective memory) to have acted together selflessly under the leadership of just and divinely guided Caliphs to realize the will of Allah in the world of human beings – a realization validated concretely through the vast power and wealth acquired by the victorious army of the faithful' (p80).

Even allowing for 'apocryphal exaggeration' (Atiyah, 1955, p36) and some less than ideal circumstances ('three of the four caliphs were assassinated', Watt, 1996, p40), the hold of this period of history over Muslim thinking remains strong, and results in a very different worldview from that held by most Christians. As Lindholm remarks:

'Remembering their glorious world-conquering past, Muslims have not pictured the 'City of God' in the Christian manner as beyond ordinary ken, achieved in the radiant future by faith and renunciation. For them, God's mandate was actually realized in historical reality, under the authority of the Prophet himself and the four pious rulers after him' (p79).

'Recalling their millennial past, the Muslim devout, unlike their Christian cousins, have never inwardly consented to the disjuncture between the religious experience of the community of believers (equal before God, led by the Prophet and his deputies) and the reality of power-seeking secular rulers prone to political intrigue and the use of physical coercion' (pp80-1).

These differences may be reflected in responses to public policy issues relevant to business and commercial affairs. In terms of the principles outlined in earlier sections of this paper, the distinctive characteristics of Islamic economics are that it is Godly, ethical, humanly, and moderate and balanced (Khaliffa,2003). Business should reflect all of these four characteristics, and be conducted by Muslims in accordance with the requirements of their religion to be fair, honest and just towards others. One commentator (although not a Muslim) has even drawn attention to the 'sharp practices' of Western companies such as Enron, the 'misdeeds' of auditing firms such as Arthur Andersen, and what would seem to be an 'immoral core' at the heart of capitalism, which is contrasted with the moral certainty of Islam with respect to business ethics (Wilson, 2003).

However, any claims to a moral high ground must be tempered by the poor record of many Muslim countries in terms of corruption. An earlier article (Iqbal and Lewis, 2002) documented the evidence using the World Bank data base. While some OIC countries such Kuwait, Malaysia, Qatar fall into the highest quartile on the corruption index (indicative of a strong control of corruption), a large number fall into the first and second quartiles (indicating poor control of corruption). In terms of the Transparency International's Corruption Perception Index for 2003, the highest ranking OIC countries are Oman (ranked 26), Bahrain (27) and Qatar (32), while the lowest ranked Muslim countries are Sudan (106), Indonesia (122) and Bangladesh (133). Further details can be found in the Global Corruption Report (2004). The Iqbal and Lewis article goes on to compare the Islamic and Western approaches to corruption providing, in the process, the first systematic analysis of corruption in terms of the Islamic intellectual heritage. On this point there can be no misunderstanding: they document that *shari'a* unequivocally condemns corruption as a severe threat to the social, economic and ecological balance. Furthermore, there seems little doubt that the widespread existence of corruption and the continuance of corrupt behaviour in the business community would be corrosive and damaging to any attempts to implement a system of Islamic corporate governance and business organization.

The authors argue that Islam and the West can learn from each other with respect to governance and corruption. Indicative, perhaps, of the Islamic historical view, and the desire for a return to an ideal era inspired by a renewal of faith, Islam views corruption as a moral problem to be fought by developing greater internal fortitude rather than relying on external law enforcement. Most Western researchers, by contrast, consider that corruption is more than a moral issue and, at its core, is a problem of bad governance. Unquestionably, Islamic societies can benefit from the practical stratagems and administrative and civil reforms now emphasized in the Western approach – in short, from better governance. The indices suggest that these approaches do work. Nevertheless, there are going to be some situations where the external constraints are weak. Here the West can benefit from reviving the idea, now largely bypassed, that there is a significant moral and ethical dimension to reducing corruption, needed in such circumstances to stiffen resolve and foster self-restraint.

REFERENCES

AAOIFI (2003), Accounting, Auditing & Governance Standards for Islamic Financial Institutions, 4th edition, Bahrain: Accounting and Auditing Organization for Islamic Financial Institutions.

Ahmad, E. (1984), Islam and Politics in Y. Haddam, B. Haines and E. Findley, eds. *The Islamic Impact*, New York: Syracuse University Press.

Algaoud, L. and M. Lewis (2007), Islamic critique of conventional financing in M. Hassan and M. Lewis, eds. *Handbook of Islamic Banking*, Cheltenham: Edward Elgar.

Ali, A. (2005), Islamic Perspectives on Management and Organization, Cheltenham: Edward Elgar.

Askari, H. and R. Taghavi (2005), The principle foundations of an Islamic economy, *Banca Nazionale del Lavoro Quarterly Review*, 235, 187-205.

Askary S. and F. Clarke (1997), Accounting in the Koranic Verses in Proceedings of International Conference, *The Vehicle for Exploring and Implementing Shariah*

Islami iah in Accounting, Commerce and Finance, Macarthur: University of

Western Sydney.

Atiyah, E. (1955), The Arabs, Harmondsworth: Penguin Books.

Baydoun, N., A. Mamman, and A. Mohrnaud, (1999), The Religious Context of Management Practices: The Case of the Islamic Religion, *Accounting, Commerce & Finance: The Islamic Perspective Journal*, **3**(1&2), 52-79.

Brown R., ed. (1905), A History of Accounting and Accountants, Edinburgh: TC and EC Jack.

Brown R. (1962), Changing audit objectives and techniques, *The Accounting Review*, October, 696-703.

Calder, N. (2002), Law in S. Nasr, ed. *Encylopedia of Islamic Philosophy*, Part II, Lahore: Suhail Academy.

Global Corruption Report (2004), www.global corruptionreport.org/download/

ger2004/ 1 2_Corruption_research_I.pdf.

Grais, W. and M. Pellegrini, (2006), *Corporate Governance in Institutions Offering Islamic Financial Services. Issues and Options*, World Bank Policy Research Working Paper 4052, November.

Hassan, M. and M. Lewis, eds. (2007), Handbook of Islamic Banking, Cheltenham: Edward Elgar.

Iqbal, Z. and M. Lewis (2002), Governance and Corruption: Can Islamic Societies and the West Learn from Each Other? *American Journal of Islamic Social Sciences*, **19**(2), 1-33.

Iqbal, Z. and M. Lewis (2008), An Islamic Perspective on Governance, Cheltenham: Edward Elgar.

Kaliffa, A. (2003), The Multidimensional Nature and Purpose of Business in Islam, Accounting, Commerce & Finance: The Islamic Perspective Journal, 7(1&2), 1-25.

Kuran, T. (1995), Islamic Economics and the Islamic Subeconomy, *The Journal of Economic Perspectives*, **9**(4), 155-173.

Lal, D. (1999), Unintended Consequences, Cambridge (M.A.): The MIT Press.

Lewis, M. (2001), Islam and Accounting, Accounting Forum, 25(2), 103-127.

Lewis, M. (2005), Islamic Corporate Governance, Review of Islamic Economics, 9(1), May, 5-29.

Lewis, M. (2007), It's a matter of principal, Monash Business Review, 3(1), 20-1.

Lewis, M. and L. Algaoud (2001), Islamic Banking, Cheltenham: Edward Elgar.

Lindholm, C. (1996), The Islamic Middle East. An Historical Anthropology, Oxford: Blackwell.

Maududi, S. (1975), The Economic Problem of Man and Its Islamic Solution,

Lahore: Islamic Publications. Original Urdu edition, 1947.

Muna, F. (1980), The Arab Executive, London: Macmillan.

Nasr, S. (1984), Islamic Work Ethics, Hamdard Islamicus, 7(4), 25-35.

Nasr, S. (1994), The Vanguard of the Islamic Revolution: The Jama at-io Islami of Pakistan, Berkeley: University of California Press.

Normani F. and A. Rehnema (1995), Islamic Economic Systems, Malaysia: S Abdul Majeed and Co.

Rahman, A. (1998), Issues in Corporate Accountability and Governance: An Islamic Perspective, *American Journal of Islamic Social Sciences*, **15**(1), 55-69.

Rahman, Y. (1994), Interest Free Islamic Banking, Kuala Lumpur: Al-Hilal Publishing.

Schacht, J. (1964), An Introduction to Islamic Law, Oxford: Oxford University Press.

Shaikh, M. (1988), Ethics of Decision Making in Islamic and Western Environments, American Journal of Islamic Social Sciences, 5(1), 115-128.

Sourial, M. (2004), Corporate Governance in the Middle East and North Africa:

An Overview, Mimeo, Cairo: Ministry of Foreign Trade.

Stone W. (1969), Antecedents of the accounting profession, The Accounting Review, April, 284-29.

Stork, M. (1999), Guide to the Quran, Singapore: Times Book International.

Watt, W. (1996), A Short History of Islam, Oxford: One World.

Whittington G. (1992), Accounting and finance in P. Newman, M. Milgate and J. Eatwell, eds. *The New Palgrave Dictionary of Money and Finance*, London: Macmillan, Volume l, 6-10.

Wilson, R. (2003), Islam & Business Ethics, New Horizon, 132, August/September, 15-16.

NEDA VITEZIĆ

Corporate Governance in an Emerging Economy and its Impact on Enterprise Performance: the Case of Croatia

Abstract

Accountability and transparency have become key factors not only for shareholders but also for investors, buyers, suppliers, and other stakeholders. This paper explores the adoption of modern corporate governance principles in an emerging market economy, Croatia, and their impact on enterprise performance. After almost 15 years of privatisation, changes in corporate governance practices and improved performance of privatised and new start-up enterprises are to be expected in Croatia. The aim of the research is to increase awareness of the importance of corporate governance in a global market, especially in enterprises of transitional economies such as Croatia where global competitiveness is difficult to attain.

The paper starts by examining the implementation of sound corporate governance principles in Croatia, and identifies the degree of corporate governance development by use of indicators. From the last 15 years of privatisation in Croatia some positive changes are evident. The main question then addressed is the impact of corporate governance on enterprise performance, especially enterprise efficiency. Analysis is based on statistical data and data gathered by means of questionnaire addressed to independent members. As there are many factors that impact on enterprise performance it is difficult to express the influence of corporate governance indicators quantitatively. However, there is an indirect qualitative impact of corporate governance on enterprises' performance. The results suggest that implementation of sound corporate governance to those experienced in developed countries. Enterprises which have implemented sound corporate governance principles have better performance.

JEL Classification Numbers: G3, K2, P2

Key Words: corporate governance, accountability and transparency, enterprise performance, indicators, Croatia

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1. INTRODUCTION

The Organisation for Economic Cooperation and Development's *OECD Principles of Corporate Governance* (OECD, 1999; hereafter *Principles*) is widely used as a benchmark by policy makers, investors, corporations and other stakeholders. The *Principles* represent common corporate governance stand-

ards and good practice, and thus are intended to provoke international debate on corporate governance. In this context, it is particularly interesting to explore the adoption of corporate governance principles in emerging countries.

In a majority of the Central and East European countries, the privatisation process started in the early 1990s and has been implemented through different models. As a consequence there are different structures of ownership, especially from a qualitative perspective. The Croatian model of privatisation enabled employees to acquire shares (a maximum equity share of 50 per cent with the rest sold) based on a discount to the estimated net book value. The acquirer had to pay only the first instalments or five per cent of the total purchase price. This created an unfavourable interim cash-flow situation for the enterprises; that is, there was no continuing obligation to pay the remainder of the purchase price for the discounted shares. To overcome this, the revised *Privatisation Law* specifically provided that if three consecutive instalment payments are missed, the purchase contract will terminate without notice. The same Law extended the payment period to 20 years.

In Croatia the privatisation process is almost completely finished. Over the course of the last 15 years a diverse set of ownership structures have emerged. These include enterprises with: one majority owner (domestic or foreign), mixed ownership (domestic, foreign, state, local government, ex employees) with different stakes, and public companies in the ownership of state or local governments. In 2004 there were 68,981 enterprises in Croatia, of which 94.7 per cent were small enterprises, 3.9 per cent medium, and 1.4 per cent large. In terms of ownership structures private companies represented 96.6 per cent of all enterprises (of which 94.4 per cent were start-ups and 2.2 per cent privatised), state-owned 1.2 per cent, mixed ownership (state and private) 1.5 per cent, and cooperatives 0.7 per cent.¹ Only 0.5 per cent of enterprises are listed on the stock market, a reflection that industry is constituted primarily of small enterprises. However, a quarter of large enterprises are listed on the stock market, and thus committed to quarterly disclosure.

Emerging economies that change their social system to democracy adjust their requirements for corporate governance principles to reflect those established by developed countries. With respect to performance, corporate governance rules establish responsibilities, disclosure and transparency as primary principles. Emphasis is put on the timely and accurate disclosure of the financial situation, performance, ownership and governance of the company. In terms of responsibility, the governance of companies should first and foremost reflect the interests of the shareholders. In addition, corporate governance principles will often support the role of other stakeholders. This is in accordance with concepts of socially responsible behaviour. A company should

¹ Computed from statistical data of Agency for Payments Croatia, 2004.

be responsible for its wider impact on society. Although, the corporate governance framework may recognise the rights of stakeholders, evidence is still not overwhelming that a company's share price is affected by its contributions to social responsibility. Corporate social responsibility (CSR) will only become economically meaningful if the financial markets reward it. However, in emerging countries where the capital market is underdeveloped, share prices are mostly based on financial results and performance.

Second, to meet disclosure and transparency principles requires development of performance measurement and management systems. Financial measures have long been used to evaluate performance for the benefit of shareholders, lenders, creditors, and statutory authorities. They are used for analysing short-term performance. Financial information should be audited and prepared according to accounting principles. However, besides financial performance there is a great need for non-financial information to be included in disclosures. For analysing long-term strategies and achievements the adoption of a more broadly-based set of performance measures is more useful. Increased complexity of performing more and more emphasized the need to use other criteria in evaluating social responsibility governing. This said, non-financial indicators are still not widely used, and thus are much harder to collect and analyse.

Although there is a wide range of research on corporate governance, there is limited research into its impact on enterprise performance, especially in emerging economies. Thus, this research analyses the corporate governance principles used in companies in a transition economy, and additionally stresses performance benefits. Specifically the paper is focused on the applicability of corporate governance indicators in Croatian enterprises and the influence of their performance. Governance's contribution to enterprise performance is analysed within the context of the environment caused by privatisation in Croatia, board attributes and disclosure. The qualitative assessment of corporate governance's impact on performance is analysed separately.

2. CORPORATE GOVERNANCE OVERVIEW

Corporate governance is a key element in improving economic efficiency and growth as well as enhancing investor confidence (OECD, 2004). Good corporate governance should provide proper incentives to owners and management to pursue objectives that are in the interests of the enterprise. It arises as a key issue when the power of management tends to be a threat to owners. Thus, the OECD defines corporate governance as a "system by which business corporations are directed and controlled", or as "all the organizational mechanisms, which have the effect of bounding the power and of influencing the decisions of the managers. In order words, the mechanisms "govern" their behaviour and define their discretionary space" (Charreaux, 1997). More broadly with regards to society, we could define corporate governance

as the relationship of a company with society. After many corporate scandals over the last few years, corporate governance has begun to be seen as a tool for separating smart from dumb choices; that is, "it is the structure that is intended to make sure that the right questions get asked and that checks and balances are in place to make sure that the answers reflect what is best for the creation of long-term, sustainable value" (Monks and Minow, 2004). Therefore, it recognises that possible conflicts of interest between the patrimony of the owners and interests of other stakeholders could appear. For that reason corporate governance codes address a wide range of structural and behaviour elements such as accountability, shareholder and stakeholder rights, disclosure and transparency, internal control and audit.

Since the first announcement of the OECD Principles of Corporate Governance (OECD, 1999), many countries in Europe have adopted such codes. In general, a company's governance framework is increasingly considered very important not only from the shareholders and stakeholders side but also from the social, environmental and ethical viewpoints. Effective corporate governance is particularly important during times of restructuring; that is, in the early period of economic transition. New owners and management have to decide upon the strategy of an enterprise. In transition countries that means major changes in organisational structure, product solutions, and management behaviour. Thus, due to path-dependency, restructuring has long-term implications for the industry and its competitiveness (Meyer, 2003). Significant improvement in corporate governance may be recognised by research into discrepancies between code recommendations and corporate governance standards in practice (Maier, 2005; Albert-Roulhac, 2005). Much of this research has focused on a few key indicators, particularly the independence of the directors, board, and audit committee, and transparency in remuneration.

Although there is a growing literature linking corporate governance and enterprise performance, there is also a diversity of results. This might be explained through differences in research approaches with respect to some crucial factors; that is, the nature of the enterprise, development of performance measurement systems, methodology, the structure of boards, etc. In spite of this, conclusions commonly suggest that corporate governance has an indirect effect on enterprise performance (Zahra and Pearce, 1989; Maassen, 1999).

There are many variables, external and internal, which influence on corporate performance. The external refer to type of industry, legislation, financial and accounting system, development of the capital market, stakeholders, political view, and, from the perspective of transitional countries, some social heritage from the past. The internal refer to organisational management issues, type of boards (one- or two- tier), board structure, their knowledge, and adopted rules. Analyses done by Dalton and Daily (1999) concludes that there is no clear evidence of a substantive relationship between board composition and financial performance, irrespective of the type of performance indicators, the size of the firm or the manner in which board structure is measured. However, from the perspective of the transition economy and enterprise performance, many issues may relate to omissions during privatisation, which have influence on the behaviour of directors, and the independence of the managerial and supervisory boards, etc. Performance measurement is also linked with corporate governance and is the product of a given society. It is the "production of a social game which has to be understood" (Pesqueux, 2004). Performance measurement and evaluation systems are being changed contemporaneously with the development of a market economy. In such circumstances, faced with the principles of a new social era of capitalism, emerging countries have to adjust both their attitudes and behaviour.

3. METHODOLOGY AND OBJECTIVES

The aim of the research was to investigate awareness of the importance of corporate governance principles and the way these could affect enterprise performance. In order to achieve this, descriptive analysis and statistics were applied. To conduct the survey data from two sources were collected. The first source is data from official published information for companies listed on the Croatian Stock Exchange. These companies are required to send quarterly and annual financial reports to the Croatian Security Exchange Commission. The sample represents 50 per cent of the total number of listed joint stock companies in Croatia during the 1999 to 2004 period. These are mostly large companies with majority ownership (over 51 per cent), although some of have mixed ownership (no one more than 50 per cent). The second source was a 30 question questionnaire concerning the implementation of corporate indicators and performance measurement. The answers to the questionnaire have been statistically evaluated based on information from the 25 enterprises that responded.

In analysing the contribution of governance to enterprise performance three main types of variables with appropriate indicators are used:

- 1) *emerging economy environment* (privatisation process and law requirements, social, political and economic development);
- 2) *board attributes* (board size and structure, composition of the board, board role, etc.); and
- 3) disclosure level (financial information, remuneration, code of ethics).

Some of the indicators are compared to those of European countries that are developing corporate governance from year to year. The period from 1999 to 2004 is used for some financial indicators computed from the Croatian Stock Market database (ie, ROA, ROE), and for confirmation of the impact of corporate governance on financial aspects of performance.

As the aims of the research were: to explore the situation in Croatia concerning corporate governance, to analyse the degree of development, and to reach conclusions about the impact of corporate governance on enterprise performance, the main hypothesis is as follows:

Ho: Implementation of corporate governance in emerging countries may have an impact by increasing accountability and transparency and on the whole improve enterprise performance.

15 years after privatisation began it would be expected that most enterprises will have adjusted to market economy principles and that private ownership will have improved enterprise performance. Although, there is no clear evidence of a significant effect of privatisation on performance, it is clear that privatisation tends to improve performance (Shirley and Walsh, 2000), and is strongly associated with more enterprise restructuring (Djankov and Murrel, 2000). Furthermore, differences in the privatisation process have resulted in different mixes of ownership across transition countries.

Djankov and Murrel (2000) suggest that differences between ownership structures are of great economic importance. They group owners into three categories. First is traditional state ownership with diffuse individual owners. This has no significant effects. Second are insiders, outsiders, workers, banks and commercialised state ownership. Third are group managers, individual owners, investment funds and foreigners, who are the most effective group. This third group with majority ownership is used in the sample so as to give regard to their presence in the market and their commitment to implement corporate governance principles.

4. SURVEY RESULTS

4.1. The corporate governance environment in Croatia

After the privatisation process started in 1991, interest in corporate governance has increased in parallel with growth in the private sector. Improvement in corporate governance are evident in better access to capital, promoting efficient performance and development, transparency comparable to European requirements and rules, and accountability.

With respect to corporate governance there are also some other important issues. These primarily relate to the history of social ownership and aspects of adjustment during the transition period. The privatisation process was undertaken according to a model which was severely criticised in public. Partly because of this it caused inefficiency in the industry sector. The weak side of the privatisation model was that some enterprises were privatised without an inflow of new capital, and ex managers started as new owners without investing their own funds. A consequence was inadequate board composition, and in many cases inefficient performance. In Croatia the management of enterprises is regulated by the *Company Act* following German law, while the *Securities Law* mostly follows Anglo-American securities market legislation. Now, Croatia is in the process of reviewing all legislation according to the *Directives* of the European Union.

The Croatian system of boards is two-tier. The Supervisory Board is responsible for monitoring enterprise leadership and thus could investigate all record keeping and documentation, cash, etc., regarding business performance. Top Management (called the Managerial Board or Board of Directors) are committed to inform the Supervisory Board about business policies, profitability, the income statement, liquidity, etc., at least once a year. Guiding corporate strategy and corporate performance, including the interests of stakeholders, is not a function of the Supervisory Board. The emphasis is on monitoring performance through financial data. This is the main difference between the Board of Directors and the Supervisory Board.

Supervisory Board members chosen by the owner have, in many cases, only a formal role in monitoring. Thus their influence on enterprise performance is debatable. In the case of mixed ownership or small shareholder ownership, members of the Supervisory Board are chosen on the basis of skill, and they are more accountable for efficient performance of the enterprise (Vitezić, 2003). In public enterprises the Supervisory Board's selection is based on party representation.

The Managerial Board's main role is responsibility for running business affairs; that is, business policies, profitable performance, and other affairs. The Managerial Board consists of several members **a**nd one of them is chairman, usually the owner. They are confirmed by the Supervisory Board and can be hired or fired by them. But the role of the Managerial Board is stronger especially in cases where the Supervisory Board is only a formal body and has little influence in the state-owned enterprise's decision-making process.

Recent literature on the subject (Nadler, 2004) suggests there are different types of board: passive, certifying, engaged, intervening and operating. The operating board makes key decisions that other directors and managers then implement. This kind of board is most similar to the Managerial Board in Croatia. They are responsible for business policies of the enterprise, in this case including the one main owner if he/she is the only member. The emphasis should be on high performance boards, which will be competent, coordinated, collegial, and focused on an unambiguous goal.

In the change from a social to a market oriented economy, a number of enterprises are believed to gain competitive advantage and therefore contribute to increasing national efficiency. Indeed privatisation is based on the premise that it will improve enterprise performance and help the economy grow. But the effects are different at aggregate and micro levels, and dependent on industry structure. For example, based on a cross-country aggregate study, Sachs, Zinnes and Eilat (2000) state that privatisation does not by itself increase GDP growth. Rather they suggest that a positive effect is present when privatisation is accompanied by in-depth institutional reforms. This analysis is applicable to Croatian economy. The inflation rate is low and decreased from 6.2 per cent per annum in 2000 to 2.1 per cent in 2004. The GDP growth rate has varied from 2.9 per cent per annum in 2000, to 5.6 per cent in 2002, decreasing to 3.3 per cent in 2004. It is obvious that institutional reforms, but also more importantly stabilisation, industry restructuring, financial discipline and new investment, are prerequisites for improving macroeconomic performance indicators. Additionally, privatisation forces enterprise restructuring and, therefore, is accompanied by changes in management, corporate governance and organisational structure.

4.2. Corporate governance indicators

In this research corporate governance indicators are considered through attributes of boards, particularly their structure, size, independence, internationalisation, diversity, frequency of meetings, and other attributes. Disclosure is investigated through existing information, especially about board members, remuneration disclosure, and adoption of an ethics code. The results summarising how Croatian boards compare to European boards on average are presented in Table 1.

Board structure

In Croatia companies have a two-tier board system (as exists in Germany, Austria, France, and, in fact, only 23 per cent of Europe). This comprises a Supervisory Board of outside members close to the owners, and a separate Managerial Board of executive directors. The two boards meet separately with strictly defined accountability under the law.

With respect to board internationalisation, European boards are more domestically-oriented, with only 16 per cent of directors being foreign nationals, than the companies themselves. In contrast, in the surveyed companies the percentage of foreign board members (one or a few) in Supervisory Boards or Managerial Boards is higher (20.8 per cent) in Croatia. (Table 1.)

Sixty-eight per cent of board members in Croatia are aged 45 years or less if the majority ownership is foreign, with 31.8 per cent of enterprises having boards aged from 25 to 35 years. In domestic enterprises 82 per cent of board members are aged 45 years or less. The board member's average age in Europe is 55 years. On average, European directors have spent 5.6 years on the same board, a little over that in Croatia (around 5 years). In European boards, the number of women has increased from six to seven per cent. In Croatia this percentage is much lower, and is less than one per cent for Supervisory boards. Only on Managerial Boards, do women contribute at over the European average, with over ten per cent of the board being women.

ttributes) Croatia	
100%	23%
-	77%
– audit committee –	– audit committee –
20% of companies	94% of companies
	 remuneration
	committee –
	94 % of companies
	 nomination
	committee –
	71% of companies
	- committees of ethics-
	22% of companies
5.8 per annum	8.7 per annum
5	125
20%	16%
5 % women	7.3% women
up to 45 years	55 years
	· · ·
20%	94%
70%	73%
	100% - - audit committee - 20% of companies 5.8 per annum 5.8 per annum 5 20% 5 % women up to 45 years 20%

TABLE 1. – Corporate governance indicators in Croatia and Europe

Source: Compiled from the survey for Croatia; EIRIS data (Maier, 2005); Albert-Roulhac, and Breen (2005)

Board size

Board size is not considered to be a factor in determining efficiency of performance or as having a crucial impact on performance. There are a number of explanations for this statement. First, board size is commonly determined by national law or listing requirements. Second, it is mostly based on enterprise size and sector and therefore considered "appropriate". Third, the knowledge of each board member is very important to the efficiency of board decision making.

The emphasis is on board effectiveness no matter what the size. Thus boards should be of sufficient size and the balance of skills and experience up to the requirements of the business. Analysis made by Maier (2005) shows a huge difference in board sizes around the world. The smallest average size is in New Zealand (7.2) and the largest average sizes in Austria (18.1) and Germany (22.8). The biggest range is found in Japan (47) where board size varies between 3 and 50 members.

In Croatia the average board size is five (for Supervisory boards) and, in accordance with the law, the minimum size is three and the maximum 21 members depending on the amount of equity. The Croatian average is still lower than the minimum size in both Germany (8) and Austria (6), where the same two-tier model for boards applies. This may be explained by the size of enterprises and ownership structure. In Croatia 95 per cent of all enterprises are small, most with no obligations to have a Supervisory Board. Medium and large enterprises contribute the other five per cent, and in a majority of cases have one or a few owners. Research by Čengić (2001) confirms that chairpersons of boards (Supervisory and Management) of enterprises with domestic owners are in most cases long-term employees or managers of these firms from the period before the start of the privatisation process. Additionally, they have essential influence on processes relating to the structure of the Supervisory or Managerial boards.

Independence of board

Croatian boards are not independent. This relates to the requirements of law and use of the German two-tier board structure model. For example, Maier (2005) estimates the mean percentage independence per board was the lowest in Germany, at only 1.5, and the highest in Switzerland, at 81.3. In countries that have implemented the German model, national law requires the supervisory board to consist of shareholders' and workers' representatives, which therefore cannot be considered independent.

The separation of the roles of Chairman and CEO is ensured under the twotier board structure. In the respect that Croatia has the same board model, a chairperson of the Supervisory Board is elected from the members of the board. However, it is worth mentioning that a member of the Supervisory Board could not be at the same time a member of the Managerial Board.

Audit committee

As of the start of 2001, since the start of accounting scandals, the role of the audit committee has come under close scrutiny. The audit committee's responsibilities are to monitor and review the integrity of the enterprise's financial statements, its internal financial controls, the external auditor's independence and objectivity, and the effectiveness of the audit process as a whole. Hence, the independence of the audit committee is very important to its effectiveness. Internationally the independence of audit committees averages 64.5 per cent and varies considerably, from a minimum of four per cent of companies with a majority independent audit committee in Japan, to over 95 per cent in the UK, Netherlands, Canada, USA, Ireland and Luxembourg (Maier, 2005). Albert-Roulhac and Breen (2005) reveal that committee chairpersons are not independent in 52 percent of European companies. In Croatia, according to the results of the questionnaire, only 20 per cent of

companies have an audit committee. While their numbers vary, on average these have two members and their independence is disputable.

Disclosure

In addition to all information a company should include in its disclosures, shareholders and others pay attention to the remuneration policy, particularly because of the relationship with enterprise performance. Remuneration should motivate members of boards to run the company successfully, but remuneration levels should also be determined according to contributions to efficient growth. 80 per cent of Croatian enterprises do not disclose information on the remuneration of Supervisory or Managerial board members. This is regarded as good practice and, from a survey of 24 countries around the world (Maier, 2005), the average rate of disclose is 84 per cent.

Comparing frequency of board meetings with remuneration, the average compensation per board meeting in Europe during 2005 was 7,301 EURO (Albert- Roulhac, and Breen, 2005). In Croatia the *Company Law* specifies the frequency of board meetings. The Supervisory Board is committed to quarterly or at least semi-annual meetings. The average number of meetings is just under six based on the responses to the questionnaire (5.8 times). The average in European countries that have a two-tier board is 6.7 meetings, and it is notable that unitary boards have more frequent meetings (9.3) than under the two-tier system. Also evident is the continued slight increase (Albert-Roulhac and Breen, 2005).

When looking at good governance practice, the implementation of a code of ethics is strongly supported. In recent years a number of governmental and private initiatives have focused on the need to reduce corruption, bribery, fraud, etc., and have urged improvements in the standards of corporate governance, ethics, transparency and integrity. In Europe an average of 73 per cent of companies have a meaningful code of ethics, and Croatian enterprises at 70 per cent are not much below that level. However, if not strictly implemented, the existing code of ethics does not protect against all illegal activities.

The results of the survey show that only three quarters of the Croatian enterprises investigated know about corporate governance indicators. Also it shows that 33 per cent of enterprises that are listed on the stock market have a code of corporate governance. Recent changes in the *Company Law* commit Managerial and Supervisory boards to give a statement of their Code of Corporate Conduct each year. When a regulatory body enacts requirements for such a code, it is expected that a higher percentage of enterprises will implement it. Today this is up to each enterprise and its need for and knowledge of corporate governance indicators for efficiency and performance measurement. Most companies (73 per cent) maintain corporate governance principles and give them very high importance, especially in assessing partner credit worthiness or self evaluation.

4.3. Corporate governance impact on enterprise performance

Results for the survey questions concerning impact of corporate governance (CG) on performance are summarised in Table 2.

The above-mentioned board attributes provide information that may have influence on enterprise performance, but it is difficult to confirm this quantitatively. Besides, they are many others variables, internal and external, that have an impact on governance and enterprise performance. In considering the environment there are different stakeholders' interests, legal and social requirements, industry structure, economic growth, need for globalisation, politics, and others, where each has a dimension in the assessment of enterprise performance. Regardless of this, there is no doubt that corporate governance principles have a positive impact on performance. Enterprises that have developed codes of conduct and codes of ethics and disclose information about governance together with information about operation and financial results in annual report have much higher credibility. In particular, in meeting stakeholders' expectations corporate governance and ethics have become important issues for listed companies.

From the survey results based on the sample of 25 enterprises, 70 per cent of enterprises have a code of ethics, but only 33 per cent a code of corporate governance, which they have individually established. All that have adopted a corporate governance code consider that its adoption has contributed to a decrease in costs and has been influential in increasing efficiency. All enterprises have been profitable longer than 5 years. At the same time they have developed measurement systems, especially financial reporting, and disclose corporate governance indicators in their reports. The accountability of board members in the context of corporate governance principles is estimated to be very high. Implementation of corporate governance principles increases creditworthiness and has a positive impact on partners and other stakeholders' assessment of performance.

All surveyed enterprises have developed performance measurement on a level suited mainly for financial reporting. Financial, mostly accounting measures, are still widely used to assess performance of enterprises. This was also confirmed in a previous survey (Vitezić, 2004). Accounting measures are focused on results, thus allowing measurement of crucial enterprise objectives, for example profitability and long-term financial strength. At the same time this enables management to assess and control complex activities within the organisation.

Of course measures and measurement systems must reflect the context in which they are applied. However, they also have to be changed according to circumstances in the environment. In Croatia there is evidence of some progress in using dynamic performance measures, which reflect changes in the internal and external environments as well as changes in priorities and

Attributes Average	(%)
1. Adoption of corporate governance	33%
2. Corporate governance contributes to decreasing costs and efficient growth	75%
3. Performing with income	75%
4. Profit longer than 5 years	40%
5. Performing with loss	25%
6. Accountability of board members	43% very good
	43% good
	14% weak
7. Impact of corporate governance on financial reporting	47% very good
	47% good
	6% weak
8. Reporting of environment	67% yes
	33% no
9. Impact of corporate governance on creditworthiness	47% very high
	33% high
	20% low
10. Importance of the partner's corporate governance	46% very high
	27% high
	27% low

TABLE 2. – Qualitative assessment of corporate governance impact on performance in Croatia

Source: Compiled from the survey for Croatia.

objectives. This is especially the case, given some of the priorities emphasised during privatisation are different to those required in a self-managing social system.

When choosing measures the focus must be on things that are really important; that is, in the shareholders' interests, depend on enterprise vision, mission and strategy, and under the control of owners. Hence, the most used indicators are ones that examine profitability, liquidity and leverage, like return on assets (ROA), return on equity (ROE), earnings before interest and taxes (EBIT), earnings before interest taxes depreciation and amortisation (EBITDA), the current and quick ratios, debt ratio, etc. Beside financial indicators, other operative and qualitative indicators are starting to be used, especially in large enterprises. The heterogeneity and complexity of the real world demand some non-financial and intangible indicators. In the so-called knowledge economy, entrepreneurs, owners, managers, and other stakeholders should be aware of the importance of their own knowledge as well of the

knowledge of their business partners and of other stakeholders. Kaplan and Norton (1992) emphasise that "financial measures are inadequate, however, for guiding and evaluating the journey that information age companies must make to create future value through investment in customers, employees, processes, technology and innovation." The composition of the board and their size are important to enterprise financial performance. Daily and Dalton (1993) found a significant relationship between three aspects of the board of directors (number and proportion of external/non-management directors and board size) and three indicators of financial performance (ROE, ROA, and price-earning ratio P/E). Thus, one of the interesting points in the survey was to investigate financial effects through some indicators (ROA, ROE), giving consideration to ownership and management.

Based on the sample of 125 enterprises listed on the stock market, 35 per cent had profitable business performance over the last five years (1999 to 2004). Of that number 80 per cent are domestic, 14 per cent are foreign-owned, and five per cent state owned. Average ROA and ROE are higher under foreign ownership, 0.87 and 5.06 per cent, respectively, than under domestic ownership, 0.77 and 1.72 per cent, respectively. The higher ROE on foreign-owned companies, at almost three times that for domestic-owned companies, may be explained by the relatively low level of invested equity in these enterprises. Additionally, 63 per cent of enterprises started to generate positive income after acquisition, and 50 per cent of these were acquired by foreign owners.



FIGURE 1. - Average ROA and ROE (1999-2004)

Source: Computed from Croatian Security Exchange Commission database.

5. Conclusions

Corporate governance has taken a key role in recent times and is the subject of much research because of the duty which enterprises hold to their stakeholders. The OECD's Principles (OECD, 1999) highlight the increased importance corporate governance issues have attained around the world. The renewed focus on governance and the more recent revised Principles (OECD, 2004) present a new challenge to policymakers and business leaders in emerging markets and transition economies. Hence, this paper provides an analytical view for understanding the implementation of corporate governance principles and how corporate performance can affect economic growth in a transition country. It is to be mentioned that globalisation of financial markets has made some contribution to balancing the requirements that markets impose. Therefore differences in views of the implementation of governance systems which exist among advanced and emerging market economies have diminished. Nevertheless, sociological and cultural differences in emerging economies, in addition to many other factors (economic development, knowledge) are still limiting factors to a comprehensive approach, especially when compared to developed economies.

While noting the limitations imposed because some attributes could not be investigated, this paper confirms that there is little functional difference between Croatian and average European board attributes. Based on the case of the emerging Croatian economy, the current survey supports the conclusions reached in previous survey research on corporate governance's contribution to enterprise performance (Zahra and Pearce, 1989; Massen 1999; Kakabadse and Kakabadse, 2001). There is no universal association between board attributes, board roles and enterprise performance. This is because of a number of shortcomings in and different interpretations of certain board attributes and roles. These attributes and roles reflect both national legislative and other environment circumstances.

The Croatian example confirms the presence of an excessive focus on the financial dimensions of enterprise performance, with lower attention being given to its operational and social dimensions. It also highlights that while some impact of corporate governance on performance is evident through better financial indicators, there is still little possibility of identifying the quantitative contributions of other contextual variables, such as social, cultural, political and economic structures of emerging country which without doubt have an impact on enterprises performance.

From the Croatian case it could be concluded that from the last 15 years of privatisation, some positive changes are evident in the management of enterprises. It may be also suggested that enterprises which have implemented corporate governance principles have performed successfully. It is, however, hard to measure the extent to which board and other corporate indicators contribute to the performance of each enterprise. In addition, the quan-

titative impact of other variables considered is significant. Through financial indicators, which show improvement in enterprises which implement governance principles, a positive impact of corporate governance on enterprises performance may be confirmed. Thus, it may be concluded that corporate governance has, at least, the same indirect effect on enterprises' performance in emerging economies as in the developed economies.

REFERENCES

Albert-Roulhac, C. and P. Breen (2005), Corporate governance in Europe: current status and future trends, *Journal of Business Strategy*, **28**(6), 19-29.

Charreaux, G. (ed.) (1997), Le gouverment des enterprises, Paris: Economica.

Čengić, D. (2001), Vlasnici, menadžeri i kontrola poduzeća, Prilog analizi korporacijskog upravljanja u Hrvatskoj, Zagreb: Institut društvenih znanosti Ivo Pilar.

Daily, C. and D. Dalton (1993), Board of directors leadership and structure: Control and performance implications, *Entrepreneurship Theory and Practice*, **17**, 65-81.

Dalton, D. and C. Daily (1999), What's wrong with having friends on the board? *Across the Board*, **36**(3), 28-32.

Djankov, S. and P. Murrel (2000), *The Determinants of Enterprise Restructuring in Transition: An Assessment of the Evidence*, Washington D.C.: The World Bank.

Kakabadse, N., A. Kakabadse and A. Kouzmin (2001), Board Governance and Company Performance: Any Correlations? *Corporate Governance*, **1**, 24-30.

Kaplan, R. and D. Norton (1992), The Balanced scorecard measures that drive performance, *Harvard Business Review*, January/February.

Klaus, E. (2003), Privatisation and Corporate Governance in Eastern Europe: The Emergence of Stakeholder Capitalism, *Chemnitz East Forum* 19-22 March.

Maassen, G. (1999), An International Comparison of Corporate Governance Models, Amsterdam: SpencerStuard.

Maier, S. (2005), How global is good corporate governance, Ethical Investment Research Services.

Monks, R. and N. Minow (2004), Corporate Governance, 3rd edn., Blackwell Publishing.

Nadler, A. (2004), Building Better Boards, Harvard Business Review, May.

Organisation for Economic Co-operation and Development (1999), OECD Principles of Corporate Governance, Paris: OECD.

Organisation for Economic Co-operation and Development (2004), OECD Principles of Corporate Governance, Paris: OECD.

Pesqueux, Y. (2004), A Critical View on Corporate Governance and Its Performance Measurement and Evaluation Systems, *Managerial Finance*, **30**(8), 34-53.

Sachs, J., C. Zinnes and Y. Eilat (2000), The Gains from Privatization in Transition Economies: Is Change of Ownership Enough? Harvard Institute for International Development, CAER II Discussion Paper 63, Vol III.

Shirley, M. and P. Walsh (2000), *Public versus Private Ownership: The Current State of the Debate*, Washington, D.C.: The World Bank.

Vitezić, N. (2003), Weaknesses of Governance/Management in Transition Economies and Their Impact to the Economic Growth: A Case of Croatia, *19th EGOS Colloquium*, Copenhagen.

Vitezić, N. (2004), Ownership Structure and Performance Measurement in Transitional Economy: A case of Croatia, *20th EGOS Colloquium*, Ljubljana.

Zahra, S. and J. Pearce (1989), Board of directors and corporate financial performance: a review and integrative model, *Journal of Management*, **15**(2), 291-334.

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International Differences in Corporate Environmental Disclosure Practices: A Comparison between Malaysia and Australia

Abstract

This paper explores the applicability of Western accounting practice within an Islamic culture. The purpose of the paper is to identify factors contributing to corporate environmental reporting practice. Factors are sourced from an eclectic range of accounting and management theories. These include stakeholder, accountability, governance, reporting and positive accounting theory. The scope of the paper is limited to a content analysis of annual reports from both Australian and Malaysian companies for the years 2002 and 2003.

It is found that in comparison to Malaysian companies, Australian companies disclose a greater volume and cover a wider range of environmental information. The factors influencing environmental disclosure practices in Australian companies are financial performance and ISO 14001 certification. and In Malaysia the sole factor was ISO certification, reflecting a drive to enter international goods and services markets.

We conclude that environmental reporting does not fully consider environmental stewardship and may ultimately hinder Malaysian corporations' ability to respect Islamic culture and laws.

JEL Classification Numbers: M4, O2, P5

Key Words: environmental disclosure, content analysis, annual report, Malaysia, Australia

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1. INTRODUCTION

The *Sharia* specifies eight rules which are to govern private ownership and use of property. There is to be: continuous utilization thereof; payment of the *zakat* according to its market value; beneficent use; care not to have its use harm others; possession of property must comply with Islamic law; use must be neither parsimonious nor prodigal; self due benefits to the owner are permitted; and property transfers are to be subject to Islamic inheritance laws (Mannan, 1986, pp.: 55-74).

As environmental concerns intensify, the focus on business in society has increased. This exploratory paper examines environmental reporting motivations and trends in Australia and Malaysia. The purpose is to examine accountability and environmental reporting to understand the factors relating to corporate governance, accountability, transparency, and corporate responsibility. A research theme is how international accounting trends impact on a developing economy. This comparison provides information on the usefulness of voluntary reporting and international standards such as ISO 14001.

This paper contributes to the environmental accounting literature by examining whether deregulation, privatisation and globalisation support the 'greening' of those economies in the process of development. The complex social and environmental factors confronting corporate reporting impact on the very existence of accounting: Can accounting inform stakeholders about corporate social and environmental impacts? This is increasingly important in the developing world where accounting and reporting systems are influenced by different social, political, and cultural factors from those in the West. These factors, in turn, impact on regulatory debates concerning the role of accounting in the public sphere. If accounting is to remain relevant in such a world it must satisfy economic and social goals. The research examines the viability of voluntary accountability initiatives as they impact on Malaysia (Gray, *et al.*, 1995a, 1995b; Brammer and Pavelin, 2004).

Reporting on corporate social responsibility now includes environmental issues such as pollution abatement, carbon-trading and environmental litigation. Many researchers, however, question whether corporations are fully equipped to satisfy environmental accountability and responsible reporting obligations. For example, Margolis and Walsh (2003: 281) question the rationale of corporations and, by implication, corporate reporting:

From society's perspective, creating wealth and contributing to material wellbeing are essential corporate goals. But restoring and equipping human beings, as well as protecting and repairing the natural environment, are also essential objectives. Companies may be well designed to advance the first set of objectives, yet they operate in a world plagued by a host of recalcitrant problems that hamper the second set.

A content analysis is undertaken of Australian and Malaysian annual reports to determine the attitudes of accountants concerning the choice between wealth creation and social wellbeing. The key issue to keep in mind is the extent to which Malaysian and Australian corporations are committed to alleviating social distress and environmental damage.

2. Theoretical arguments for disclosing environmental information

2.1. Accountability and Accounting

Accountability is concerned with community and individual rights to receive information and the duty to supply it (Williams, 1989; Gray, 1992, 2002; Lehman, 1995, 2007). The definition of accountability that shapes the argument

is from Williams (1987: 170), whereby accountability is "an obligatory relationship created via transactions in which one party is expected to give an account of its actions to other parties."

Accountability is construed as a relationship between a stakeholder and a firm and specifies moral obligations and duties. Accountability contrasts with the technical features associated with decision-useful financial information that is designed to provide numbers (Gray, 1983; Roberts and Scapens, 1985; Gray, *et al.*, 1987, 1988, 1991; Williams, 1987; Laughlin, 1990; Roberts, 1991). But do numbers tell the true story? Do they provide a full narrative and theoretical analysis? It is to answer these questions that accountability was developed to guide an emancipatory accounting that aims to influence environmental and social relationships (Gray, 1983; Gray, *et al.*, 1987; 1988; 1991).

Accountability theory guides how we determine whether business is satisfying stakeholder demands to be informed about corporate external impacts on the natural environment. This is for two reasons: (a) to develop closer relationships and (b) to increase transparency (Gray, 1992; Lehman, 1995, 2007). The satisfaction of these objectives might be achieved by the provision of accounting information to relevant parties in discharging accountability obligations between corporations and other parties (Roberts and Scapens, 1985; Williams, 1987; Gray, *et al.*, 1988; Gray, 1992; Lehman, 1995; Gray, *et al.*, 1996).

Environmental accounting is about informing relevant publics about corporate impacts on the natural world. Environmental reporting provides a means to satisfy accountability obligations and explore the 'social ecology' (Williams, 1987; Lehman, 1995; Sherer, 2002). Extending accountability arguments, this study offers preliminary observations as they relate specifically to the Malaysian economy. The Malaysian context is compared with that of Australia to enhance our understanding of environmental and sustainability accounting. Of concern are the factors that would lead to the successful implementation of this accounting technology in a developing economy such as Malaysia.

2.2. Stakeholder Theory

A useful way to begin the analysis is to consider the stakeholder approach developed by Ullman (1985), Roberts (1992), and Gray, *et al.*, (1997). Stakeholder theory assumes:

...the corporations continued existence requires the support of the stakeholders and their approval must be sought and the activities of the corporation adjusted to gain that approval. The more powerful the stakeholders, the more company must adapt. Social disclosure is thus seen as part of the dialogue between the company and its stakeholders. (Gray, *et al.*, 1995a: 53) This definition was adapted by Maunders, *et al.* (1990) to extend stakeholder accountability to recognise the existence of specific community rights. These rights involved access to corporate information to satisfy stakeholder needs. They applied these ideas to develop a democratic approach to align business with the broader interests of the community. These arguments are extended to Australian and Malaysian accountability functions to consider stakeholder involvement.

In later work Gray, *et al.* (1997) adapted further the democratic model to incorporate a role for accounting and business. They now argue that the political influence and power of corporations must be given explicit consideration. They argue that control and power are important in social accounting research as these factors involve taking command over limited resources such as finance, labour, access to media, ability to legislate against corporations, or ability to influence corporations' consumption of goods and services. From an environmental point of view, it is possible that some stakeholder groups can be more effective than others in demanding social responsibility disclosures (Neu, *et al.*, 1998). This impacts on how corporations concentrate on providing information to satisfy specific information needs and demands. Ullmann (1985: 552) argues that corporate strategy involves:

As the second dimension, strategic posture describes the mode of response of an organization's key decision makers towards social demands. Many scholars in the area of strategic management have stressed the importance of values and attitudes in the strategy formulation process (Freeman, 1984; Glueck, 1980), and this is even more so in the context of responding to social demands (Carroll, 1981; Sturdivant and Ginter, 1977). An active posture implies a position in which managers seek to influence their organization's relationship with important stakeholders in order to achieve optimal levels of interdependence. Freeman suggests several techniques for monitoring an organization's stakeholders, and proposes four generic strategies:.

Thus, the more critical stakeholders' control, the more likely companies will be to satisfy these demands. According to Gray, *et al.* (1997), stakeholder theory is generally concerned with how an organization manages its stakeholders. On the one hand, Jawahar and McLauglin (2001) argue that organizations are likely to use different strategies to deal with different stakeholders and these strategies may change overtime. Stakeholder theory integrates the values of other cultures into the matrix of accounting, but this needs to be handled with sensitivity to local contexts. Thus, stakeholder theory is relevant for Malaysian accountants to whom environmental matters are important.

For Malaysia this is important, as aspects of the Islamic tradition lie outside the increasingly complex range of financial transactions being constructed. Moreover, from the perspective of Islam, Western stakeholder theory overlooks a significant claim: that of God. As drawn out by Hamid, *et al.* (1993) Judaic-Christian traditions often ignore the values found in Eastern philosophies and tend to dismiss the philosophies underlying Islam.

The response of managers to social issues is important for Malaysia, in particular, as it strives to integrate environmental values into accounting and business structures. Moreover, managerial responses can facilitate or hinder the implementation of environmental accounting. It is important to remember Islamic stakeholders have different values, – such as recognition of the importance of God. For example:

As private property is encouraged under Islam, its use to provide a just reward for its owner is permitted. But ultimate ownership of property lies with God, according to the Islamic tradition. Muslims consider themselves merely stewards for private property. Accordingly, money and property have to be utilized for the common good, not exploited, not overworked, not left unused (Hamid, *et al.*, 1993: 142-143).

The application of stakeholder theory shapes the studies explanation of corporate environmental engagement in Malaysia and Australia. It adds to the literature by explaining how local cultures and community needs reflect environmental accounting and reporting practices. From stakeholder theory it is clear that other stakeholders exist and must be given consideration in the reform of international accounting.

Further, globalisation poses threats to traditional cultures. Rather than respecting difference a crude capitalistic universalism and cultural imperialism represses valued particularities (Gallhofer and Haslam 1996: 907)

The sections that follow examine factors likely to influence companies to provide additional information about their impact on the natural environment. It must be kept in mind that failure to recognise the importance of culture and place jeopardises the success of environmental accounting initiatives.

2.3. Environmental Sensitivity

Those matters have potential consequences for the imposition in general of Western finance and accounting practices on an Islamic commercial community and with asset valuation practices in particular (Hamid, *et al.*, 1993: 142-143).

Literature on Islamic banking indicates that the nature of a company's operations may be a potential factor that affects environmental disclosure practice. Before delving into the factors important for Malaysia as compared to Australia, a number of issues must be considered. First, industry types could influence political visibility and assign pressures to companies to report in order to evade criticism from certain social and environmental groups (e.g. Patten, 1991; Neu, *et al.*, 1998). Second, the type of industry has been found to have strong relationship with decisions to disclose environmental information. Halme and Huse (1997) found that industry is the most influencing factor for a group of Scandinavian countries. Dierkes and Preston (1977) argue that a company that is directly operating and has a high impact on the environment (such as an extractive industry) are more likely to disclose environmental information than other industries. Other studies that have discovered a relationship between environmental disclosures and types of industries include Patten (1991), Gamble and Hsu (1995), Deegan and Gordon (1996), Frost and Wilmshurst (2000), Kolk et al., (2001), and Banerjee (2002).

Following previous research, this study divides Malaysian and Australian industry sectors into two distinct categories: environmentally sensitive and non-environmentally sensitive industries.

2.4 FINANCIAL PERFORMANCE

Prior empirical research on the nexus between financial and environmental disclosure has been inconclusive. For the professional accounting bodies in Australia and Malaysia the relationship between corporate financial performance and environmental disclosure is not clear or decisive. Alternative studies have reported contradictory evidence. Jaggi and Freedman (1982) and Cormier and Magnan (2001) find that no significant difference exists between financial performance and environmental disclosure. Richardson and Welker (2001) conclude that there is a negative association between disclosure and the cost of equity capital used. Some studies have found that financially under-performing companies have legitimately disclosed more extensive pollution disclosures (Freedman and Jaggi 1988; Murray, *et al.*, 2002). Other studies report positive relationships between financial performance and voluntary environmental disclosures (Teoh, *et al.*, 1998; Alnajjar 2000).

Overall the evidence suggests that the stronger the financial condition of a company, the more environmental information is disclosed. For example, Cormier and Magnan (1999) find that disclosure extensiveness is associated with various financial and economic performance indicators including information costs, return on assets, and the debt ratio. Such observations invariably lead to arguments supporting voluntary corporate reporting in relation to environmental matters, as argued earlier. However, these statistical approaches ignore the complexities of culture and local traditions such as that of Islam in Malaysia. Moreover, arguments have been presented which explain that mixed results concerning the relationship between environmental disclosures and financial performance might

reflect different statistical metrics used (Ullmann, 1985). Of course, accounting and market based measures have their own strengths and weaknesses and it is for that reason that McGuire, *et al.* (1988) argue that financial performance measures are better predictors for corporate social responsibility (which at that time included environmental disclosures). In this body of literature some studies use Return on Assets (ROA) and Return on Equity (ROE) as they relate to the 'owners' investment in the company and, or total investment of the company (Jaggi and Freedman, 1992: 706). Again the emphasis is on private ownership without an explicit consideration of the relationship to God in Malaysia as they begin to adopt ISO 14001.

2.5 Environmental Certification

The voluntary criteria of ISO 14001: *Environmental Management Standards* represents an international consensus on what constitutes best practice regarding environmental management systems. ISO 14001 is designed to assist organizations to improve their performance and make a positive impact on business results. ISO 14001 accredited companies are obliged to develop their mission, targets, policies, and procedures to continuously monitor the effects of their operations on the natural environment.

According to Sunderland (1997) international standards for environmental performance provide an opportunity for companies to demonstrate their commitment to environmental protection. Corbett, *et al.* (2003) surveyed companies in fifteen economies and discovered that among the main motivations for seeking ISO 14001 certification, are environmental improvements and corporate image, followed by improved procedures, and better relations with authorities and communities.

The message for Australian and Malaysian accounting is that ISO 14001 has the potential to increase trade opportunities and strengthen markets (*United Nations Industrial Development Organization* cited in Husseini, 2001). The ISO 14001 standard is based on a view that maintains that environmental and economic benefits will eventually lead to sustainable development. The ISO standard is specifically important for Malaysia as an economy that will increasingly rely on global markets. The issue is whether the standard acts as a transmission mechanism that imports other complex social factors at the expense of local considerations.

The examination of the influence of ISO 14001 certification on the environmental disclosure practices in Malaysia and Australia helps explain the role accounting plays in environmental issues together with the regulation/deregulation settings in these countries. To that end, Malaysian and Australian public companies are split into ISO 14001 accredited companies and nonaccredited ISO 14001 companies. The purpose is to determine the extent to

which they comply with market standards. This is a proxy that provides insight into corporate attitude and commitment to environmental management. It is a first step in exploring the role of environmental accounting in Malaysia. The comparison with Australia allows benchmarking to be undertaken. It is a first step in that the annual reports and other material did not display a commitment to environmental accounting in Malaysia. The study explores whether the certification acts as a more efficient signal for accounting systems to encounter environmental matters or not.

3. REGULATORY FRAMEWORK FOR ENVIRONMENTAL REPORTING

3.1. Environmental Regulation and Voluntary Initiatives in Malaysia

The *Malaysian Accounting Standard Board* (MASB) has incorporated standards that *explicitly* encourage greater disclosure of environment-related information. Para 10 of *Financial Reporting Standard* (FRS) 101: *Presentation of Financial Statements* states:

Many enterprises present, outside the financial statements, additional statements such as environmental reports and value added statements, particularly in industries where environmental factors are significant and where employees are considered to be an important user group. Enterprises are encouraged to present such additional statements if management believes they will assist users in making economic decisions.

Para 20 of *FRS 137*: *Provisions, Contingent Liabilities and Contingent Assets* recognizes environmental obligations such as penalties, or clean-up costs for environmental damage, and decommissioning costs of an oil installation as potential business provisions. In addition an appendix to Para 20 of the Standard provides examples of important issues such as contaminated land, decommissioning offshore oilfield costs and legal requirements to fit smoke filters.

In addition, the Malaysian government passed a number of laws regarding the preservation of the environment including *Environmental Quality Act, 1974*, *Occupational Safety and Health Act, 1994* and other environmental regulations and guidelines for issues dealing with pollution control and environmental impact assessment. The Malaysian *Five-Year Development Plan*, the fundamental framework for sound environmental management, provides the guiding principles for the *National Environmental Policy*. Chapter 22 in the *Ninth Malaysian Plan (2006-2010)*, promotes environmental stewardship. The plan highlights the government's concern with environmental stewardship and promotes involvement from the private sector and NGOs (Lehman, 2007).

In terms of reliance on voluntary corporate initiatives, it is important to observe that progress in Malaysia has been a result of the introduction of the *Corporate Social Reporting Framework* (CSRF). Bursa Malaysia introduced this framework on 5th September 2006. The framework provides a guideline for publicly listed companies in the practice of CSR. Introduction of the framework was a follow-up to the *2006 National Budget* where the Prime Minister highlighted the need for public disclosures on CSRF. The framework focuses on four areas: environment, workplace, community, and marketplace. It emphasizes how companies can improve performance in relation to CSR practices.

Various independent initiatives imply local encouragement for Malaysian companies to report environmental information. As reported by ACCA (2003), among the driving forces for environmental reporting in Malaysia are the introductions of the *Malaysia Code on Corporate Governance* listing requirements, the *National Annual Corporate Award* (NACRA), and *Malaysian Environmental Reporting Award* (MERA) changed to *Malaysian Environmental and Social Reporting Award* (MESRA) in 2004.

Another local initiative is the joint effort between ACCA Malaysia and the Department of Environment Malaysia (DoE) on the production of environmental reporting guidelines for Malaysian companies in 2003. These local initiatives not only indicate a major development in environmental reporting, but also offer important mechanisms through which progress is monitored and standards are improved. At the very least, these initiatives provide signals for corporations to engage in environmental disclosure practices.

3.2. Environmental Regulation and Voluntary Initiatives in Australia

In Australia, laws and regulations are slightly different. Australia has a mixed voluntary-regulatory framework for addressing environmental disclosure practices. Section 299(1) (f) of the *Corporations Act 2001* requires the following to be reported in the Directors' Report of a corporate annual report:

If the entity's operations are subject to any particular and significant environmental regulation under a law of the commonwealth or of a state or territory – give details of the entity's performance in relation to environmental regulation.

The Australian Accounting Standards Board (AASB) adopted relevant international accounting standards, for reporting periods beginning on or after 1 January 2005. In terms of environmental reporting initiatives, *AASB 137: Provisions, Contingent Liabilities and Contingent Assets*, paragraph 19 states:

It is only those obligations arising from past events existing independently of an entity's future actions (that is, the future conduct of its business) that are

recognized as provisions. Examples of such obligations are penalties or cleanup costs for unlawful environmental damage, both of which would lead to an outflow of resources embodying economic benefits in settlement regardless of the future actions of the entity. Similarly, an entity recognizes a provision for the decommissioning costs of an oil installation or a nuclear power station to the extent that the entity is obliged to rectify damage already caused.

Australia has an extensive suite of assessment, compliance, and reporting measures that can affect corporations by regulating their business. Among them are the *Environmental Protection and Biodiversity Conservation Act* 1999, *Renewable Energy (Electricity) Act 2000, Australian Forestry Standard 2002,* and numerous state government enactments and enforcement strategies. Apart from these requirements to disclose environmental compliance and performance, the *Financial Services Reform Act 2001* focuses on disclosures by fund managers and financial product providers about the role of labour standards and environmental, social, and ethical considerations in the selection, retention, or realization of investments.

Australian industrial companies are also required to report their emissions and inventory levels on specific substances and fuels to the *National Pollutant Inventory* (NPI) agency in their respective state or territory. The NPI provides a national database of emissions to the environment and is coordinated by the Australian Government *Department of Environment and Heritage*.

In 1996, Deegan and Newson prepared a report for the *Environmental Protection Authority* (EPA) in New South Wales titled *Environmental Performance Evaluation and Reporting for Private and Public Organisations*. The report discussed international best-practice environmental performance and reporting and indicates how Australian organizations stand in relation to world best practice. Additionally, the report provides recommendations both for the government and corporations to engage in and improve their environmental performance processes and reporting practices.

Initiatives from independent bodies also exist. For instance, in 2004 ACCA Australia and New Zealand launched an award for sustainability reporting. The award aims to recognize organizations that report and disclose environmental, social, or full sustainability information. The initiative was designed to raise awareness about corporate transparency issues and increase corporate accountability to stakeholders. Individual Australian bodies such as the Australian Conservation Foundation (ACF) and Australian Consumer Association (ACA) also initiate corporate ratings on corporate social and environmental performance. Additionally, RepuTex, a fully independent private company, established in 2000, carries out research and rating services in the area of corporate social responsibility including an environmental dimension. These environmental initiatives, among others, depict local efforts to

encourage companies to conduct business in a socially and environmentally responsible manner.

4. Environmental disclosure practices in Malaysia and Australia

4.1. MALAYSIAN SCENARIO

In the work of Teoh and Thong (1984) Malaysian environmental disclosure practices have been compared against recent developments in Australia, UK, and the US. Teoh and Thong (1984) surveyed chief executive officers in companies operating in Malaysia and analysed their views on corporate social responsibility and reporting practices. They reported that Malaysian companies were driven by profitability and concerns for the environment and other social issues were a minor factor. Nevertheless, among social issues, human resource information was ranked highly, but it was driven by loyalty and commitment to the company (for early work in this area see Guthrie and Parker, 1990).

Of the material disclosed in annual reports in Malaysia, environmental information was very general, qualitative in nature and variable in quality (Ahmad and Sulaiman, 2002; Yusoff, *et al.*, 2002). The 2002 ACCA national survey on the Malaysian main board listed companies by confirmed the low response; only 40 (7.7 per cent) companies voluntarily disclosed environmental information. This finding is low compared to 81 per cent for the *UK FTSE100*; 44 per cent for the *S&P US Top-50*; 74 per cent for the *Euro Top-50* ex-UK and 45 per cent of the *Global Fortune 250* issues environmental reports (Jackson cited in *The Edge*, 2004). The scenario clarifies the early standard of environmental reporting in Malaysia; however, the rate increased from 7.7 per cent to 10 per cent in 2003 (ACCA, 2004).

4.2. Australian Scenario

A number of studies have documented Australian voluntary corporate environmental disclosure practices. Australian environmental practices were low, but with an increasing trend in the period from 1967-1977 (Trotman, 1979) and 1980 to 1991 (Deegan and Gordon, 1996). Comparing Australian reporting practices with the US and the UK, the country's corporate social disclosures were lower; 56 per cent compared to 85 per cent and 98 per cent, respectively (Guthrie and Parker, 1990). Despite low engagement, Williams (1999) found that Australian companies are high environmental reporters among seven countries in Asia-Pacific region studied. The nature of environmental disclosures in Australia is qualitative in form, voluntary in practice, and shaped by motives to legitimize economic activities.

5. Methodology

The selection of countries in this study is particularly important given Williams' (1999) argument that Malaysia is at an early stage of environmental disclosures, while Australia is a leader on the issue among the seven Asia-Pacific countries studied (Guthrie and Parker, 1990; KPMG, 1999; 2002). This research is also motivated by the opportunity to compare and contrast results with other studies that have examined social and environmental disclosures. A key concern was to test the relationship between community concern for particular social and environmental issues (as measured by the extent of media attention), and annual report disclosures on the same issues. It was found that significant positive correlations were obtained for the general themes of environment and human resources. Following O'Donovan on this point:

From a theoretical perspective, it should be noted that concentrating on legitimacy theory, as an explanation for increased environmental disclosures, does not invalidate the likelihood that other social theories have explanatory power as well. The imprecise distinction between legitimacy, stakeholder and political economy theories should continue to be examined and explained. Care should also be taken in generalising too much from the results of this study. The study is exploratory in nature and while the methods used delivered a great deal of valuable qualitative data, it must be remembered that the results were based on six-in-depth interviews with personnel from three companies. (O'Donovan, 2002: 365).

Following O'Donovan (???2002) a content analysis was carried out to examine reasons for environmental disclosures. That analysis revealed ISO14001 as a key theme that consistently emerged from the annual reports. This analysis led to an initial focus on economic motives in the first instance. Obviously an economic focus contrasts with aspects of the literature developed earlier – our argument is that it is important to draw the two strands of information together to obtain a broad picture about environmental accounting and its implementation.

5.1. Research Technique

Content analysis was carried out on the 2002 and 2003 annual reports to measure the extent of environmental information disclosed and reasons for environmental disclosures. Content analysis is a typical technique to study environmental disclosures in corporate annual reports and assists in understanding the meanings, motivations, and corporate intentions (Gray, *et al.*, 1995b). Furthermore, the non-reactive measure has been widely employed in corporate social responsibility research (Wiseman, 1982; Zeghal and Ahmed, 1990; Roberts, 1992; Deegan and Gordon, 1996; Hackson and Milne, 1996; Cormier, *et al.*, 2004). The corporate annual report is used because it is the

most: significant source of environmental information, because of its statutory significance in the regulatory framework (Wiseman, 1982; Tilt, 1994; Deegan and Rankin, 1997); widely available source (Hughes, *et. al.*, 2001); and accessible source of information for listed companies (hard copy and electronic). It is the major means of communicating environmental information in Malaysia (ACCA, 2003) and Australia (Deegan and *Rankin*, 1997).

Content analysis provides a window into the world of management and why they provide environmental reports. This technique is used to reveal the differences of environmental disclosure practices in Australia and Malaysia – allowing an analysis of corporate disclosure practice in Australia and Malaysia.

5.2. STUDY SAMPLES

A total sample of 100 companies from both countries was selected. The selection was based on each company's magnitude in terms of market capitalization. This technique is similar to that of Guthrie and Parker (1990) who analysed annual report disclosures in BHP a large Australian mining company. The first hypothesis developed by Guthrie and Parker was: large environmentally sensitive companies disclose more environmental information.¹ Larger companies are more likely to have responded to environmental agenda than small or medium-sized companies (e.g., Belkaoui and Karpik, 1989; Gray and Collison, 1991; Gray, 1993). A non-probability sampling method known as purposive or judgmental sampling is used, in which the top 50 companies listed on both Bursa Malaysia (formerly known as Kuala Lumpur Stock Exchange) and Australian Stock Exchange as at financial year end 31 December 2003 are selected.

5.3. Measurements and Coding

With the notion of communication, this study will apply the 'meaning orientated' or thematic analysis, which focuses on the underlying environmental themes disclosed in the reports. This type of content analysis offers a better understanding on the environmental information studied, describing the intention of information preparers in the communication and dissemination of environmental importance. The coding scheme developed by Wiseman (1982) has been modified through preliminary examinations that seek new and up-to-date environmental themes. The process helped the construction of final environmental disclosure themes from the 18-items by Wiseman (1982) to a 24-item of disclosure index developed for this study. In develop-

¹ Public companies that have large numbers of shareholders, of whom some demand social and environmental information.

ing an improved index, preliminary content analyses were conducted on corporate annual reports of the top 10 of Australian public companies and 12 selected Malaysian public listed environmental reporting companies as at 31 December 2003.

The study applies Wiseman's (1982) rating scale on the extensiveness of environmental disclosures. It is a common measure of disclosure levels and the rating scale has been used by a large number of previous studies (e.g. Fekrat, *et al.*, 1996; Cormier and Magnan, 1999; Alnajjar, 2000; Bewley and Li, 2000; Patten, 2002). The use of a disclosure index is considered the best measurement technique because: it is based on the number of different topics and specificity of information provided; and it avoids elements of subjectivity (Bewley and Li, 2000).

For measurement purposes, a disclosure is defined as 'any passage of written or any form of an environmental issue'². Environmental disclosures were rated based on the presence and the degree of specificity of each environmental item. Levels of extensiveness were measured and grouped according to the nature of environmental information disclosed: (1) general information, (2) qualitative information, (3) quantitative information and (4) a combination of qualitative and quantitative information.

Three categories are provided. First, general information may consist of a short statement of the company's intention, general statements of 'the company will, the company does' nature, or any general statement of a sentence of length. The second category – 'qualitative information' – covers any declarative/narrative environmental information other than financial information in nature. However, this category may also contain 'a long' description on the environmental performance of the companies – 'long' being more than one sentence.

Additionally, it covers pictorial information such as graphs and photos depicting specific environmental messages or events. Category three – 'quantitative information' – relates to disclosures of actual financial numbers or any quantifiable environmental information. The fourth category – 'combination of qualitative and quantitative information' – represents any environmental information that falls in both categories (2) and (3). To eliminate, or at least, to reduce the degree of subjectivity that would be involved, an 'inter-rater' code method was applied where both researchers reviewed the respective reports. The scores were compared to detect any inconsistencies. If so, the score was re-analyzed and re-considered until a consensus score was reached.

² There is no uniformity in the definition of 'disclosure' in the literature – from the U.S.A. (Gamble et al, 1993: 38) to Australia (Guthrie and Matthews, 1985: 252) in the absence of mandated items for disclosure there is evidence of subjective evidence choice.

5.4. VARIABLE DEFINITION AND HYPOTHESES

The dependent variable, *total environmental scores* is the score on the disclosures' extensiveness of the 24 environmental items identified in the disclosure index (see Table VI). The independent variables used in the empirical tests represent the environmental sensitivity, ISO 14001 certification, or the financial performance of a corporation. Based on these predetermined factors that may influence environmental disclosures discussed earlier, the following hypotheses are proposed:

H₁: Environmentally sensitive companies tend to disclose more environmental information than non-environmentally sensitive companies.

H₂: Companies with high financial performance tend to disclose more environmental information than companies with low financial performance.

H₃: ISO 14001 accredited companies tend to disclose more environmental information.

TABLE 1. – Descriptive Statistics on Study Variables

Part A: Malaysia

Variables	Variable Name	Min	Max	Mean	Std. dev.
Total environmental scores	EnviScores	0	27	520	5983
Earnings before interest and tax	EBIT	79	2619	672	590
Earnings per share	EPS	30	2655	464	4542
Return on Asset	ROA	20	433	65	703
Return on equity	ROE	20	1242	162	1835
Net profit margin	Netmargin	1	175	3	27

Part B: Australia

Variables	Variable Name	Min	Max	Mean	Std. dev.
Total environmental scores	EnviScores	0	39	1264	9111
Earnings before interest and	EBIT	89	9170	1459	2069
tax					
Earnings per share	EPS	76	4000	719	8473
Return on Asset	ROA	11	193	63	394
Return on equity	ROE	24	649	169	1217
Netmargin	Netmargin	16	1640	171	250

Table 1 presents descriptive statistics for the variables used in this study. Part A shows significant variations in corporate environmental disclosures and the independent variables (in both Australia and Malaysia). The total environmental disclosure scores have a mean of 5.20 (0, 27) for Malaysia and 12.64 (0, 39) for

Australia. Variations are also evident on the independent variables of the studying both countries except for ROA and ROE where the mean values are quite similar for both countries (Malaysia – 6.5, 16.2; Australia – 6.3, 16.9).

5.5 Empirical Model

The purpose of the model is to determine and examine the extent to which environmental information is included in the annual report – it is postulated that increasing levels of disclosure reflect attempts by management to legitimise business activities (O'Donovan, 2002) by communicating environmental information. The empirical tests used measures of environmental sensitivity, financial performance, and ISO 14001 certification to predict cross-sectional variations in corporate environmental disclosure practices. A multiple regression analysis was used in understanding the possible factors leading toward environmental disclosures practice, based on a regression undertaken for the year 2003. The data were analyzed using the SPSS software package with proxies for financial performances: financial ratio variables, and environmental sensitivity and ISO certification were nominal variables. The empirical form of the model is:

EnvScore =
$$\beta_0 + \beta_1$$
SECTOR + β_2 ISO + β_3 EBIT + β_4 EPS + β_5 ROA
+ β_6 ROE + β_7 Netmargin + e

Where:

 β_0 = intercept terms

 β_1 , β_2 ... β_7 = coefficient of slope parameters; change in environmental disclosures associated with a unit change in respective variables

EnvScore = total environmental scores of all environmental information

EBIT = earnings before interest and tax

EPS = earnings per share

ROA = return on assets (net income/total assets)

ROE = return on equity (net income/owners' equity)

Netmargin = net profit margin (net profit/net revenues)

Sector = dummy variables for type of industry sector; (0 = non-environmental sensitive and 1 = environmental sensitive)

ISO = dummy variables for ISO 14001 certification; (0 = non ISO company and 1 = ISO company)

e = error terms

Assumptions for multiple regressions were tested to ensure the validity of results and some assumptions were violated. Hence, transformations of the variables were undertaken that involved logarithms, square roots, and inverse.
The best method of transformation was selected for each variable which resulted in the empirical testable models below:

Malaysian model

 $\begin{aligned} \text{EnvScore}_{\text{log}} &= \beta_0 + \beta_1 \left(\text{SECTOR} \right) + \beta_2 \left(\text{ISO} \right) + \beta_3 \left(\text{EBIT}_{\text{sqrt}} \right) + \beta_4 \left(\text{EPS}_{\text{sqrt}} \right) \\ &+ \beta_5 \left(\text{ROA}_{\text{log}} \right) + \beta_6 \left(\text{ROE}_{\text{log}} \right) + \beta_7 \left(\text{Netmargin}_{\text{log}} \right) + \epsilon \end{aligned}$

Australian model

$$\begin{split} \text{EnvScore} &= \beta_0 + \beta_1 \left(\text{SECTOR} \right) + \beta_2 \left(\text{ISO} \right) + \beta_3 (\text{EBIT}_{\text{log}}) + \beta_4 \left(\text{EPS}_{\text{log}} \right) \\ &+ \beta_5 \left(\text{ROA} \right) + \beta_6 \left(\text{ROE}_{\text{log}} \right) + \beta_7 \left(\text{Netmargin}_{\text{log}} \right) + \epsilon \end{split}$$

TABLE 2 Pearson Correlation Coefficients among Study Variables
Part A: MALAYSIA

	Envi	EBIT	EPS	ROA	ROE	Net	SECTOR	ISO
	Score					margin		
EBIT	.129	1000						
	(.277)							
EPS	059	.499**	1.000					
	(.365)	(.001)						
ROA	121	.014	.617**	1.000				
	(.242)	(.405)	(.000)					
ROE	150	.337*	.644**	.721**	1.000			
	(.191)	(.022)	(.000)	(.000)				
Net	.065	.370*	.240	.361*	.622**	1.000		
margin	(.354)	(.013)	(.079)	(.015)	(.000)			
SECTOR	.052	298*	269	.157	053	.148	1000	
	(.382)	(.039)	(.056)	(.180)	(.380)	(.195)		
ISO	.368	.282*	.251	.269	.160	.297*	.068	1.000
	(.014)	(.048)	(.070)	(.056)	(.176)	(.040)	(.346)	

Part B: AUSTRALIA

	Envi	EBIT	EPS	ROA	ROE	Net .	SECTOR	ISO
	Score					margin		
EBIT	075	1000						
	(.302)							
EPS	234	.454**	1.000					
	(.051)	(.000)						
ROA	.226	014	191	1.000				
	(.058)	(.921)	(.183)					
ROE	.032	.438**	.371**	.382**	1.000			
	(.413)	(.001)	(.008)	(.006)				
Net	162	.154	.070	.134	.239	1.000		
margin	(.131)	(.285)	(.628)	(.354)	(.095)			
SECTOR	.394	177	051	.271	001	126	1000	
	(.002)	(.218)	(.723)	(.057)	(.995)	(.382)		
ISO	.569	.187	.000	087	.012	072	.169	1.000
	(.000)	(.193)	(.998)	(.549)	(.934)	(.621)	(.241)	

Note: the top number represents the degree of correlation and the bottom number represents the level of significance

** Correlation is significant at the 0.01 level.

* Correlation is significant at the 0.05 level.

Correlation coefficients for all the variables are presented in Table II. The table results indicate the presence of multicollinearity in both Malaysian and Australian independent variables. There are eleven pair-wise relationships with significant results between Malaysian variables and among the significant pairs only one pair-wise relationship showed a correlation of more than 0.7. Careful consideration is made before including two variables in the same analysis when the correlation is 0.7 or more (Tabachnick and Fidell, 2001). Hence the variables for ROA and ROE are excluded from the subsequent analyses. Australian data (Table II) indicates four pair-wise relationships with significant correlations between the independent variables; however, the multicollinearity problem was minor (Tabachnick and Fidell, 2001). Therefore, all independent variables are acceptable and used for further analysis.

6. Analyses and findings

6.1. Descriptive Statistics

Slight improvements are observed on environmental disclosure practices in Malaysia and Australia respectively. For 2002 - (34 per cent to 37 per cent and 70 per cent to 75 per cent) and 2003 - (45 per cent to 50 per cent and 96 per cent to 100 per cent). Table 3 presents the number of companies disclosing some form of environmental information in the corporate annual reports. Additionally, both Malaysian and Australian listed companies have a comparable proportion of environmental and non-environmental sensitive companies (2002 - 3.8:6.2 and 3.4:6.6 and 2003 - 4.6:5.4 and 3.4:6.6 respectively). Table 4 reports that of the 50 companies studied in the two countries, the number of companies accredited with ISO 14001 certification are rather similar. For both the years, all ISO companies were found to disclose some form of environmental information.

		2002				2003			
T., J.,	Malaysia		Australia		Malaysia		Aust	ralia	
Industry				Dise	close				
	Yes	No	Yes	No	Yes	No	Yes	No	
Environmentally sensitive	13	0	15	0	17	2	17	_	
Non-environmentally sensitive	21	15	30	2	20	11	33	_	
Total	34	15	45	2	37	13	50	-	
Total Companies	4	9	4	7	5	0	5	0	

TABLE 3. - Number of Companies Disclosing Environmental Information According to Industry Type

6.2. Types of Environmental News

The type of news reported is a dimension studied. It is hypothesised that readers of annual reports require knowledge concerning a company's operations especially when any environmental harmful activity occurs. And, it is widely known that disclosing negative news establishes corporate credibility (KP-MG, 1993). From another angle, the rationale of corporate disclosure maintains that by reporting positive news leads to a situation that "*legitimize[s] the existence of their operations*" (Deegan and Rankin, 1999: 59).

	2002				2003			
100 14001	Mala	aysia	Aust	ralia	Mala	aysia	Aust	ralia
ISO 14001				Dise	close			
	Yes	No	Yes	No	Yes	No	Yes	No
ISO accredited	9	0	9	0	13	0	10	-
Non-ISO accredited	25	15	36	2	24	13	40	-
Total	34	15	45	2	37	13	50	-
Total Companies	4	9	4	7	5	0	5	0

TABLE 4. – Number of Companies Disclosing Environmental Information toISO 14000 Certification

Positive news represents any environmental information reported with a positive tone (the analysis involved reports about how companies are doing environmentally). Negative news obviously refers to 'bad' press for the company (and this can include news about companies failing to preserve the environment or violating environmental regulations). The first stage of the data analysis was to test news against industry categories. Needless to say this was for the environmentally sensitive companies. Chi-square tests indicated no significant difference in the Malaysian study, while the Australian study showed significant result in the type of news amongst the industries (x^2 : 2002 = 0.794, 0.002; 2003 = 0.0934, 0.002 respectively). More environmentally sensitive companies in Australia tend to report both positive and negative environmental news (see Table 5).

This finding contrasts with that of Deegan and Gordon (1996) who found that firms tend to disclose positive news and repress negative news. This finding may reflect a change in motivation among Australian companies in the years where more than half of the environmentally sensitive companies disclosed both types of environmental news. While Malaysian companies generally preferred to disclose positive and good environmental news.

		2002				2003			
Inductor	Malaysia		Australia		Malaysia		Australia		
Industry	+ve (%)	Com. (%)	+ve (%)	Com. (%)	+ve (%)	Com. (%)	+ve (%)	Com. (%)	
Environmentally sensitive	13 (38.2)	0	7 (14.9)	8 (17)	16 (43.2)	1 (2.7)	8 (16)	9 (18)	
Non-environmentally sensitive	20 (58.8)	1 (2.9)	26 (55.3)	4 (33.3)	20 (54.1)	0 (0)	30 (60)	3 (6)	
Total	33	1	33	12	36	1	38	12	
Chi-Square	Value: . Sig.: 07		Value: Sig.: .00		Value: Sig.: .09		Value: Sig.: .00		

TABLE 5. – 7	Type of Industry	and Environmental	News Disclosed
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6.3. NATURE AND TYPES OF ENVIRONMENTAL DISCLOSURES

Studying the level of extensiveness of environmental information reported in corporate annual reports, Table VI provides the mean score of each of the 24-environmental item together with the ranking of disclosures. Malaysian companies voluntarily disclosed general and qualitative type of environmental information (also, Nik Ahmad and Sulaiman, 2002). It is reported that environmental disclosures by Australian companies were more extensive i.e. from 'general' to 'quantitative' type of environmental information. The ranking of mean scores on types of environmental information studied differs in both countries except for the disclosure on environmental stakeholder engagement activities. Additionally, in both years of study, zero disclosures were done on potential litigation.

Based on the mean scores in 2002 information about the financing for environmental equipment, previous litigation, and environmental data were the three most extensive disclosures for Malaysian reporting practices. Land rehabilitation, or remediation, was the most extensive disclosures for Australian practices – (mean scores of 4.00). In 2003, Malaysia evident a similar trend where environmental data has the highest mean score (mean score of 2.17) while past and present environmental litigation was the information with the highest rank for Australia (mean score of 3.75). This reflects a declining trend on extensiveness of environmental disclosure practices. Generally, in both years a high level of extensiveness was discovered for financial factors and litigation disclosures on environmental information – qualitative to combination type of disclosures. While a majority of environmental disclosures were at the low end of extensiveness of general and qualitative disclosures.

MalaysiaAustraliaMalaysiaAustraliaScore (Rank)Score (Rank)Score (Rank)Score (Rank)Score (Rank)Score (Rank)Score (Rank)Past and current environmental expenditures3.00 (2)2.50 (5)3.25 (2)Future estimates of environmental equipment4.00 (1)3.33 (2)3.25 (2)Environmental cost accounting4.00 (1)2.56 (4)3.75 (1)Potential litigation4.00 (1)2.56 (4)2.47 (5)Potential litigation4.00 (1)2.66 (6)1.82 (3)2.21 (7)Environmental data1.67 (11)4.00 (1)2.00 (2)2.00 (8)Control, installations, facilities or processes described1.67 (11)4.00 (1)2.00 (2)2.00 (8)Conservation of natural resources1.92 (5)1.91 (9)2.00 (2)1.81 (9)Departments or offices for pollution control1.71 (10)1.63 (8)1.76 (11)Discussion of regulations and requirements1.88 (17)1.44 (12)1.69 (13)Environmental policies or company concer1.67 (11)1.61 (13)1.61 (12)1.50 (19)Environmental audit1.00 (16)1.16 (17)1.33 (14)1.36 (20)Environmental audit1.00 (16)1.61 (13)1.61 (13)1.64 (13)Environmental audit1.00 (16)1.61 (13)1.61 (13)1.64 (13)Environmental memberships/ relationships2.00 (4)1.56 (12)1.60 (13)Environmental autivities1.63 (13)1.92 (Year	2002	Year	2003
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N (cases) 34 45 37 50		1.64 (12)	1.20 (16)	1.50 (10)	1.33 (21)
	N (cases)	34	45	37	50

TABLE 6. - Nature and Type of Environmental Disclosures

Note: Mean scores are calculated based on environmental reports only.

Scores – 1: general disclosures; 3: quantitative disclosures; 2: qualitative disclosures; 4: combination of qualitative and quantitative disclosures.

Table 6. also demonstrates that in 2002, the least disclosed environmental information by Malaysian companies was environmental audit and environmental stakeholder engagement activities (mean score of 1.00 – short statement). Apparently, 'environmental stakeholder engagement activities' was also the least disclosed environmental information in 2003 (mean score of 1.00). It is postulated that given Malaysia's relatively embryonic status as an environmental reporter, wider stakeholder relationships and stakeholder engagement have not reached a prominent position in the accounting landscape (see Unerman and Bernett, 2004). Comparatively, environmental awareness and education programmes scored poorly for Australian companies (mean score of 1.33 – general or short statement). It is interesting to note that very few corporations in Australia have conducted and reported environmental educational programmes. This finding suggests that Australian companies engage with environmental activities only when directly related to their production process.

6.4. Multivariate Analysis – Environmental Disclosure Regression Model

This study continued to search for a reliable model, hence the best regression model. In doing so, the stepwise method was selected.

	D.f.	Sum of	Mean	t-ratio	p-value
		squares	square		
Regression	1	.679	.679	5331	.27
Residual	34	.4332	.127		
Variable	В	Beta	t-ratio	p-v	alue
Constant	.613		8233		
ISO	.286	.368	2309	.0	27

TABLE 7. - Regression Analysis of Malaysian Environmental Disclosures

Multiple R = .368 R^2 = .136 Adjusted R^2 = .110 Std. error = .35696

The results of the analyses are presented in Table VII and Table VIII, with Table VII showing the Malaysian results and Table VIII showing the Australian results. ISO is found to be the sole significant predictor of environmental disclosures among Malaysian companies. The R² value of 0.136 suggests that the model explains a certain amount of variation in the environmental disclosures. Nevertheless, the significant level is low (t-ratio = 5.331, p-value = 0.027 < 0.05). The coefficient of determination value of 0.136 indicates that only 13.6 % of the variation in environmental disclosure is due to the ISO variable (refer to Table 7.).

	D.f.	Sum of squares	Mean square	t-ratio	p-value
Regression	3	1881550	627183	13198	< .001
Residual	46	2185970	47521		
Variable	В	Beta	t-ratio	p-v	alue
Constant	16608		3878		
ISO	11.700	.519	4.731	<.	001
SECTOR	5.615	.295	2.685	.0	10
EPS	-4.969	219	-2.024	.0	49

TABLE 8. - Regression Analysis of Australian Environmental Disclosures

Multiple R = .680 R² = .463 Adjusted R² = .428 Std. error = 6.894

Comparatively, the Australian analysis identified ISO, SECTOR and EPS as possible predictors for environmental disclosure. The first two factors, ISO and SECTOR, have positive correlations while EPS has a negative relationship. Among the three predictors, the beta values presented in Table VIII showed that ISO has the highest explanatory power (51.9% of the total relationship). In total, the coefficient of determination value of 0.463 indicates that all three factors affect 46.3% of the variation in the environmental disclosures made by Australian companies (t-ratio = 13.198, p-value < 0.001).

6.5. Tests of Hypotheses

Based on the Malaysian analysis, H1 and H2 are rejected while H3 is accepted. Overall, the findings suggest that Malaysian companies that are accredited with ISO 14001 certification tend to disclose more environmental information publicly. Within the sample companies, it describes that there exists an inconsistency with other previous studies. With only ISO being the sole factor discovered to influence environmental reporting practice in Malaysia, this finding indicates that deregulation and less-government control is the preferable choice among companies to engage with 'green' practice.

Based on the Australian analysis, all three hypotheses are accepted. The analysis illustrates that among Australian companies, financial performance, industry type, and ISO 14001 certification are amongst the significant determinants of environmental disclosures. While Malaysian results are limited, Australian results indicate a consistency of environmental disclosure practice with the literature (e.g. Freedman and Jaggi, 1988; Gamble and Hsu, 1995; Hackston and Milne, 1996; Deegan and Gordon, 1996; Halme and Huse, 1997; Frost and Wilmshusrt, 2000; Al-Tuwaijri, *et al.*, 2004; Murray, *et al.*, 2006).; that is, industry type, environmental management and performance, and financial performance are the key influencing factors of corporate environmental disclosure practice.

With ISO a significant predictor for environmental disclosures both in Malaysia and Australia it provides some reasons why companies deem ISO certification as a strategic posture. It also provides some reasons how the era of globalization has set guidelines for companies. Speculating, environmental disclosures may reflect responsiveness to global market demands at the expense of stakeholder engagement in the Malaysian case.

7. CONCLUSIONS

Generally, more Australian companies disclose environmental information in corporate annual reports than Malaysian companies. However, the levels of extensiveness of environmental disclosures in the two countries are rather similar – majority of disclosures made are of general and qualitative in nature. In terms of the types of environmental news, more Australian companies tend to report both positive and negative news compared to the majority of Malaysian companies that report only positive news. It is postulated that the reasons for such corporate reporting behaviour is not simply legitimatising motives or fulfilling the information demands of stakeholders but to portray good corporate image thus could gain access to wider markets.

The results of the regression tests are of interest for several reasons. The tests determine the potential factors that may have some force on motivating environmental disclosure practices. It was found that ISO 14001 certification influenced Malaysian and Australian companies - such voluntary initiative has potential to shape environmental disclosure initiatives in a sustainable direction. It was of interest that ISO 14001 certification influenced companies to engage with environmental disclosure practice. ISO 14001 certification provides confidence to external parties, providing evidence that corporations have control over significant aspects of their operations and activities and are committed to comply with all relevant environmental legislation and regulations and that they are continuously improving their environmental performance. High voluntary environmental disclosures among ISO companies may also result from global economic pressures on the countries' business market. Specifically, Malaysia being one of Asian most progressing and developing countries has to struggle in the highly demanded international market condition. Malaysian companies may receive pressures from various parties including competitors and suppliers for ethical consciousness with regards to accounting for the environment before being able to penetrate wider market. Thus, the tension from the economic factors has put force for corporations (both in Malaysia and Australia) to engage with the reporting initiative.

In the case of Australia, all three determinants of environmental disclosures identified in this study showed significant results – financial performance, industry sector, and ISO 14001. This result indicates the maturity of environmental reporting practice in Australia; in which the factors that influence environmental disclosures are consistent with the key factors determined by previous literature. These to some extent create an impression that currently environmental disclosure practices in Malaysia and Australia are primarily influenced by market factors. Hence, the application of stakeholder study does not seem to be an appropriate foundation to understanding environmental disclosure behaviour. Companies, especially in Malaysia deem environmental reporting as a practice to support the trends of globalisation and privatisation rather than to attain the support from corporate stakeholders.

It is interesting to study in future research whether this reporting scenario will prolong or things will change and the sense of environmental belonging will increase among companies; being the corporate citizens of a nation. Further exploration in relation to this matter should contribute to a deeper understanding about corporate motivations toward environmental reporting practice. A detailed study relating to motivations may contribute to the body of knowledge on specific and local factors that influence such business strategic management practices.

This study concludes that based on the samples studied, Australia has better environmental disclosure practices compared to Malaysia. The results in this study suggest that corporate environmental reporting in Malaysia is less transparent hence the values of governance, accountability, and responsibility in accounting and reporting are still in question. It therefore signals that the role of accounting and reporting towards the 'greening' of a developing economy is yet to be achieved. Trade and open markets are the key factors for a company's system and practice - this supports the interpretative argument made in the earlier sections. This indicates potential to create tensions with local and particular values; is a focus on local values rather than global values the solution to a 'green' reporting practice? Study findings also conclude that ISO 14001 certification has become a new element in voluntary environmental accounting dimension in the two Asia-Pacific realms. Future exploration can be extended to other economies to confirm the significance of ISO 14001 as it relates to environmental accounting. Then, comparisons can be made whether the Western developed countries are under similar pressure.

REFERENCES

ACCA (2002), The State of Corporate Reporting in Malaysia. Malaysia, Association of Chartered Certified Accountants, ACCA Malaysia Sdn. Bhd.

ACCA (2003), The State of Corporate Reporting in Malaysia. Malaysia, the Association of Chartered Certified Accountants, ACCA Malaysia Sdn. Bhd.

ACCA (2004), Report Summary: The State of Corporate Environmental and Social Reporting in Malaysia 2004. Kuala Lumpur, ACCA Malaysia Sdn. Bhd.: 1-25.

Alnajjar, F., K. (2000), Determinants of Social Responsibility Disclosures of U.S. Fortune 500 Firms: An Application of Content Analysis, *Advances in Environmental Accounting and Management*, **1**, 163-200.

Banerjee, S. B. (2002), Corporate Environmentalism: The Construct and Its Measurement, *Journal of Business Research*, **55**(3), 177-191.

Belkaoui, A. and P. Karpik (1989), Determinants of the Corporate Decision to Disclose Social Information, *Accounting, Auditing and Accountability Journal*, **2**(1), 36-51.

Bewley, K. and Y. Li (2000), Disclosure of Environmental Information By Canadian Manufacturing Companies: A Voluntary Disclosure Perspective, *Advances in Environmental Accounting and Management*, 1, 201-226.

Brammer, S. and S. Pavelin (2004), Voluntary Social Disclosures by Large UK Companies, *Business Ethics: A European Review*, **13**(2-3), 86-99.

Choi, J. (1998), An Investigation of the Initial Voluntary Environmental Disclosures Made in Korean Semi-Annual Financial Reports, APIRA, Osaka, Japan.

Clarkson, M. (1995), A Stakeholder Framework for Analyzing and Evaluating Corporate Social Performance, *Academy of Management Review*, **20**(1), 92-117.

Corbett, C., M. Luca and J.-N. Pan (2003), Global Perspective on Global Standards: A 15-Economy Survey of ISO 9000 and ISO 14000, *ISO Management Systems*, 31-40.

Cormier, D. and I. Gordon (2001), An Examination of Social and Environmental Reporting Strategies, *Accounting, Auditing and Accountability Journal*, **14**(5), 587-617.

Cormier, D. and M. Magnan (1999), Corporate Environmental Disclosure Strategies: Determinants, Costs and Benefits, *Journal of Accounting, Auditing and Finance*, 14(4), 429-451.

Cormier, D., I. Gordon and M. Magnan (2004), Corporate Environmental Disclosure: Contrasting Management's Perceptions with Reality, *Journal of Business Ethics*, **49**(2), 143-165.

Cowen, S., L. Ferreri and L. Parker (1987), The Impact of Corporate Characteristics on Social Responsibility Disclosure: A Typology and Frequency-based Analysis, *Accounting, Organizations and Society*, **12**(2), 111-122.

Crowther, D. (2002), A Social Critique of Corporate Reporting: A Semiotic Analysis of Corporate Financial and Environmental Reporting, Hampshire: Ashgate.

Deegan, C. (2000), Financial Accounting Theory, Sydney: McGraw Hill Book Company.

Deegan, C. and B. Gordon (1996), A Study of the Environmental Disclosure Practices of Australian Corporations, *Accounting and Business Research*, **26**(3), 187-199.

Deegan, C. and M. Rankin (1996), Do Australian Companies Report Environmental News Objectively? An Analysis of Environmental Disclosures by Firms Prosecuted Successfully by the EPA, *Accounting, Auditing and Accountability Journal*, **9**(2), 50-67.

Deegan, C., M. Rankin and J. Tobin (2002), An Examination of the Corporate Social and Environmental Disclosures of BHP from 1983-1997: A Test of Legitimacy Theory, *Accounting, Auditing and Accountability Journal*, **15**(3), 312-343.

Dierkes, M. and L. Preston (1977), Corporate Social Accounting and Reporting for the Physical Environment: A Critical Review and Implementation Proposal, *Accounting, Organizations and Society*, **2**(1), 3-22.

Fekrat, M., C. Inclan and D. Petroni (1996), Corporate Environmental Disclosures: Competitive Disclosure Hypothesis using 1991 Annual Report Data, *The International Journal of Accounting*, **31**(2), 175-195.

Freedman, M. and B. Jaggi (1988), An Analysis of the Association between Pollution Disclosure and Economic Performance, *Accounting, Auditing and Accountability Journal*, 1(2), 43-58.

Frost, G. and T. Wilmshurst (2000), The Adoption of Environmental-Related Management Accounting: An Analysis of Corporate Environmental Sensitivity, *Accounting Forum*, **24**(4), 344-365. Gamble, G. and K. Hsu (1995), Environmental Disclosures in Annual Reports and 10Ks: An Examination, *Accounting Horizons*, **9**(5), 34-54.

Gamble, G., K. Hsu, C. Jackson and C. Tollerson (1996), Environmental Disclosures in Annual Reports: An international Perspective, *The International Journal of Accounting*, **31**(3), 293-331.

Gray, R. (1983), Accountability, Financial Reporting and the Not-For-Profit Sector, *British Accounting Review*, **15**(1), 3-23.

Gray, R. (1992), Accounting and Environmentalism: An Exploration of the Challenge of Gently Accounting for Accountability, Transparency and Sustainability, *Accounting, Auditing and Accountability Journal*, **17**(5), 399-425.

Gray, R., C. Dey, D. Owen, R. Evans and S. Zadek (1997), Struggling with the Praxis of Social Accounting: Stakeholders, Accountability, Audits and Procedures, *Accounting, Auditing and Accountability Journal*, **10**(3), 325-364.

Gray, R., D. Owen and K. Maunders (1987), *Corporate Social Reporting: Accounting and Accountability*, Hemel Hempstead: Prentice Hall.

Gray, R., D. Owen and K. Maunders (1988), Corporate Social Reporting: Emerging Trends in Accountability and the Social Contract, *Accounting, Auditing and Accountability Journal*, 1(1), 6-20.

Gray, R., D. Owen and K. Maunders (1991), Accountability, Corporate Social Reporting and the External Social Audits, *Advances in Public Interest Accounting*, **4**, 1-21.

Gray, R., D. Owen and C. Adams (1996), Accounting and Accountability: Changes and Challenges in Corporate Social and Environmental Reporting, London: Prentice Hall.

Gray, R., J. Bebbington and W. Walden (1993), *Accounting for the Environment: The Greening of Accountancy Part II*, London: Paul Chapman.

Gray, R., R. Kouhy and S. Lavers (1995a), Corporate Social and Environmental Reporting: A Review of the Literature and a Longitudinal Study of UK Disclosure, *Accounting, Auditing and Accountability Journal*, **8**(2), 47-77.

Gray, R., R. Kouhy and S. Lavers (1995b), Constructing a Research Database of Social and Environmental Reporting by UK Companies, *Accounting, Auditing and Accountability Journal*, **8**(2), 78-101.

Guthrie, J. and L. Parker (1990), Corporate Social Disclosure Practice: A Comparative International Analysis, *Advances in Public Interest Accounting*, **3**, 159-175.

Hackston, D. and M. Milne (1996), Some Determinants of Social and Environmental Disclosures in New Zealand Companies, *Accounting, Auditing and Accountability Journal*, **9**(1), 77-108.

Halme, M. and M. Huse (1997), The Influence of Corporate Governance, Industry and Country Factors on Environmental Reporting, *Scandinavian Journal of Management*, **13**(2), 137-157.

Hamid, S., R. Craig and F. Clarke (1993), Religion: A Confounding Cultural Element in the International Harmonization of Accounting? *Abacus*, **29**(2), 131-148.

Hughes, S., A. Anderson and S. Goldenc (2001), Corporate Environmental Disclosures: Are They Useful in Determining Environmental Performance? *Journal of Accounting and Public Policy*, **20**(3), 217-240.

Husseini, A. (2001), Industrial Environmental Standards and Their Implementation in the World, National Environmental Management Seminar (EM 2001), Kuala Lumpur, Malaysia.

Jaggi, B. and M. Freedman (1982), An Analysis of the Informational Content of Pollution Disclosures, *The Financial Review*, 142-152.

Jaggi, B. and M. Freedman (1992), An Examination of the Impact of Pollution Performance on Economic and Market Performance, *Journal of Business Finance and Accounting*, **19**(5), 697-713.

Jawahar, I. and G. Mclaughlin (2001), Toward a Descriptive Stakeholder Theory: An Organizational Life Cycle Approach, *Academy of Management Review*, **26**(3), 397-414.

Kelly, G. (1981), Australian Social Responsibility Disclosure: Some Insights into Contemporary Measurement, *Accounting and Finance*, **21**(2), 97-104.

Kolk, A., S. Walhain and S. Wateringen (2001), Environmental Reporting by the Fortune Global 250: Exploring the Influence of Nationality and Sector, *Business Strategy and The Environment*, **10**(1), 15-28.

KPMG (1993), International Survey of Environmental Reporting.

KPMG (1999), *KPMG International Survey of Environmental Reporting 1999*. The Netherlands, Institute for Environmental Management, 1-31.

KPMG (2002), KPMG International Survey of Corporate Sustainability Reporting 2002, The Netherlands, 1-32.

Lehman, G. (1995), A Legitimate Concern for Environmental Accounting, *Critical Perspectives on Accounting*, **6**, 393-412.

Lehman, G. (2007a), The Accountability of NGOs—Accounting and the Public Sphere, *Critical Perspectives on Accounting*, **18**(6), 645-669.

Lehman, G. (2007b), A Common Pitch and the Management of Corporate Relations: Interpretation, Ethics and Managerialism, *Journal of Business Ethics*, **71**(2), 161-178.

Margolis, J. and J. Walsh (2003), Misery Loves Companies: Rethinking Social Initiatives by Business, *Administrative Science Quarterly*, **48**(2), 268-305.

McGuire, J., A. Sundgren and T. Schneeweis (1988), Corporate Social Responsibility and Firm Financial Performance, *Academy of Management Journal*, **31**(4), 854-872.

Milne, M. (1991), Accounting, Environmental Resource Values, and Non-market Valuation Techniques for Environmental Resources: A Review, *Accounting, Auditing and Accountability Journal*, **4**(3),

Murray, A., D. Sinclair, D. Power and R. Gray (2006), Do Financial Markets Care About Social and Environmental Disclosure? Further Evidence and Exploration from the UK, *Accounting, Auditing and Accountability Journal*, **19**(2): 228 – 255.

Neu, D., H. Warsame and K. Pedwell (1998), Managing Public Impressions: Environmental Disclosures in Annual Reports, *Accounting, Organizations and Society*, **23**(3), 265-282.

Neuman, W. (2003), Social Research Methods: Qualitative and Quantitative Approaches, Boston: Allyn and Bacon.

Nik Ahmad, N. and M. Sulaiman (2002), Environmental Disclosures in Malaysian Annual Reports: A Study of the Construction and Industrial Products Sectors, European Accounting Association 25th Annual Congress, Copenhagen Business School, Denmark.

O'Donovan, G. (2002), Environmental Disclosures in the Annual Report: Extending the Applicability and Predictive Power of Legitimacy Theory, *Accounting, Auditing and Accountability Journal*, **15**(3), 344-371.

Patten, D. (1991), Exposure, Legitimacy and Social Disclosure, *Journal of Accounting and Public Policy*, **10**(4), 297-308.

Patten, D. (2002), The Relation between Environmental Performance and Environmental Disclosure: A Research Note, *Accounting, Organizations and Society*, **27**(8), 763-773.

Jackson R. quoted in Iskandar, A. (2004), Management: Trends in Environmental Reporting, *The Edge*, Singapore.

Richardson, A. and M. Welker (2001), Social Disclosure, Financial Disclosure and Cost of Capital, *Accounting, Organizations and Society*, **26**(7-8), 597-616.

Roberts, J. and R. Scapens (1985), Accounting Systems and Systems of Accountability--Understanding Accounting Practices in Their Organisational Contexts, *Accounting, Organizations and Society*, **10**(5), 443-456.

Roberts, R. (1992), Determinants of Corporate Social Responsibility Disclosure: An Application of Stakeholder Theory, *Accounting, Organizations and Society*, **17**(6), 595-612.

Shearer, T. (2002), Ethics and Accountability: From the for-itself to the for-the-other, *Accounting*, *Organizations and Society*, **27**(6), 541-575.

Sunderland, T. (1997), Environmental Management Standards and Certification: Do They Add Value? in Sheldon, C., ed., *ISO 14000 and Beyond: Environmental Management Systems in the Real World*, Sheffield: Greenleaf Publishing, 127-140.

Tabachnick, B. and Fidell, L. (2001), Using Multivariate Statistics (4th edn.), MA: Allyn and Bacon.

Teoh, H.-Y., F. Pin, T. Joo and Y. Ling (1998), *Environmental Disclosures-Financial Performance Link: Further Evidence From Industralising Economy Perspective*, APIRA 98, Osaka: Japan.

Teoh, H.-Y. and G. Thong (1984), Another Look at Corporate Social Responsibility and Reporting: An Empirical Study in a Developing Country, *Accounting, Organizations and Society*, **9**(2), 189-206.

Tilt, C. (1994), The Influence of External Pressure Groups on Corporate Social Disclosure, *Accounting, Auditing and Accountability Journal*, 7(4), 47-72.

Trotman, K. (1979), Social Responsibility Disclosures by Australian Companies, *The Chartered Accountant in Australia*, 24-28.

Ullmann, A. (1985), Data in Search of a Theory: A Critical Examination of the Relationships among Social Performance, Social Disclosure, and Economic Performance of U.S. Firms, *Academy of Management Review*, **10**(3), 540-557.

Unerman, J. and M. Bennett (2004), Increased Stakeholder Dialogue and the Internet: Towards Greater Corporate Accountability or Reinforcing Capitalist Hegemony? *Accounting, Organizations and Society*, **29**(7), 685-707.

Walden, W. and B. Schwartz (1997), Environmental Disclosures and Public Policy Pressure, *Journal of Accounting and Public Policy*, **16**(2), 125-154.

Williams, P. (1987), The Legitimate Concern with Fairness. Accounting, Organizations and Society, **12**(2), 168-198.

Williams, S. (1999), Voluntary Environmental and Social Accounting Disclosure Practices in the Asia-Pacific Region: An International Empirical Test of Political Economy Theory, *The International Journal of Accounting*, **34**(2), 209-238.

Wiseman, J. (1982), An Evaluation of Environmental Disclosures Made in Corporate Annual Reports, *Accounting, Organizations and Society*, 7(1), 53-63.

Yusoff, H., N. Yatim and N. Nasir (2002), Environmental Disclosures Amongst Malaysian Reporting Companies, Conference on Financial Reporting: Issues in the 21st. Century, Intekma Resort and Convention Centre, Shah Alam, Malaysia.

Zeghal, D. and S. Ahmed (1990), Comparison of Social Responsibility Information Disclosure Media Used by Canadian Firms, *Accounting, Auditing and Accountability Journal*, **3**(1), 38-53. MICHAEL GRAFF

Law and Finance: The Creditor Rights Index Revisited

Abstract

The "law and finance theory" predicts that a common law system provides the best basis for financial development and economic growth, followed by Scandinavian and German origin civil law, and finally French origin civil law. This paper summarises the key points of the theory as well as a number of sceptical views. Moreover, it argues that the theory faces an identification problem, since the majority of common law countries have a market-based financial system, whereas the majority of civil law countries have a bankbased financial system. Furthermore, it is shown that one of the cornerstones of the law and finance theory, its proposition that a common legal tradition implies a similar set of legal rules and procedures to protect financial investors, does not hold empirically. Finally, it is shown that recent additions to the theory's creditor rights indicators data pool are eliminating the (weak) correspondence between business law and the legal family that could be found in the original data set. Accordingly, the theory's claim that creditor protection is largely determined by the legal tradition of a particular country has to be reconsidered.

JEL Classification Numbers: K22, G20, P00

Key Words: legal tradition, creditor rights

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1. INTRODUCTION

The "law and finance theory" argues that the legal system, which today's countries inherited from the past, is crucial in the way it favours financial development. Moreover, as financial development is now widely regarded as a driving force of economic growth, the legal system is perceived as an ultimate cause of economic growth and development. As well as this, the theory identifies two dominating legal traditions: the common law tradition inherited from England, and the civil law tradition that goes back to 19th Century codifications in France, Germany and Scandinavia. The major conclusion is that a common law system provides the best basis for financial development and economic growth, followed by the civil law system of Scandinavian and German origin and finally civil law of French origin.

This paper will first give a short summary of the main assumptions, hypotheses and findings of the theory. It then reviews some of the critical views. Finally, it will take a closer look at some of the data that constitutes the empirical basis of the theory. It will be shown that the major predictions of the theory are not supported.

2. The law and finance theory

Less than ten years after the seminal contributions—two widely cited papers by La Porta, *et al.* (1997, 1998; henceforth LLSV)—the finance and law literature has produced its first synthesis. Written by two insiders, Beck and Levine (2005) gives an authoritative overview of this research programme, its foundations, assumptions, data and main findings. In particular, Beck and Levine (2005: 251) argue that the law and finance theory explains why "some countries have well-developed growth-enhancing financial systems, while others do not", and why "some countries developed the necessary investor protection laws and contract-enforcement mechanisms to support financial institutions and markets, while others have not." The theory's ability to answer these questions is attributed to two related hypotheses (*op cit.*: 251 f):

(1) "[I]n countries where legal systems enforce private property rights, support private contractual arrangements, and protect the legal right of investors, savers are more willing to finance firms and financial markets flourish."

(2) "The different legal traditions that emerged in Europe over previous centuries and were spread internationally through conquest, colonization, and imitation help explain cross-country differences in investor protection, the contracting environment, and financial development today."

Two mechanisms are held responsible for these outcomes (op cit.: 252):

(1) A *political mechanism* that refers to a difference between legal traditions "in terms of the priority they attach to private property vis-à-vis the rights of the State" and

(2) An *adaptability mechanism*, referring to formalism that may impair the legal system's capability to "minimize the gap between the contracting needs of the economy" and the normative status quo.

The microeconomic foundation of the theory is the "willingness to invest". On this basis, it argues that a major function of corporate law is to ameliorate the inherent risk involved in financial contracts due to informational asymmetry and moral hazard or outright fraud. Accordingly, to the degree that the legal system offers effective protection against the occurrence and, if necessary, the consequences of these types of market failure or deception, financial investors will be more inclined to lend (directly on financial markets or via financial intermediaries). Notwithstanding the differences between equity and debt finance, a unifying notion in the law and finance theory is the distinction between insiders (stakeholders like "the State" or the workers) and outsiders (shareholders as well as creditors). The legal system's support to

outsiders, which is likely to increase their willingness to invest, is expected to be beneficial to financial development, whereas a strong position for insiders would be detrimental.

The original contribution of the law and finance theory is how it combines these well-established ideas and assumptions with its peculiar view of legal history. Let us therefore take a closer look at how the theory deals with the historical legacy of law.

The civil-law family goes back to the Roman Empire, the first society with a statuary law. Its contemporary successors are the French, German and Scandinavian branches. The theory's view of the French legal system is that it "evolved as a regionally diverse mélange of customary law, law based on the Justinian texts, and case law." However, "by the 18th Century, there was a notable deterioration in the integrity and prestige of the judiciary. The Crown sold judgeships to rich families and the judges unabashedly promoted the interests of the elite and impeded progressive reforms. Unsurprisingly, the French Revolution turned its fury on the judiciary and quickly strove to (a) place the State above the courts and (b) eliminate jurisprudence. ... Napoleon sought a code that was so clear, complete, and coherent that there would be no need for judges to deliberate publicly about which laws, customs, and past experiences apply to new, evolving situations. Furthermore, this approach required a high degree of procedural formalism to reduce the discretion of judges ..." (op cit.: 254 f). In contrast to this, the German legal system is seen as the result of an evolution rather than a revolution. When Bismarck decided "to codify and unify the whole of private law in Germany that led to the adoption of the German civil law in 1900", Germany had a history of "deliberations that illustrated how courts weighted conflicting statutes, resolved ambiguities, and addressed changing situations." Hence, there was "a dynamic, common fund of legal principles that then formed the basis for codification in the 19th Century. Moreover, in contrast to the revolutionary zeal and antagonism toward judges that shaped the Napoleonic Code, German legal history shed a much more favorable light on jurisprudence and explicitly rejected France's approach. ... Whereas the Napoleonic code was designed to be immutable, the Bürgerliches Gesetzbuch was designed to evolve." (op cit.: 266). Regarding the Scandinavian civil-law family, the theory it is not very explicit, but it stresses that, like Germany, Scandinavia rejected the legal traditions brought about by the French Revolution.

The other major legal legacy, common law, is characterised as (*op cit.*: 257 f) "unique both in terms of (a) the relationship between the State and the Courts and (b) jurisprudence. ... English law evolved based on the resolution of specific disputes and increasingly stressed the rights of private property [and] the courts developed legal rules that treated large estate holders as private property owners and not as tenants of the king. Indeed, the common law at the dawn of the 17th Century was principally a law of private property. ... In terms of legal formalism, English law typically imposes less rigid and formal-

istic requirements ... In terms of jurisprudence, the English common law tradition is almost synonymous with judges having broad interpretation powers and with courts molding and creating law as circumstances change ... rather than adhering to the logical principles of codified law."

How does this view of the history of law combine with the theory's focus on lenders' property rights? The conclusion can only be that common law is adequately flexible to deal with financial contracts that are contingent on a host of foreseeable and unforeseeable states of nature and business. For the civillaw family, the conclusions will be mixed. While the revolutionary attempt to establish a permanent order of reason through codified, positive law is the antithesis to flexibility, the German and Scandinavian systems, having rejected the French approach, are perceived to be somewhat less inadequate.

Accordingly, with respect to the *adaptability mechanism* the theory predicts the following ranking of legal systems. Common law is superior, German and Scandinavian civil law are intermediate, and French civil law is inferior.

Regarding the *political mechanism*, the law and finance theory perceives "the State" as potentially harmful by interfering with the activity of private economic agents. In Beck and Levine's words (*op cit.*: 260): "A powerful State with a responsive civil law at its disposal will tend to divert the flow of society's resources toward favored ends, which is antithetical to competitive financial markets."¹ The *political mechanism* hence implies a binary classification of legal systems in terms of appropriateness to promote financial development.

The theory of law and finance thus combines a specific interpretation of the history of law with two proposed mechanisms that may affect the willingness to invest. It predicts that common law countries should have a legal system that effectively guarantees the highest level of protection to financial investors, followed by Scandinavian and German origin civil law countries, whereas French legal origin should yield the poorest results.

3. The theory in practice

A straightforward application of the theory is to compare investor protection across countries belonging to the different legal traditions, and this is precisely what LLSV undertake in their seminal papers. To this end, they collect and process information on commercial law and procedural regula-

¹ Note that what Beck and Levine are describing here is an interventionist state rather than a civil law country; and while it may be true that interventionist policy is encountered relatively more frequently in countries with a civil law tradition, the two phenomena may be fundamentally unrelated. An alleged causality between civil law and interventionism would hence merit more elaboration. How a civil law background would make the state prone to interfere with the functioning of financial markets, or how civil law would make it difficult to credibly commit not to interfere, remains very unclear.

tions relating to shareholders and creditors from 49 countries. This exercise in comparative analysis of contemporary law results in eight variables that characterise various aspects of shareholder rights (six of them binary and two continuous), and in five variables that characterise creditor rights (four of them binary and one continuous). These variables are defined as follows (LLSV, 1998, Table 1):

3.1. Shareholder rights

One share-one vote: one if the company law or commercial code of the country requires that ordinary shares carry one vote per share, zero otherwise. Equivalently, this variable equals one if the law prohibits the existence of both multiple-voting and non-voting ordinary shares and does not allow firms to set a maximum number of votes per shareholders irrespective of the number of shares she owns; zero otherwise.

Proxy by mail: one if shareholders are allowed to mail their proxy vote; zero otherwise.

Shares not blocked: one if firms are not allowed to require that shareholders deposit their shares prior to a general shareholder meeting thus preventing them from selling those shares for a number of days; zero otherwise.

Cumulative voting: one if shareholders are allowed to cast all of their votes for one candidate standing for election to the board of directors (cumulative voting) or if there is a mechanism of proportional representation in the board by which minority interests may name a proportional number of directors to the board; zero otherwise.

Oppressed minority: one if minority shareholders are granted either a judicial venue to challenge the decisions of management or of the assembly or the right to step out of the company by requiring the company to purchase their shares when they object to certain fundamental changes, such as mergers, assets dispositions and changes in the articles of incorporation; zero otherwise. Minority shareholders are defined as those shareholders who own 10 per cent of share capital or less.

Pre-emptive rights: one if shareholders are granted the first opportunity to buy new issues of stock and this right can only be waived by a shareholder vote; zero otherwise.

Extraordinary meeting: minimum percentage of ownership of share capital that entitles a shareholder to call for an extraordinary shareholders' meeting. It ranges from one to 33 per cent.

Mandatory dividend: equals the percentage of net income that firms are required to distribute as dividends among ordinary shareholders; zero for countries without such a restriction.

3.2. CREDITOR RIGHTS

Reorganisation: one if a reorganisation procedure imposes restrictions, such as creditors' consent to file for reorganisation; zero for countries without such restrictions.

No automatic stay: one if a reorganisation procedure does not impose an automatic stay on the assets of the firm upon filing the reorganisation petition; zero otherwise

Secured first: one if secured creditors are ranked first in the distribution of the assets of a bankrupt firm; zero if non-secured creditors, such as the government and workers, are given priority.

No management stay: one if an official appointed by the court, or by the creditors, is responsible for the operation of the business during reorganization; equivalently if the debtor does not keep the administration of its property pending the resolution of the reorganization process; zero otherwise.

Legal reserve: minimum percentage of total share capital mandated to avoid dissolution of an existing firm; zero for countries without such a restriction.

These indicators obviously capture interesting features of shareholders' and creditors' positions in corporate finance. Now, to condense this information, LLSV propose two indices, which they call "anti-director rights" and "creditor rights". The anti-director rights index results from adding "Proxy by mail", "Shares not blocked", "Cumulative voting", "Oppressed minority", "Pre-emptive rights" plus one if "Extraordinary meeting" is less than or equal to 10 per cent (the sample median). This index thus ranges from one to six. The creditor rights index results from adding the four binary creditor rights variables; that is, "Reorganisation", "No automatic stay", "Secured first" and "No management stay". It hence ranges from zero to four.

Recall that the law and finance theory predicts that common law countries should perform better than civil law countries in protecting both shareholders and creditors, and that the French legal legacy will produce the most unfavourable results. Comparing the index means across groups of countries belonging to the same legal tradition, this is exactly what LLSV read from their data. The common law countries show an average of 4.0 on the anti-director rights index, whereas the Scandinavian, German and French civil law country averages are 3.00, 2.33 and 2.33, respectively. Accordingly, as predicted, the common law countries seem to offer better shareholder protection on average than the civil law countries. Though the ranking within the civil law family is not exactly in line with the theory, which would have the French system perform worst, the evidence nevertheless seems favourable with respect to the basic distinction of law families. Regarding the creditor rights index, the common law countries on average score highest with 3.11, whereas the Scandinavian, German and French law family groups' scores are 2.00, 2.33 and 1.58. Accordingly, LLSV (1998: 1139) conclude that both indi-

ces support the law and finance theory and that it "is not the case that some legal families protect shareholders and others protect creditors."

This is an impressive finding. On this basis, these indices are widely accepted as a verification of the first link in the theory of law and finance's causal chain that runs from legal origin to financial development.²

4. Sceptical views

While the theory of law and finance is generally regarded as a major achievement and its key texts are now standard references in the field of finance and development, a number of sceptics have formulated their doubts. In this section, we shall discuss some of the typical criticisms that have been brought forward so far.

A frontal attack holds that the law and finance theory is a skilful piece of "pro markets" ideology, designed to deliver a rationale to the alleged superiority of the Anglo-Saxon model of corporate finance (Singh, *et al.*, 2001). While there may be some truth in this argument, this is certainly not sufficient to invalidate the theory and its predictions, which are a set of hypothesis with indisputable empirical content.

To deconstruct empirical approaches, one can claim that the links are flawed, that the facts are flawed, or identify contradictory facts that falsify the theory, and, indeed, the finance and law theory has been criticised along these three lines.

Some concerns have been raised about the law and finance theory's division into major legal families and about a limited number of assignments of countries to a specific group that may be open to doubts (e.g., see Berkowitz, *et al.*, 2003). Yet, the classification is accepted as basically sound, so that this line of criticising is constructive and aims at eliminating minor deficiencies of the theory.

A more challenging critique refers to the observation that the majority of the legal systems were spread around the world together with the financial systems of the originating countries, so that the law and finance theory faces an identification problem. In particular, Fohlin (2000) shows that common law was generally imported together with the English financial system, so that the alleged causal impact of the legal tradition cannot be separated from the coincident transplantation of a wider range of institutions from England. What the theory attributes to legal origin should, accordingly, instead be interpreted as a result of the financial system that the country inherited.

Let us consider this point in some depth: the Anglo-Saxon financial system is usually described as "market-based" and "specialised", whereas the continen-

 $^{^2}$ This paper does not deal with the second link (financial development – economic growth). See GRAFF (2006) for a discussion on how this link is addressed by proponents of the theory.

tal systems and Japan's are labelled as predominantly "bank-based" and "universal". Along these distinctions, there is a lively academic discussion about normative and theoretical questions (e.g. see Allen and Gale, 1995 and Levine, 2002), but it has proven notoriously difficult to construct corresponding empirical classifications of the world's financial systems. Nevertheless, a few attempts covering a reasonably large number of countries have been documented. On this basis, Levine (2002) performs extensive cross-country analyses to detect a possible supremacy of either market-based or bank-based financial systems. He concludes that while there is evidence for the importance of the *level* of financial development, the *type of system* does not seem to matter. Demirguç-Kunt and Maksimovic (1998, 2002) analyse firm-level data across countries and find that firms' access to external finance is positively related to the level of financial development, but not to the expansion of the capital market relative to the banking sector. Fohlin (2000) develops a classification of financial systems for 26 countries ranging back to the 19th Century and concludes that, until recently, the typology of financial systems was remarkable stable over time. However, economic history over the last 150 years does not support the view that any specific system provided a superior environment to achieve economic prosperity; in the long term the type of legal system does not seem to have had any perceivable impact on economic growth. Though these studies suffer from the inherent difficulty of classifying the world's economies along a binary category, the fact that they fail to come up with significant outcomes with respect to "bank-based" versus "capital market-based" systems supports the argument that it is the quality rather than the specific type of financial system that matters for growth and development. Hence, if legal origin were a reliable predictor of the quality of a country's financial system, the law and finance theory would indeed highlight an important link.

We now turn to sceptical views that cast doubt on this link. A theory is flawed if other causes than those claimed by the hypotheses of the theory are responsible for an observable outcome. Though alternative, competing hypotheses for an observed phenomenon that are just as plausible, or even more plausible, than the original proposition, cannot *falsify* a theory, they can nevertheless contribute to it seeming less likely. Regarding the finance and law theory, this type of criticism has been brought forward in manifold ways. These critiques accept as fact that common law countries protect investors better than German and Scandinavian civil law countries, but it disputes that a country's legal origin is responsible for this outcome.

Along these lines, it has been argued that a "transplant effect", that is the way in which the original legal system was transferred to receiving countries, rather than the legal origin itself, is responsible for the quality of investor protection (Berkowitz, *et al.*, 2003).

Other authors have undertaken to show that LLSV's anti-director and creditor rights indices are better explained by a country's predominant religion. Rather than its legal origin they conclude that the true causal chain runs from religion to investor protection (Stulz and Williamson, 2003).

Still other studies refer to cultural characteristics. Licht, *et al.* (2001) submit the LLSV data to a secondary analysis and find that cultural dimensions (measured by worldwide socio-psychological surveys) are at least as effective as the legal origin in explaining the inter-country variation in the legal characteristics of the financial system. High scores on the anti-director rights index are associated with an English speaking country group that is to a large extent identical with the common law group and very similar in cultural terms. On the other hand, the cultural dimension performs better in distinguishing between high and low creditor rights country groups than the common versus civil law distinction. According to this finding, it seems more likely that common characteristics of the predominantly English speaking and common law country group go hand in hand with a comparable setup of the stock market. Differences in credit and banking should be attributed to other factors than the legal traditions, such as national culture, which may, but need not, coincide with the inherited legal tradition.

Yet another argument refers to climatic conditions that either made overseas colonies attractive for European settlers or otherwise turned them into predominantly "extractive" colonies, which resulted in comparatively lower institutional quality in the latter than in the former (Acemoglu, *et al.*, 2001 and 2002). Accordingly, the climate is regarded as an alternative to legal origin in predicting institutional quality. The proponents of the law and finance theory have been quite receptive to what they call the "endowment view" and rarely fail to mention this as an alternative explanation (see, in particular, Beck, *et al.*, 2003).

Rajan and Zingales (2003) argue that financial development has undergone "great reversals". Thus, while the common law countries nowadays tend to have more developed arms-length finance, in the beginning of the 20th Century the civil law countries were more advanced in this respect. Their explanation is that civil law is likely to give more influence to important "incumbents" in shaping corporate law, and the great reversal of the 20th Century was that in the initial free trade regime incumbents promoted financial development, whereas the breakdowns of the free trade regime during World Wars I and II and the protectionism they initiated made incumbents opt for financial repression, in the sense of the seminal works of Shaw (1973) and McKinnon (1973), to secure their rents. This "great reversals" theory is another view that the finance and law theory has readily accepted as an important critique (see Beck, *et al.*, 2003). Yet, it is an extension of the law and finance theory rather than a critique, since it delivers a plausible story for the political mechanism which the original contributions fail to provide.

Finally, a link between property rights and financial development (i.e., institutions and growth) can be addressed without imposing the legal origin paradigm that unifies the law and finance theory (e.g. Knack and Keefer, 1995, Grogan and Moers, 2001, and Claessens and Laeven, 2002). This allows for more flexibility in accurately tracing differences in the factual quality of law, so that the results of this competing approach seem theoretically less appealing, but more informative from an applied point of view.

In sum, it is fair to conclude that alternative hypotheses explaining the different levels of investor protection, or in more general terms, the quality of the financial system, are indeed offering plausible alternatives to the law and finance theory. Yet, they do not rule out that the theory may highlight important links between legal tradition and financial development.

Let us therefore turn to the law and finance indicators originally put together by LLSV (1998) and since referred to in an impressive number of papers. First, we shall briefly examine the extent to which the sceptics maintain that what LLSV identify as the fundamental source of variation in investor protection is actually a distinction between the capital market-based, arms' length, English origin financial system versus the bank-based, relationship oriented, Continental origin financial system rather than the a distinction between the origins of the legal family. To this end, we refer to an index developed by Demirguç-Kunt and Levine. This is designed to reflect the structure of a country's financial system in the late 20th Century on a spectrum from more bank-based to more market-based. Demirguc-Kunt and Levine recode this into a binary market versus bank-based variable.³ As mentioned above, it is notoriously difficult to propose a solid empirical decomposition of the world's financial systems into two groups, and different vintages of this variable actually differ in how a number of countries are classified. Yet, any sensible attempt to get an empirical hold of the bank-based versus capital market-based dichotomy can only be welcomed. Referring to the binary variable "market" from the Demirguç-Kunt and Levine (2001) data supplement, the common law countries' mean score equals 0.61, implying that 61 per cent of the common law countries are classified as having market-oriented financial systems against only 39 per cent that are classified as bank-based. For the civil law countries, the finding is practically reversed, 68 per cent fall into

³ The dummy variable "market" was first introduced by Demirguç-Kunt and Levine (1999). It is obtained by recoding one for positive and zero for negative values of a continuous "structure index", where the latter is the average of the deviations from the mean for (1) the inverse of the size of banking sector relative to stock market (approximated by deposit money bank assets divided by stock market capitalisation), (2) the inverse of activity of banking sector relative to stock market (approximated by deposit money bank divided by total value traded) and (3) the efficiency of stock markets relative to the banking sector (approximated by total value traded as share of GDP x overhead costs). Higher values are supposed to indicate a more market-based financial system.

the bank-based category and only 32 per cent are classified as market-based. While this is clearly not a perfect correspondence of common law with market-based and civil law with bank-based, the difference is statistically significant at the 5 per cent level (F = 4.03).

Now, since "market" results from a dichotomisation of a continuous variable, this relatively clear result could be due to an arbitrary aggregation. It is easy to show that this is not the case. If we compare the group means for civil and common law countries of the underlying continuous structure index, the differences are statistically even more pronounced; the *F*-statistics jumps to 8.30, passing a 1 per cent test for differences between group means. Accordingly, accepting that the structure index captures essential features of the bank-based versus market-based paradigm, the law and finance theory indeed faces an identification problem. However, since the correspondence is far from perfect, the legal family origin might still reveal essential features beyond the market structure paradigm.

Referring to the core argument of the finance and law theory, it is necessary to determine whether there are differences in LLSV's measures of investor protection that are related to legal origin, but not to the type of financial system as classified by Demirguç-Kunt and Levine. To this end, Table 1 shows the group means for the anti-director rights and the creditor rights indices for common versus civil law countries and bank-based versus market-based financial systems.

Legal	Anti-director	Creditor	Financial	Anti-director	Creditor
origin	rights index	rights index	system	rights index	rights index
Civil law	2.42 (n = 31)	1.79 (n = 29)	Bank-based	2.61 (n = 28)	2.44 (n = 27)
Common	4.00	3.11	Market-	3.52	2.10
law	(n = 18)	(n = 18)	based	(n = 21)	(n = 20)

TABLE 1. – LLSV investor protection indices by legal family and financial system

From Table 1, the group means of LLSV's investor protection indices for shareholder and creditor rights are both higher for common law countries. Moreover, analysis of variance confirms that both differences are statistically significant at the 1 per cent level (F = 24.97 for anti-director rights and F = 13.05 for the creditor rights index, respectively). However, the market-based financial system group scores higher on the anti-director rights index, but *lower* on the creditor rights index. For the anti-director rights index, the difference is again statistically significant (F = 6.59), but not for the creditor rights index (F = 0.73, corresponding to p = 0.4). Nevertheless, the group means for creditor protection are contrary to what one would expect if one held the market-based type of financial system to be superior in both shareholder and creditor protection.

Accordingly, if we are prepared to put trust in the LLSV investor protection indices and the financial system classification by Demirguç-Kunt and Levine, we must conclude that market oriented financial systems protect shareholders better than bank-based financial systems, but not creditors, where the difference is rather tipping to the other side. In other words, the law and finance theory indeed appears to explain *general* superiority of investor protection in common law countries. This is a neat result, but as we have stressed, it rests on the assumption that the financial system classification as well as the investor rights indices are valid instruments to capture what they are designed to. We leave the financial system classification aside and now proceed to an assessment of the theory's measurement of investor rights.

Referring to the cross country data on investor protection which accompanied the seminal papers of the theory, a recent re-analysis (Graff, 2006) demonstrates that the LLSV indicators neither constitute a one- nor a two-dimensional space. Yet the law and finance theory predicts that legal origin should determine both creditor and shareholder protection along similar lines. Accordingly, the LLSV indicator set should reflect different surface phenomena that emerge from a common underlying variable "investor protectiveness" which in turn is rooted in the legal tradition. Translated into quantitative statistics, if this were true, a factor analysis should confirm that the total variance of the indicators can reasonably be attributed to a single factor. However, as Graff (2006) shows, a principal component analyses comprised of the ten shareholder and creditor rights indicators that LLSV chose to include in their indices clearly rejects a one-factor solution. The first principal component reproduces only 26 per cent of the indicator set's variance. Moreover, three out of ten loadings (correlations of the variables with the first principal component) are negative, whereas LLSV consistently assign higher values to their indicators for better protection. Furthermore, the communalities (squared factor loadings, indicating the shares of variance of the indicators reproduced by the first component) show that some indicators have virtually nothing in common with the first component. Accordingly, the data do not support a one-dimensional notion of investor protection.

Although LLSV claim that investor protection is a universal feature, they nevertheless group their indicators into shareholder and creditor rights and calculate two indices. This indicates that, though the theory does predict something else, LLSV are inclined to distinguish two dimensions of investor protection. And indeed, Graff (2006) finds some support for a two-factor solution that is in line with a two-dimensional data set. Looking at loadings of at least |0.5| only, the first principal component is related exclusively to creditor protection indicators and the second component exclusively to shareholder protection indicators. However, while the signs are equal for the high loadings on the first component, we encounter two positive and one negative high loading for the second component, and three out of six shareholder protection indicators as well as one out of four creditor protection indicators.

tors do not load highly on their respective components. Moreover, the first two components reproduce no more than 42 per cent of total variance. A standard principal component analysis extracts two additional factors with eigenvalues greater than one, and the rotated loading matrix for these four components does not imply any obvious interpretation. Accordingly, though an imposed two-dimensional structure fits the indicator set somewhat better than a one-dimensional, the presence of wrong signs as well as of indicators that are uncorrelated to either component imply that the indicator set cannot reasonably reduced into one or two dimensions.

Aggregation of the data is a dubious endeavour, since minor differences in indicator selection, weighting or scaling will considerably change the aggregate measure. We should, therefore, not expect particularly robust results. This is exactly what is shown in Graff (2006 and 2007), where after a few minor but sensible modifications to the way in which LLSV aggregate their indicators into the anti-creditor rights and anti-director rights indices, the relative difference between the group means of civil law and common law countries drops sharply and becomes statistically insignificant.

Graff (2006) argues that LLSV's creditor right index disregards information that would produce results less in line with the theory's prediction of the legal family rank order in terms of investor protectiveness. In particular, LLSV (1998: 1135) maintain that one of their indicators, the legal reserve capital requirement to avoid dissolution, is merely a "remedial" right, which "protects creditors who have few other powers ..." Now, the group mean of this indicator is 1 per cent for the common law countries, whereas the Scandinavian, German and French legal legacy counties score 16 per cent, 41 per cent and 21 per cent on average. This creditor rights protection indicator thus scores lowest for the common law countries, which-without the "remedial" interpretation-would contradict the law and finance theory. However, this interpretation is questionable. It appears very much like an *ad hoc* rationalisation of an unexpected result. Indeed, LLSV do not seem too convinced of their interpretation, since they do not include this indicator into their creditor rights index. After all, their interpretation would imply that out of all indicators for creditor protection, this particular one had to be entered with a negative sign. When the creditor rights index is recalculated with all five indicators,⁴ the alleged superiority of the common law countries in protecting creditor rights is considerably reduced (3.11 versus 1.79 with four indicators compared to 3.17 versus 2.66 with five indicators), and the difference between the groups, which is significant for the original index (F = 13.0), turns insignifi-

⁴ To make its scale comparable to the other indicators in the creditor rights index, following LLSV's general approach, the reserve requirement indicator is dichotomised before adding it to the index (by assigning one if the reserve requirement is greater than 0% and zero if there is no such requirement, which splits the sample neatly in 43% countries that score zero versus 57% that score one).

cant (F = 1.84, corresponding to p = 0.18). Moreover, though the rank order predicted by the law and finance theory does not manifest itself perfectly in the LLSV creditor rights index, a test for linearity is passed at the 1 per cent level (F = 13.73). The recalculated index, however, stands in clear contradiction to the law and finance theory, since the common law countries rank inferior to the German law legacy group, and a test for linearity does not even pass at the 10 per cent level (F = 2.73). Note also that LLSV (1998: 1138) concede that–even according to their own specification of the creditor rights index–the "United States is actually one of the most anticreditor common-law countries". In other words, the predictions of the law and finance theory do not hold for creditor protection in the German origin country group, which does better than the common law countries, nor for the US, which finds itself close to the bottom.

A similar picture emerges when the LLSV anti-director rights index is analysed in detail (Graff, 2007). Again, there is an indicator which LLSV call a "remedial" protection and exclude from their index, whereas Graff argues that a distinction between "remedial" and other protection is not warranted. Another indicator ("one share-one vote") is excluded from the index for unconvincing reasons. Furthermore, the "extraordinary meeting" indicator, which is originally measured on a numerical scale, is dichotomised in a particular way that makes the common law country group appear more protective towards financial investors. A minor modification is to assign one if the requested share to call in an extraordinary meeting is less rather than less or equal (as in LLSV) to the sample median. Graff argues that this dichotomisation is preferable, since it splits the sample into groups that are closer to each other in numbers. Finally, he argues that the "proxy by mail" and the "shares not blocked before meeting" variables are practically irrelevant and should be excluded from an index for shareholder protection. They reflect the easiness with which shareholders can cast their votes, but the small public shareholder, who might find it inconvenient not to be able to cast her vote by mail or to be urged to deposit her shares before the meeting is in fact rational to be apathetic. What matters is whether large minority shareholders have a voice, and given that the latter are mostly institutional investors, the provisions captured by the two indicators in question are probably a very minor concern. Now, these modifications to the LLSV anti-director rights index practically eliminate the legal family inter-group differences (1.94 for common law versus 2.11 for civil law as compared to 2.42 versus 4.0 in LLSV's original index, with a drop in the *F*-statistics from 25 to 0.18, corresponding to p = 0.67).

In a related paper, Spamann (2006) presents a recoded version of the LLSV anti-creditor rights index for the same countries as in the original sample, but based on detailed information from local lawyers. He finds that, after his recoding, the common law countries no longer score higher on the anti-creditor rights index than the civil law countries. This result is the same as in Graff (2007), but instead of suggesting modifications to the dichotomisation

and aggregation of the LLSV indicators, Spamann sticks to the suggested dichotomisation and aggregation while reassessing the indicators. His result is thus based on a critique of the indicators, while Graff's takes the indicators at face value and criticises the subsequent steps.

Taken together, these findings cast serious doubt on the empirical basis presented in the seminal papers of the theory. The conjecture that legal origin is the key variable determining to which degree financial investors are protected is not reflected by the LLSV data set, which cannot be reduced to one dimension. Furthermore, the prediction that common law countries offer better protection to financial investors than civil law countries is not nearly as clearly supported by the data as claimed by LLSV and subsequent proponents of the theory. Accordingly the LLSV creditor rights and anti-director rights indices–as well as the studies that rely on the original data–should be referred to with caution.

Notwithstanding all critiques, the LLSV data can be seen as a heuristic exercise to open new and exciting paths for empirical analyses. Rather than a constituting a final result, they are an invitation for improvements and additions. Given the impact of the theory, it is not a surprise that some effort should be devoted to improving the seminal data set and to extending the sample. Indeed, after LLSV made their indices available to the academic community, there have been some attempts to proceed in this direction. What surprises is how little work has been done along these lines. We now conclude our analyses by turning to these contributions.

5. THE LLSV INDICATORS: REVISIONS AND EXTENSIONS

As we have demonstrated, both the anti-director and the creditor rights index are constructed on a series of arbitrary and sometimes dubious decisions. This implies that the support that any of these can deliver to the theory is at best very modest. Moreover, the proponents of the theory themselves consider it convincingly empirically supported by cross-country comparisons of the anti-director rights index, whereas they concede shortcomings regarding creditor protection (see LLSV, 1998, *op cit.*, as well as Beck and Levine, 2005). According to this self-assessment, the theory would first of all require better support from new or more adequate data on creditor protection.

Now, for the purpose of this paper, we leave the theory's predictions regarding shareholder protection undisputed and take another look at creditor rights. Note that this just defines the focus of the following reflections and does by no means implies that in this respect we take the theory for granted, which would be difficult, having in mind the findings reported in Graff (2007) and Spamann (2006).

The most significant extension of the original LLSV data so far has recently been provided by Simeon Djankov, Carallee McLiesh and Adrei Shleifer (the

latter one of the contributors to the seminal LLSV papers), which refers to creditor rights. In particular Djankov, *et al.* (2007) construct a data set (henceforth DMS) covering 133 countries and four binary indicators,⁵ which are described as equivalent to those constituting the LLSV creditor rights index.⁶

Unfortunately, the legal reserve capital requirement to avoid dissolution, which LLSV interpreted as a "remedial" rather than a proper right, is no longer reported in the DMS data set. We hence cannot-as with the LLSV data-construct an amended five-indicator index where we take the presumed remedy at face value, and find that with this modification, the level of creditor protection between county groups of different legal origin reflected in the index is considerably less in line than with the four-indicator measure.

To start with, we look at whether-or to which degree-the four DMS indicators differ from the LLSV indicators they are supposed to mimic. To this end, Table 2 presents non-parametric correlations for those countries that are included in both data sets.

		LLS	V	
-	Reorganisation	No automatic stay	Secured first	No management stay
CR1	0.50*	0.24	0.02	0.48*
(restrictions on entering)	(47)	(47)	(48)	(47)
CR2	0.43*	0.36*	0.21	0.18
(no automatic stay	(47)	(47)	(48)	(47)
CR3	0.06	0.18	0.59*	0.13
(secured creditor paid first	(47)	(47)	(48)	(47)
CR4	0.28*	0.57*	0.27*	0.40*
(management does not stay	(47)	(47)	(48)	(47)

TABLE 2. - LLSV and DMS creditor rights indicators: Spearman's Rho

⁵ The cited paper refers to 129 countries. Presently (September 2007), the data set that has kindly been made available on the Internet comprises 135 countries (economics.harvard.edu/faculty/ shleifer/Data/dataset_creditpaper_Nov_05.xls). We base our assessment on this last vintage.

⁶ The description of the data that is supplied together with the data posted on the web is as follows: "an index aggregating creditor rights, following La Porta and others (1998). A score of one is assigned when each of the following rights of secured lenders are defined in laws and regulations: First, there are restrictions, such as creditor consent or minimum dividends, for a debtor to file for reorganization. Second, secured creditors are able to seize their collateral after the reorganization petition is approved, i.e. there is no 'automatic stay' or 'asset freeze.' Third, secured creditors are paid first out of the proceeds of liquidating a bankrupt firm, as opposed to other creditors such as government or workers. Finally, if management does not retain administration of its property pending the resolution of the reorganization." This data set is hence designed to enlarge the coverage of the LLSV creditor rights index and at the same time to preserve its character.

As the non-parametric correlation coefficients given in Table 2 reveal, the DMS indicators are not merely an extension of the LLSV data. If this were the case, the correlations in the diagonal should be equal or close to unity, which they are clearly not. In fact, they are low to moderate (ranging from 0.36 to 0.59), and in four cases (highlighted in bold), the DMS indicators that allegedly represent the same information as the LLSV indicators correlate higher with another of the LLSV indicators than with the one they are supposed to represent. This is an irritating finding. We would expect some minor variation between the two data sets, as the reference years are not the same. The LLSV indicators reflect corporate law in the 1990s, whereas the DMS indicators that end finance theory is that legal origin has a highly persistent influence on how corporate law protects investors. A time span of roughly ten years should, therefore, not affect the correlation in any substantial way. Thus we would expect Table 2 to be very similar to an identity matrix.

Accordingly, the DMS indicators have obviously been substantially recoded and consequentially, whatever the LLSV creditor rights index and the DMS creditor rights index are measuring is something substantially different.

We shall come back to what the two indices may reflect later. At this stage, we briefly compare their mean scores across the main legal families, which are given in Table 3.

Legal	LLSV	DMS	DMS
origin		(LLSV sample)	(full sample)
Civil law	1.79	1.59	1.62
	(29)	(29)	(97)
Common law	3.11	2.72	2.28
	(18)	(18)	(36)

TABLE 3. - Creditor rights indices (group means) by legal family

As per Table 3, LLSV's original result that the common law countries score higher on the creditor rights index can be reproduced with the DMS data. Despite substantial recoding, the group means are again significantly different, and this result is the same in qualitative terms for both the full DMS sample of 135 countries and the 47 country sample that is covered by the LLSV data. It would, of course, be interesting to check in how far this result would be watered down if we could include the alleged "remedial" device (the legal reserve capital requirement) into the DMS index. But, alas, this variable is not reported in the DMS data set.

What we can do, however, is to look at the four LLSV/DMS indicators from a heuristic perspective and see whether the data allow identifying groups of variables or observations that are similar in certain respects, though not necessarily along the lines suggested by the theory of law and finance. To this end, we now submit these indicator sets to a series of hierarchical cluster

analysis, a method that is designed to identify groups of observations that are similar in a number of aspects.

If the theory were correct, a hierarchical cluster analysis should divide the country sample into two top-level clusters corresponding to the two major legal traditions. Such a pattern would not require that the common-law countries protect financial investors *better* than civil-law countries; just that they treat them *differently*. This means that this method is not affected by the problems that haunt the anti-creditor as well as the creditor rights indices; namely how to aggregate the information that is conveyed by the indicator set.

To assess the similarity or dissimilarity between observations, we refer to the Euclidean distance for binary data, which is defined as the square root of (b+c)/(a+b+c+d), where b+c is the number of discordant cases (0,1; 1,0) and a+d the number of concordant cases (0,0; 1,1) for a pair of observations in contingency tables for all indicators. The clusters are determined by the Ward method, which is minimising the within-groups variance. Starting from the lowest level of aggregation, this algorithm successively considers all possible pairings and joins those observations to clusters or merges those clusters to higher-level clusters that result in the minimal increase in total with-in-groups variance. The focus of this algorithm is thus on the within-group homogeneity rather than on the dissimilarity between clusters, corresponding well with the assumption of the theory of law and finance that a shared legal tradition will result in similar provisions of corporate law to protect investors' rights.

With the clustering algorithm determined accordingly, we perform three cluster analyses. Firstly, a 4×47 data matrix representing the LLSV creditor rights indicators that are included in the index. Secondly, a 4×47 matrix covering the same countries, but referring to the DMS set of indicators. Finally, we refer to a 4×135 matrix representing the DMS county sample.

We then evaluate the results in terms of the correspondence of the two clusters on top of the hierarchy with the theory's basic legal family distinction. To this end, we define a variable "common" that equals one if a country is classified as belonging to the common-law tradition, and zero if it belongs to the complementary civil-law group. We then compare its binary correlation with two dummy variables for the first two clusters on top of the hierarchy. The results are shown in Table 4.

	LLSV data	DMS data (LLSV sample)	DMS data (full sample)
Cluster 1	59	-0.30	-0.08
Cluster 2	-0.59	30	8
Ν	47	47	135

TABLE 4. – Binary correlation (φ) of "common" with clusters 1 and 2

Note that Table 4 represents an *a priori* fit from the theory of law and finance to the data, according to which the indicator should produce clustering of the countries into two groups corresponding to the major legal traditions common law and civil law. Interestingly, this distinction is reasonably well reproduced by the clustering that refers to the LLSV indicators. The correlation of common-law membership with cluster 1 is 0.59. Since the clusters and legal groups both dichotomise the sample, this implies that the correlation of the common-law dummy variable with cluster 1 equals –0.59, and that same correlations with inverted signs would apply for a civil-law dummy variable. Surprisingly, the correspondence of a two-cluster distinction to the basic legal traditions drops to 0.30 for the same countries, when the clusters are determined with the DMS indicators, which–as they are a recent achievement–we would expect to be closer in line with the theory. Last but not least, there is no correspondence at all when we extend the analysis to the DMS 135 country sample.

These are interesting results. The theory's original idea that major differences in how countries protect investors can be detected along a line that is marked by the two major legal traditions is for the same countries supported more convincingly by the LLSV indicators than by the recoded DMS data. Moreover, for the extended country sample, our cluster analysis completely fails to reproduce the theory's legal family distinction. The original data hence clearly beat the update. In other words, while the LLSV data are supportive of the idea that characteristic similarities of corporate law across countries can be attributed to joint legal origins, the DMS data set does not imply such causality.

6. CONCLUSION

The "law and finance theory" identifies two dominating legal traditions, a common law tradition inherited from England, and a civil law tradition that is going back to 19th Century codifications in France, Germany and Scandinavia. The micro foundation of this approach is the willingness to invest. The innovative contribution of the theory is the way in which it combines these ideas with its peculiar view on legal history. The major conclusion is that the common law system provides the best basis for financial development and economic growth, followed by Scandinavian and German origin civil law and finally French origin civil law. Moreover, as financial development is nowadays widely believed to promote economic growth, the law and finance theory is perceived as an important building block in the ongoing search for the ultimate sources of economic growth and development.

We argued that the theory faces an identification problem. The majority of common law countries have a market-based financial system, whereas the majority of civil law countries have a bank-based financial system. Yet, since the correspondence is far from perfect, the legal family origin might still reveal essential features beyond the market structure paradigm.

Furthermore, we summarised plausible alternative hypotheses to explain the different levels of investor protection, or in more general terms, the quality of the financial system; but concluded that they cannot rule out that the theory refers to a relevant link between the legal tradition and financial development.

The cornerstone of the law and finance theory is the proposition that different legal traditions imply different degrees of investor protection. We reported evidence that this is not as firmly reflected by the available data as claimed by the theory. In particular, the original and widely accepted LLSV data set to support this claim does not have a low dimensional structure, so that it is not obvious what meaning one should attach to an aggregation of the data. Moreover, under such circumstances, minor differences in indicator selection, weighting or scaling may considerably change any resulting aggregate measure. It then was demonstrated that a few minor, but sensible modifications in aggregating the original indicator set indeed produce results that are very different from those brought forward in support of the theory and contradictory to the proposed ranking of the legal families in terms of investor protection. Accordingly, the validity of the LLSV anti-director rights and creditor rights indices for international comparisons of shareholder and creditor rights and the supremacy of the common law legacy in protecting investors is questionable.

A new dataset on creditor protection by Djankov, et al. (2007) that covers nearly three times as many countries as the LLSV data at first sight appears to deliver fresh support for the theory, at least if we restrict ourselves to comparisons of an LLSV-type creditor rights index across countries. However, the new data set does not comprise the LLSV "remedial" variable that helped us to re-assess the LLSV creditor rights index scores across legal families. Therefore we cannot say whether the amended index would not also imply markedly less difference in investor protection between countries with different legal traditions, as it was the case with the smaller LLSV country sample. What we can say is that the larger data set is strikingly less consistent with respect to the theory's fundamental distinction between common law and civil law countries. If we cluster the countries according to the joint similarity of the four indicators, the original LLSV data is split into clusters that largely correspond to the two main legal families, whereas the new data set on creditor protection is not. In other words, while the LLSV data are supportive of the idea that characteristic similarities of corporate law across countries can be attributed to joint legal origins, the latest data set on creditor protection does not imply such causality, and the theory's essence is lost.

REFERENCES

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Acemoglu, D., S. Johnson and J. Robinson (2001), The Colonial Origins of Comparative Development: An Empirical Investigation, *American Economic Review*, **91**, 1369-1401.

Acemoglu, D., S. Johnson and J. Robinson (2002), Reversal of Fortunes: Geography and Institutions in the Making of the Modern World Income Distribution, *Quarterly Journal of Economics*, **117**, 1133-1192.

Allen, F. and D. Gale (1995), A Welfare Comparison of Intermediaries and Financial Markets in Germany and the US, *European Economic Review*, **39**, 179-209.

Beck, Thorsten and Levine, Ross (2005), Legal Institutions and Financial Development, *Handbook of New Institutional Economics*, 251-271, Berlin: Springer

Beck, T., A. Demirguç-Kunt and R. Levine (2003), Law, Endowments, and Finance, *Journal of Financial Economics*, **70**, 137-181.

Beck, T., R. Levine and N. Loayza (2000), Finance and the Sources of Growth, *Journal of Financial Economics*, **58**, 261-300.

Berkowitz, D., K. Pistor and J.-F. Richard (2003), Economic Development, Legality, and the Transplant Effect, *European Economic Journal*, **476**, 165-195.

Claessens, S. and L. Laeven (2002), Financial Development, Property Rights and Growth, CEPR Discussion Paper No. 3295.

Demirguç-Kunt, A. and R. Levine (1999), Bank-Based and Market-Based Financial Systems: Cross-Country Comparisons, World Bank Policy Research Working Paper No. 2143, Washington.

Demirguç-Kunt, A. and R. Levine, eds. (2001), *Financial Structure and Economic Growth: A Cross-Country Comparison of Banks, Markets, and Development*, Cambridge: MIT Press.

Demirguç-Kunt, A. and V. Maksimovic (1998), Law. Finance, and Firm Growth, Journal of Finance, 53, 2107-2137.

Demirguç-Kunt, A. and V. Maksimovic (2002), Funding Growth in Bank-based and Market-based Financial Systems: Evidence from Firm-level Data, *Journal of Financial Economics*, **65**, 337-363.

Djankov, S., C. McLiesh and A. Shleifer (2007), Private Credit in 129 Countries, *Journal of Financial Economics*, **84**, 299-329.

Fohlin, C. (2000), Economic, Political, and Legal Factors in Financial System Development: International Patterns in Historical Perspective, Social Science Working Paper No. 1089, California Institute of Technology.

Graff, M. (2006), Myths and Truths: The "Law and Finance Theory" Revisited, *Review of Economics*, **57**, 51-67.

Graff, M. (2007), Law and Finance: Common-law and Civil-law Countries Compared, *Economica* (forthcoming).

Grogan, L. and L. Moers (2001), Growth Empirics with Institutional Measures for Transition Countries, *Economic Systems*, 25, 323-334.

Knack, S. and P. Keefer (1995), Institutions and Economic Performance: Cross country Tests Using Alternative Institutional Measures, *Economics and Politics*, 7, 207-227.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer and R. Vishny (1997), Legal Determinants of External Finance, *Journal of Finance*, **52**, 1131-1150.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer and R. Vishny (1998), Law and Finance, *Journal of Political Economy*, **106**(6), 1113-1155.

Levine, R. (2002), Bank-Based or Market-Based Financial Systems: Which Is Better? *Journal of Financial Intermediation*, **11**, 398-428.

Licht, A., C. Goldschmidt and S. Schwartz (2001), Culture, Law, and Finance: Cultural Dimensions of Corporate Governance, SSRN Working Paper.

McKinnon, R. (1973), *Money and Capital in Economic Development*, Washington, D.C.: The Brookings Institution.

Shaw, E. (1973), *Financial Deepening in Economic Development*, New York: Oxford University Press.

Spamann, H. (2006), "Law and Finance" Revisited, mimeo, Harvard Law School.

Rajan, R. and L. Zingales (2003), The Great Reversals: the Politics of Financial Development in the Twentieth Century, *Journal of Financial Economics*, **69**, 5-50.

Singh, A., A. Singh and B. Weisse (2001), Corporate Governance, the New International Financial Architecture and Large Corporations in Emerging Markets, mimeo, University of Cambridge, Faculty of Economics and Politics.

Stulz, R. and R. Williamson (2003), Culture, Openness and Finance, *Journal of Financial Economics*, **70**, 313-349. RON McIVER

Gradualism and Reform of China's Banking System: Impact and Implications

Abstract

China's experiences during the restructuring and rehabilitation of its banking system may usefully be compared to those of the Eastern European economies. This reflects a number of factors. First is the original scale of the NPL problem. Second, the choices that China has taken in reform of its banking system. In particular, these latter choices have been made in the presence of constrained capital, potentially supporting the focus on re-contracting of non-performing debt arrangements.

Consideration of internal and external alternatives for bank restructuring and rehabilitation suggest that China has given preference to methods that allow it to defer, or more gradually recognise, the costs associated with recapitalisation. As such choices may entail higher levels of cost than would a more rapid recognition of losses and recapitalisation of the banking system such a preference may have been based on pragmatic considerations. These include the greater ability to fund such losses in the future and the perceived macroeconomic benefits of a more gradualist approach. However, such an approach is more likely based on recognition that China lacks either the budgetary or debt accumulation capacity to have enabled a more rapid resolution of the NPL problem within its statecontrolled national banking system.

JEL Classification Numbers: G2, N2, P2

Key Words: China, non performing loans (NPLs), state-owned commercial banks (SOCBs), bank restructuring, governmental budget constraint

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1. INTRODUCTION

This paper examines the choices made by China in restructuring its stateowned/state-controlled commercial banks (SOCBs) so as to resolve the nonperforming loan (NPL) problems associated with decades of policy-based lending. To start, the level of NPLs relative to GDP or total loans for a range of Asian and Eastern European countries are presented. China's experiences with managing its NPLs are then reviewed. This allows the similarity between China's constraints and experiences and those of the Eastern European transition economies to be highlighted, rather than comparing China's experiences to those of the Asian crisis countries or Japan. In part, the choice reflects that the core of China's banking system remains state-owned (or ma-
jority-owned/controlled by the state), and has been maintained as such over China's extended economic and financial transition. Discussion then turns to the methods available for the reform and restructuring of banking systems in crisis, based on the experiences of the Eastern European transition economies (EETEs). Following this the paper considers financial reform options actually chosen by the Chinese government for its banking sector in light of the options suggested by the EETEs' bank reform experiences. This allows discussion of the apparent rationale for these choices, the benefits and costs potentially associated with China's banking system reforms, and whether the choices made were optimal policy or, as is more likely, represent budget constrained choices. A brief summary completes the paper.

2. CHINA'S FINANCIAL TRANSITION: ASIAN OR EASTERN EUROPEAN IN CHARACTER?

2.1. The need for restructuring and recapitalisation of China's state-owned banking system

The absence or presence of a systemic banking sector crisis in China over the period associated with its financial reform is open to debate. This is largely due to extensive explicit and implicit government support of the system (McIver, 2005). Those that suggest that China had, or will have, a banking sector crisis point to the presence of a potentially unsupportable level of NPLs on the balance sheets of the SOCBs, and the likelihood for further NPLs to accumulate due to non commercial lending practices at these institutions (Economist Intelligence Unit, 1999 and 2001; Lardy, 1998, 1999, 2000 and 2001; Cockerill, 2001; Bottelier, 2002; Clifford, 2002; and DaCosta and Foo, 2002). For example, using a range of estimates Dornbusch and Giavazzi (1999: 44) argue that the ratio of NPLs to loans in China's banking system peaked at between 50 and 70 per cent in 1999. Alternatively, based on the NPL to GDP ratio Berger, et al. (2002) suggest that the NPL ratio for China peaked at between 44and 55 per cent of GDP in 2001. Whether the NPL to loans or NPL to GDP ratio measure is used, China's peak NPL problem was on a scale rarely seen internationally, as is evidenced in the data presented in Table 1.

The above argument regarding the presence of a systemic banking sector crisis is very much based on western concepts of the operation of a bank. Thus, there is a focus on the danger posed by NPLs to the ability of the banking system to perform its core functions (McIver, 2005). Alternative perspectives on the presence or absence of a banking sector crisis consider a number of other factors. These include the role of continuing government support for the SOCBs and the assets of the state available to cover losses associated with the NPLs (He, 2002; Fan, 2003; Lin, 2003; and Gordon, 2003). To these may be added the continuing development role played by the SOCBs, suggesting that their performance be judged other than purely on commercial crite-

ria (Laurenceson and Chai, 2001). However, even given these considerations China's attempts to recapitalise its banking system, and the level of funds required for its SOCBs to be recapitalised to levels conducive to operation as commercial banks, appear consistent with a state of financial crisis (McIver, 2005).

TABLE 1. – NPLs as a per cent of GDP for Asian banking sector distress countries (2001), and NPLs as a per cent of total loans for Eastern European transition economies (1991)

Country (2001)	NPLs (% of GDP)	Country (1991)	NPLs (% of loans)
China	44-55	China ¹	53-67
Malaysia	36-48	Hungary	50
Thailand	36-41	Poland	40
Taiwan	20-27	Czech and Slovak Federation	55
Japan	25-26	Bulgaria	44
Indonesia	11-14	Romania	37
South Korea	7-14		
Philippines	9–13		

Source: Berger, *et al.* (2002: 140), Exhibit 1 – The burden in Asia; Thorne (1993: 16); and author estimates.

Note: ¹ Figure for China refers to 2001.

Regardless of the view accepted, the estimated peak ratio of China's NPLs to GDP suggest that the costs of restructuring of China's banking system provided, and will continue to provide, a significant drain on the resources of the state over an extended period.

2.2. China's financial transition and similarities to Eastern European and Asian experiences

It is evident that China's NPL problem at its peak appears large relative to that of most other Asian countries experiencing banking sector distress (Table 1). Indeed China's NPL to GDP ratio stands out clearly in terms of its magnitude relative to most of the countries affected by the Asian Crisis of the late 1990s, and even against that of Japan following its banking sector crisis over the latter decades of the twentieth century. It is also the case that, in contrast to China, most of the Asian countries with banking system crises listed in Table 1 had these problems emerge via the private sector. This feature relates to a number of problems. First, moral hazard and overinvestment in the presence of implicit government guarantees over debts of private sector financial intermediaries (Krugman, 1998). Second, is excessive borrowing by the non-bank private sector, associated with euphoria regarding the success of economic reform (McKinnon and Pill, 1998). Third, we observe pan-

ic by foreign investors (Radelet and Sachs, 1998). Fourth, the emergence of awareness amongst investors of the fundamental problems associated with banking and corporate debt in these countries (Corsetti, Pesenti, and Roubini, 1998). These factors were reflected in the collapse of property market bubbles in a number of the Asian economies.

The similarity of both the time over which China and Japan have been attempting to address their NPL problems and the absolute size of this problem in each country may suggest that the Japanese experience is particularly relevant to the study of the Chinese NPL problem. It is also similar to China's case to the extent that there is heavy government involvement in addressing the NPL problem. However, significant differences exist between the banking systems and NPL problems in the Japanese case relative to that of China. First is the sale of NPLs to Japan's AMC (the RCC) at a fraction of book value. Second the relatively small amount of assets transferred in association with the NPLs. To this must be added the slower rate at which NPLs have been disposed. Next is the use of bank merger, nationalisation, and bank sale to foreigners. All nationalised banks were later privatised. Finally, Japan has experienced a prolonged phase of recession and limited economic growth. These latter features suggest that we should look elsewhere for a model of bank restructuring better matched to the Chinese case.

While limited as a guide for China's banking reform, the Japanese experience is undoubtedly informative. Flexibility of institutions and an ability to adapt rather than copy are important lessons Qian (1994). A more rapid resolution of NPL problems may also be appropriate. What the Japanese experience in the 1990s vis-à-vis that of America during the 1930s makes clear relates to government assistance. Where government assistance is provided in the absence of market discipline, limited incentives exist for banks to avoid transference of risk to the government, or to engage in long-run risk management (Calomiris and Mason, 2003).

Table 1 highlights the similarity of the magnitude of China's NPL problem in the early 2000s to that of the EETEs in the early 1990s in terms of the share of NPLs in total loans. This suggests that while high, the ratio of NPLs to loans in China is not exceptional in the context of an economy in its transition from a planned to a more market-based system.

As well as the order of magnitude of the problem, other aspects of China's path through financial transition are consistent with those of transition economies that have faced a systemic crisis in their banking sector.¹ Specifically, a number of features of China's financial transition process are similar to that of the former socialist countries of Eastern Europe. First, China has re-

¹ See, for example, Catte and Mastropasqua (1993), Borish, *et al.* (1996), and Šević (1999), for detailed examinations of the bank recapitalisation and restructuring experiences of the Eastern European transition economies.

structured its banking system from a state-owned mono-banking structure to a commercially-oriented system. Second, this restructuring has been associated with an inheritance by the newly commercialised banking system of a large stock of policy-based NPLs. Third, is that restructuring of the financial sector has been required to be undertaken at the same time as restructuring of the state-owned enterprise (SOE) sector.

Also similar to the EETEs are the major factors behind the accumulation of China's NPLs to the levels indicated in Table 1. These include: extensive policy lending during the command economy period; poor and deteriorating financial performance of a significant portion of the SOE sector (Bonin and Huang, 2001: 199-200); and the lack of a true bank credit culture at the SOCBs (OECD, 2000: 87). These features have frequently been observed in socialist transition economies, where the dominance of the state sector and, particularly, public ownership of both the SOCBs and SOEs, is associated with a lack of financial discipline in SOEs; a soft-budget constraint exists (Kornai, 1992; Li, 1992).

While China's experiences with banking reform seem to most closely resemble those of the EETEs, differences are present. In contrast to many of the former socialist countries of Eastern Europe, China has taken a gradualist approach to economic transition. This is especially so with regard to the evolving legal, regulatory and institutional arrangements associated with reform and restructuring of its banking system. It is also unique in several other respects. First is that its transition process has not been associated with a significant and rapid decline in GDP. Second, although NPL ratios are high in its banking system, it has not suffered from a collapse in the credit-creation ability of the banking and financial systems. Indeed, both growth in GDP and lending have remained positive and generally strong over the transition period (McIver, 2005).

3. Recapitalisation of banking systems

3.1. Factors influencing the cost of restructuring

Recapitalisation of China's banking system at a level sufficient to cover the existing stock of NPLs must be viewed as a medium- to long-term process. This is due to its complexity. Recapitalisation approaches available to the government in the case of such a significant intervention differ with respect to the mix of direct capital injection, asset purchase and asset rehabilitation that may be chosen (Saunders and Sommariva, 1993; Borish, *et al.*, 1996; Claessens, *et al.*, 2001; Calomiris, *et al.*, 2003 and 2004). However, in all cases the chosen mix of approaches will determine the expected present value of net government expenditure (outlays less recoveries). Thus, this mix can be seen to require strategic management at both the systemic and individual bank levels (Enoch, *et al.*, 2001; Honohan and Klingebiel, 2003).

While the expected present value of net government expenditure may seem to be a core issue in bank recapitalisation, there is a range of factors-institutional, political, economic and cultural-that determine the restructuring model chosen by policy-makers. These factors ultimately help to decide the resulting trade-off between efficiency and income distribution effects. The scale and extent of the banking crisis also impacts on the appropriateness of restructuring alternatives. Small-scale crises may be managed via internal restructuring processes such as recapitalisation and the rescheduling of problem loans. This is on the understanding that the banking system will expand with growth in the economy. Thus, internally-generated capital may provide adequate resources with which to rebuild bank balance sheets over time, while not precluding continued growth in lending. Large-scale crises will often demand government-sponsored external restructuring. A lack of sufficient resources within the banking sector to provide for future expansion and the support of economic growth make this a requirement (Saunders and Sommariva, 1993: 956). These alternatives are explored in more detail in the next section.

3.2. Alternatives for the restructuring of the banking system in transition economies

A number of alternative approaches are available to bankers when dealing with the restructuring and management of non-performing loans. These may be divided into two broad groups. Legal remedies, the first group, are based on the use of bankruptcy and liquidation laws. The second group embodies remedies based on the re-contracting of the non-performing debt arrangements (Saunders and Sommariva, 1993: 935). However, China has faced difficulties in restructuring many of the SOEs associated with its substantial NPLs. This reflects the presence of high public bankruptcy costs and inefficient procedures for SOCBs attempting recovery via bankruptcy due to inadequacies in the legal bankruptcy framework (CMS Cameron McKenna, 2001). Even where the court process is quite fast, it will often take a long time for the local government to decide on the bankruptcy route and to secure the debt write-off. It has also often been difficult to liquidate assets under China's arrangements due to unrealistically high valuations. Delays in bankruptcy filing and then bankruptcy proceedings may also lead to asset stripping by existing management. This results where increased asset wastage and agency costs are associated with delayed bankruptcy proceedings as managers are provided with an incentive to dissipate assets before these are claimed by the firm's creditors (ie, managers seek to transfer firm assets to themselves or related parties). These features suggest a focus on methods based on the recontracting of non-performing debt arrangements be preferred.

Saunders and Sommariva (1993: 937-950) identify eight alternative models for the restructuring of banks in transition economies particularly suited to banks that are capital and reserve constrained (as may be argued is the case

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for China). These models, which are based primarily on the re-contracting of the non-performing debt arrangements, their mode of operation, and their potential advantages and disadvantages, are summarised in Table 2.

4. Reforming China's four large SOCBs

4.1. Methods used in China's reform and recapitalisation process

From 1996 China's government took a number of steps to improve the soundness of its banking sector. A particular focus has been on the financial integrity of the four large SOCBs that still account for the bulk of the total assets of the banking sector.

Restructuring alternative	Operation	Potential advantages	Potential disadvantages
Internal			
Recapital-isation	Involves a substantial injec- tion of new equity capital onto the balance sheet of the bank, usually supplied by ei- ther the government (or an agency of the government) or an external agency.	Allows bank to make new loans, reducing credit con- straints on development. Reduces incentives for man- agers to undertake high-risk activities (ie gamble) in or- der to regain lost capital. Can provide preferred equity stakes to external financing agencies to encourage their taking of a stake in the bank. Bank continues as a going concern, avoiding costs of liquidation (bankruptcy). May encourage new deposi- tors and/or reduce the risk premium required by de- positors.	Potentially softens budget constraint of firms in finan- cial difficulty, including the provision of new doubtful loans to poor quality firms May increase state control over the bank where it pro- vides significant funding. Preferred stakes may cap up side exposure to bank and loan assets
Loan hospital	The bank maintains the problem loans on-balance sheet, but segregates a por- tion of these loans to receive special monitoring and allo- cates these a separate man- agement team.	Increases resources allocated to the problem loans. Provides a training ground in which to develop staff skill in the identification and workout of problem loans.	Requires that a work-out plan for problem borrowers be developed and adhered to Lack of existing expertise within banking organisation in transition economy bank- ing systems. May require design of ap- propriate incentive system to ensure remuneration of management encourages maximisation of the PV of the debt portfolio.

TABLE 2. - Alternative models for bank restructuring

Restructuring alternative	Operation	Potential advantages	Potential disadvantages
Debt-for-debt ex- change	Requires revision of loan contract after negotiations between parties, often lead- ing to: reductions in the in- terest rate, reductions in bank seniority over collater- al, extension of maturity on debt contracts, relaxation of loan covenants, partial pay- down of loan, issue of new credit to debtor, and replace- ment of management of the financially distressed firm.	Provides greater flexibility than is available in the case of liquidation/bankruptcy. Avoids transactions costs as- sociated with liquidation/ bankruptcy. Maintains business value as a going concern, enhancing the value of assets. By reducing the number of parties involved in negotia- tions, it increases the pre- dictability of outcomes for the bank.	In the presence of insoluble problems for the firm due to demand and cost factors, this may only delay rather than prevent closure of the firm. Potential need for soft loans/ government guarantees by banks prior to entry into ne- gotiations to ensure bank willingness to engage in loan restructuring.
Internal			
Equity-for-debt swap	Bank negotiates with the management of the loss- making enterprise on the taking of an equity posi- tion in enterprises associated with non-performing loans, in exchange for forgiveness of the debt (or a component of the debt).	Subordination of bank claims to other creditors, po- tentially reducing the cost of trade finance and other non- bank non-secured finance. May allow the bank to exer- cise control over/to influence investment and strategic de- cisions.	The bank's role as both a debt and an equity holder poses considerable conflicts of interest, and may provide incentives to provide high- er levels of financial sup- port to the financially dis- tressed firm. By increasing ownership concentration, there may be an increase in monop- oly power in the economy with a result loss of efficien- cy and the deterrence of new entrants.
External			
Good-bank-bad- bank structure	Create a specialised sub- sidiary, the 'bad' bank, in- to which the non-perform- ing loan assets are placed-a carve-out of a component of the bank balance sheet.	Improves liquidity of 'good' bank and its ability to make new loans. By improving the balance sheet of the 'good' bank its stability is improved. Allows non-performing as- sets to be packaged to inves- tors looking for higher risk assets. Allows provision of incen- tives to managers of the 'bad' bank to align management and state objectives.	In the presence of state own- ership of the bank, requires additions to bank capital to allow non-performing loans to be written down to mar- ket value prior to carve-out and transfer of loans to the 'bad' bank. May need external financing. May require pooling of state assets with non-performing loan assets to improve salea- bility of debt portfolio. Does not prevent the writing of new loans to enterpris- es associated with non-per- forming loans.

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Restructuring alternative	Operation	Potential advantages	Potential disadvantages
Government re- structuring insti- tution	Government establish- es special-purpose vehicles charged with the responsibil- ity of resolving and rearrang- ing the banks' non-perform- ing loans. Can use liquidation and merger, via deposit trans- fer or purchase and assump- tion of assets, as means to pool assets and/or liabilities of banks.	Recognises errors in design of current banking system, and potential removal/reduc- tion of inefficiencies. Centralises bad loan as- set monitoring and manage- ment. Bundling enhances sale val- ue of assets. Avoidance of fire sale situ- ation via continued agency funding. May assist in privatisation of financial institutions.	Diseconomies of scale due to the size of the pool of non- performing bank assets. Political pressure for rapid reform may lead to fire sale of assets. Government agency takeover of assets may increase cen- tralised control of industrial and financial sectors.
Internal			
Loan sale/swap	Banks write-down loans to market value, then rear- range/swap loans amongst themselves.	Assists in the development of an inter-bank market in cor- porate debt, and the future development of secondary markets for this debt. May allow banks to diversify their bad loan portfolios.	Does not resolve the under- lying problem of non-per- formance of the loan port- folio. Secondary cash market for debt requires long-term de- velopment.
Government	Carve-out of loans and	Transparent process	Banks must hold bonds in
bond/bank loan swap	transfer to government in exchange for government bonds/securities.	Cleans up balance sheet.	the presence of illiquid bond markets. Low coupon interest rates
			will impact on bank earnings
			Creation of additional deficit in fiscal budget.
			Government may not be a suitable/skilled liquida- tor due to a lack of expertise in personnel charged with the task.

Source: Derived from Saunders and Sommariva, 1993: 937-950.

Some of the reform strategies are designed to have a behavioural impact, including: a requirement for the use of commercial standards in the allocation of credit; planning for, and initiating, partial listing of the SOCBs on mainland China's stock markets; the introduction of governing boards; and a requirement for audits to be conducted by approved accounting firms (Moreno, 2002: 2; OECD, 2000: 14). These behavioural strategies aim to provide for a greater exposure to market forces and improvements to corporate governance in the banking sector itself. However, the high level of exposure to bad debts in the balance sheets of the four national SOCBs has been a major obstacle in the path of these banks becoming true commercial banks. This has required significant funding and changes to the balance sheets of the SOCBs as important elements of the Chinese reforms.

Restructuring alternative	Application	Results	
Internal			
Recapitalisation	1998 RMB 270 billion (USD 32.9 billion) recapitalisation of the SOCBs by the central government.	Enabled the banks to initially meet/approach the eight per cent capital adequacy ratio re- quired under the Basle Agreement (Lardy, 2000, p. 12; Huang and Xu, 2000, p. 17).	
	2003 (USD 45 billion) quasi-recap- italisation of two banks	Additional recapitalisation will be required to ensure the SOCBs balance sheet strength and stability.	
Loan hospital	Strong evidence of use of this method by national SOCBs, espe- cially BOC, ICBC and CCB.	Improved internal monitoring and use of bankruptcy by BOC, ICBC and CCB apparent from annual reports.	
		Presence of Asset Disposal Committee in BOC.	
		Sales by ICBC and CCB of components of their NPL portfolios to national and interna- tional consortia.	
Equity-for-debt swap	Not apparent between SOCBs and SOEs.		
Debt-for-debt ex- change	Not apparent.		
External			
Good-bank-bad- bank structure	No. Use of Government restructur- ing institution.		
structuring insti- tution	Transfer of a large amount (around RMB 1.4 trillion) of NPLs from the SOCBs' balance sheets to an asso- ciated set of AMCs.	Financially more significant than recapitalisa- tion and important to the reforms.	
		Bundling of assets has been used to enhance sale value.	
	At the core of the management of the problem of large state-owned enterprises with substantial NPLs.	Ten-year horizon for AMCs may avoid fire sale situation. However, AMCs appear to be under- funded. The Ministry of Finance has provided	
	Equity-debt swaps are an associ- ated component. Selected compa- ny NPLs have been chosen by the	10 billion Yuan to each of these companies as capital, a relatively small contribution given th level of assets each is required to manage.	
	government and AMCs as the basis of equity-for-debt swaps between AMCs and SOEs as apart of the	May assist in privatisation of financial institu- tions by strengthening the balance sheets and credit ratings of the four national SOCBs.	
	process associated with the transfer of NPLs from SOCBs. AMCs have taken a total book value of equity of RMB 405 billion in enterprises selected 'jointly' by the government and the AMCs via these debt-eq- uity swaps.	The value of the NPLs exchanged for equi- ty under equity-for-debt swaps varies consid- erably by asset management corporation, with the swap representing 3.6 per cent of the NPLs carved out for Great Wall, 23.9 per cent for Orient, 27 per cent for Huarong, and 41.4 per cent for Cinda (Ma and Fung, 2002, pp. 13-14).	
Loan sale/swap	Not apparent.		
Government bond/ bank loan swap	No. However, government own- ership of AMCs and an implied guarantee of AMC debt by the MoF effectively suggest aspects of this method.		

TABLE 3. – Bank restructuring processes used in China's bank reform

Table 3 provides a summary on which of the outlined alternative restructuring models for banks have been applied in the Chinese case. It is apparent that a number of internal and external methods have been used, and still are being used, to resolve the problems associated with the level of NPLs held by the four national SOCBs. However, the use of Government restructuring agencies in the form of the four national asset management companies (AMCs) and the internal loan hospital approach are the dominant methods being used to manage NPLs.

While China's authorities have used a range of both internal and external alternatives to restructure the SOCBs, there has been a preference for internal restructuring methods. Of the four internal restructuring alternatives available three have been chosen: recapitalisation, loan hospital and equity-fordebt swaps (although the latter is evident only to a minor degree). Of the external approaches available, that of the government restructuring agency is the only alternative for which there is clear evidence (the creation of the four national AMCs associated with each of the SOCBs).

In terms of the quantitative importance of the methods chosen, government restructuring agencies, in the form of the AMCs, and the internal loan hospital approach are the dominant methods. However, write-offs of NPLs using internally-generated funds, as under the loan hospital approach, will actually account for the removal of more NPLs from the SOCBs balance sheets than did, for example, the 1999 to 2000 NPL asset transfer to the AMCs. This may be seen in the level of write-offs of NPLs that the SOCBs have achieved since 2000.

Recapitalisation of the banks was also an initial requirement in the Chinese authorities' management of these NPLs, with a RMB 270 billion (USD 32.9 billion) injection of capital taking place in 1998. That this was inadequate even at the time was quickly reflected in suggestions that further injections of capital would be required by each of the SOCBs (eg, Hu, B., 2003: 6). However, this did not occur until more recently, in the form of a quasi-recapitalisation via an injection of capital of USD 45 billion (approximately RMB 372 billion) into BOC and CCB in January 2004, split evenly between the two banks. This reflected a desire by the Chinese authorities for the SOCBs to internally manage the write-off of a substantial component of their NPLs.

4.2. Impact of the choice of methods in the recapitalisation process: Deferral

With the exception of recapitalisation, which was only partial, and applied more fully to BOC and CCB than to ICBC and ABC, it is apparent that the Chinese government chose to emphasise restructuring methods that allow for delay in the full recognition or settlement of losses associated with the NPLs of the SOCBs. Again a gradualist approach to the recognition and resolution of the NPL problem is suggested. This is particularly the case with the emphasis that has been placed on the loan hospital and government restructuring agency (AMC) approaches to restructuring. The latter approach was financed through the issue of bonds backed by the Ministry of Finance (MoF), deferring full settlement on losses associated with the management of the NPLs, and a large central government budgetary balance impact, until maturity of the AMC bonds in 2009. The deferral arises because of the replacement of NPLs in the SOCBs' balance sheets with the AMC bonds. To some extent the original recapitalisation funded through fiscal bonds, also allowed for a spreading over time of the budgetary impact of the cost of this component of NPL resolution.

5. AN OPTIMAL STRATEGY?

5.1. POTENTIAL COSTS AND BENEFITS OF A GRADUALIST APPROACH

China has taken a gradualist approach in reform of its banking sector; in the shorter term an accommodating approach to the NPL problem. Thus, the fiscal costs may be higher than if the NPL problem were immediately resolved. This reflects the moral hazard effects of the provision of implicit guarantees on SOCB held debt, debt relief via equity-for-debt swap for financially distressed SOEs, and the potential for further recapitalisation of the SOCBs. For example, Honohan and Klingebiel (2003: 1553), provide estimates of the average cost of taking individual accommodating approaches during financial crises. Their estimates, which assume that no other forms of accommodation are in place, put the cost of provision of blanket guarantees at 2.9 per cent of GDP, that of forbearance on debt at 4.1 per cent of GDP, and that of repeated recapitalisation at 6.3 per cent of GDP.

China displays aspects of all the above forms of accommodation in its approach to the resolution of the NPL problem at the SOCBs. This raises the potential for considerable additional costs of resolution of the NPL problem. An important issue to address is why the government chose a potentially higher-cost strategy in the presence of low reported government debt levels and large reserves of foreign exchange. China's foreign debt-to-GDP ratio measured just over 16 per cent as of the end of 2001 (Fan, 2003: 148). Explicit fiscal debt (recognised internal debt) to GDP also stood at around 16 per cent of GDP as of 2001 (Lin, 2003: 84). China's foreign exchange reserves stood at just over USD 408 billion at end of 2003 prior to the transfer of USD 45 billion to further recapitalise BOC and CCB. This would have provided sufficient funds to cover the cost of all but the most pessimistic of the estimates of the potential cost to resolve China's state banks' NPL problem.

It may be argued that the higher likely costs of an accommodating approach to NPL management must be traded off against the greater ability of the Chinese government to fund rehabilitation over the longer term. The enhancement of capacity over the longer term reflects two forces. First, is the rapidly increasing level of China's GDP. Second, reductions in the SOE share of national output as the non state-owned sector grows. The latter provides potential for a gradual improvement in the level of tax receipts. This provides the capacity for the government to better fund losses that are recognised on the NPLs without placing immediate strain on its budget. It has also been argued that the macroeconomic benefits of a gradualist approach may make it a preferred option. However, before accepting the argument that a gradualist approach resulted as an optimal choice, closer consideration of the ability of China's government to fund bank rehabilitation is suggested.

5.2. China's fiscal capacity to fund more rapid NPL resolution

A gradualist approach to recognition of the policy basis of many of the NPLs held by the SOCBs, and a failure to remove all NPLs generated on this basis from the SOCBs' balance sheets, suggest an inability on the part of China's central government to fund the additional debt required to achieve this outcome. Ignoring issue costs, estimates of the ratio of NPLs to GDP in Section 2 suggest that an increase in debt funding sufficient to recapitalise the SOCBs to international standards would have increased the official public debt-to-GDP ratio from a level of little more than 30 to between 50 and 70 per cent of GDP. While these levels of direct explicit liability are not high by international standards, China possesses relatively high levels of both direct implicit and contingent explicit and implicit liabilities that, through conversion to direct liabilities, would significantly increase its debt-to-GDP ratio.²

Direct explicit liabilities include both the public debt and government budget, while direct implicit liabilities include such obligations as future pension and social security liabilities. Contingent explicit liabilities encompass the obligations of state-guaranteed institutions. Contingent implicit liabilities may exist due to foreign credit received by the domestic corporate and financial sectors, banking failures, and obligations accumulated by local governments. The latter category is clearly of greater significance in the presence of state ownership or control of the corporate, banking, and financial institutions (Polackova, 1998).

In the case of China, Fan (2003: 149) places the ratio of national comprehensive liabilities-to-GDP at 72 per cent at the end of 2002, excluding social security debt liabilities. Jia (2003: 15) estimates that the value of broad-based government debt represented about 91 per cent of GDP as of 2000. Hu (Hu, F., 2003: 15) suggests that the inclusion of estimated unfunded pension liabilities on top of the liabilities from NPLs generated by the SOCBs would

² Polackova (1998) provides both a discussion of these alternative forms of government fiscal liability and a methodology for their measurement.

take the estimate of the liabilities-to-GDP ratio to around 135 per cent. Lin (2003: 74) reports upper estimates of the level of the total explicit plus implicit debt-to-GDP ratio for China to be of the order of 150 per cent of GDP in this time period.

Clearly direct implicit liabilities in the form of social security and pension obligations to current and former employees of SOEs comprise the largest component of these liabilities (Fan, 2003: 149; Lin, 2003: 91-92). However, they may be considered to be of a relatively long-term nature (Jia, 2003: 17). Offsetting these long-term liabilities are the long-term assets held by the state, including SOEs and their associated assets and all land. State balance sheets put the value of assets associated with the SOEs at more than RMB 9 trillion in 2001 and at RMB 9.9 trillion at the end of 2002 (Lin, 2003: 94-95; Fan, 2003: 149). Of more immediate concern is a need to recognise components of China's contingent liabilities that require the provision of additional funding in the short-to-medium term. This includes the shortfall between the value of the AMC bonds held by the SOCBs, which will mature in 2009, and the value of funds likely to be recovered on the NPLs behind these bonds. To this must be added accrued, and hence unpaid, interest on the bonds that is owed to the SOCBs.

Although no official estimates on total accrued interest owing from the AMCs are available, the recovery rates on NPLs and equity-for-debts swaps, suggest the presence of a contingent debt in excess of the RMB 1,168 billion of the face value of bonds issued by the AMCs, or that a minimum of ten per cent of the value of China's 2003 GDP in additional debt or budget outlays would have potentially been required to fund this shortfall.

The large increases in the level of China's debt and its debt-to-GDP ratio suggested by the need to recapitalise the banking and financial systems are of concern. China's ability to service debt payments from its fiscal revenues is severely restricted. Additionally, China has increasingly become dependent on debt issue to fund budget deficits during the most recent phase of financial and economic reform, which has been increasing as a share of GDP (Table 4).

Year	Budget deficit/ GDP	Year	Budget deficit/ GDP
1995	-10	2000	-28
1996	-8	2001	-26
1997	-8	2002	-29
1998	-12	2003	-24
1999	-21	2004	-13

TABLE 4. – F	Budget deficit as a	percentage of GDP,	1995-2004
	Judget denen as a	percentage of ODI,	1775 2004

Source: Datastream and author's calculations.

The ability of China's Central Government to raise revenues via taxation is poor. This reflects the devolvement of responsibility for collection to lower levels of government, widespread tax avoidance/evasion, and the provision of widespread tax relief (Deng and Smyth, 2000, pp. 398-399). A further complication for China is a high reliance on extra-budgetary revenues at the central and local government levels, in the forms of inefficient and ad hoc levies, charges, and fees (Deng and Smyth, 2000; Eckaus, 2003). Attempts to enforce transfer of these forms of revenues, so as to allow management by the central government, may reduce local government incentives to collect such revenues. This would exacerbate the revenue problem and increase the rate at which government debt is required to increase to fund budget deficits (Lin, 2003: 84).

Prohibitions on borrowing from People's Bank of China (PBoC) enacted in 1994 were associated with an increased reliance on the issuance of public debt to fund the fiscal deficit (Gao, 2003: 4). For example, the value of new debt issuance in 2001 equated to 24.4 per cent of national government, and 79.8 per cent of central government, budgetary expenditures, while repayment of principal and interest equated to 23.4 per cent of central government revenues in the same year (Jia, 2003: 15). Lin (2003: 84) records that between 1994 and 2001 explicit fiscal debt increased in level from five to 16.3 per cent of GDP. The issue of additional debt to fund settlement of liabilities associated with the NPLs in the banking system would have had a significant impact on the share of revenues required to service debt payments, and thus reduced flexibility in other key expenditure areas. It may reasonably be concluded that it is only in the presence of rapid growth in GDP, and hence significant accompanying growth in government revenues, that a continuation of recorded rates of growth in the level of government debts would be sustainable. Therefore, it should be recognised that China's capacity to service increases in debt to fund write-offs of existing and new NPL losses remained limited.3

The above argument suggests that China's gradualist approach to financial sector reform may be seen as necessary (or broadly optimal) given its fiscal constraints. This contrasts with the view that it was a reflection of the perceived requirement to match the underlying pace of reform in the real economy. The policy may also be thought of as optimal from other perspectives, especially when the need to maintain SOEs is considered. For example, Dwight (2004) suggests that from a public finance perspective the continued

³ Lardy (2000, p. 15) draws the conclusion that funding to adequately recapitalise the SOCBs exceeds the fiscal capacity of the government through a similar argument to that given above, although presenting data covering earlier periods. See also OECD (2000, p. 12) regarding the implications of fiscal constraints for China's ability to fund additional outlays on debt repayments. Gao (2003) also discusses the nature of China's current problems with low taxation revenues and rapidly accumulating debt and debt-service levels, and thus the need for China to constrain continued rapid expansion of its debt.

creation of NPLs allowed the Chinese government to provide loss-making SOEs with additional subsidies while limiting demands on taxation-based resources and reducing the excess burden of taxes. This allowed higher levels of state-owned employment to be supported over an extended period than would have been possible via use of subsidies or low interest rate loans.

6. CONCLUSION

This paper has provided a brief review of a number of features of China's gradualist approach to the reform of its banking system. This includes a review of the level of NPLs relative to GDP and total loans, consideration of China's move from a mono-bank structure to a largely state-controlled multi-institution sector, and finally restructuring of the banking system in the presence of severe capital constraints.

It was determined that the Chinese pattern of bank financial reform and bank restructuring has greater parallels with the Eastern European experiences than with those of the Asian economies (including Japan). This supports an analysis of the alternative methods for the restructuring of banking systems (internal and external to the banks), using the EETEs' restructuring experiences-based primarily on the re-contracting of the non-performing debt arrangements.

A number of alternatives for restructuring of banking systems were shown to be available to the Chinese government. Internal arrangements include recapitalisation, loan hospital, debt-for-debt, and equity-for-debt-swap. External arrangements include good-bank-bad-bank restructure, use of a government restructuring institution (an AMC), government bond-bank loan swap, and loan sale/swap. However, the Chinese authorities focused on a relatively small set of these options. A clear preference has been displayed for internal arrangements-recapitalisation, loan hospital, and equity-for-debt-swap-compared to external arrangements-primarily the use of a government restructuring institution (an AMC) in China's case. That the methods chosen for restructuring allowed deferral of the budgetary cost of bank restructuring has been suggested as having been a primary decision criterion in China's case.

An inability to immediately fund the cost of restructuring and recapitalisation of the SOCBs, due to inadequate budgetary resources and the scale of the NPL problem, appear to be the driving factors in China's choice of a gradualist approach to financial reform and the methods chosen for bank restructuring. Thus, China largely selected methods that allowed it to defer and to limit immediate budgetary outlays to restructure the SOCBs for pragmatic reasons. This is especially so with the use of internal methods such as the loan hospital, which entails significant write-offs of policy-based loans by the SOCBs. This is also the case with the use of the AMCs, funded largely via the issue of government-backed bonds at low interest. These bonds and funds made available from PBoC loans made to the AMCs were used to purchase stocks of pre-1996 NPLs from the SOCBs. As the AMC bonds do not mature until 2009, a considerable delay in the provision of funds to cover the principal was possible, allowing the Chinese government (via the MoF) to substitute public-sector guarantees (synthetic capital) for real capital.

Many of the factors relating to soft budget constraints and a lack of corporate governance were present over the period of reform considered. Weaknesses in the legal system and lack of enforceability of property rights presented major impediments to China's SOCBs. The continued presence of government in the areas of financing and the appointment of SOE managers, and in the management of the disposal of NPLs may also have retarded the reform process. The role of local government as supervisors of centrally owned SOEs, suggests that local employment and development issues may have taken precedence over efficiency and profitability (eg, see Watanabe, 2000). This provided a greater incentive to minimise the immediate burden on government budget revenues through policy choices.

REFERENCES

Berger, L., G. Nast, and C. Raubach (2002), Fixing Asia's bad-debt mess, *The McKinsey Quarterly*, 4, 2002, 139-149.

Bonin, J. and Y. Huang (2001), Dealing with the bad loans of the Chinese Banks, *Journal of Asian Economics*, **12**, 197-214.

Borish, M., M. Long and M. Noël (1996), Lessons from Bank and Enterprise Restructuring in the Transition Economies of Europe and Central Asia, *World Economy*, **19**(1), 39-62.

Bottelier, P. (2002), Implications of WTO Membership for China's State-owned Banks and the Management of Public Finances: issues and strategies, *Journal of Contemporary China*, **11**, 32, 397-411.

Calomiris, C., D. Klingebiel and L. Laeven (2003), A Taxonomy of Financial Crisis Restructuring Mechanisms: Cross-Country Experience and Policy Implications, paper prepared for *Systemic Financial Distress: Containment and Resolution Conference*, World Bank, October 8-9, 2003.

Calomiris, C., D. Klingebiel and L. Laeven (2004), A Taxonomy of Financial Crisis Resolution Mechanisms: Cross-Country Experience, World Bank Policy Research Working Paper 3379.

Calomiris, C. and J. Mason (2003), How to restructure failed banking systems: Lessons from the U.S. in the 1930s and Japan in the 1990s, National Bureau of Economic Research, Working Paper 9624, April 2003.

Catte, P. and C. Mastropasqua (1993), Financial structure and reforms in Central and Eastern Europe in the 1980s, *Journal of Banking and Finance*, **17**, 785-817.

Claessens, S., D. Klingebiel and L. Laeven (2001), Financial Sector Restructuring in Banking and Corporate Sector Crises: What Policies to Pursue? National Bureau of Economic Research (U.S.), Working Paper No. 8386.

Clifford, M. (2002), Caught in Quicksand? *Business Week* (International edition), November 25, p. 18.

CMS Cameron McKenna (2001), Guide to Restructuring in Asia 2001.

Cockerill, C. (2000), The two faces of Chinese capitalism, Euromoney, December 2000, 46-56.

Corsetti, G., P. Pesenti and N. Roubini (1998) What Caused the Asian Currency and Financial Crisis? Paper presented at the *CEPR/World Bank Conference*, May 8-9, London.

DaCosta, M. and J. Foo (2002), China's Financial System: Two Decades of Gradual Reforms, *Managerial Finance*, **28**(10), 3-18.

Deng, X. and R. Smyth (2000), Non-Tax Levies in China: Sources, Problems and Suggestions for Reform, *Development Policy Review*, **18**, 391-411.

Dornbusch, R. and F. Giavazzi (1999), Heading off China, SFinancial Crisis, in *Strengthening the Banking System in China: Issues and Experience*, BIS Policy Papers No. 7, 40-58.

Dwight, L. (2004), The Role of Non-Performing Loans in China: A Public Finance Approach, Department of Economics, University of California, Berkley, accessed 10 October 2004 from emlab. berkeley.edu/users/ webfac/groland/e261_f04/dwight.pdf.

Eckaus, R. (2003), Some consequences of fiscal reliance on extrabudgetary revenues in China, *China Economic Review*, **14**, 72-88.

Economist Intelligence Unit (1999), Passing the debt, Business China, June 21st 1999, 1-3.

Economist Intelligence Unit (2001), Abracadabra, Business China, June 18th 2001, 1-3.

Enoch, C., G. Garcia and V. Sundararajan (2001), Recapitalizing Banks with Public Funds, *IMF Staff Papers*, **48**(1), 58-110.

Fan, G. (2003), China's Nonperforming Loans and National Comprehensive Liability, *Asian Economic Papers*, **2**(1), 145-152.

Gao, P. (2003), The Scale of Public Debt in China, China & World Economy, 2, 2003, 3-13.

Gordon, M. (2003), Is China's financial system threatened by its policy loans debt?, *Journal of Asian Economics*, 14, 181-188.

He, F. (2002), How far is China away from a financial crisis? China & World Economy, 10(5), 21-27.

Honohan, P. and D. Klingebiel (2003), The fiscal cost implications of an accommodating approach to banking crises, *Journal of Banking and Finance*, **27**, 1539-1560.

Hu, B. (2003), Decades of loans have left the big four in trouble: Banking chief admits to a need for more capital, *South China Morning Post*, News, March 2003, 6.

Hu, F. (2003), China's banks need a decisive bail-out, *Financial Times* (US edition), Comment & Analysis, April 15 2003, 15.

Jia, K. (2003), Contingent Debt in China's Public Sector, China & World Economy, 3, 2003, 14-18.

Kane, E. and Klingebiel, D. (2004), Alternatives to blanket guarantees for containing a systemic crisis, *Journal of Financial Stability*, **1**, 31-63.

Kornai, J. (1992), The Socialist System: The Political Economy of Communism, Oxford: Oxford University Press.

Krugman, P. (1998), What happened to Asia? mimeo, World Bank, January 1998.

Lardy, N. (1998), China's Unfinished Economic Revolution, Washington: Brookings Institution Press.

Lardy, N. (1999), The Challenge of Bank Restructuring in China, *Strengthening the Banking System in China: Issues and Experience*, BIS Policy Papers No. 7, 17-39.

Lardy, N. (2000), When Will China's Financial System Meet China's Needs? Stanford University, *Center for Research on Economic development and Policy Reform*, Working Paper No. 54.

Lardy, N. (2001), China's Worsening Debts, The Financial Times, June 22, 2001.

Laurenceson, J. and J. Chai (2001), State Banks and Economic Development in China, *Journal of International Development*, **13**, 211-225.

Li, D. (1992), Public Ownership as a Sufficient Condition for the Soft Budget-Constraint, University of Michigan, Center for Research on Economic and Social Theory, Working Paper 93-07.

Lin, S. (2003), China's Government Debt: How Serious? *China: An International Journal*, **1**, March 2003, 73-98.

McIver, R. (2005), China's National Banking System: Commercialisation and Financial Stability, *Third International Conference on Accounting and Finance in Transition: European and Asian Experiences and Public Policy Considerations*, London, University of Greenwich, 13-16 July, 2005.

McKinnon, R. and H. Pill (1998), International Overborrowing: A Decomposition of Credit and Currency Risks, mimeo, Stanford University, February 1998.

Moreno, R. (2002), Reforming China's Banking System, *FRBSF ECONOMIC LETTER*, Number 2002-17, May 31 2002, 1-4.

OECD (2000), *China in the Global Economy: Reforming China's Enterprises*, OECD Economics: Emerging Economies in Transition.

Polackova, H. (1998), Government Contingent Liabilities: A Hidden Risk to Fiscal Stability, World Bank Policy Research Working Paper 1989.

Qian, Y. (1994), Financial System Reform in China: Lessons from Japan's Main Bank System, in Aoki, M. and H. Patrick, eds., *The Japanese Main Bank System: Its Relevance for Developing and Transforming Economies*, Oxford University Press, 552-591.

Radelet, S. and J. Sachs (1998), The Onset of the East Asian Financial Crisis, mimeo, Harvard Institute for International Development, February 1998.

Saunders, A. and A. Sommariva (1993), Banking sector and restructuring in Eastern Europe, *Journal of Banking and Finance*, **17**, 931-957.

Šević, Ž. (1999), Restructuring Banks in Central and Eastern European Countries as a Part of Macroeconomic Changes towards Market Oriented Economies, Belgrade: Balkan Center for Public Policy and Related Studies, and Čigoja štampa.

Thorne, A. (1993), Eastern Europe's Experience with Banking Reform: Is There a Role for Banks in the Transition? World Bank, Policy Research Working Paper 1235, December 1993.

Watanabe, M. (2000), Enterprises and Banks-The NPL-Generating Mechanism, in M. Watanabe, ed. *IDE Spot Survey: China's Non-Performing Loan Problem*, Japan: Institute of Developing Economies, 23-38.

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CATO Institute (1998), *Rita Gluzman, Petitioner v. United States of America, Respondent, Brief of Amicus Curiae the Cato Institute in Support of the Petition for a Writ of Certiorari to the United States Court of Appeals for the Second Circuit*, http://www.cato.org/pubs/legalbriefs/gluzman.pdf [accessed 15th March 2001]

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Revenue, R is calculated as

 $R = P^*V$

where

- P is the selling price, and

- V is the volume of sales in units.

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