

# WHAT CAN MANAGEMENT ACCOUNTING PRACTITIONERS AND ACADEMICS DO TO IMPROVE RISK MEASUREMENT AND FOREWARN IMPENDING FINANCIAL CRISES?

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## Abstract

We discuss some perceived shortcomings of management accounting in the light of the financial crisis of 2008. We describe current trends in management accounting thinking and Japanese perspectives on the discipline. Our main focus is on the lack of reliable measurement of financial risk and its consequences. The importance of collaborative multi-disciplinary research through partnerships between academics and practitioners is emphasised.

**Keywords:** financial crisis, management accounting, Japanese management accounting; risk measurement

## Introduction

The 2008 global financial crisis once more raised questions concerning the role of accounting in organisations. When things go wrong we ask ourselves if we could have done things better so that what happened might not have happened. Could we have foreseen and avoided the problem had we been better informed or better directed? Were we deficient or were we looking in the wrong direction?

Many of the criticisms, levelled against accounting and accountants (often by themselves) are similar to those that were aired at the time of the Asian financial crisis in the mid to late 1990s; insufficient clarity in what was being measured, the wrong things being measured or things being measured inappropriately, lack of

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standards, inadequate transparency and poor ethical conduct (Mainelli, 2009). In short, poor corporate governance.

These deficiencies apply to both financial and management accounting. Both disciplines are ultimately founded on common principles. Management accounting is directed to internal decision making purposes, though, and the emphasis is less on transparency and disclosure and more on measurement and relevance for managerial decision making. Here we reflect on the state of play in management accounting, Japanese perspectives on issues facing management accounting in the wake of the global financial crisis, and what we believe to be the main shortcoming of management accounting contributing to the financial crisis – the reliable measurement of financial risk. Meeting challenges in a crisis situation is a common element in the agenda of management accountants and financial accountants. A response can be better harmonized by both parties acting as risk professionals, by integrating management and financial accounting approaches together in a risk analysis (Mainelli, 2010)

## **The State of Management Accounting Generally**

Management accounting in Asia, influenced by developments in the US, Europe and, distinctively Japan, has been considered until recently to be relatively backward, lacking theory and a knowledge of practice compared to financial accounting (Nishimura and Willett, 2005). More generally, Davila and Oyon (2008) criticize management accounting research as working too much within silos. They argue that researchers should consider the impact of their work on society at large and describe what is happening in society. Management accounting academics and professionals share the same discipline but often have little in common in the problems they perceive as being important and the approach for dealing with these, except, perhaps, their terminology. Recent events, the global financial crisis and corporate governance scandals, bring pressure for academic researchers and business professionals to work together more effectively to address these problems, analyse their causes and suggest workable solutions.

The immediate cause of the current financial crisis is generally attributed, as with the earlier Asian financial crisis, to poor corporate governance (Dujuan, 2009; Dercon, 2007; Parker, Peters, and Turetsky, 2002). This is partly a problem of ethics (Wong, 2009). Better management accounting cannot solve the ethical problem but poor management accounting information compromises good ethical decision making. Much has been made of the need for management accounting to encompass non-financial and non-quantitative information to provide a broader understanding of the problems faced by management (Pretorius, 2008; Otley, 2008; Asada, Bailes, and Suzuki, 2000). The underlying cause of the financial crisis, however, is the failure to control financial risk. Again, while management

accounting cannot, of itself, prevent managers taking undue risks; it can by accurately measuring and reporting financial risk, draw attention to the need to manage risk. Then, if ethical imperatives are followed, supported by appropriate incentives to act in the best interest of the organisation, the probability of financial distress can be reduced. The problem is that, in common with financial accounting, we do not yet have an accepted, systematic and reliable system for measuring and routinely reporting levels of financial risk in organisations. Consequently, the development of rigorous techniques for financial risk measurement should be a key priority for management accounting research.

The difficulty with this suggestion is that it requires two things that are absent from most present management accounting research: finding solutions to technical problems and a multi-disciplinary approach.

On the first point, the research published in most well-known academic management accounting journals in recent years concentrates on qualitative case study descriptions of practice and surveys of perceptions of managers and accountants about various matters (Riaz, 2009; Bhimani, 2002). We know a lot more, qualitatively, about what is going on in management accounting within organisations and perceptions of what is going on but, apart from advances in information technology and computational techniques generally, we know little more about how management accounting *per se* can be improved technically.

Normative issues relating to the design of better measurement systems, once the core of the discipline are rarely published (Bromwich, 1999/2000). Developments in this area, where they occur, now appear in journals of mathematics, operations research and operations management, mostly inaccessible to the management accounting academic as well as the management accounting practitioner (Rosenzweig, 2009).

The second thing that is absent from most management accounting research, a multi-discipline approach, is related to the first. The management accounting needs of organisations, while having commonalities, are to some extent specific to individual organisations. Implementations of so-called 'strategic management accounting' (SMA) systems show that generic enterprise resource management systems (ERPs) such as SAP and Oracle require extensive and expensive tailoring to suit special needs (Kakouris and Polychronopoulos, 2005). The ubiquitous presence of legacy systems and the problem of their integration into ERPs bear witness to this fact (Beheshti, 2006). Consequently, management accounting research that addresses the issue of the better design of management accounting systems requires the involvement of not only management accountants but also information technology and management specialists and, quite possibly, statisticians, mathematicians and engineers.

The need for a more multi-disciplinary approach to management accounting research and the lack of interest in technical measurement issues is reflected in the literature in examples such as Lewellyn (2003), Otley (2008) and Langfield-Smith (2008). Lewellyn explores the 'level of theorizing' in management accounting research and concludes that what counts as the subject matter of theory is currently too narrowly defined and that the full range of the significant empirical phenomena that characterizes management accounting is not being properly researched. Otley emphasizes the need to move beyond the confines of an artificially restricted management accounting function. Langfield-Smith suggests that SMAs may no longer be useful in describing management accounting techniques or approaches and that, in the future, the focus should be on how SMA-inspired techniques diffuse into more general practice and into organizational processes. The academic literature is, however, long on commentaries of general problems afflicting the 'strategic' shortcomings of management accounting research but short on solutions to key issues such as effective ways to measure financial risk.

## **Japanese Perspectives on Management Accounting**

Japan's theorizing about management accounting is at the same time more cohesive in a societal context, more mystical and 'Eastern' (at least to Western rationalist eyes) and more interested in technological aspects of the discipline.

In the accounting literature, countries such as Australia, New Zealand, Canada and the United States are considered micro-economic in their accounting focus. Japan, in contrast, along with countries such as France, Germany, Sweden and Spain, is considered to have a macro-economic focus (Nobes, 1983). This characteristic is essentially derived from the design of the ancestor accounting systems by which Japan's own system was influenced. Nevertheless, it reinforces the point made by a number of author's that, in order to understand Japanese accounting, one must understand Japanese culture, business practices, history and so on (Nishimura et al., 1997).

Group consciousness, interdependence in personal and corporate relationships, interlocking *keiretsu*, and strong political control over business affairs make for a different accounting environment compared with the more open market environment and rationalist traditions of western nations. As the influence of Japanese culture distinguishes their management practices from Western models, Japan has added a particularist flavour to its management accounting techniques. In a distinctively Japanese style of theorising, Nishimura argues for the integration of what he terms the three aspects of 'minimization', 'maximization' and 'optimization' into a new type of management accounting (Nishimura, 2003).

However, having until recently been seen as exemplars of innovative management practices, recent survey results show that Japanese executives both in Japan and in the US believe their management system is in crisis. The *keiretsu* has become less important. They increasingly engage in mergers and acquisitions and display major shifts in HRM practices away from Japanese traditions. An increased influence of western management practices has become evident and some foreign executives in Japan are considered to be role models. Innovation has largely been neglected (Pudelko and Mendenhall, 2007).

Based on a survey of 101 Japanese manufacturing firms, Nishimura and Willett (2005) found that well under one-fifth of the respondent firms adopt the modern management accounting systems advocated by researchers, such as activity-based costing and the balanced scorecard. Nishimura explains how Japanese management techniques such as JIT, TQC, and target costing have acted to suppress the adoption of the balanced scorecard in Japan. The Japanese focus in practice is mainly on cost design (*genka kaikaku*) and cost improvement (*genka kaizen*) for internal control and market strategy (Nishimura and Willett, 2005). The fundamental approach in Japanese management accounting system is based on high quality and low cost. The influence of cost and quality centred management is clearly visible among the business strategies of Japanese companies.

This approach is not necessarily effective in the context of the current global economic environment, however. Japanese firms are concerned about cost reduction practices in order to be competitive and profitable but there is little evidence of adaptability to change conditions through experimentation with alternative approaches. Japanese managers seem to use the same cost approach that has failed to provide positive outcomes over more than a decade. The 2009 Japan Company Handbook recounts how 80 firms whose management generally held in a 1993 survey that their company was deficient in areas such as personnel development, innovation and marketing strategy are still struggling with losses or declining profits 16 years later, as they continue with the traditional strategies of cost cutting, reducing manpower and reducing inventory.

The malaise in the approach of some large Japanese organisations is sometimes transmitted to smaller firms through the not well-thought-through adoption of models of the former by the latter. Hopper et al's (1999) exploratory study of small and medium sized (SME) Japanese manufacturing firms in Kyushu found that many were using costing systems similar to larger organizations, but were not using the resulting information effectively for decision making or performance evaluation.

Japanese managers admit the need for re-structuring. They concentrate on market growth at the cost of low profits while continuing cost cutting strategies (Pudelko

and Mendenhall, 2007). Managers are aware of the need for profit generation but, often under crisis management, they are focusing more on core competencies, limiting over-diversification, re-structuring value chains, engaging in more mergers and acquisitions, scaling down company networks (keiretsu) and reducing subsidiaries and suppliers (Japan Company Handbook, 2009). This is essentially a defensive withdrawal strategy maintaining the focus in management accounting on cost cutting and quality improving processes. It is unclear that this focus is in Japan's best interests in the present state of world markets.

Providing a conceptual analysis of value-based management with reference to Japanese practice, Nishimura suggests that, given the severe competition in international markets, short-lived consumer sentiment and rapid change in technology, management should enhance not only the effective and efficient value of the product, but also enterprise value for competitive advantage. To achieve this, management should look forward and be pro-active, while management accounting should serve the management with useful information on risk and opportunity (Nishimura, 2007).

### **Objectives, Strategies and Tactics to Address the Cause of the Financial Crisis**

The objective of management accounting is, and always has been, to inform better management decisions. Scandals and financial crises show, however, that better management decisions are not just about maximising short-run profits. Incentive systems have to be carefully thought through to ensure managers act in the best interests of their organisations. Decisions have to be made to allow sustainable long-run development. But the most important weakness in the armoury of management accounting lies in the narrow area of technique, the central issue of accounting measurement, in the valid and reliable representation of financial risk.

The mushrooming of unidentified and unmeasured financial risk is the final cause of the present financial crisis. We can design incentive schemes to reduce the likelihood that managers will behave badly. We can force ourselves to consider the longer term, the important non-financial dimension of decisions and the impact of these on our environment. However, unless we can measure the extent of risk in the decisions we make and communicate this effectively, recent history is likely to be repeated. The development of valid and reliable financial risk measurement is thus the single most important challenge facing management accounting researchers.

Cooper and Kaplan (1988) proposed Activity-Based Costing (ABC) as a solution to the allocation problem. Whether or not this claim is justified, there is no systematic treatment of financial risk within the ABC framework. Kaplan and Norton (1992) at various points refer to risk as an important ingredient in good strategic management but again there is no apparatus for relating the multidimensional aspects of risk into a single measure of financial risk.

Willett's Statistical Cost Activity Theory (Willett, 1991; Gibbins et al., 1998) is more rigorous and precise than ABC. While its practical approach and implications are similar to ABC in non-risk related applications, its explicit statistical framework enable it to deal naturally with the measurement of financial risk that underlies the development of Statistical Activity Cost Analysis (SACA). The latter applies to management accounting as much as financial accounting. In financial accounting SACA has been applied mostly in the context of the decision usefulness of depreciation as an accounting estimate. For instance, Lane & Willett (1997) suggest a function for depreciation as an optimal smoothing technique for the estimation of long-run profit. Applications in management accounting include Booth and Willett (1997) on the statistical properties of standard costing variances and, more recently, Falta et al. (2006) on estimating hard to measure environmental costs arising from processes. Much recent work has been done in sponsored, applied projects to measure financial risk in the emerging field of engineering asset management (e.g. see Colin et al., 2010).

Such recent SACA research can help practitioners address the important problem of assessing financial risk. We have the theory and the techniques to provide a solution as the references to recently published work show. What is needed is the development of further partnerships between academics and practitioners to develop theory, models, methods and techniques and to implement these in the management systems of organisations. Researchers need access to the internal workings of organisations and sponsorship to provide the resources necessary to produce a successful product in a timely manner. The research teams required to achieve success in this endeavour are multi-disciplinary: accountants, information scientists, management theorists, engineers and others.

Teams such as this are already employed, through government and privately funded research centres in countries such as Australia (e.g. see [www.cieam.com](http://www.cieam.com)). This model works well but it is not yet widely used outside of a relatively few isolated research programs, such as the projects referred to above. This is a pity because universities, especially business faculties, contain largely untapped human and technical resources that could be used in partnerships with business organisations to find solutions to the technological challenge facing management accounting. Resources are needed to support such collaborative research.

However, the cost of collaboration is certain to be much less than other alternatives to solving these problems. Universities and business organisations should therefore proactively seek collaboration with a view to management accounting research making a positive contribution to improved financial risk measurement.

## References

Asada, T., Bailes, J. C. and Suzuki, K. (2000). Implementing ABM with Hoshin Management, *Management Accounting Quarterly*, Winter, 1-6.

Beheshti, H. M. (2006). What managers should know about ERP/ERP II, *Management Research News*, 29, 4: 184-193.

Bhimani, A. (2002). European Management Accounting Research: Traditions in the Making, *The European Accounting Review*, 11, 1: 99-117.

Bromwich, M. (1999/2000). Thoughts on Management Accounting and Strategy, *Pacific Accounting Review*, 11, 2: 41-48.

Booth, J. and Willett, R. J. (1997). Some Statistical Properties of Standard Costing Variances, *IMA Journal of Management Mathematics*, 8: 167-179.

Colin, A., Falta, M., Su, S., Turner, L., Willett, R. J. and Wolff, R. (2010). A Statistical Activity Cost Analysis of the Relationship between Physical and Financial Aspects of Fixed Assets *Proceedings of the first World Congress of Engineering Asset Management*, Gold Coast, Queensland, Australia, July 2006, Springer. (Forthcoming in the *Engineering Asset Management Review*).

Cooper, R. and Kaplan, R. S. (1988). Measure Costs Right: Make the Right Decisions, *Harvard Business Review*, Sept-Oct, 96-103.

Davila, T. and Oyon, D. (2008). Cross Paradigm Collaboration and the Advancement of the Management Accounting Knowledge, *Critical Perspectives on Accounting*, 19: 887-893.

Dercon, B. (2007). Corporate Governance after the Asian Crisis, *Managerial Law*, 4, 4: 129-140.

Dujuan, Y. (2009). Inefficient American Corporate Governance under the Financial Crisis and China's Reflections, *International Journal of Law and Management*, 51, 3: 139-152.



Falta, M., Gallagher, L. and Willett, R.J. (2006). Modelling “Hard-To-Measure” Costs in Environmental Management Accounting, *Asia-Pacific Management Accounting Journal*, 1, 1: 127-144.

Gibbins, M., Hillier, J. and Willett, R. J. (1998). The Foundations of Statistical Activity Cost Theory with Applications to Some Old Accounting Measurement Issues: A Simulation Approach. *Journal of Political Economy*, 64, 5-6: 57-79 (Kyushu University Press, Japan).

Hopper, T., Koga, T. and Goto, J. (1999). Cost Accounting in Small and Medium Sized Japanese Companies: An Exploratory Study, *Accounting and Business Research*, 30, 1: 73-86.

Japan Company Handbook, (2009). Tokyo, Toyo Keizai Inc.

Kakouris, A. P. and Polychronopoulos, G. (2005). Enterprise Resource Planning (ERP) System: An Effective Tool for Production Management, *Management Research News*, 28, 6: 66-78.

Kaplan, R. S. and Norton, D. P. (1992) The Balanced Scorecard – Measures that Drive Performance, *Harvard Business Review*, Jan-Feb, 71-79.

Lane, J. and Willett, R. J. (1997). Depreciation Need not be Arbitrary. *Accounting and Business Research*, 3(Summer): 179-94.

Langfield-Smith, K. (2008). Strategic Management Accounting: How Far Have We Come in 25 Years?, *Accounting, Auditing and Accountability Journal*, 21, 2: 204-228.

Lewellyn, S. (2003). What Counts as “Theory” in Qualitative Management and Accounting Research?, *Accounting, Auditing and Accountability Journal*, 16, 4: 662-708.

Mainelli, M. (2010). Just Doing My Job: Intelligence Versus Integrity in Financial Professionals, *The Journal of Risk Finance*, 11, 2: 235-237.

Mainelli, M. (2009). Confidence Accounting: Putting Essential Uncertainty Back into Auditing and Accounting, *The Journal of Risk Finance*, 10, 3: 305-310.

Nishimura, A. (2003). Management Accounting: Feed Forward and Asian Perspectives, New York, Palgrave.

Nishimura, A. (2007). Conceptual Analysis of Value-Based Management and Accounting: With Reference to Japanese Practice, *Asia-Pacific Management Accounting Journal*, 2, 1: 71-88.

Nishimura, A. and Willett, R. (1997). Structures and Features of Japanese Accounting in Accounting in the Asia-Pacific Region, ed. Nabil Baydoun, Akira Nishimura, and Roger Willett, Singapore, John Wiley and Sons.

Nishimura, A. and Willett, R. (2005). Fundamental Features and Perspectives of Management Accounting in Asia in Management Accounting in Asia, ed. Akira Nishimura and Roger Willett, Malaysia, Thomson Learning.

Nobes, C. W. (1983). A Judgemental International Classification of Financial Reporting Practices, *Journal of Business Finance and Accounting*, Spring, 1-19.

Otley, D. (2008). Did Kaplan and Johnson Get it Right?, *Accounting, Auditing, and Accountability Journal*, 21, 2: 229-239.

Parker, S, Peters, G. F. and Turetsky, H. F. (2002). Corporate Governance and Corporate Failure; A Survival Analysis, *Corporate Governance*, 2, 2: 4-12.

Pretorius, M. (2008). When Porter's Generic Strategies are not Enough: Complementary Strategies for Turnaround Situations, *Journal of Business Strategy*, 29, 6: 19-28.

Pudelko, M. and Mendenhall, M. E. (2007). What Western Executives Need to Know about Current Management Practices, *Organizational Dynamics*, 36, 3: 274-287.

Riaz, S. (2009). The Global Financial Crisis: An Institutional Theory Analysis, *Critical Perspectives on International Business*, 5, 1/2: 26-35.

Rosenzweig, E. G. (2009). A Contingent View of E-Collaboration and Performance in Manufacturing, *Journal of Operations Management*, 27: 462-478.

Willett, R. J. (1991). Transaction Theory Stochastic Processes and Derived Accounting Measurement., *Abacus*, 27: 2, 117-134.

Wong, L. (2009). The Crisis: A Return to Political Economy?, *Critical Perspective on International Business*, 5, 1/2: 56-77.

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