Proposal Submitted to
The KPMG and University of Illinois Business Measurement Research Program

Performance Measurement and Incentives in Loss-Making Firms

Michal Matejka
matejka@marshall.usc.edu
(213) 821-5979

Kenneth A. Merchant
kmerchant@marshall.usc.edu
(213) 740-4842

Wim A. Van der Stede
wim@marshall.usc.edu
(213) 740-3583

University of Southern California
Leventhal School of Accounting
Los Angeles, CA 90089-0441
Fax (213) 747-2815

* Principal Investigator
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1 Research Questions and Objectives

1.1 Motivation

In the course of conducting prior research (Gibbs et al., 2003; Matejka et al., 2003), we have observed that managers are reluctant to base performance-dependent incentives on summary accounting measures of performance (e.g., earnings, returns) when their firms (or subentities, such as divisions or departments) are reporting losses. They tend, instead, to base their incentive awards on highly specific financial performance measures (e.g., sales to a specific targeted customer), non-financial performance measures (e.g., on-time delivery percentage), or subjective assessments of performance, or at least they weight the summary accounting performance measures lower in importance. This practice hints at a failure of accounting systems to measure performance well in these situations.

Understanding the failures or limitations of accounting measures of performance in loss-making situations is important because these situations are so common. For FY 2001, we found that 4,019 of the 22,090 publicly held firms in the U.S., or about 1 in 5 firms, operated at a loss. But even in non-recessionary times, many firms lose money, and there are many loss-making entities within profit-making firms.

We also know from prior research that firms commonly provide bonus payments even when incurring losses. According to one study (HR Focus, 1994), 75% of top executives in large firms that report losses earn bonuses nonetheless.

Why managers might choose to deemphasize the importance of accounting measures of performance in providing bonuses in loss-making situations is not well known. No prior research has focused on this issue. At a technical level, making losses would not seem to cause a measurement problem. Losses can be measured in accounting terms as well as profits, and loss-making firms could just adjust their performance targets and provide incentives for managers to reduce losses. But this does not seem to be what most firms do.

Our research question is aimed at providing a better understanding of what seems to be the dominant practice. The first part of the question is: What affects managers’ choices of the performance measures that are linked to incentive payments in loss-making entities? The second part is: What are the consequences of the performance measurement choices in loss-making entities?

1.2 Theory

The usefulness of accounting data in evaluating performance is a research topic with a long history in the accounting and management literatures. In prior work, we have described the importance of integrating complementary theories from different disciplines (Merchant et al., 2003). We have argued that such multidisciplinary approach is
particularly important in research examining situations where explicit (negotiated, formula-based) contracts are likely to be incomplete (such as in loss situations). Therefore, to inform this study, we draw on the findings of prior work in multiple literatures—accounting, management, finance, and economics.

Argyris (1952) was one of the first to document some dysfunctional behavioral effects of using accounting data to measure and evaluate performance. This finding motivated a stream of literature investigating the consequences of the so-called reliance on accounting performance measures (Hopwood, 1972; Otley, 1978; Merchant, 1985, 1990; Hartmann, 2000). One conclusion from this literature was that there is no universal relationship between the use of accounting in performance measurement and dysfunctional behavior. Rather, positive and negative outcomes of the use of accounting performance measures vary depending on their use in the particular setting. Among the contextual factors found to be important were strategy, environmental uncertainty, and various aspects of organizational structure (e.g., Otley, 1980; Merchant, 1981, 1984).

Our preliminary observations from our other studies, which we mentioned above, suggest that a loss situation is an important contextual characteristic to consider and that accounting performance measures appear to be used more heavily for incentive-granting purposes in profitable firms than in loss-making firms.

There are prior studies that relate to this issue. A major stream in the accounting literature focuses on the use of financial vs. non-financial measures (e.g., Ittner et al. 1997). There are also some studies on the use of subjectivity in performance measurement and evaluation (e.g., Gibbs et al., 2003; Bushman et al., 1996; Baker et al., 1994). These empirical studies, however, say little about the differences between profitable and unprofitable firms. Thus, the question as to how loss situations affect the design of incentives remains largely unanswered in this literature.

What causes the predominant performance-measurement practice in loss-making firms? We suggest that one useful way to build one part of the theoretical argument may be derived from the organizational change literature and the accounting/economics literature on measurement informativeness. Tushman and Romanelli’s (1985) model of organizational change suggests that organizations evolve incrementally, yet there are infrequent radical changes triggered by poor performance and/or environmental change. The conservative accounting treatment of the costs of a radical change, requiring expensing rather than capitalizing many investments, makes earnings-based performance measures less informative in such situations. Since radical change is more likely in loss-making firms, the earnings measures in loss making firms are likely to be less informative about ‘real’ managerial performance (Holmstrom, 1979; Holmstrom and Milgrom, 1991; Banker and Datar, 1989; Feltham and Xie, 1994). The task remains, however, to understand what affects measurement informativeness in loss-making entities.

2 Research Method

Our interest in this research project began as we were analyzing a rich database on performance measurement and incentives in car dealerships (Gibbs et al., 2003). We observed that a loss situation was one of the factors that was significantly related to the use of subjectivity in the allocation of incentives. Our interest in the topic grew when we
wrote a case on a company called _Catalytic Solutions, Inc._ (CSI). The case describes performance measurement and compensation design choices in a growing firm that exploits an innovative technology. The fact that CSI was in a pre-profit situation substantially affected the choice of performance measures and the structure of the whole compensation package. The case explores how and why this happened.

In thinking further about the topic, we noted that loss-making entities could be classified into three categories. One includes young entities operating in a _pre-profit_ stage of development, as is described above. A second includes entities that face _transitory losses_ (i.e., those that are temporarily unprofitable but are in solvent businesses). A third category includes entities that are _financially distressed_ (i.e., those that have been running losses for multiple years and are in significant risk of failure). We propose to study all three types of loss making entities in hopes of being able to draw distinctions among them. While the outcome may be the same—loss-making firms deemphasize the use of summary accounting measures of performance—their rationales for doing so are likely to be different.¹

2.1 Phase I – Exploratory Field Research

In conducting this study, we propose to do some exploratory field research. Before we attempt to collect a large set of empirical data, we will conduct interviews with a sample of managers in various kinds of loss-making entities. We think this will enhance our understanding of the phenomena and greatly improve our ability to design an effective data collection (survey) instrument.

2.2 Phase II – Survey Study

The second phase of our study will be a large sample survey. We plan to collect data both at the corporate and profit center level of analysis (e.g., sector, division). But we expect the division-level study to provide a different, and even richer set of findings, if for no other reason that market-based incentives (e.g., stock options) are much less prevalent and much less important as motivators lower in the organizational hierarchy. We propose to conduct a survey of a sample sufficiently powerful for our analyses. Our rough guess at this time is that we would need a minimum sample of approximately 200 profit center managers.

Response rate is obviously critical to the success of the survey study. Performance measurement for compensation purposes is a sensitive topic and targeting loss-making firms and profit centers may make it even more difficult to solicit the desired responses because most of the managers in these entities are quite busy addressing their performance problems. We plan to maximize responses in two ways. First, we plan to use a ‘combination’ approach to survey administration (i.e., phone calls to solicit collaboration and to establish commitment in combination with a survey), which increases response rates (Baldauf et al., 1999). And second, we plan to design an on-line, rather than a mailed, survey to reduce the effort needed to cooperate.

¹ Prior papers have concluded that in _solvent_ firms senior managers on average experience little reduction in their personal wealth when their firms are unprofitable (e.g., Jensen and Murphy, 1990a, 1990b). Other studies, however, have shown that senior managers incur significant personal losses when their firms are _financially distressed_ (Gilson and Vetsuypens, 1993).
We propose to select a sample of loss-making firms from Compustat and then contact the CFO (by phone) to introduce our research and solicit cooperation. We would also ask the CFO to direct us to managers and controllers in charge of divisions running losses. If we can identify a sufficiently large group of companies that would be willing to participate in our study, our chances of success would be enhanced. It is perhaps not essential, but help from KPMG, as the project sponsor, would be greatly appreciated.

3 Proposed Research Activities and Timeline

We propose the following milestones (starting from the date of research proposal approval):

- Six months:
  - Report on the findings of the exploratory fieldwork.
  - Preliminary design of the survey phase of the study, including variables to be measured, sample selection procedures, and survey administration procedures.

- One year:
  - Interim report on the progress of the survey project. At this stage, we will have designed the survey instrument and arranged its on-line hosting. Data collection may start a few months earlier or later to avoid soliciting responses in ‘busy’ periods (beginning/end of the year).

- 18 months:
  - Final report on the survey phase of the study.
  - Draft paper(s).

4 Research Team and Skills

The research team consists of members with a track record of research in management accounting and management control. All team members have experience with empirical analyses of ‘real world’ data, and have worked with practitioners in prior research through casework and large sample empirical research. All team members have demonstrated interest in approaching managerial accounting research issues from a broad, interdisciplinary, perspective. And each team member also has extensive prior experience with the survey method. (See enclosed vitae.)

5 References


*HR Focus* (October 1994). Top Executives Earn Bonuses Despite Losses Last Year, p. 17.


