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The Impact of Profit Sharing on the Performance of Financial Services Firms*

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ABSTRACT Relying on macro theories (agency and organizational control) as well as micro theories (goal setting and expectancy), this study investigates the impact of profit-sharing plan (PSP) adoption on the value creation process of financial services firms. The study relies on a comprehensive methodological approach that is both quantitative, with a dual cross-sectional/longitudinal (pre-post) design that compares PSP adopters with a control group of PSP non-adopter firms, and qualitative through interviews with some adopting firms' managing directors. Results show that firms adopting a PSP enhance their profitability in comparison to both their own prior performance and to firms that are not adopting a PSP. Results also show that the adoption of a PSP: (a) positively influences only profit drivers that are under employee control; and (b) is more likely to have a long term, positive impact on external profit drivers than on internal profit drivers. Qualitative data from field interviews corroborate and enrich these quantitative findings.

INTRODUCTION

It is estimated that approximately 20 per cent of all US firms have profit-sharing plans (PSPs), with some evidence suggesting that the incidence of PSPs may reach 40 per cent among large publicly listed firms (Kruse, 1993, 1996). In Canada, surveys indicate that between 17 and 25 per cent of all firms rely on PSPs to reward their employees (Long, 1997; Tyson, 1997; Watson Wyatt, 1998). Broadly defined, a PSP is any contract '. . . in which part of employee compensation during a particular period is based substantially on the profitability of the company in that period' (Kruse, 1993, p. 5).

Despite their widespread use and many calls by leading researchers over the years, our understanding of the process by which PSP adoption translates into

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higher firm productivity and performance is still tentative. For example, Weitzman and Kruse (1990) pointed out 'the limitation of econometric studies is that they shed little light on the mechanisms through which profit sharing may affect productivity' (p. 139). In 1992, Gerhart and Milkovich (1992) underlined that more needs to be known about the value creation process following the adoption of a particular compensation plan. More recently, Long (2000) observes that there is a dearth of evidence regarding PSPs' impact on corporate activity – that is, about the mechanisms by which PSPs affect organizational productivity and/or performance.

Hence, even if links are found between a particular pay programme such as a PSP and unit or organizational performance, it is not clear why and how these links were established. In this study, we intend to investigate this research gap. More precisely, we aim to gain a better understanding of how a PSP, as an outcome-based compensation plan covering a majority of a firm's employees, can affect value creation within an organization. Toward this end, we ask three specific questions: (1) Is PSP adoption an effective tool in improving an organization's profits? (2) Why does PSP adoption lead to value creation? (3) How does PSP adoption translate into value creation?

In responding to these three questions, the study provides both theoretical and methodological contributions. From a theoretical perspective, we integrate macro theories, i.e. organizational control and agency theories, and micro theories, i.e. goal and expectancy theories of motivation, into a single theoretical framework. In doing so, we follow the recommendation expressed by Wiseman and Gomez-Mejia (1998, p. 147) that 'incorporating goal-setting theory into agency models of compensation design may provide new ways of viewing the criteria used in awarding variable pay'. Besides, by investigating the effectiveness of a key compensation tool, i.e. PSPs, the study contributes to the broader debate about the impact of human resources management programmes on firm performance and on shareholder value (e.g. Becker et al., 1997; Delaney and Huselid, 1996; Huselid, 1995; Huselid et al., 1997; Pfeffer, 1998).

From a methodological perspective, this study incorporates three major improvements. Firstly, it adopts a dual cross-sectional/longitudinal (pre-post) design, with a control group of PSP non-adopter firms, thus allowing stronger inferences to be drawn about the impact of PSP adoption on the value creation process. Secondly, it focuses on a single industry (commercial banking) thus controlling for environmental and organizational factors. A single-industry focus also implies a homogeneous value-creation process, thus ensuring that relevant profit drivers can be identified and compared across firms (Foster, 1986; Raviv, 1985). Third, the data comprises both objective measures of organizational performance measures as well as perceptual measures of PSPs' organizational effectiveness obtained through interviews with sample organizations' managing directors. Such a qualitative insight may shed interesting additional insights since previous studies

of productivity in the banking industry indicate the importance of getting 'inside the black box' (Bartel, 1998; Berger and Mester, 1997).

THE EFFECTIVENESS OF PROFIT SHARING IN FINANCIAL INSTITUTIONS

Prior Research on the Effectiveness of Profit Sharing Plans (PSPs)

Prior research on the effectiveness of PSPs focuses on only a few aspects of firm performance. On the one hand, early comparative studies provide evidence that firms with a PSP exhibit higher earnings levels than firms without a PSP (Bell and Hanson, 1987; Howard, 1979; Howard and Deitz, 1969; Jehring and Metzger, 1960; Metzger, 1978; Metzger and Colletti, 1971). On the other hand, there is extensive evidence that PSPs are associated with enhanced firm productivity, either measured as a firm's value-added or as sales per employee: in other words, one dollar of labour resources in a firm with a PSP raises productivity by more than one dollar of labour resources in a firm without a PSP (e.g. Bell and Neumark, 1993; Cable and Wilson, 1990; Conte and Svejnar, 1988; Defourney et al., 1985; Fitzroy and Kraft, 1987; Kim, 1998; Kruse, 1991; Kumbhakar and Dunbar, 1993; Wadhwani and Wall, 1990). In a path-breaking study, Kruse (1993) actually shows that profit-sharing adoption can produce a one-time increment in productivity that is maintained over time.

However, while findings from prior research show that PSPs improve productivity, evidence as to their impact on profits or value creation appears to be rather mixed (Jones et al., 1997; St-Onge, 1994). For instance, while Bhargava (1994), Conte (1992), Fitzroy and Kraft (1987) and Florkowski and Shastri (1992) find that PSP adoption leads to an improvement in profits, Blanchflower and Oswald (1988) and Poole and Whitfield (1994) provide no evidence that PSPs improve profits or value for a firm's owners. In fact, improvements in a firm's productivity that accompany the adoption of a PSP do not necessarily translate into improvements in that firm's overall performance (Defourney et al., 1985; Wadhwani and Wall, 1990). Using a simultaneous equations design, Kim (1998) shows that while profit sharing leads to an improvement in productivity, such improvement does not translate into higher profits. Kim (1998) suggests that, through PSP payouts, employees may actually receive most of the additional profit resulting from any productivity improvement.

In summary, empirical evidence clearly shows that PSPs have a positive moderating impact on the relation between an organization's use of labour resources and its value-added per employee (Kruse, 1993; Weitzman and Kruse, 1990). However, beyond productivity, PSPs' impact on organizational effectiveness is unclear (Long, 2000).

An Investigation of the Effectiveness of Profit Sharing Plans (PSPs) in Financial Institutions

Investigating the impact of PSP adoption on profitability in the Canadian banking industry is relevant as the environment in which Canadian banks and quasi-banks operate has changed dramatically in the last decade due to the introduction of new capital adequacy regulations in 1988, to a change in Canada's *Bank Act*, and to the 1990–91 recession, which was especially harsh in Canada and led to many loan defaults. To satisfy regulators' demands and meet investors' profit expectations, banks must modify their internal processes and methods, broaden the scope of their services and introduce new management tools. Conversations with some senior bank executives confirm that more intense competition leads banks to emphasize customer-focused service as a way to gain a strategic advantage. In such a context, employee involvement and motivation are crucial ingredients in a bank's strategy, since employee costs are the most important component of operating costs and the most significant performance input. Therefore, the challenge for management is to involve employees so that they actually contribute to organizational changes and technological improvements through outcome-based compensation plans like PSPs. Finally, a focus on financial services seems appropriate as it is in contrast with most existing work on PSPs, which focuses on manufacturing firms.

PROFIT SHARING PLANS (PSPs) AND FIRM PROFITABILITY: A MACRO THEORETICAL FRAMEWORK

The increasing use of group, outcome-based incentive compensation such as PSPs among financial services firms is consistent with agency theory (Eisenhardt, 1985). Within agency theory, one person, the principal, contracts with another person, the agent, to act on his or her behalf in return for some reward (Calvo, 1987; Fama and Jensen, 1983; Stiglitz, 1987). While agency theory is typically applied to the case where the owner is principal and executives its agents, 'agency costs arise in any situation involving cooperative efforts . . . by two or more people even though there is no clear cut principal-agent relationship' (Jensen and Meckling, 1976, p. 309). The principal's two concerns regarding the agency relation are assumed to be the following. Firstly, the principal and the agent may have conflicting goals, with the agent's actual behaviour being costly to monitor by the principal. Secondly, agents are expected to be more risk-averse than a principal as their human capital, their key asset, is not diversified. In contrast, the principal can probably have a diversified investment portfolio. Hence, any incentive compensation contract that is based upon some performance measure causes a loss from inefficient risk-sharing as some risk is shifted from the principal to the agent.

Agency theory's challenge is to specify the most efficient contract that will ensure that an agent's actions are consistent with the principal's interests, typically profit maximization or value creation, with the contract's cost to the principal being less than the performance it elicits from employees. Such contracts can either be behaviour-based, i.e. monitoring intensive, or outcome-based (Bartol and Locke, 2000; Milgrom and Roberts, 1992).

The issue as to whether compensation contracts should be based upon behaviours or on outcomes has been a recurring one. From an organizational control perspective, which is consistent with agency theory, these contracts essentially translate into control mechanisms. Behaviour-based or 'process' controls focus on employees' job inputs and require high levels of supervisory monitoring, direction, and intervention. Such controls are appropriate when the transformation process (input-output) is well understood but reliable and consistent output measures are not available. In contrast, outcome-based controls are preferable when the work process is not well understood and reliable output measures are available. Such outcome-based controls require little managerial supervision, which is consistent with the transformation process being complex and costly to monitor, and are often related to employee compensation plans such as PSPs (Ouchi, 1977, 1978, 1979). Moreover, when offered to all employees, outcome-based controls such as PSPs can be effective selection and socialization tools that ensure that employees behave in ways that are consistent with an organization's goals, thus reinforcing its performance culture (Deckop et al., 1999).

An outcome-based incentive compensation plan can be effective in raising firm performance when employees' task programmability is low, i.e. when relevant behaviours leading to desired outcomes are not known or cannot be specified in advance, and when outcome measurability is high and task programmability low (Conlon and Parks, 1990; Eisenhardt, 1985; Eisenhardt, 1989; Govindarajan and Fisher, 1990; Snell, 1992). Such a situation occurs when firms diversify their activities, thus leading employees to engage in behaviours that are more difficult or less familiar to monitor (Gerhart, 2000). In addition, group-based outcome-based compensation plans lead employees to engage in reciprocal monitoring of actions and behaviours so they do not diverge from the common objective, i.e. improving earnings (Fitzroy and Kraft, 1987; Gerhart et al., 1996; Weitzman and Kruse, 1990). Banker et al. (1996) argue that since tasks performed by employees in a services-oriented firm are more ambiguous, more difficult to prescribe and less programmable and observable than those performed in a firm that is oriented toward mass production, outcome-based controls should be effective in improving banks' performance. They go on to say that outcome-based compensation plans become key control levers in a bank's reorganization of its value creation process. Based upon the premises of both macro perspectives, i.e. organizational control and agency theories, and in light of previous findings on PSP effectiveness, we propose the following two hypotheses:

Hypothesis 1: Firms with a profit sharing plan (PSP) exhibit a higher level of profits than firms without a PSP.

Hypothesis 2: The adoption of a profit sharing plan (PSP) is accompanied by an improvement in a firm's profits.

THE PROFIT ENHANCEMENT PROCESS ACCOMPANYING THE ADOPTION OF PROFIT SHARING PLANS (PSPs): A MICRO THEORETICAL FRAMEWORK

Conceptual Background

Macro theories, such as agency theory and organizational control theory, are useful in predicting that, on average, PSP adoption should lead to improvements in a firm's profits but they do not shed much light on the intra-firm process by which profits are enhanced (Eisenhardt, 1989). However, micro theories or organizational behaviour theories related to motivation suggest that a profit enhancement process is likely to be driven by employees' willingness and latitude to perform or not to perform certain tasks, either through *goal-related* planning or through *personal agency belief*s.

On the one hand, according to goal-setting theory, if employees believe that attainment of a goal is possible, their commitment to that goal will be high (Locke, 1968; Locke and Latham, 1984; Locke et al., 1981). Locke et al. (1988) argue that employees' commitment to goals will be even higher if goal-based rewards are offered. However, as targets become more difficult and are increasingly perceived as impossible to attain, their influence on employees' behaviour and efforts decreases (e.g. Bandura, 1986; Locke and Latham, 1990b).

On the other hand, several motivation theories refer to 'personal agency beliefs' constituting a cognitive regulation process that allows individuals to identify and rank goal options so that they make effective choices in the face of several alternative goals, plans, and actions (e.g. goal-setting, planning, monitoring of feedback, allocation of rewards, variable compensation). According to Ford (1992), three 'personal agency beliefs' provide employees with the information they need to decide if they must initiate, activate, maintain, amplify, or inhibit some pattern of goal-directed activity: (1) *capability beliefs*: evaluative expectancies as to whether one has the personal capabilities needed for an effective action; (2) *context beliefs*: evaluative expectancies as to whether the environment will be responsive, cooperative, trustworthy, enabling, or supportive with respect to the person's goal-attainment efforts; and (3) a*ttainability beliefs*: evaluative expectancies that focus on the attainability of the desired outcomes or goal.

Barden and Ford (1990) argue that the de-motivating impact of uncertainty about personal capabilities (*capability beliefs*) and environmental responsiveness (*context beliefs*) may be reduced by focusing attention on 'controllable short-term

goals', i.e. proximal sub-goals that seem attainable with a manageable degree of effort. Proximal sub-goals are associated with positive capability and context beliefs, and a high probability of generating positive feedback information (Bandura, 1986; Bandura and Schunk, 1981). Similarly, Locke and Latham (1990a) propose the integration of motivation theories into a coherent whole, the 'high performance cycle', using goal-setting theory as the core but incorporating other concepts like expectancy and self-efficacy. According to this high performance cycle, a specific and challenging goal is most effective on employee behaviour and actions when: (1) the individual has high self-efficacy and ability; (2) there is a commitment to the goal; (3) there is feedback showing progress in relation to the goal; (4) the task is simple; and (5) there are no blocks to performance (Bandura, 1997; Bartol and Locke, 2000).

Profit Drivers and the Concept of Employee Control

From a cognitive perspective, PSPs may offer benefits that are too complex for employees to understand as they yield little information on the long-term drivers of firm performance over which employees can take action (Long, 1998). Thus, from an employee's perspective, a transparent line of sight between individual or collective efforts and an organization's profits is often lacking. Such a gap undermines the premises of the high performance cycle, and it prevents employees from committing to a goal they perceive as too far removed from their actual work.

Hence, to understand why PSPs influence financial returns, it is necessary to map how employees' actual actions and decisions are linked to ultimate profits. Relying on Rappaport's shareholder value network (1998, p. 55), we argue that employees envision profits and profit enhancement through underlying profit drivers that more closely reflect their actions and decisions. Hence, a profit driver's proximity to employees' actual work makes it a likely goal to commit to as they try to establish a line of sight between their work and a firm's profit.

The impact of employees' actions and decisions on a firm's profits is hindered by two factors. Firstly, profits reflect forces that are external to a firm: e.g. monetary policy or macro-economic conditions. Secondly, changes occur within the firm over which employees have no control: the use of new technologies, changes in work procedures and methods, new services, new customer service policies, labour costs, etc. Perhaps the most important limitation that is attributed to PSPs is inability to provide employees with a line of sight, i.e. 'the ability to influence and understand what needs to be accomplished to make the business result happen' (Altmansberger, 2000, p. 203). Hence, relying on the 'line of sight' concept, the adoption of a PSP is expected to affect profit drivers over which employees have more control: i.e. proximal sub-goals. Even agency theorists admit that monetary outcomes from an incentive plan depend upon organizational performance measures that are likely to be affected by employees' actions (Holmstrom, 1979;

Milgrom and Roberts, 1992). More precisely, the impact of PSPs on profits is through drivers that ultimately determine a firm's value (Lingle and Schiemann, 1996). Profit drivers such as asset growth and loan losses are posited to be antecedents rather than a measure of PSP effectiveness. This expectation is consistent with Bartel's (1998) findings that a bank's human resources management environment has significant effects on profit drivers that are directly under employee control. In contrast, profit drivers such as a bank's net interest margin are unlikely to be influenced by the adoption of a PSP since they are mainly determined by market conditions and the central bank's monetary policy. Hence, the following hypothesis:

Hypothesis 3: The adoption of a profit sharing plan (PSP) positively influences only profit drivers that are under employee control (extent-of-control).

Profit Drivers and the Concept of Span of Improvement

Even if a profit driver is under employee control, it is also expected that PSP effectiveness will be limited by the target difficulty, or the span of improvement – i.e. 'the probability of not achieving a performance goal' (Wiseman and Gomez-Mejia, 1998, p. 136). In fact, the high performance cycle is likely to be broken if employees perceive that a profit driver has reached a level beyond which improvement is deemed impossible or improbable (Locke and Latham, 1990a; Locke et al., 1988). Under these conditions, employees lose commitment to the goal of enhancing a firm's profits. The span of improvement captures employees' ability to enhance a profit driver over time, thus introducing a temporal dimension to their control.

For the purpose of determining its span of improvement, a profit driver could be considered as being either external or internal. External drivers, which are conditioned by how successfully employees interact with customers and exploit market opportunities, have a greater span of improvement than internal drivers. Since ultimately the only limit faced by employees in the enhancement of external value drivers is market size, the span of improvement following PSP adoption is expected to be long term. As such, external drivers best capture an organization's success in attaining the primary objective of an outcome-based compensation plan, which is to focus employees' efforts and attention toward customers. In contrast, internal value drivers are related to employees' success in improving the bank's internal operations and capital situation, a task that is subject to severe limitations. For example, although employees exert some control over loan losses because of their control over lending and loan-collection decisions, once loan losses become nil or negligible for a given period as a result of better credit management, further employees' actions cannot lead to further reductions in loan losses. In fact, loan losses may actually increase as provisions are set up for new loans. Consequently,

it is expected that the span of improvement of internal profit drivers is likely to be short term following the adoption of a PSP. Hence, the following hypothesis:

> *Hypothesis 4*: The adoption of a profit sharing plan (PSP) is more likely to have a long term, positive impact on external profit drivers than on internal profit drivers (span of improvement).

METHODOLOGY

A Sample of Financial Institutions

The population under investigation comprises financial services cooperatives that are part of the Fédération des caisses populaires Desjardins de Montréal et de l'Ouest du Québec (FMO) (Federation of Desjardins financial services cooperatives for the Montreal and Western Quebec regions; Desjardins is the name of the founder of this cooperative movement). Financial services cooperatives are similar to credit unions in the United States or to building societies in the United Kingdom in terms of ownership characteristics, but in Canada they essentially operate like commercial banks, offering full retail and wholesale banking services to individuals and businesses (mostly small to medium sized). In addition, financial cooperatives are allowed to offer trust and insurance services. Overall, financial cooperatives control approximately 50 per cent of the market for commercial banking services in Eastern Canada.

Each financial cooperative is an autonomous entity with its own board of directors, management and membership. While financial cooperatives report their financial results independently, they are all subject to an audit by the audit staff of the 'parent' organization (in this case, the FMO). Moreover, the FMO issues guidelines to its member organizations with respect to their management and lending policies; it also coordinates their activities and provides administrative and technical support. For instance, the FMO is promoting the use of PSPs among member organizations and, toward that end, has issued detailed guidelines specifying the attributes of an effective PSP. While each financial cooperative may adopt a PSP with different attributes, it cannot diverge too extensively from the FMO's model, since the FMO is ultimately responsible to the Inspector General of Financial Institutions (the government regulator): a financial cooperative with a PSP that is deemed too aggressive or generous will be viewed as high-risk by the FMO's auditors and inspectors, who may then impose a revision of its terms. PSP adoption is a major part of the FMO's new competitive strategy. After many years of being the dominant but reactive players in most local Eastern Canadian markets, financial cooperatives are now in the midst of a major strategic repositioning that involves upgrading employees' skills and implementing aggressive customer-focused marketing strategies, process re-engineering, massive downsizing (mostly

through attrition), and new performance management initiatives such as PSPs. The impetus for changes like these is the proactive stance of Canada's large banks, which are currently enjoying high rates of return that allow them to compete aggressively with financial cooperatives in terms of employee recruitment and customer lending/deposit-taking.

Profit-sharing Plan Guidelines and Management

In promoting PSPs, the FMO encourages employees: (1) to share the organization's business goals; (2) to work in teams in the pursuit of business goals; and (3) to perceive that their compensation package is stimulating and motivating (Lalande, 1997). The PSPs must adhere to the following guidelines:

- Payouts are allowed only if a firm is profitable and meets regulatory capital ratios.
- The board of directors sets a normal profitability target as well as an optimal profitability target. The normal target is the profitability level that can be attained under reasonable assumptions.
- The board of directors can set also targets for complementary performance measures according to the firm's context.
- Maximum payouts to employees range from 5 per cent of salary (lower-level employees) to 10 per cent (for managing directors).
- The payout formula is multiplicative, i.e. if a firm does not achieve its normal profitability target, no payout is made to employees even if other objectives have been achieved.
- The total payout to employees cannot exceed 50 per cent of the differential between actual profits and the normal profitability target.

For each financial cooperative, PSP payout formula and conditions must be within the guidelines specified by the FMO's compensation staff.[1] Annual audits by the FMO's audit staff ensure conformity and consistency.[2]

Hence, the magnitude of potential rewards from a PSP is consistent across SBUs as the FMO does not want staff moving from one SBU to another because of different PSP payment schemes. The performance measure underlying the PSP, i.e. earnings (return on assets), is measured in a consistent manner across all SBUs as they must apply the same accounting standards and are subject to an audit by the FMO's audit staff.

Data Collection

To find out which financial cooperative had a PSP, the FMO's management sent a short questionnaire to each of its 323 member organizations. The responses were

as follows: 19 financial cooperatives did not respond; 10 did not specify the adoption date; 120 had a PSP and indicated the year of its adoption; and 174 did not have a PSP as of 1 January 1996. The study thus focuses on the 294 (120 + 174) financial cooperatives that responded to the questionnaire. Mergers and financial restructurings in some financial cooperatives may cause the sample size to vary over time. All quantitative data on profit level and profit drivers are extracted from the FMO's computerized data files.

In addition, to better understand the impact of PSPs and to provide some background to statistical findings, interviews were conducted with 14 managing directors from financial cooperatives that have a PSP. Potential interviewees were selected with the help of the FMO's top management. Each interview lasted an average of one hour. The interviews were semi-structured and all of them were recorded and transcribed. Using ETHNOGRAPH software, text the lines of each interview's were initially numbered. Three co-researchers then independently reviewed all the transcripts to break them into segments representing topics and to identify each segment by an appropriate established or emerging code. Once the initial coding task was completed, all text segments dealing with the same topic were regrouped and labelled with a key word that captured the underlying issue. The labels were arrived at consensually among the researchers. The approach used is similar to the one described in St-Onge et al. (2001). Some excerpts from these interviews are reproduced later in this paper to provide additional insights into our quantitative findings.

Variable Measurement

Profit level and profit drivers. Each profit driver reflects a complementary facet of a bank's economic activity and employees' actions. *Net interest income* is the difference between income on loans and investments and interest expenses on deposits and borrowings. *Loan losses* comprise both loan write-offs and estimates of unrecoverable amounts on actual outstanding loans. *Other revenues* encompass credit-card income, service fees and other revenues charged to customers, such as safety box fees and line-of-credit standby fees. *Operating costs* mostly include employees' salaries and benefits, occupancy costs, and information system expenses. *Profits*, *net interest income*, *loan losses*, *other revenues*, and *operating costs* are deflated by a financial cooperative's annual average assets in order to obtain percentages that are comparable over time and across firms. Two balance-sheet-based drivers that contribute to value creation can also be identified. Firstly, a financial cooperative's capital ratio, as measured by [(Owners' capital)/(Total liabilities)] reflects its ability to grow and generate profits. A capital ratio deemed too low by the FMO and/or by regulators impedes the growth of a financial cooperative, since it cannot raise more deposits or extend more loans. At the beginning of the 1990s, many financial cooperatives had low capital ratios, and building up capital was assigned high priority

Table I. Banks' profit enhancement process through income statement

Component of bank's income statement – profit drivers	*Actual figures ($)**	*Variable*	*Measurement*
Interest income on assets	$100		
Interest charges on liabilities	(80)		
Net interest income	20	Net interest income	*(Net interest income)* × *100* Average assets
Loan losses	(5)	Loan losses	*(Loan losses)* × *100* Average assets
Other revenues	10	Other revenues	*(Other revenues)* × *100* Average assets
Operating costs	(20)	Operating costs	*(Operating costs)* × *100* Average assets
Net profit	$5	Profits	*(Net profit)* × *100* Average assets

Note:
*Figures in this column are for illustrative purposes only.

by most boards of directors as well as by the FMO's top management. Thus, *capital growth*, i.e. the year-to-year change in the capital ratio, can be considered a key profit driver. Secondly, a bank's ability to increase its assets is also a profit driver, in the sense that higher profits will flow from a larger loan portfolio, and from economies of scale that derive from a larger market share. Thus, *asset growth* (in percentage) reflects another key management strategy that contributes to profit enhancement. Assets comprise the amount shown on the balance sheet plus off-balance sheet activities. Table I illustrates how profit drivers translate into profits using a hypothetical bank's income statement.

Employee control over profit drivers. Following PSP adoption, the contribution of a particular profit driver to profit enhancement is determined by the extent to which it is controllable by employees. For this study we classify profit drivers into two groups based upon the extent of employee control. Profit drivers under employee control include *asset growth*, *other revenues*, *capital growth*, and *loan losses*. Asset growth and other revenues are directly affected by employees' success in selling a financial cooperative's services, e.g. loans, deposits, financial advisory services, accounts, etc. In addition, there is some discretion in the pricing of complementary services (service charges, safety boxes, etc). Therefore, for employees, the line of sight between their actions and reported profits through both profit drivers is relatively clear. With respect to capital growth, employees have a major role, since financial cooperatives can raise capital directly from their members. In fact, many financial cooperatives offer ownership units to members as a savings alternative to long-term deposits. Since interest expenses on deposits directly reduce reported profits,

and since eventual dividends on ownership units do not affect the bottom line, it is clear that employees of financial cooperatives with a PSP have an incentive to raise capital. Finally, employees have some control over loan losses, as they are involved in all lending and credit collection actions and in recoverability estimations.

Profit drivers that are not under employee control include net interest income and operating costs. Since financial institutions essentially act as price takers in the pricing of loans and deposits, net interest income reflects conditions in the credit and deposit markets that are unlikely to be affected in the short run by employees' actions, attitudes or decisions. Operating costs are also largely immune to short-term employee actions, since their major components are salaries and benefits, occupancy costs and information systems costs. Occupancy costs are largely fixed, as most financial cooperatives operate from premises they own. Information system costs are also likely to be fixed in the short run, since all financial cooperatives rely on a centralized computer system operated by the FMO, for which they are charged user fees.

Profit drivers' span of improvement. The span of improvement corresponds to the extent to which a performance driver can be improved upon through employee actions or initiatives. Potential for improvement among profit drivers that are under employee control varies and can be assessed in the following manner. On the one hand, external drivers such as asset growth and other revenues are expected to exhibit the longest span of improvement, since they are a direct result of the actions and selling efforts of employees and are only constrained by customer responses and market size. On the other hand, internal drivers such as loan losses and capital growth are expected to have short spans of improvement. Firstly, as described earlier, loan losses cannot be reduced indefinitely. Secondly, capital growth becomes uneconomical from a profit enhancement perspective if there is excess capital that cannot be put to use profitably.

RESULTS

Cross-Correlations and Comparative Quantitative Analyses

Table II provides cross-correlations between banks' profit and profit drivers for 1991–96. All value drivers are significantly correlated with reported profit, with net interest income (0.56) and loan losses (–0.67) having the largest association with reported profit. Among profit drivers themselves, the highest correlation is between other revenues and operating costs (0.52), a relation that is consistent with the fact that additional banking revenue-generating services are often labour and premises intensive. No other cross-correlation is higher than 0.50, which suggests that profit drivers do capture different facets of sample firms' activities. The size

Table II. Cross-correlations between profit and profit drivers, 1991–96

	Net interest income	*Loan losses*	*Other revenues*	*Operating costs*	*Capital growth*	*Asset growth*	*Firm size*
Profits	0.56*	–0.67*	–0.11*	–0.20*	0.32*	0.29*	–0.12*
Net interest income		–0.15*	0.02	0.49*	0.22*	0.26*	–0.43*
Loan losses			0.07*	0.04	–0.18*	–0.26*	0.10*
Other revenues				0.52*	–0.01	0.02	–0.01
Operating costs					–0.04	0.12*	–0.38*
Capital growth						–0.11*	–0.05
Asset growth							–0.13*

Notes:
- Cross-correlation significant ($p < 0.01$; two-tailed).
- N = 1713 (except for cross-correlations with capital growth and asset growth, where N = 1415).

of a financial cooperative is also found to be negatively associated with its profits (–0.12), net interest income (–0.43), operating costs (–0.38), and asset growth (–0.13). These findings provide further support for including firm size as a control variable in the multivariate analyses.

Financial cooperatives with and without a PSP are compared on a year-by-year basis as to their average level of profits and value. Student's *t* tests and Z tests are performed on the mean differences between both groups. To be included in the PSP group, a financial cooperative must have had a PSP in place during the year under investigation. Year-by-year comparisons (not reported) between financial cooperatives with and without a PSP are consistent with expectations and with Hypothesis 1. On average, financial cooperatives with a PSP exhibit higher levels of reported profit, lower loan losses, lower operating costs, and higher asset and capital growth than financial cooperatives without a PSP. No conclusive evidence can be found for net interest income and other revenues. Overall, financial cooperatives with a PSP tend to show higher profits than those without. Both *t* tests (annual comparisons) and Z tests (1991–96) are used for these analyses (Healy et al. (1987) also use Z tests in a similar context). To illustrate, in 1996, financial cooperatives with a PSP exhibit higher profit (0.55 vs. 0.31; $p < 0.01$), lower loan losses (0.31 vs. 0.40; $p < 0.05$), lower operating costs (3.05 vs. 3.31; $p < 0.01$) and higher capital growth (0.47 vs. 0.28; $p < 0.10$) than financial cooperatives without a PSP.

Descriptive Longitudinal Analyses

Table III presents the profit enhancement process in the years surrounding PSP adoption, and average profit driver levels in the year prior to, the year of, and the

Table III. Comparative univariate analysis of the profit enhancement process surrounding PSP adoption

Profit and profit drivers	*PSP status*	*Average level of PSP adopters*		
		Year prior to adoption of PSP	*Year of PSP adoption*	*Year following PSP adoption*
Net interest income	With PSP	3.33	3.38	3.33
	Without PSP	3.37	3.36	3.36
Loan losses	With PSP	0.25	0.21*	0.24*
	Without PSP	0.32	0.32	0.32
Other revenues	With PSP	0.65	0.66	0.67
	Without PSP	0.59	0.66	0.64
Operating costs	With PSP	3.04*	3.04*	3.04*
	Without PSP	3.15	3.16	3.17
Profit	With PSP	0.69	0.79*	0.72*
	Without PSP	0.59	0.60	0.59
Capital growth	With PSP	0.25	0.66*	0.64*
	Without PSP	(0.44)	(0.42)	(0.42)
Asset growth	With PSP	0.05	0.05*	0.04
	Without PSP	0.04	0.04	0.04

Note: *Performance level of PSP adopters significantly higher than the average performance of sample firms ($p < 0.10$).

year following PSP adoption for all PSP adopters. Average performance levels for non-adopters are provided within parentheses. While such figures do not control for time and firm fixed effects, they do reveal underlying trends in the various profit drivers. All figures are in percentage of total assets and profit drivers drawn from the income statement total up to the profit figure. Firstly, as predicted in Hypothesis 1, PSP adopters consistently exhibit higher profits than non-adopters, even before adoption. The increase in profit levels from 0.69 to 0.79 in the year of PSP adoption is also consistent with Hypothesis 2. However, prior to PSP adoption, the source of this advantage appears to rest solely on low operating costs, since there are no other differences in profit driver levels between adopters and non-adopters. Secondly, profit driver patterns in the three-year period surrounding PSP adoption provide some support for Hypothesis 3 (extent of employee control). Both profit drivers that are not under employee control, net interest income and operating costs, remain essentially flat for PSP adopters throughout the period, as predicted in Hypothesis 3. In fact, it appears that PSP adopters are more efficient than non-adopters with respect to operating costs, even before PSP adoption (additional analyses for the two years prior to PSP adoption provide consistent evidence). In contrast, PSP adopters exhibit a significant improvement in three out of four profit drivers under employee control (loan losses, capital growth and asset

growth), as compared with both the year prior to adoption and with non-adopters' performance.

Impact of PSP Adoption on Profit Levels

Quantitative analysis. Since existing analyses do not control for time and firm-fixed effects, which are likely to influence performance levels in any given period, they do not allow any conclusion to be drawn about the ultimate impact of PSP adoption on the profit enhancement process and on profits. To address this issue, we use a pooled, cross-sectional, time-series, OLS regression, controlling all the while for firm and time-fixed effects and firm size. For this purpose, all sample firm-year observations are pooled. Firm-specific fixed effects are controlled for by introducing a dummy variable for each firm except one: the variable takes a value of 1 when the observation is from a specific firm and a value of 0 otherwise. Coefficients for such variables should capture profit and profit driver trends in the absence of PSP adoption. Year-specific fixed effects are controlled for by introducing a dummy variable for each year under investigation except one: the variable takes a value of 1 when the observation is from a specific year and of 0 otherwise. Such an econometric technique is often used when analysing pooled, time-series, cross-sectional panel data (Kmenta, 1986).

To assess the profit enhancement process induced by adopting a PSP, four additional dummy variables are included in the regression model: year before PSP adoption, year of PSP adoption, year following PSP adoption, and two years following PSP adoption. These variables allow the differential performance levels of PSP adopters to be directly inferred. Such a quasi-experimental design, with experimental and control groups as well as observations before (pre) and after (post) the event under investigation, can be deemed relatively robust. Firm size has been found to influence the performance of commercial banks, especially because of economies of scale (Sinkey, 1992). Moreover, the customer mix of large financial services organizations differs from that of small banks, in that the former have more business and wholesale services that provide thinner margins. Since firms adopting a PSP tend to be larger, firm size is introduced into the multivariate regression analyses and is measured as log (Assets).

Table IV shows the results from a pooled, time-series, cross-sectional, OLS regression of the impact of PSP adoption on a financial cooperative's level of reported profit (or value creation). Overall, the regression model explains 54.5 per cent of total sample variance in profit levels (F statistic: 7.80; $p < 0.01$). Colinearity (variance inflation factors) and auto-correlation diagnostic procedures (Durbin-Watson test) do not reveal any particular problem. Regression residuals are normally distributed around zero and do not exhibit any specific variance pattern. As expected, and consistent with Hypothesis 2, adopting a PSP is accompanied by an improvement in a financial cooperative's profit. For instance, in the year it

Table IV. Impact of PSP adoption on profit[1]; dependent variable: profit (1991–96)

Explanatory variables[2]	
Differential profit levels in years surrounding PSP adoption	
Year prior to PSP adoption	0.03 (0.52)
Year of PSP adoption	0.11** (1.99)
Year following PSP adoption	0.11** (1.96)
Two years following PSP adoption	0.06 (1.03)
Firm size	0.66*** (3.53)
Adjusted *R*-square	54.5%
F statistic	7.80***
Durbin-Watson	2.07
N	1722

Notes:
[1] Cell entries are unstandardized regression coefficients; *t* statistics are in parentheses.
[2] Intercept, firm-specific and year-specific coefficients not reported.
*** $p < 0.01$; ** $p < 0.05$; * $p < 0.10$.

adopts a PSP, a financial cooperative exhibits a profit level that is on average 11 basis points higher than reported in other periods and by other financial cooperatives that are not adopting a PSP (0.11%; $p < 0.05$). This is after controlling for firm-specific and year-specific fixed effects and for firm size. The improvement persists in the year following PSP adoption, with financial cooperatives exhibiting on average a profit level 11 basis points higher than reported in other periods and by other financial cooperatives not adopting a PSP (0.11%; $p < 0.05$). However, the profit enhancement impact of PSPs tapers off in the second year following its adoption, adopters not showing a profit level above what they reported in other periods or above the level of non-adopters (0.06%; ns). The magnitude of the profit generated by PSP adoption can be illustrated by using 1995 financial results as a benchmark (a year in which 29 financial cooperatives adopted a PSP). In that year, financial cooperatives without a PSP exhibited a profit of 0.51% (as a proportion of average assets), while financial cooperatives with a PSP exhibited a profit of 0.62%. Since the average asset size shown by financial cooperatives with a PSP was C$82,000,000, the incremental profit derived from adopting a PSP can be estimated at $90,200 ($82,000,000 − 0.11%), which thus brings average reported profit upward from $418,200 ($82,000,000 × 0.51%) to $508,400 ($82,000,000 × 0.62%).

An alternative empirical model that explicitly controls for lagged performance was used to assess the impact of PSP adoption on profits and profit drivers. Inferences to be drawn from results are similar to those reported in Tables IV and V.

Field interviews with managing directors. Overall, managing directors participating in our field interviews share the view that PSPs are effective. However, most

managing directors (10 out of 14) view a PSP's effectiveness in terms of its impact on employees' behaviour and attitudes. In that regard, PSPs are deemed effective in ensuring that employees become more:

- responsible toward their colleagues and the firm
- trusting of management's intentions and actions
- concerned about the firm's performance
- involved in the firm's operations.

One managing director summarizes these views by stating that a PSP leads 'employees and management to become partners in the firm's success . . . The trade-off is that employees will start asking questions about the firm's operations and will want to get involved in decision-making'.

Out of 14 managing directors interviewed, only 3 explicitly refer to financial objectives (cost reductions and/or productivity improvements) when defining PSP effectiveness. However, according to managing directors, the attainment of such financial objectives is solely dependent upon employees' behaviour, i.e. 'with our PSP . . . employees are willing to make phone calls during the evening' and 'a PSP leads people to surpass themselves, to extend more efforts'.

Hence, profit improvements that accompany the implementation of a PSP do seem to be the result of an extensive change in employees' behaviour and attitudes toward the firm and its management that goes beyond increased effort.

Impact of PSP Adoption on Profit Drivers

The results from previous studies do not reveal why and how PSPs enhance profits. To answer this question, it is necessary to investigate the evolution of profit drivers that are unique to the financial services industry. Table V presents results from pooled time-series cross-sectional OLS regressions assessing the impact of PSP adoption on six profit drivers. All six regressions are statistically significant (*F* statistics: $p < 0.01$) and appear to be well specified.

Extent of employee control. Consistent with Hypothesis 3, PSP adoption only has an impact on profits through profit drivers that are under employee control. Hence, PSP adoption influences the level of profit drivers that are under employee control, i.e. loan losses, other revenues, capital growth and asset growth. In contrast, financial cooperatives adopting a PSP do not show any improvement in net interest income and operating costs, two profit drivers with less employee control. For instance, in the year of PSP adoption, adopters report loan losses that are significantly lower than those reported in other periods or by other financial cooperatives (−0.08, $p < 0.05$). Similarly, PSP adopters exhibit higher other revenues (0.03; $p < 0.05$) and greater asset growth (0.01; $p < 0.05$) in the year of PSP adoption

Table V. Impact of PSP adoption on profit drivers[1], 1991–96

	Dependent variable: profit drivers					
	Net interest income	*Operating costs*	*Capital growth*	*Loan losses*	*Other revenues*	*Asset growth*
Extent of employees' control over profit driver	*Low*	*Low*	*High*	*High*	*High*	*High*
Profit driver's improvement span	*Internal*	*Internal*	*Internal*	*Internal*	*External*	*External*
Differential profit driver levels in the years surrounding PSP adoption[2]						
Year prior to PSP adoption	0.01	0.03	−0.04	−0.03	0.03**	0.02***
	(0.38)	(1.27)	(−0.47)	(0.88)	(2.03)	(2.69)
Year of PSP adoption	0.05	0.02	0.10	−0.08**	0.03**	0.01**
	(1.56)	(0.93)	(1.21)	(−2.34)	(2.09)	(2.20)
Year following PSP adoption	0.03	0.01	0.19**	−0.06*	0.02*	0.02***
	(1.09)	(0.03)	(2.56)	(−1.79)	(1.68)	(3.37)
Two years following PSP adoption	0.02	−0.02	0.01	−0.01	0.01	0.01**
	(0.53)	(−0.89)	(0.15)	(−0.16)	(0.86)	(1.97)
Firm size	−0.36***	−0.66***	−0.25	−0.29***	−0.05	0.23***
	(−3.84)	(−8.46)	(−0.82)	(−2.78)	(−1.36)	(9.43)
Adjusted *R*-square	82.3%	86.6%	31.1%	23.1%	80.9%	43.3%
F statistic	27.43***	37.98***	3.11***	2.71***	25.00***	4.59***
Durbin-Watson	1.95	2.01	2.03	2.09	1.99	2.04
N	1721	1722	1411	1721	1722	1414

Notes:
[1] Cell entries are unstandardized regression coefficients; *t* statistics are in parentheses.
[2] Intercept, firm-specific and year-specific coefficients not reported.
***p < 0.01; **p < 0.05; *p < 0.10.

than in other periods. For capital growth, the impact of PSPs lags their adoption. Only in the year following adoption do adopters exhibit above-average capital growth (0.19; $p < 0.05$).

Span of improvement. There is some support for Hypothesis 4: internal profit drivers exhibit a shorter span of improvement around PSP adoption than do external profit drivers. For instance, financial cooperatives adopting a PSP exhibit superior asset growth from the year prior to PSP adoption to two years following PSP adoption: all four differential performance coefficients are positive and statistically significant. Therefore, financial cooperatives adopting a PSP attain asset growth rates that are higher than those of other sample firms and than their own prior results. That employees focus on increasing assets in the year prior to formal PSP implementation can be explained in the following manner. Firstly, the decision to adopt a PSP is made in year $t - 1$ but the PSP itself becomes effective for year t. In addition, payouts under the PSP are conditional upon meeting some budgetary goals, which are established in year $t - 1$. Hence, toward the end of the year prior to PSP adoption, employees know that they could receive payouts in the coming year. Secondly, asset growth in a given year leads to greater profits in the following year, as the new assets generate revenues for a full year. Therefore, employees can work toward increased profits, and PSP payouts, in year t (PSP adoption year) by pushing assets up in year $t - 1$.

Similarly, financial cooperatives that adopt PSPs exhibit a higher level of other revenues than do other sample firms, from the year prior to PSP adoption to one year following PSP adoption: these three differential performance coefficients are positive and statistically significant. An argument similar to asset growth can also be made to explain why employees focus on increasing revenues in the year prior to PSP adoption. In contrast, capital growth is affected only in the year following PSP adoption, while loan losses are actually reduced only in the year of adoption (–0.08) and the year following adoption (–0.06). Such a reduction in loan losses is actually quite dramatic when compared with the average level of loan losses for all sample observations (0.32% of total average assets). As expected, such improvements are unsustainable. In the year prior to PSP adoption, even if employees are aware that a PSP will be implemented, they have no incentive to reduce loan losses, since it will not bring them any benefit. In fact, it would be to their advantage to overstate loan losses in the year prior to PSP adoption, an action they did not seem to take.

Findings reported in Tables IV and V are presented in graphical form in Figure 1. Essentially, Figure 1 shows that financial cooperatives experience a sharp rise in profit in the year of adoption, with the following year's profit remaining steady. Two years following PSP adoption, profit levels are still higher among adopters than among non-adopters but the gap has narrowed. Large contributors to this profit improvement are reductions in loan losses as well as solid capital growth, which indirectly contribute to net interest income growth. We can also observe

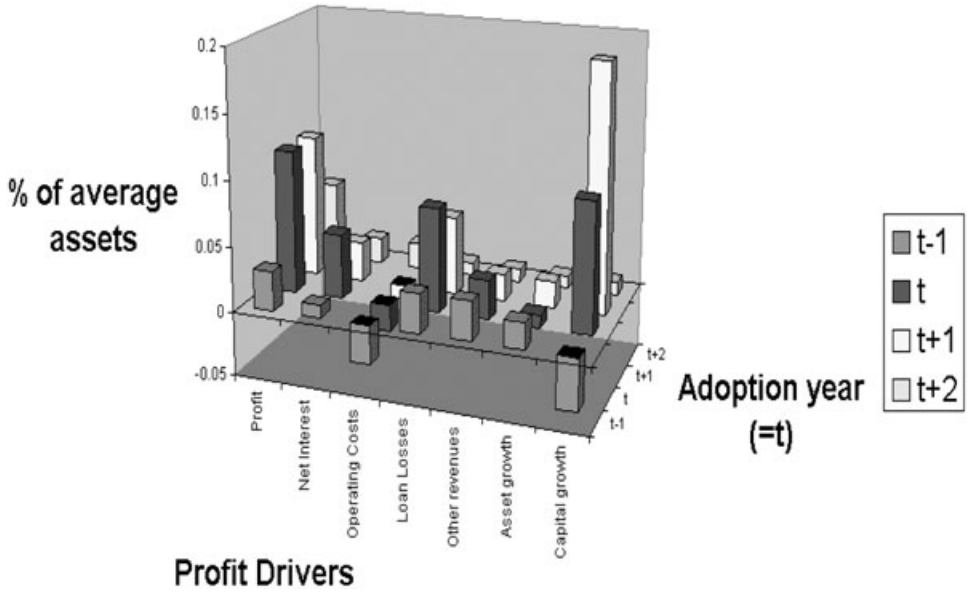

Figure 1. Contribution to profit differential between PSP adopters and non-adopters

that, over the four years, adopters consistently increase their differential over non-adopters with respect to operating costs, albeit at statistically significant levels.

Field interviews with managing directors. For interviewed managing directors, the extent of employee control over profit drivers is an essential success condition for a PSP. For instance, 9 managing directors assert that a PSP will be successful if underlying performance outcomes are perceived by employees to be under their control (excerpts from some interviews):

> A PSP will be effective when employees control its underlying objectives.
>
> A way must be found for the PSP not to be wholly dependent upon external factors that are beyond employees' control.
>
> What is needed is a (PSP) system that relies on performance outcomes over which employees have some control.

In fact, these managing directors emphasize that a successful PSP must rely on a set of performance drivers that: (1) is more comprehensive than just profits; and (2) employees can be directly accountable for:

> If the only objective attached to the PSP is a profit target . . . then external uncontrollable negative events may undermine all employees' actions on other performance measures over which they have control.

> If the PSP's focus is strictly on profit targets, then some areas where employees have a direct impact (e.g. growth in loan portfolio) may get shadowed by external events that are beyond their control.
>
> Yes, there is a need for a certain level of profitability. But you also need to consider other performance outcomes . . .
>
> A PSP based only upon profit objectives is too narrow: I always take other performance outcomes into account . . .
>
> A PSP must not be solely based upon the attainment of profit objectives . . . as profit is subject to wide fluctuations for which employees cannot be accountable.
>
> You may lose the effectiveness of your PSP as a motivational tool if you achieve (or do not achieve) your profit targets because of events that are outside of employees' control . . . Means must be found to ensure that the PSP is not too dependent upon external, contextual conditions.

Consistent with their views, most managing directors interviewed manage their PSP by relying on objectives that encompass profit drivers over which employees have some degree of control.

Of 14 managing directors interviewed, 12 also assert that a PSP will be effective in changing employees' behaviour and actions only if the objectives relate to profit drivers with a span of improvement that is external rather than internal. For employees to take action on a long-term basis, they must envision that improvements in a particular profit driver are: (1) feasible yet challenging; (2) likely to be repeatable on an ongoing basis; and (3) growth-driven (i.e. external):

> Objectives must be reasonable yet not too low. Their attainment must not be automatic for employees.
>
> If objectives are set too high and are never reached, it demotivates employees. Some level of achievement is needed but we cannot expect employees to reach 120–125 per cent of the projected target on a continuous basis.
>
> The first step (i.e. level of objective in the adoption year) must be reachable to show employees that you are leading them down a path that is feasible.
>
> A growth rate of more than 15 per cent is unsustainable (in the long run): employees will quickly realize it and will stop exerting additional efforts. They may actually feel that management cheated them.
>
> PSP objectives must be related to sales, to growth.
>
> To have a motivational effect, PSP objectives must relate to new markets development.

(For our PSP to be effective) . . . we do long term planning with specific growth objectives (increases in market shares for various services).

PSP-related objectives must be realizable, tangible for employees and sale-oriented.

DISCUSSION AND CONCLUSION

Recent changes in the operating environment have led financial services firms to become more customer focused. Thus, profit enhancement in financial services is becoming increasingly dependent upon an organization's ability to establish good relations with its customers and find profitable market niches. However, to achieve this strategic repositioning, financial organizations need to involve all employees, by inducing them to take actions and make decisions that are consistent with a sales orientation. Outcome-based compensation plans, such as PSPs, are key levers at management's disposal to redirect employees' efforts and actions.

Thousands of organizations offer their employees a PSP, and although there is some evidence that the presence of a PSP improves organizational performance, no study seems to have investigated the mechanisms by which PSPs affect organizational productivity and/or performance. Relying on a two-level theoretical framework based upon organizational control, agency, goal and expectancy theories, this study investigates how adopting a profit-sharing plan affects profit enhancement in customer-focused financial cooperatives that provide banking services. Our sample firms are Canadian financial cooperatives that used to be dominant players in their local markets, but are now increasingly on the defensive against the competition. The quantitative analyses are both longitudinal and cross-sectional and rely on both PSP adopters and non-adopters. Excerpts from interviews with financial cooperatives' managing directors complement our quantitative findings.

In this study, we assert that profit drivers reflect various facets of a firm's business condition, its profit generation process and, ultimately, its performance. A profit driver reflects employees' actions and decisions and, following the adoption of a PSP, provides them with a clear line of sight between their own work and profit improvements. If, as expected, a PSP modifies or redirects employees' actions, decisions, and behaviour (Gerhart et al., 1996; Long, 2000), its impact on firm performance is likely to be through profit drivers under employee control, with internal inward-looking profit drivers showing short term improvements and external, outward-looking profit drivers showing longer-term improvements.

Overall, findings are consistent with theoretical predictions. Firstly, financial cooperatives with a PSP exhibit higher profitability than those without (Hypothesis 1). Secondly, the adoption of a PSP is accompanied by a short-term improvement in profit (Hypothesis 2). Third, only profit drivers under employee control

contribute to profit enhancement following PSP adoption (Hypothesis 3). Finally, consistent with Hypothesis 4, only external (i.e. outward-looking) profit drivers exhibit long-term improvements when PSPs are adopted (span of improvement). Interviews with managing directors confirm that PSP adoption does affect employees' attitudes and actions, as they focus on improving profit drivers over which they have control and for which there is a span of improvement. Overall, it appears that PSP adopters are well-performing organizations that have exhausted their means of enhancing profits through cost reductions, and that need to reorient their efforts toward higher sales.

Implications

This study contributes to existing literature on PSPs by providing an in-depth look at the profit enhancement process surrounding PSP adoption. By introducing an integrated theoretical framework and relying on both quantitative and qualitative methodologies, the study contributes to our understanding of why and how PSP adoption leads to improved profits. Whereas according to agency and organizational control theories, a PSP helps align employees' interests with those of the firm's owners, goal and expectancy theories suggest that employees internalize this alignment by committing themselves to the improvement of proximal sub-goals, i.e. profit drivers, that noticeably progress toward outcomes that will ultimately have the most significance for them (Bandura, 1986; Barden and Ford, 1990). For instance, the fact that other revenues and asset growth start improving in the year prior to PSP adoption is consistent with employees immediately identifying and focusing on profit drivers likely to bring recurring improvements in profits once the PSP is actually implemented. Actions on profit drivers that have a short span of improvement, such as loan losses, are delayed until the PSP is effective. Besides, results from this study suggest that PSP adoption does not lead to immediate incremental improvements in operating costs. Such an outcome can be explained by the fact that employees do not have much control over operating costs, especially if their level already reflects high operating efficiency.

Since the impact of PSP adoption on profit enhancement is through specific profit drivers, careful planning is needed before implementing them. For instance, if employees control too few drivers, or if improvement spans are exhausted, it will be difficult for employees to ascertain the relationship between their actions and profits, the performance measure upon which their compensation is based. Therefore, in some contexts, adopting a PSP may increase their frustrations or dysfunctional behaviours. Since the study's results show that profit enhancement surrounding PSP adoption is through 'controllable' drivers – i.e. drivers under employee control – these should be identified and analysed a priori so that employees have a clear view of management's goals. In fact, a more efficient means of rewarding employees could be a goal-sharing or success-sharing plan (Altmans-

berger and Wallace, 1995; Belcher, 1996). These plans, because they are based upon measures under employee control (e.g. cost reduction, absenteeism, service improvement), are more focused than PSPs and more clearly link expected payouts to employees' efforts. Lawler et al. (1995) report that large US firms increasingly rely on goal-sharing plans to reward employees (70% in 1993 vs. 59% in 1990). This study's results are coherent with the view that it is important for organizations to design scorecard systems and compensation plans that rely on operational, specific and team-based performance measures (e.g. Abernathy, 1999; Gross, 1995; Kaplan and Norton, 1996).

Tsui (1997) suggests that employees perform better on core tasks when they work in an over-investment or mutual investment relationship. Since a move toward a customer-focused strategy implies redefining employees' core tasks, adopting a PSP underlines management's commitment toward the new strategy and its willingness to establish a mutual investment relationship that is beneficial to both parties. Interviews with managing directors corroborate that PSPs are part of a more comprehensive performance management strategy that relies on education, communications, participation and transparency. Moreover, the existence of a PSP is expected to bring about greater cooperation, particularly with respect to acceptance of new technology and other changes in working practices. This potential positive impact of PSPs may explain why PSPs with short-term payouts constitute the most stable component of variable compensation (Hewitt and Associates, 1996).

Limitations

Analysing data from one industry may lead to criticism that findings cannot be generalized to other work settings. However, since sample firms produce the same products using the same service process in the same environment, the impact of PSPs can be more effectively estimated, without worrying about the confounding impact of a potential unmeasured attribute of a firm's production process.

While this study focuses on the value added process surrounding PSP adoption from a financial perspective, there may be other important outcomes. For example, PSPs may be used to improve commitment and loyalty, to promote involvement, to avoid bankruptcy, to save jobs, to attract and to retain competent employees, etc (Long, 1997, 1998). Both our quantitative financial-focused findings and our qualitative analyses of managing directors' remarks and comments provide insights into the impact of PSP adoption on firm-wide performance. Other alternative qualitative approaches could be used to assess how PSP adoption affects other stakeholders such as employees, board of directors or customers.

Finally, according to Kruse (1993, pp. 4–5), 'a profit-sharing plan is defined broadly as a plan in which part of employee compensation during a particular

period is based substantially on the profitability of the company in that period without the requirement of a formula' and 'some plans provide shares of profits only after a threshold level of profits has been met or make the percentage of profits to be shared depend upon the overall level of profits'. Since many types of variable pay plans require some profit target to be met before any payment occur, it should be noted that this study investigate a particular type of PSP.

> Profit-sharing plans can take a variety of forms. In its simplest form, a company might pay out to its employees a fixed percentage, say, 15 per cent, of its after-tax, fully accounted profits. Or it might choose to share only those profits in excess of a threshold amount, for example, 25 per cent of profits in excess of a 12 per cent ROI. An alternative approach is to establish the budgeted or planned levels of profitability as the threshold, such as would be the case in a plan that pays out 50 per cent of profits in excess of its budget. (Belcher, 2000, pp. 210–11)

> An organization's choice are not limited to a pure form of profit sharing, gain sharing, or goal sharing. . . . The most prevalent combination approach uses a form of profit sharing to fund a bonus at a corporate or division level, with the payout contingent upon the achievement of controllable goals at the operational level. (Belcher, 2000, p. 214)

> Many variable pay plans have some form of profit trigger linked to revenue growth or profit margins or some measure of shareholder return such as earnings per share or return on capital. Profit sharing continues to be popular because the focus is on the measure that matters most to the most people: some index of profitability. (Milkovich and Newman, 2002, pp. 331–2)

The organization in which we did the study describes its group incentive plan as a profit-sharing plan. Looking at the above definitions, such a designation appears to be appropriate since the driving force behind any employee payouts is profitability. However, it should be recognized that the plan does incorporate features from other plans, such as goal-sharing plans. It should also be recognized that this study focuses on a PSP which allocates plan payouts strictly on the basis of firm performance. Many firms take into account individual performance when determining employees' PSP bonus. Future studies should investigated the effectiveness of PSPs which allocate payouts on the basis of both organizational and individual measures of performance. The effectiveness of such plans should be expected to be greater since the productivity associated with formula-driven individual incentives has been shown to exceed that associated with profit-sharing by a magnitude of about two to one (Jenkins et al., 1998; Weitzman and Kruse, 1990).

Future Research

Our results indicate that the impact of PSPs on firm performance is highly dependent upon how employees perceive the line of sight between their work and profits. Since our sample firms were relatively small, we could identify profit drivers close to employee actions that quickly translated into improved profits. Discussions with the managing directors of some sample firms suggest that such profit drivers were used as targets in implementing a PSP. However, future research should investigate how to accomplish this in larger organizations. Furthermore, the relative effectiveness of various programme management programmes should also be examined (e.g. communications, training, information, performance management) as variables influencing PSPs' value creation.

> If organizations are to overcome the problems associated with organizational reward plans, combined measures must be used. When completed information is available to employees on both sets of measures, when all employees are trained to understand and to use these measures in their jobs, then the concept of open-book management has been realized. Line-of-sight issues are kept to a minimum if care is taken to make operational measures under control of employees salient to them. Resentment due to economic downturns can be decreased because employees have knowledge about how financial market operates. Free riding can be addressed because employees have the knowledge of who does what and can police themselves. Owner concern about sharing information can be overcome because owner can see how employees can use this information to help the owner build more wealth. (Heneman, 2001, p. 209)

The differential spans of improvement of profit drivers and the apparent short-term impact of PSP adoption on profits suggest that their effectiveness as a management tool cannot be taken for granted, and that innovations are probably needed to maintain employee motivation and incentives to work toward their firm's interests. Gerhart et al. (1996) argue that compensation plans should have sunset provisions that would allow management to revise what is needed without unduly frustrating employees. Further research could include in-depth investigations of specific PSP adopters, in order to identify managerial techniques that keep employees committed to PSP-driven goals.

NOTES

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[1] The following example illustrates how the FMO's PSP work. Let's assume the following objectives:

	Profitability objective (payout if target achieved)	*Asset growth objective (payout if target achieved)*
Normal target	0.50% (0%)	+5% (75%)
Optimal target	0.65% (100%)	+8% (100%)
Relative weighting of each objective for payout formula purposes	80%	20%

The actual performance of the firm in the year is the following:

- Rate or return on assets (profitability): 0.55%
- Asset growth: 6%

Such performance, for an employee which payout is capped at 5% of salary, would translate into the following payout:

$[80\% \times 5\% \times [(0.55\% - 0.50\%)/(0.65\% - 0.50\%)]] \times [20\% \times 5\% \times [75\% + (25\% \times (6\% - 5\%)/(8\% - 5\%))]] = 2.16\%$ of salary

[2] In all sample SBUs, the PSP represents the only incentive compensation plan that is offered to employees, whose annual salary raises are capped at 2%.

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