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Conceptual frameworks of accounting from an information perspective

John Christensen*

Abstract — This paper analyses the benefits of accounting regulation and a conceptual framework using an information economics approach that allows consideration of uncertainty, multiple agents, demand for information, and multiple information sources. It also allows private information to enter the analysis. The analysis leads to a set of fundamental properties of accounting information. It is argued that the set of qualitative characteristics typically contained in conceptual frameworks does not adequately aggregate the information demands of users of accounting information. For example, the IASB's conceptual framework contains no guidelines for the trade-off between relevance and reliability. Furthermore, neutrality might not be part of an optimal regulation. The statistical bias introduced by the stewardship use of accounting information is not necessarily undesirable and will always remain; stewardship is the characteristic of accounting information that provides incentives for management to act in the desired way. Accounting information is inherently late compared to other information sources but influences and constrains the content of more timely sources. The accounting system does not exist in a vacuum. Other information sources are present and the purpose of the accounting system cannot be analysed without considering the existence of other information sources. Finally, financial statements are audited by an independent auditor. This implies that accounting data are hard to manipulate.

Keywords: accounting regulation; conceptual framework; qualitative characteristics; information economics

1. Introduction

The question I have been asked to address is how conceptual frameworks contribute to the quality of corporate reporting regulation. This is by no means an easy task. In the paper I shall attempt to show that an answer requires identification of the concept of quality of corporate reporting, of the purpose of the conceptual framework, and of the benefits of reporting regulation. In order to understand the concept of the quality of corporate reporting it is important to analyse the fundamental characteristics of accounting information and its limitations.

The idea of the conceptual framework is to provide a set of consistent principles to guide regulation and reporting of financial information as part of the political decision process. The IASB's current conceptual framework (IASB, 1989) gives equal ranking to information that is useful to a wide range of users in making economic decisions (para. 12) and information that shows the results of stewardship of management (para. 14). The Discussion Paper that sought to bring together the IASB and FASB conceptual frameworks (FASB/IASB, 2006) asked whether stewardship had a

continuing role in the objective and indicated a preference to focus solely on decision usefulness (para. BC1.32 to BC1.41). In the proposed conceptual framework (FASB/IASB, 2008) the main objective of decision usefulness is expanded to include information about 'management's ability to protect and enhance the capital providers' investments' (para. OB 9).

Previous work has shown that, in a single firm setting, the accounting system has to be finely tuned to the specifics of the organisation and its environment, including the economics of the firm, the decision problems at hand, the private information of the parties involved, the public information, and the moral hazard problems of the organisation. Furthermore, the world contains many firms and many decision-makers.

It is impossible to construct an income measure that reflects true income as defined by Hicks (1946) when markets are not perfect and complete (Beaver and Demski, 1979). Such a measure does not exist. Rather, accounting should be viewed as an information system as acknowledged by both FASB and IASB in their original conceptual frameworks (FASB, 1978; IASB, 1989). Unfortunately, there is no universal ranking of information systems (Christensen and Demski, 2003). In addition, it is well known that no rational preference relation describes the decision process of society (Arrow, 1951). The accounting system is the result of a delicate balancing of the possibilities imbedded in the accounting system and the demands of the users.

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This balancing is not entirely of a technical nature as it calls for balancing of preferences of the parties involved. Such balancing cannot be achieved by technical rule-making and is inevitably the result of a political decision process.

The accounting income number reports firm-specific financial information to the market and thus reduces the information asymmetry in the market. The paper considers how information is simultaneously used by investors to make decisions and to induce or influence management to behave optimally or to use the entity's resources efficiently. The decision-influencing role distorts the reporting incentives. Once the accounting information is used for performance evaluation (or for decisions regarding replacement of management), incentives for earnings management arise (Burgstahler and Dichev, 1997; Graham et al., 2005). The reason is that the financial statements include reporting of private information by management as part of the accruals. Auditing reduces this problem to some extent. Managers often have an informational advantage over the auditors and this prevents the problem from being completely eliminated.

A current trend in financial reporting is toward adoption of a fair value approach. It is highly questionable whether this is a viable path. The firm has an information advantage compared to the users of financial information and this advantage is used strategically in reporting. Fair value accounting relies even more on the private information of management, and enhances the possibilities for earnings management and leaves auditing less efficient. In addition, it is not obvious what information should be included into the financial statements. One question is whether the accounting system or the users are better at performing the aggregation of various information sources (Christensen and Frimor, 2007).

A related question is how the accounting system best complements other information sources. The financial statements will always be published late compared to other information sources. This is due to the nature of financial statements as all transactions must be processed and audited before the statements are released. In contrast, management's forecast might be timely. The prime purpose of financial statements might be to provide incentives for reporting of other types of information.

The conceptual frameworks of both IASB and FASB identify sets of the qualitative characteristics of financial information. The origin of the qualitative characteristics is related to the decision orientation of accounting and was stated in the ASOBAT report on accounting theory (AAA, 1966). These

qualitative characteristics certainly describe the attribute for a useful information system when it is used for decision-making purposes in a one-person world. This might be very different in a multi-person world. For example, one of the characteristics calls for unbiased reporting standards, yet recent research finds that the introduction of bias might lead to welfare improvements (Christensen and Demski, 2007). Furthermore, it is impossible to maximise all qualitative characteristics simultaneously and consequently there is a demand for trade-offs. However, the frameworks are silent on how to do this. In a multi-person world it is not possible to replace the individual preferences with a set of qualitative characteristics.

It is obvious that there is a demand for regulation of financial reporting and that a conceptual framework includes the objective and basic principles of reporting regulation. Given the multi-person nature of the problem it might take the form of a constitution (in the sense of fundamental laws and principles). The benefit will be that the conceptual framework forces the regulators to constantly seek solutions that are maintaining and enhancing the comparative advantage of the accounting system compared to other information systems such as press releases and web-based information sources.

An information economics framework allows consideration of uncertainty, multiple agents, demand for information, and multiple information sources. It also allows asymmetry in the knowledge of different stakeholders in the market such that the firm knows something which is of value to the market participants. Finally, it allows incentive issues to be part of the analysis.

My analysis of how conceptual frameworks contribute to the quality of corporate reporting will fall into four parts. Section 2 will analyse the supply of accounting information for decision and control. Accounting accruals are seen as the primary vehicle for management to report their private information. The incentives for such reporting are reviewed. Section 3 will deal with the demand for financial information. It is argued that the demand for decision purposes and control purposes leads to different ranking of accounting systems. The suggestion to have different accounting systems for different purposes is analysed and rejected. Section 4 will discuss the fundamental properties of accounting information. The qualitative characteristics and other fundamental properties will be part of this discussion. Section 5 will show the implications of the analysis for the accounting regulation and the conceptual framework. Conclusions are offered in Section 6.

2. The reporting organisation

2.1. Income measurement

One of the prime targets for accounting information is the investor group and, according to common wisdom, the main interest for this user group is the future cash flows of the company. First assume that the firm is placed in a perfect capital market under certainty. The cash flow series for the lifetime of the firm is given by:

$$CF = (CF_0, CF_1, \dots, CF_T) \quad (1)$$

Given perfect capital markets, a no arbitrage argument leads to the well-known result that the NPV of investing in a firm is zero. The value of the firm at any given date t is given by:

$$PV_t = \sum_{j=t+1}^T CF_j(1+i)^{t-j} \quad (2)$$

With this the income definition easily follows:

$$I_t = CF_t - (PV_{t-1} - PV_t) \quad (3)$$

This is economic income and coincides with the classical income as defined by Hicks (1946) and it is equal to cash flow minus economic depreciation. Again, a no arbitrage argument leads to this income being equal to the interest earned on the invested capital or:

$$I_t = iPV_{t-1} \quad (4)$$

In a perfect world income measurement is not interesting (Beaver and Demski, 1979). Everybody knows everything and information adds nothing new.

2.2. Decision information

Imperfection might take on many forms. The first to be introduced here is adding some of the details leading to the given cash flows. The firm is producing one product and the basis for this is an initial capital investment and labour in each period. Both are acquired in perfect markets and the production function describes a feasible relationship between inputs and output. The demand is exogenously given for each period. The realised cash flows are the consequence of optimal production during the lifetime of the firm. If inventories are possible and if the production function exhibits economics of scale or scope, production smoothing will be part of the optimal production schedule. Thus, the total assets of the firm will both contain the inventory of finished products and the fixed assets. Despite the fact that the value of the firm is uniquely determined, it is not possible to find individual values of the two assets that add up to the total value of the firm. The non-separability of the

cost function combined with the non-perfect markets (for the finished product and the fixed assets) leads to this result (Christensen and Demski, 2003). The result points to the difficulty there is in defining appropriate and descriptive accounting measures even when faced with lots of regularity and certainty. The analysis by Bromwich et al. (2009) reinforces this point.

Now, no uncertainty leads to no demand for information (or there is no such thing as information in such a world). Formal introduction of uncertainty into the model calls for a definition of the error terms that have an influence on the cash flows in each period. The simplest model of this type includes the following stochastic cash flow series:

$$CF = (CF_0 + \varepsilon_0, CF_1 + \varepsilon_1, \dots, CF_T + \varepsilon_T) \quad (5)$$

Assume that the ε_j 's are identically and independently distributed. The accounting system reports routinely the realised cash flows, but the realised cash flow from period j will have no predictive ability with respect to future cash flows. Thus, accounting information is only keeping track of the realised cash flows, but it is hardly useful.

The introduction of a correlated error structure changes this. Actions or decisions often have a multi-period effect and this feeds into the stochastic description of the future cash flows. Now observation/reporting of the cash flows will provide information that enables the user to update the expectation of the future cash flows. This estimation uses the correlation structure. This is information for valuation purposes as in Peasnell (1982). For the purpose of facilitating this estimation the accounting system might be useful. This will be the case when the accounting system, together with the reporting of realised cash flows, provides more insight into the error structure, thus enabling the user to better form expectations about future cash flows. More accounting variables might improve the estimation. The key to finding valuable information is to get information about the fundamental time processes or the components which characterise the evolution of the cash flow series. Any bias in the accounting variables does not matter as long as the user is able to inverse the bias and decipher the content of the accounts (Demski and Sappington, 1990). The important component remains the unexpected error which is used to form expectations. Any systematic bias in the accounting model is easily countered through a balanced use of the information.

Furthermore, the double entry accounting system satisfying the clean surplus relations or the comprehensive income contains counterbalancing

errors. Over the lifetime of the firm the accounting income will always equal the total cash flows of the firm. That is, whichever errors the present accounting valuation includes, these are balanced by the error in the future expected accounting income numbers (Feltham and Ohlson, 1995).

2.3. Control information

The control use of accounting numbers is often modelled using the principal-agent model. The principal hires an agent to perform a task for some reason. The principal is unable to observe the action selected by the agent and at the same time the act is a source of disutility for the agent as he does not want to work hard. The market for labour of the type of the agent determines the level of the salary. The agent has to be offered at least the utility he can get from working elsewhere to accept working for the principal. This is the classical moral hazard problem (Holmstrom, 1979). The naïve interpretation of this model is cast in the form of a simple working relationship. However, it is descriptive of much more complex relationships. Managerial action choices are hardly observable in a classic sense. In the managerial context the issue of goal congruence is also predominant in the management accounting texts (Hornigren et al., 2003; Antle and Demski, 1988). The bottom line is the agent (manager) wants to select a different action from the one desired by the principal (owner). This is the basic moral hazard problem.

In response to this problem the owner introduces an incentive scheme to make the manager select the desired action. The information supplied by the accounting system becomes important here as the payment is a function of the available accounting information and the additional contractible information signal. The owner's outcome might or might not be included in the accounting information. One reason for this asymmetry is that the owner's time horizon might extend beyond the accounting and other information available. This is in line with the net present value focus of the stockholders.

From an accounting perspective it is interesting that the information of value in this type of model is information about the act taken. That is, whenever an additional information source is available, it is useful or of value if it provides more information about the act selected (Holmstrom, 1979). The interesting information in this context is information that informs the parties about the source of the market imperfection, in this case the non-observability of the act selected. The fundamental goal conflict between the manager and the owner is essential for this result. If that were not present, the

manager would simply choose the first best action. Thus, the problem disappears when there is perfect goal congruence in the organisation such that there is no demand for incentive pay to promote the actions desired by the owners. This includes the tension between long-term and short-term profit measures. Control problems are important to accounting (Sunder, 1997).

The demand for information for control purposes is closely tied to the act selection. Thus, it depends upon the set of available actions how these differ in terms of the manager's preferences and in terms of the owner's preferences. One information system is preferred to another information system if it is better at providing incentives for the manager to select the desired action. Intuitively it translates into how the information systems are able to distinguish among the available actions. When the focus is on the accounting system it is also important to acknowledge the presence of alternative information sources. The value of a particular accounting system depends upon which other information sources are present. This is, however, only part of the story.

2.4. Reporting incentives

Managers are employed to make decisions. They are also supposed to collect and process information. And finally, they are employed to report information, for example, through the accounting system. Thus, part of the managerial job is to acquire information and this information is, unless disclosed, private to the manager. Some managers are even hired because they possess special knowledge, which is also private information. In all cases this adds to the imperfection of the relationship between the owner and the manager. Consequently, the contractual arrangements between the two become more complex in response to this private information. More interestingly, the timing of how the events unfold becomes part of the problem.

If the private information gets into the hands of the manager after the actions have been selected, there is no immediate control problem. The contract that controlled the actions of the manager without considering the new information will continue to do its job and induce the same action choice. However, a new option arises as it might be possible to allow the manager to communicate his private information to the public and thus make the information available for contracting purposes. Accounting information is often of this type as accruals are constructed at the end of a period.

Given the late arrival of this information it cannot be used for selecting the action. The communicated information can only be used for control purposes

as the information might be used to induce the efficient operation of the firm through incentive pay. The communication of such private information is constrained as the manager will only communicate signals that are in the interest of the messenger. Only the manager knows the specifics of the information and the communication is impossible to control directly. Thus there is yet another possibility for gaming by the manager. One way to resolve this is to make the owner offer a set of contracts to the manager. The manager is then supposed to choose among these. This is a revelation game and through his choice the manager reveals his private information. The use of the information for contracting purposes is limited to the use which is specified in the chosen contract. What is more important is that the owner has to commit to refraining from using the information otherwise. The communication is controlled by the other more primitive observable variables such as cash flows and by the potential use of the information for control purposes (Christensen, 1982). The accruals are used for communicating the private information of the managers, and reporting incentives have to be taken into consideration. Other information is used to control the reporting incentives.

If the information is available to the manager before the decision process is finished, the information has the potential of informing and thus directly influencing the decision. This might also be the very purpose of hiring a manager in the first place. There is then a potential for using the information in the evaluation process as in the previous case, but in addition to that there is also a possibility for the manager to use the information in the decision-making process. The double use of the private information has an impact on the control problem as that might be improved or made worse. In extreme cases, the private information might be of negative value to the firm. The information from the manager can be extracted in the same way as above but more complicated incentive issues have to be taken into consideration (Christensen, 1981).

Communication of private information is possible both inside and outside the accounting system. Communication within the accounting system is limited to financial information. The initial recording of a transaction takes place inside the accounting system. This information is then often combined with the manager's private information from outside the accounting system to form accruals. The accounting system handles this combination using consistency as a controlling device. Depreciation is a good example of how management's expectation

is entered into the accounting system as an accrual. The initial recording is historical cost and the depreciation follows a predetermined plan according to the expectations of management. During the lifetime of the investment the managers might learn more about the profitability of the investment. The normal accounting treatment will not allow such information to enter the accounting system. Only hard evidence is accepted as an excuse for changing the depreciation plan. Modern times call for fair value to enter the accounting system. Fair value accounting constitutes another example of accounting control and here it is historical cost combined with market data that forms the accrual. Management has private information concerning the market value when considering firm-specific assets. Market value is not always exogenously given and users of financial statements have concerns about the completeness of the market search performed by management. The control problem is easy to solve when there is a well-functioning market for the asset in question. Then it is routine to report a market-based value of the asset. When the market is less well-functioning, evidence has to be present to defend the accounting treatment.

The communication might also take place outside the accounting system and then the communication is free of the rules, regulation, and conventions that govern the accounting system. This information channel is heavily used by modern corporations, and security regulation is in place to regulate the sharing of information among market participants. The content of the communication is subject to market control, and the published financial statements are certainly part of the set of controls.

2.5. Auditing

Auditing is an important part of the controls that allow private information to be communicated to the decision-makers. The auditor might have two functions: that of a quality control and that of an independent actor who provides credibility to the report (Kinney, 2000). Given the regulation which surrounds the auditing profession, the latter task must be very important. The first task could easily be carried out by a person who is directly employed by the firm. The latter task calls for independence (Antle, 1984).

The auditor usually has a disadvantage compared to the manager of the firm when it comes to information about the firm. If reporting incentives were trivial, the manager's self-reporting of firm-specific information would clearly dominate any information that the auditor could provide. It is also

noteworthy that the auditor only provides an opinion of the published financial statements. Thus, he is not producing the information himself but only verifying the content. Given the problematic reporting incentives of management, this function increases the information content of the published statements (Christensen and Demski, 2003). A consequence of this finding is that it is very important that the information contained in the accounting system can be audited. In that way, audit ability also becomes a constraint on the accounting system.

3. Demand for information

3.1. *The users of financial statements*

The demand for accounting information, even for a simple firm and only considering the owners (and potential owners) and the manager, is quite complicated. The present and potential owners have investment decisions as well as control decisions. The demand for information depends upon the future cash flows, the control problem that is faced by the organisation, the access of the two parties to information, whether there is any private information, and the possible observables to be used in contracting. The usefulness of communicated private information is very sensitive to all of these factors. Consequently, even at the firm level, the demand for information and the optimal choice of accounting information system will be very specific to the firm characteristics. The demand for information is partly a response to the frictions in the markets faced by the firm and the interrelationship among the available sources of information, the goal congruence of management, and the constituents of the firm and the incentives. A minor change in one information source might have dramatic consequences for the information content and the use of accounting accruals. The reporting incentives are hard to control. Thus there is no universally best way to manage the reporting of the firm. The choice must reflect a cost benefit comparison in order to reach an optimal system (Christensen and Demski, 2003).

The information content of the accounting system is mainly firm-specific information providing the investors with input for their investment decisions. Most of the information contained in the accounting system is endogenous to the firm but some pieces of information are the consequence of the mixing of endogenous and exogenous information. The prime example of this is fair value valuation, which includes market information.

Modern finance has taught us that a rational, risk-averse investor invests in a diversified portfolio of

assets. The Capital Asset Pricing Model (CAPM) has informed us that the main ingredient in the pricing of a security is the association of the security and the market portfolio such that the correlation between the security and the market portfolio, i.e. the beta, accounts for the pricing of the security (Beaver, 1998). The investor will demand a risk premium for the market risk that is associated with investing in a specific security. The firm-specific risk will be diversified and the result is that this part of the firm-specific risk disappears from the equation. The investor may also want information about firm-specific risk in order to diversify, particularly if he has non-diversifiable endowments (e.g. property investments or skills). Consequently, the investor's demand for information concerns the risk and the correlation of the firm return and the market return. This is not the type of information which is given the highest priority in the accounting system.

On the supply side, the accounting system contains financial information about the activities of the firm. The data are initially collected within the firm as transactions. Later, revaluations and accounting accruals are added to the system. As a result, some data are hard data in the form of realised cash flows, and other data are of a softer nature as the accruals are based upon the expectations of management, perhaps inspired by exogenous events like price changes. A general characteristic of the accounting information is the stamp which is provided by the auditor of the firm. The accounting system has the comparative advantage that it produces firm-specific information primarily about the firm's financial position.

Thus the accounting information is not in demand by the general investor who follows the advice to invest in well diversified portfolios. Rather, accounting information is useful for persons who are placed (for some reason) in a speculative position. Some investors look for information about future cash flows to identify when it is optimal to exchange the investment for cash. Another group of investors look for stewardship information to induce efficient operation of the firm. There is not a generally best accounting system across firms (Christensen and Demski, 2003). The optimal information system is unique to each relationship, and the accounting system has to compromise among the users and producers. A choice also has to reflect the preferences of the stakeholders of the firms and it has to balance the possible uses of the accounting system. Furthermore, as Arrow's theorem suggests the non-existence of a social welfare choice function, the choice must be the result of a political decision process (Arrow, 1951, and

Demski, 1973). The exposure draft, (FASB/IASB, 2008), acknowledges this dilemma more specifically than the extant IASB and FASB conceptual frameworks, as it identifies the capital providers as the primary users (para. OB5 to OB8). Capital providers' demand for information includes both the ability to generate future cash flow and the ability to protect and enhance the investments. The focus on reporting incentives could be stronger.

This is further mixed with a public goods problem in the sense that once the information is produced and the cost for that is incurred, the information is a free good. Consequently, if left alone, the market would end up with an under-supply of accounting information. This creates a lemons problem (Akerlof, 1970) in the market for the assets of the firm and there is a demand for regulation of the supply of firm-specific information. If the signalling behaviour is important the result might be an oversupply of information.

3.2. *Multiple uses of financial information*

According to the discussion of the reporting firm, accounting serves two purposes: decision and control. Information for decision purposes is information that enables the decision-maker (an investor) to estimate the future cash flows for investment decisions. This means information that feeds into the net present value calculation. Different signals lead to different decisions. Information for control purposes informs the decision-maker about the 'act' selected by the manager of the firm. Here the important characteristic is the ability of the information to provide information that enables the owner to distinguish the desirable from the undesirable action. The purpose of this is then to allow the owner to provide incentives for selection of the desirable action. The two purposes are not identical and the rankings of information systems according to these two purposes do not necessarily coincide. This means that when faced with a choice among a set of information systems, one information system might be preferred for one purpose and another might be preferred for the other purpose. This implies that there is not one universally optimal accounting system independent of the use of the information (Gjesdal, 1981; Christensen and Demski, 2003).

One way to proceed is to consider several accounting systems – one for each purpose or user group. Generically that could be one for control purposes and one for decision purposes serving the stockholders of the firm. In this way, the accounting system could overcome the incentive issues raised previously as management will only communicate

information which is in its own best interest for control purposes. Separating the two sets of reports will remove this conflict. Unfortunately this is not a viable option. Management will only communicate everything if the users are able to and will commit not to use the information too aggressively. Given the separation of management and stockholders, it is hardly possible for the owners to commit to such a policy. Bad news in the decision information domain will at some point spill over to bad news in the control domain and thus the incentives for complete and truthful communication in the decision domain break down. Therefore, we cannot expect that a separation of the user groups and their reports will lead to an accounting system for decision-making which is free from the bias introduced by the incentives of management.

4. **The properties of accounting information**

4.1. *The qualitative characteristics of financial statements*

The qualitative characteristics of the conceptual framework are the attributes which make the information useful to users according to the conceptual frameworks of the IASB (IASB, 1989) and FASB (FASB, 1980a, 1980b, 1984, 1985). This is the important link between the information source and the users. The qualitative characteristics then function as a proxy for the users. The details of the decision problem are replaced by the qualitative characteristics. As noted earlier, the origin of the qualitative characteristics is related to the decision orientation of accounting and was stated in the ASOBAT report (AAA, 1966). These qualitative characteristics certainly describe the attribute for a useful information system when it is used for decision-making purposes in a one-person world. The inherent multi-person nature of most accounting issues is ignored. The question to be analysed here is whether the qualitative characteristics can replace the users when the regulators are deciding upon accounting standards.

Focus first on the pair 'relevance' and 'reliability' as these attributes have hitherto been identified as the most important ones (although 'reliability' is replaced by 'faithful representation' in FASB/IASB, 2008). The IASB conceptual framework (IASB, 1989: para. 45) calls for a balancing between qualitative characteristics but offers little assistance beyond a reference to 'professional judgement'. In the wording of the Exposure Draft (FASB/IASB, 2008), 'Enhancing qualitative characteristics improve the usefulness of financial information and should be maximised to the extent possible' (para. QC 25). In order to analyse this balance,

briefly consider the model of Feltham and Xie (1994). They consider a multi-task agency model. The manager faces a two-dimensional task and is supposed to select an action pair $a = (a_1, a_2)$. The owner wants to maximise expected profit $\Pi = b_1a_1 + b_2a_2$. The accountant has to choose between two different information systems. The first will report a profit of $p_1 = b_1a_1 + b_2a_2 + \varepsilon_1$ and the second will report a different profit of $p_2 = c_1a_1 + c_2a_2$. The first information system weighs the two actions according to the objective function of the firm but has noise as well. The second has no noise but gives a biased profit compared to the objective of the firm. Thus the first information system scores high on relevance and low on reliability. The second is very reliable but less relevant. Using the two information systems for contracting purposes illustrates the consequences of a second best world. Using the first profit measure leads to a deficiency. Providing incentives to work imposes a non-trivial risk upon the manager and consequently he requires a risk premium in his pay for performance contract. The second information system leads to a decision from the manager which is not aligned with the first best choice as the mix of the two actions is skewed. This is also inefficient. Consequently, there will be different costs associated with the two information systems. The first will include a risk premium and the second will reflect the unbalanced weighted decision. Now perform a comparative static analysis. If b is small (compared to ε_1) the second information system will be optimal. If b is large (compared to ε_1) the first information system will be optimal. The information systems including the relevance or reliability characteristics are not changed,¹ yet the optimal information system changes as a consequence of the difference in the underlying decision problem. The optimal choice is not accurately described by the pair relevance and reliability. Wagenhofer (2009) makes a similar point.

To take the analysis one step further, the concept of faithful representation or neutrality is considered. Faithful representation means that the transactions and other events should be represented in the financial statements in a way it purports to be. This takes away any consideration of managerial incentives to control the information system. Yet it is widely acknowledged and documented that there is a phenomenon called earnings management and that this takes on many forms. This has been

¹ It is suggested that reliability is replaced by faithful representation in FASB (2008). This replacement does not change the argument as the interpretations of reliability and faithful representation are identical in the proposed setting.

documented in many and very different ways (Dye, 2002; Nelson et al., 2002; Demski, 1998). The next level of earnings management has led to the emergence of something that might be labelled designer transactions, which stands for transactions that just satisfy a set of conditions to qualify for being accounted for in a specific way. The Enron case was a huge system of such designer transactions. The point is that the focus on qualitative characteristics skips over the finer details of the decision problem and in this case over the reaction of those making the reporting system once a regulation is in place. They might design transactions to circumvent the regulation. The regulators must consider the incentives of the information producers to maximise the result of the regulation effort. Furthermore, this might lead to optimality of non-neutral standards and non-neutral accounts as suggested by Dye (2002) and Christensen and Demski (2007).

The qualitative characteristics work as a way of simplifying the decision problem faced by the regulators as the finer details of the accounting decision problem including preferences, decision problems and information environment are simplified into only viewing the qualitative characteristics of accounting information. This appears to be too simplistic as it blinds the regulators to incentives that are inherent in the system producing accounting information and to the more delicate trade-offs that the regulators (and information producers) are facing.

4.2. *The fundamental properties of financial statements*

In very general terms, the purpose of financial statements is to provide information for the constituents of the firm. This is a very broad purpose, yet financial statements have some very fundamental properties which will remain no matter the regulation. Some of these will be discussed in the six points below. First, the optimal reporting for the firm is unique to the specifics of the firm. Second, the general purpose of accounting information is usually cast in the wording of decision information and stewardship information. The bias introduced by the stewardship use of accounting information will always remain. Third, the accounting information specialises in firm-specific information, and mainly investors holding a speculative position benefit from financial reporting. Fourth, the accounting information is inherently late compared to other information sources. Fifth, the accounting system does not exist in a vacuum. Other information sources are present and the purpose of the

accounting system cannot be analysed without considering the existence of other information sources. Sixth, the financial statements are audited by an independent auditor. This implies that accounting data are hard to manipulate. Eventually a synthesis of these points will lead to the identification of the role of the conceptual framework.

Following the earlier discussion of the reporting firm, the main content in financial statements is financial information about the firm. This follows from the historical development and it also reflects the comparative advantage of financial reporting. Furthermore, it was concluded that the optimal information system, which balances cost and benefits of the information system, is highly specific to the details of the specific reporting situation. This includes the decision problems faced, the information present, and the distribution of this information among involved parties. There is no universally optimal information system independent of the specifics of the reporting situation.

Furthermore, it is well established that the rankings of information systems for decision purposes and stewardship purposes are not aligned (Gjesdal, 1981). As argued earlier, it follows from the institutional setting that it is impossible to have two different financial reporting systems – one for stewardship purposes and one for decision purposes. It is impossible for the users to commit to not using the decision-relevant information for stewardship purposes as the use of the information system is decoupled from the production. Consequently, the situation-specific optimal accounting system will balance the pros and cons of the information system for the different purposes. This suggests that there is always a bias in the accruals which is related to the stewardship use of the information.

Another point is how the accounting system best supplements the other, perhaps more timely, information sources that are found in the information society. The famous Ball and Brown (1968) diagram suggests financial accounting indeed provides information which is used by the market participants to value the securities in the market. Unfortunately, the diagram also suggests that only a small fraction (8% according to Lev, 1989) of the total information released to the market stems from the published financial statements. The market reacts to all kinds of information and this information is clearly timelier than accounting information. Yet most information sources are not regulated. Accounting information is heavily regulated and has an important effect on other information

sources. The financial report has a potential for controlling the information content in other perhaps more timely information sources.

The conceptual framework implicitly assumes that financial statements should carry all relevant information and thus it disregards the existence of other information sources. This view does not allow for a specialisation of the different types of information sources. The accounting system constructed in one way might be a better supplement to existing information sources than another accounting system that is supposed to stand on its own. The big question remains as to who is best able to aggregate the financial information with other sources of information which are available to the market participant. It appears to be too naïve to assume or conclude that this aggregation is best performed by the accountants. The famous Roll (1984) paper suggests that this should be taken seriously. Who would, at the outset, have expected the financial markets to outperform a set of meteorologists when it comes to forecasting weather in a small region of Central Florida? The market mechanism is an extremely strong information aggregator and it might, despite the fact that each of the market participants only has very noisy information compared to the firm, be very efficient at performing such an aggregation.

The final observation is that financial statements are unique in the sense that they are audited. That is, the private information of the firm is verified by an independent auditor before being entered into the financial statements. Consequently, only information that passes this filter is included (Kinney, 2000). This implies that financial statements are hard to manipulate and produce hard information that is useful in repairing inefficiencies in markets.

Where do these six observations lead? First of all, financial statements are not particularly suited to serve the diversified investor. Mainly to investors holding speculative positions will the financial statements be of value. Next, is the balancing of information to be included in and excluded from the financial statements? The first observation is that this is an empirical question as it is highly contingent upon the situation whether the accountant or the market is best at aggregating information. Routinely, the accounting system steps away from including investment in the future into the assets because the benefits are uncertain both with regard to timing and amount. The market has no problem in including such information into the valuation of securities. The second observation is that accounting information is inherently late by construction. Events have to take place and the entry into the

published statements has to be verified by an auditor. Numerous sources of information step in and fill the gap. This is evidenced by Ball and Brown's (1968) diagram and Beaver (1998).

This leads to the following question: why regulate accounting information when most of the information action is going on in the non-regulated regime of other information sources? These sources are perhaps regulated with respect to timing due to securities regulation but not with respect to content. One possible answer to that question is that the regulated accounting information serves as the information source which 'controls' the other information sources. Then all free voluntary information disclosures are at the time of financial reporting compared to the published financial statements. If they are consistent it is viewed as good news, whereas inconsistency is regarded as bad news. The information content of the voluntary disclosure is a function of the control that is built into the accounting system. The financial statements serve an important role in controlling such information.

5. Accounting regulation

5.1. *The purpose of a conceptual framework*

Before going into the specifics of the present and proposed conceptual framework it might be useful to consider the stated purpose and scope of the conceptual framework. The purpose of the present IASB conceptual framework is to assist the Board in developing future accounting standards, to assist the Board in promoting harmonisation of regulations and accounting standards, to assist national standard-setters, to assist auditors in formulating opinions, and to assist users (IASC, 1989). The FASB states a similar purpose (FASB, 1980b). Thus, the purpose is twofold. One is to help the standard-setter to develop future standards, and the other is to help those producing and using the financial statements. A framework could be regarded as a constitution defining the general principles for the development of accounting standards in the regulatory domain and for the information content of financial statements in the users' domain. To fulfil this purpose a framework should be invariant over a long period and formulate the general rules which constitute the core of financial reporting.

As already indicated, the IASB and the FASB are jointly participating in a project that is intended to lead to a new conceptual framework which unites the two frameworks of the two institutions. This work is in progress and many preliminary working papers have been released for comment. In the

exposure draft of the joint Conceptual Framework (FASB/IASB, 2008) the purpose is reformulated as establishing concepts that underlie financial reporting. The framework is thought of as a coherent set of concepts that flows from an objective. Many questions are being asked and not many have an immediate answer.

5.2. *Coordination of the financial statements*

The research activities of the universities serve the implicit regulation of accounting. Most of the ideas which form the basis for our thinking of accounting issues stem from the research community. The notable contribution of Paton and Littleton (1940) on corporate accounting standards provides a deep insight into the fundamental and problematic issues of income measurement. Also the American Accounting Association's Committees on Accounting Reporting have had some influence, most notably the ASOBAT (AAA, 1966) report.

The research industry is not well coordinated. Consequently, a set of definitions of the elements of financial statements is part of the conceptual framework. The elements are the assets, the liabilities, the equity, the income, and the expenses. The framework also provides definitions of recognition rules related to the basic elements. Finally, the general rules of accounting measurement are included in the conceptual framework. Taken together, the definition of elements of financial statements is thought to govern the inclusion and exclusion of information in the financial statements.

Analysing the demand for accounting information for a specific entity leads to a specific optimal information structure. The accounting system has to be finely tuned to the specifics of the organisation and its environment. The flexibility of the accounting system is a key to its success as an information system. Within the general framework of accrual accounting there is room for many variations. This allows feeding the expectations of management into the accounting information in a controlled way. Too much regulation would destroy this flexibility and leave the accounting system useless (Christensen and Demski, 2003).

The optimal accounting information system will fill the gap left between the private and public information to induce optimal decision-making in the most general sense. Provided there is a well-defined social preference relationship this information will possibly be unique except for the representation or the scaling of the information system. Sending a message from one individual to another might take on many equivalent forms, e.g. using different languages. The important function of

financial statements as an information source is that the users are able to invert the mapping that produces the information in the first place such that the user learns the primitive underlying state realisation or event (set of events) (Antle and Demski, 1989; Demski and Sappington, 1990).

As the world contains many firms and many decision-makers, there is a demand for coordination of the scaling or representation of the information. This would serve the purpose of coordination among different users of the information such that the information might be understood by a broader audience and not coded for a specific user. In the framework this is equivalent to the set of definitions and the set of elements which constitute the financial statements. No doubt this demand for coordination is real. The demand could be satisfied in the financial statements as a description of the applied accounting methods. The textbooks or professors are other candidates for taking care of this coordination. Given the anarchistic and innovative nature of both, this is probably not a good place to do the coordination. National regulation will not do the job either, given the open society. Consequently, this job is best served by the international accounting regulation.

As noted previously, the current view is that financial statements provide financial information about the firm. The format of the information system is defined as accrual accounting and universally agreed upon. Pointing this out belongs to a long-term valid conceptual framework. The specific definitions of what constitutes the elements of the subsection of the financial statements are subject to change as part of an evolution and might be better placed in the standards.

5.3. *A conceptual framework*

There is certainly a demand for accounting regulation as a market failure can be observed in the market for information supply. Those who possess the information might have poor incentives to disclose such information and the market is also haunted by a lemons problem as suggested by Akerlof (1970). The literature on the demand for regulation of financial statements is vast and a recent summary of the arguments is given by Bushman and Landsman (2010).

Now to the initial question of how do conceptual frameworks contribute to the quality of corporate reporting regulation? The conceptual framework can be viewed as the constitution (statement of fundamental laws and principles) that keeps control over the process of accounting regulation. A constitution should have long-term validity and it

should not be changed in response to small changes in the workings of society. This calls for a rather robust wording of the conceptual framework. However, this is not the way the present conceptual framework is set up. It is far too detailed and might consequently fail in its purpose, as observed by the AAA committee on Financial Reporting (AAA, 2009). I share their view.

A conceptual framework should function as a constitution to remind the regulators of the overall goal of financial reporting such that the details of individual standards are kept in line with that. Therefore a conceptual framework should contain that goal. As found earlier there is not unanimity among stakeholders on this issue and it is part of a political process. Thus it is impossible to define what is meant by quality of corporate reporting objectively and often we are reducing this question to one of measuring the cost and benefits of regulation as in Schipper (2010). The regulators are supposed to balance the pros and cons of introducing or revising a standard. The overall goal is to find a socially optimal level of disclosure of firm-specific financial information which leads to well functioning capital markets and to efficient firms. Rather than providing a set of qualitative characteristics which does not guide the regulatory process, as noted earlier, it would be more useful to state the perceived comparative advantages and the perceived limitations of financial statements.

One of the advantages of the accounting system is that it is audited, which makes the information hard to manipulate. This is important given the role accounting plays in reporting otherwise undisclosed information and in controlling other sources of information. It might also flag that some pieces of information are hard evidence, whereas other pieces are softer, such as accruals. The latter are reported by management but have an accounting stamp as the procedure for producing them lends itself to auditing. The usefulness of the pieces of accounting information depends critically upon the hardness of the data.

The limitations include the potential bias of financial statements. The word bias can be interpreted in two ways. One meaning implies that the statements do not represent the expected value of the asset, i.e. the reported value is not equal to the mean. It is admittedly a nice property that a measurement is free from bias, but any deviation from this norm does not constitute a major problem as that is easily resolved once the source of the bias is known. The troublesome part is the bias introduced by an involved party. Identifying and resolving this type of bias could point to the

importance of the incentives of management for the preparation and interpretation of financial statements. This would put these incentives in a central role when it comes to the development of new standards and when it comes to interpreting the financial statements of firms. Along these lines, the AAA committee has developed a few ground rules for a conceptual framework (AAA, 2009). The future development of the standards might benefit from allowing competition among standards and allowing firms to decide which set of standards they want to satisfy (Dye and Sunder, 2001).

6. Summary and conclusions

The conceptual framework has been with us for a long time and the regulation of accounting even longer. Much regulation has been a consequence of observed business failures (Clikeman, 2009). The globalisation of business has led to a call for harmonisation of accounting standards around the globe and as a result the FASB and IASB have joined forces to make one set of accounting standards. One of their joint projects is a common conceptual framework (FASB/IASB, 2006, 2008). Consequently, the present interest in the development of a new framework is seen.

In this paper I have reviewed the demand for a conceptual framework from an information economics perspective. This has been a broad analysis. The point of departure was supposed to be the consequences for the quality of financial reporting of a conceptual framework. This is a very difficult question as the notion of quality is very hard to describe in the first place and secondly because the roles of allocation between a conceptual framework, the actual accounting regulation, and the information content in financial statements are not predetermined. Therefore, I have taken the path of analysing the role and content of a conceptual framework as a set of ground rules that is useful in the regulation of financial reporting.

The focal point of a conceptual framework must be the comparative advantage of accounting. Accounting is an information source which is always produced late in a decision process. That stems from the fact that a main characteristic of accounting information is that accounting data: (1) are based upon the financial relationship of the firm with outside parties and upon formal recognition rules; (2) are subject to auditing; (3) acknowledge the role of other, perhaps more timely, information sources; (4) aggregate and allocate information over time and units; and (5) are hard to manipulate. It is an important role for the conceptual framework to

help the accounting system in maintaining the comparative advantage.

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