

# The need to reengineer the business reporting process

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## ABSTRACT

**KEYWORDS:** *enhanced business reporting, accounting information systems*

*This paper examines the forces that are shaping and changing the environment within which business reporting takes place. The starting point of our analysis is the perspective that if the financial reporting system was being built from scratch today, it would look very different, taking into account fundamental changes in the two drivers of financial reporting: first, the reduction in the variable costs of disclosures to technology-enabled firms; secondly, the dominance of market making by professional investors, which includes such intermediaries as pension and mutual funds, which is how most ordinary individuals interact with the market. Taken together, the consequence of these two changes is that a system being designed today has to rethink the entire process by which financial data held by the firm is translated into decision-relevant information by users. This process takes place both within the firm and outside of it, with a handover of financial statements*

*taking place at the boundary between the firm and its users. The degree of pre-processing of information to the point of handover is an opportunity for lack of transparency and reporting fraud. Given these underlying changes, it is time to ask whether the location of that handover boundary point is still appropriate: whether the firm should continue to aggregate and condense information to the same extent before releasing it, or whether sophisticated users would prefer to have access to more information in closer to its raw format so that they can manipulate and aggregate it as they see fit.*

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## INTRODUCTION

This paper examines the technological and economic forces that have fundamentally changed the environment within which business measurement and reporting takes place, but have yet to materially impact the process of reporting itself. Ultimately, if business reporting is to retain its relevance to financial markets, that process has to be reengineered to better reflect the changes that have taken place in the economy since modern financial reporting began in the first half of the 20th century.<sup>1,2</sup>

Ours is hardly the first attempt to rethink the drivers of business reporting. Throughout the history of accounting, there have been initiatives to update or change the basis of financial accounting, no more so than in the last few years, after scandals such as those at Enron and WorldCom shook public confidence

in financial reporting. To pick but a few of the more prominent examples, the Canadian Institute of Chartered Accountants (CICA) undertook its *Canadian Performance Reporting Initiative* that distinguished measuring and reporting 'creation' from 'value realisation', the latter, it is argued, being the focus of the current system of accounting.<sup>3</sup> The International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB) are currently undertaking a major initiative to jointly develop an improved conceptual framework for financial reporting, building on the earlier FASB's *Concepts Statements* and the IASB's *Framework for the Preparation and Presentation of Financial Statements*.<sup>4</sup> This process will necessitate reexamining some of the thorniest issues that have faced accountants from the very beginning of the profession, such as the definition and scope of earnings, the basis for the valuation of assets and the impact of uncertainty. Meanwhile the CFA (Chartered Financial Analyst) Institute,<sup>5</sup> which trains and represents CFAs, has just released its *Comprehensive Business Reporting Model* that proposes changes to the accounting system that is specifically aimed at meeting the needs of investors.<sup>6</sup>

All these projects, and the many others before and ongoing, take as their starting point the perceived inability of the current financial reporting paradigm to adequately measure firm performance and capture firm value, as reflected most notably in the increasing importance of the so-called intangible assets and the consequent rise in the market to book ratio. While these efforts vary in the degree of change they promote and in their underlying reporting models economic value added (EVA) in the Canadian model, for instance, their differences are really ones of emphasis. Few have suggested wholesale changes to the way in which markets obtain financial information, such as moving away from the current system of quarterly and audited annual financial statements, with the focus more on incremental improvement than a total rethink.

What has been lacking, in particular, is an examination of the role that technology has

had on dramatically transforming the 21st century business, especially large Fortune 500 firms — beginning with PCs (personal computer) in the 1980s to Enterprise Resource Planning (ERP) Systems such as SAP<sup>TM</sup> in the 1990s and other of digital technologies that make up the networked, real-time firm of today's 'flat economy'.<sup>7,8</sup> The problems these changes pose for financial reporting are well known, with, for example, SEC (Securities and Exchange Commission) Commissioner Cynthia A. Glassman recently stating in a talk on 'Complexity in Financial Reporting and Disclosure Regulation' that:

'The current questions about the ability of our accounting and reporting framework to communicate meaningful information to investors arise, in part, because the economy continues to evolve at a rapid pace, while reporting standards and mechanisms are in a "catch-up" mode. Globalization and the emergence of new economies and capital markets have increased dramatically. Advances in technology, including the emergence of the Internet, faster and more ubiquitous communication and other technological developments, have changed the way companies do business, as well as changing the types of financial arrangements and instruments that businesses utilize. As the business world has become more complex, so have financial reports and accounting standards.'<sup>9</sup>

And yet, as in this speech by Commissioner Glassman, the discussion inevitably returns to familiar problems in financial accounting and after having raised the issue, fails to consider the role of technology not just as a source of problems for financial reporting, but also as a solution.

One noteworthy attempt to fill that gap is the ongoing Enhanced Business Reporting Consortium (EBRC), which defines itself as a *consortium of stakeholders collaborating to improve the quality, integrity and transparency of information used for decision-making in a cost effective, time efficient manner*.<sup>10</sup> The EBRC is the successor to



the American Institute of Certified Public Accountants (AICPA) Special Committee for the Enhanced Business Reporting (EBR) Model, also called the Starr Committee after its chairman Michael Starr from Grant Thornton, which was created by the American Institute of Certified Public Accountants in response to the collapse of Enron and Arthur Andersen in 2000.

That committee reexamined the proposals presented in the early 1990s by another special committee, the Jenkins Committee.<sup>11</sup> Despite the fact that its chairman, Ed Jenkins, subsequently headed the FASB, only a very small subset of the Jenkins Committee recommendations were put into practice. One reason was that the late 1990s' bull market made its concerns about the adequacy of generally accepted accounting principles (GAAP) seem excessive. What the Starr committee would really have liked to have determined was whether the malfeasance crisis could have been avoided if the improvements to financial accounting and reporting suggested in the Jenkins report had been implemented. But since that question is essentially unanswerable, the lesson the committee took away from the fate of the Jenkins recommendations was that the accounting profession by itself did not have the authority or the ability to create a new reporting model, regardless of how good its proposals were. Given the enormous societal consequences of changing the business measurement reporting system, bringing about substantive change requires the cooperation of a much broader set of stakeholders in the financial reporting process and bringing them on board was the rationale for transforming the EBR committee into the EBRC.

As originally envisioned by the Starr Committee, the EBR model consisted of five elements that give rise to a more useful and robust system of financial reporting (Figure 1).

This five-component model captures the notion that improving business reporting is a holistic process that encompasses the way in which business information is measured,

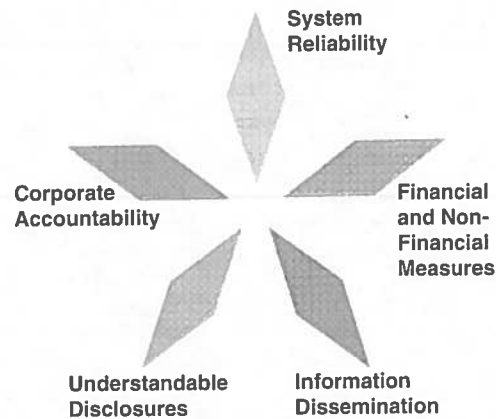


Figure 1: The five components of EBR model

translated into accounting metrics and communicated to stakeholders. The EBRC focuses on a collaborative model that supplements mandated financial statements with non-financial information and simplifying disclosures, while leaving areas such as the development of technology to bring about system reliability or creating best practices for corporate responsibility to other partners.<sup>12</sup> The EBRC approach is a key advance in that it focuses attention on the process of business reporting as opposed to narrowly on changing the accounting standards.

Before this shift in emphasis and the creating of the consortium, the Public Company Taskforce of the Starr committee created a set of comprehensive sample reports to illustrate the kinds of enhanced disclosures that it feels are necessary and useful for complex organisations in today's information economy.<sup>13</sup> By design, most of these sample reports were not especially 'radical'. The Starr Committee's self-imposed mandate was developing a structure for voluntary disclosures that 'enhanced' the coverage of the statutory annual income statement and balance sheet, as opposed to questioning the underpinnings of those reports themselves, such as the continued relevance of GAAP.<sup>14</sup> As Paul Herring, the chair of the Public Company Task Force wrote during the process that created the sample reports: 'Formats that follow outlines that are already in general use in the business information supply chain are likely to gain faster

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acceptance than those that are new... We will explore potential enhancements to the existing financial reporting format but will not consider wholesale re-structuring of the financial statements'. The incremental approach of the EBR process is justified in terms of change management, although as the failure of the Jenkins Committee indicates, caution is by itself no guarantee of acceptance.

The committee did commission one project, known by its internal code name 'Galileo', that was by design meant to push the envelope of possible changes to the reporting system. As the EBRC states on its website: 'While [the other sample reports] present ideas that are potential enhancements to existing reporting, the "Galileo" sample report presents ideas that are further departures from current practice'. The basis of Galileo was the question: What would a reporting system look like if it was designed from scratch for 21st century firms using 21st century tools for a 21st century audience? It is that emphasis that drives the inevitable focus on technology, because it is technology and all its consequences that define business today.

The other sample reports do not ignore technology, but restrict its use largely for the presentation of reports in a web based rather than paper format. But Galileo went further by not just using it as a medium for communication, but by making the assumption that a new reporting system must logically arise from that IT foundation of the firm and its management.

Building on the Galileo's work originally done for the EBR consortium by the authors, this paper lays out some of the larger forces that will shape this or any other attempt to reengineer business reporting. For while any particular change initiative may falter until one arises in the right place and at the right time, the forces that both cause the existing system of business reporting to be dysfunctional and which will constrain its replacement, remain constant.

The objective of this paper is to help launch an initiative into reengineering business reporting, and to do so in a way that makes use of the characteristics of the information age

economy to create an environment for the development of the concept. What we have in mind is the equivalent of the 'open source' development model, of which UNIX is the most prominent example, and which stands in contrast to changes in the standard reporting model, which have always been led by bodies 'authorised' to do so, such as the FASB or the IASB. Such parties are often subject to political constraints that constrain the scope of innovation. Of course, the danger is that a radical approach would fail in translating ideas, however innovative, into action. But, again, a more constrained approach has also had little to show for it, and given that one of the characteristics of the 21st century economy is that it is a highly efficient marketplace for ideas, our hope is that the strength of the ideas for business reporting, which a new approach might generate will serve as its own endogenous form of change management.

We begin by going over, in the next section, the well-known shortcomings of the existing reporting system. Then, the further section discusses the changes in the fundamental drivers of financial reporting that leads to an analysis of their implications for a reengineering business reporting system. Finally, the last section offers concluding comments.

## THE UNDERLYING PROBLEMS OF BUSINESS REPORTING

The need for drastic change in financial reporting has been recognised by many. When launching the CFA's recommendations for reforming financial reporting to better serve the needs of shareholders, Rebecca T. McEnally, CFA, PhD, project director of the Comprehensive Business Reporting Model and director of the Capital Markets Policy Group for the CFA Centre stated: 'As businesses develop new products and services, the financial reporting model must keep pace to ensure that financial statements are relevant, clear, accurate, and complete. Investors worldwide are too often in the dark about the true value of companies because accounting practices fail to reflect the economics of today's



business operations'.<sup>15</sup> Even blunter was Senator Carl Levin, who condemned 'the fiction that corporate financial statements had become: companies technically were in compliance with accounting rules, yet their financial statements were hiding huge debts and other liabilities'.

There are numerous lists of problems in the current financial reporting system. The measurement and implications on earnings and valuation of intangible assets tops most of those lists, followed by accounting for derivatives and consolidations.<sup>16</sup> The perennial issues of accounting for leases, revenue recognition and non-cash compensation also remain. And of course, the problems of the recognition of uncertainty and the extent to which relevance should trump reliability have dogged accounting since its very inception.<sup>17</sup> Since such issues have been frequently discussed elsewhere, from academic papers to Senate hearings, it would be redundant for us to repeat them here. What is useful, though, is to step back and understand the fundamental basis of financial reporting.

Financial reporting would not be needed if all internal and external stakeholders in the firm shared the same information about how the firm has performed in the past and had similar expectations as to how it will perform in the future. In reality, those within the firm are inevitably in a better position to know its state than those stakeholders outside of it. Moreover, the former are not just informationally advantaged, but as managers they can actually shape the firm's future performance. This is the fundamental informational asymmetry that both motivates and bedevils financial reporting, a reflection of the conflict of interest between shareholders who only care about the financial performance of the firm as reflected in its market price and managers who can directly benefit from exploiting the firm's assets. Other stakeholders in the company, such as employees, creditors, suppliers, customers, local communities, government agencies and so on have their own points of alignment and conflict with management and look to financial statements to obtain information relevant to their particular decisions.

The informational asymmetries issues, between managers inside the firm and stakeholders outside it, add the possibility of deliberately distorted reporting to the already formidable problem of measuring firm performance. Moreover, measuring past firm performance is largely a means towards the end of forecasting future performance, for it is only the future and not the past that affects firm valuation.<sup>18</sup> Clearly, managers can affect the degree to which past performance predicts future performance, thus affecting the value of financial reporting.

These incentive problems only add to the most fundamental problem facing business reporting: the changes in the way in which firms transform capital into returns. Once the main function of the firm was manufacturing, meaning the application of largely unskilled labour to physical assets to produce other physical products. In such a setting, reporting that concentrated on the disposition of those tangible assets adequately captured firm performance. Indeed, even accuracy in measuring assets could be sacrificed for other goals such as reliability. For example, through the adoption of the doctrine of conservatism that gave rise to historical cost reporting of firm assets.

But firms today create value by the use of such intangible assets as the knowledge and the skills of its workers to predominantly produce services- and value-relevant information. Hence, the relationship between physical assets and firm performance is greatly diminished. This creates two problems: a pure measurement issue of how to account for the presence and role of intangibles and an incentive problem in that this weaker relationship opens up a wider scope for managers to manipulate earnings.<sup>19,20</sup>

An example of these challenges comes from the decision by Cisco Systems, in May 2001, to write-down its inventory by \$2.25bn, an amount larger than the inventory value in its books.<sup>21</sup> One explanation is that the write-down related to the value of inventories that could be not sold by its suppliers in the value chain where Cisco had a contractual or moral obligation. In particular, during the e-commerce

boom Cisco had offered many of its dot-com customers' vendor financing in exchange for sales contracts, while signing contracts itself with downstream suppliers in anticipation of tight demand. These obligations were not reflected anywhere in the financial statements, thus, in hindsight, clearly overstating the firm's profit potential. Of course, even granting these measurement problems, there was also the suspicion that the sheer magnitude of the write-off resulted from the use of the well-known tactic of the 'big bath', in which if reporting some bad news is unavoidable, then the opportunity is taken to get all bad news of the books in advance and in one shot, thereby creating reserves to boost income in the future.

This example and the difficulty in disentangling its purpose are indicative of the difficulty that users face today with financial reports. This is not an example of fraud, but rather an example of what is arguably a far more compelling problem: the systematic inability of the current financial reporting system to meet the needs of users to understand the ways in which complex organisations perform and to hold their managers accountable.

This example also undermines one of the arguments in support of the current financial reporting system and against changes to that system: the need to maintain comparability and consistency across firms in the ways in which they account. In the case of Cisco, even long established and relatively uncontroversial rules on inventory valuation could not guarantee that different firms will apply those rules in the same way given the underlying ambiguity about what is being measured. This is an argument for more information disclosure to enable stakeholders to better discern the purpose and meaning of each transaction.

### THE CHANGING DRIVERS OF FINANCIAL REPORTING

The Concepts Statements that underlie the current US financial reporting systems state that 'Financial reporting should provide information that is useful to present and potential

investors and creditors and other users in making rational investment, credit, and similar decisions. The information should be comprehensible to those who have a reasonable understanding of business and economic activities and are willing to study the information with reasonable diligence' (para. 34, Statement of Financial Accounting Concepts No. 1). That information is communicated principally through the mandated financial statements: 'Financial statements are a central feature of financial reporting. They are a principal means of communicating accounting information to those outside an enterprise' (para. 6, Statement of Financial Accounting Concepts No. 1).<sup>22</sup>

Of particular significance is how the quality and nature of the information conveyed by those statements is determined: 'Whether at the level of the Board or the individual preparer, the primary criterion of choice between two alternative accounting methods involves asking which method produces the better — that is, the more useful — information. If that question can be answered with reasonable assurance, it is then necessary to ask whether the value of the better information sufficiently exceeds that of the inferior information to justify its extra cost, if any. If a satisfactory answer can again be given, the choice between the alternative methods is clear.

The qualities that distinguish "better" (more useful) information from "inferior" (less useful) information are primarily the qualities of relevance and reliability, with some other characteristics that those qualities imply. Subject to considerations of cost, the objective of accounting policy decisions is to produce accounting information that is relevant to the purposes to be served and is reliable' (paras 14 and 15, Statement of Financial Accounting Concepts No. 2).<sup>23</sup>

We have quoted these at length in order to give some context to the issues that face any proposed changes to the financial reporting system. The current joint project of the IASB and the FASB to converge their conceptual statements attempts to deal with some of the





shortcomings in these original conceptual statements that have emerged over time. That process has just begun and it is pointless for us to attempt to replicate or replace it. But it is useful to see at this highest level what drives financial reporting, of which we focus on three issues:

(1) *The users of financial information and their capabilities.* As the quote above indicates, such users are no longer considered to be the unsophisticated 'widows and orphans' that apocryphally motivated the passage of the original securities acts in the 1930s, at the height of the Great Depression. But having a 'reasonable understanding of business and economic activities and are willing to study the information with reasonable diligence' seems to be a rather minimalistic description of the investment bankers, hedge funds, credit rating agencies and institutional investors that dominate financial markets today. A reengineered century-reporting model would surely give greater prominence to these sophisticated players — and the technology that they utilise to arbitrage even the slightest price discrepancy — that make the market today, as opposed to passive investors who enter the market largely through such intermediaries as mutual and pension funds.

Indeed, while 50 years ago private investors owned over 90 per cent of all shares outstanding of US firms, their stake has plummeted to only around 30 per cent with the share of ownership by such large financial institutions, that intermediate stock ownership, as pension funds and mutual funds having increased in the same time period from under 10 per cent to almost 70 per cent. Moreover, while in decades past such large equity holders had an asset turnover in their portfolios of less than 20 per cent per year, in the last few years that rate has shot up astonishingly to over 90 per cent, which suggests a far more dynamic trading strategy, accompanied by very different informational needs.<sup>24</sup> The issue of how users use information and what form they get it in is intimately connected with the costs of financial reporting.

(2) *The costs of financial information processing and reporting.* The costs of preparing financial

information clearly affected the original focus on the annual financial statements as the 'central feature of financial reporting'. They serve as summary measures of the state of the firm and its performance. Such summarisation and condensation inevitably results in a loss of information, which cannot be in the best interest of users unless the measure perfectly captures future firm value, or the costs of more detailed information exceed its benefits to users. What is the cost of preparing financial statements? The answer to that question is often complicated by misleadingly combining the potential cost of reporting in general and the specific cost of meeting the current financial reporting standards. In other words, the cost induced by such complex standards as those on pensions or derivatives should not be taken as indicative of the cost of meeting any standard, current or proposed.

The fact is that the incremental cost of creating financial statements has fallen dramatically with the development of software and electronic stock keeping. Thus, an ERP system such as SAP generates innumerable reports on a continuous basis without the need for the manual closing and reconciliation of ledgers that used to characterise accounting for much of its history. Much of the manual component of financial statement preparation relates to the common effort of 'window dressing' by financial and PR executives. Data entry is increasingly automated thanks to bar coding and soon with RFID (radio frequency identification) chips. The key change accounting software makes is to change data processing and report preparation from a variable to a fixed cost. That fixed cost keeps decreasing thanks to dramatically and ever-decreasing costs of computing and the various other factors that have made IT so much more cost-effective in the last few years, and which accountants can take advantage of.

It is also important to put the costs of disclosure against two other costs: the first is the opportunity cost when faulty disclosures harm the company, for example, by increasing its cost of capital.<sup>25</sup> The other is the cost to the user

of deciphering the firm's financial statements. It has been argued that the rationale for the highly aggregated system of annual statements is to lower the cost to the user of understanding the complexities of accounting. But today many users complain that the statements conceal more than they reveal and that a great deal of costly analysis is needed to reverse the accounting and find out what the statements are really saying about firm performance. Many of the public available databases, or internally used data sources, incorporate clarifying adjustment to numbers, for example the dilutive effect of options, etc.<sup>26</sup> Learning how to do this process of 'peeling the onion' of financial statements, is, after all, the purpose of all the classes that are taught on financial statement analysis. As Hirst and Hopkins<sup>27</sup> state: 'Financial accounting standards allow companies considerable flexibility in determining which accounts are aggregated into the individual line items in the primary financial statements. Because of the difficulty inherent in assessing the relevance and persistence of these amounts, users of financial accounting information often must sort through voluminous notes and non-financial information to effectively forecast the future earnings, cash flows or intrinsic value of a company. This wide dispersion of value-relevant information increases the direct and indirect cost of valuation activities'.

The CFA puts argument about the cost of financial reporting from the perspective of their members, the existing shareholders, this way: 'the most compelling argument for requiring that the reporting changes be made is that if investors must transform financial statements, and the information they contain, into a different form so that they can use the information in their decision making, then the statements and information should be presented in that form in the first place'.<sup>28</sup>

The issue of the costs of disclosure, however, is much more likely to be raised in terms of the physical cost of issuing financial statements than of the user in deciphering them, or even of the opportunity cost to the firm itself of

incomplete disclosures. That is certainly the only way in which the term 'cost' is used in the FASB's Concepts Statements cited above which states that disclosing better information can only be justified 'subject to considerations of cost'. There is undeniably a substantial cost for the preparation of data for the running of a business. But the only subset of those costs that should be considered relevant is the incremental cost of disclosure and of increasing disclosure, not the entire cost of a system of information gathering and measurement that would be constructed for management purposes even in the absence of any external disclosures, and that incremental cost is rapidly decreasing.

As the CFA and others argue, a reengineered business reporting system needs to depart from a perspective that seems to serve solely the interests of managers who wish to hide behind obscure financial statements by claiming that any expansion in transparency is too costly. The bottom line is that, either in terms of the physical costs or disclosure, the total costs that encompasses the cost to users of deciphering financial statements and the opportunity costs to the firm of faulty disclosures, all forces today indicate that there should be more rather than less disclosure, which raises the final issue we focus on in this section, of the process by which financial statements are prepared.

(3) *The process of financial reporting.* External financial reports are the outcome of an accounting process in which a very small subset of the data held by the firm is transformed into publicly released information. At present, that process involved a great deal of summarisation, aggregation and condensation of information, the extent of which can be gauged from looking, for example, at the income statement of a gigantic conglomerate like General Electric, which reduces the activities of a company with \$150bn in revenues and a 'portfolio' of half-a-dozen operating businesses, each with individual units and divisions all over the world, to a financial statement no more than one page long.<sup>29</sup>

What is the rationale for a process that clearly leads to a great deal of information loss? It is





clearly an outcome of the assumptions made earlier about the capabilities and needs of the users of financial information and the direct costs to the firm of preparing financial statements. Statements meant for 'widows and orphans' look very different from that desired by a mutual fund manager contemplating adjustments to a stock portfolio. The scope of reporting when statements were prepared manually should differ from one generated by the push of a button on the firm's ERP system. The question is whether the changes in these two fundamental drivers of financial reporting have been adequately reflected in the evolution of financial reporting. Clearly, users such as the CFA, and even preparers such as the AICPA, which instigated the EBRC or the CICA, feel that they have not. An additional factor in the development of the current systems of reports is that for much of the early history of accounting, its purpose was not providing information to investors but the stewardship of the firm's physical assets. This shift from the stewardship function towards valuation and comparative evaluation necessitates a broader, future-oriented set of information.

As financial statements have proven to be insufficient for the needs of more sophisticated users, they have been expanded periodically in response to demand or the latest scandal, in a largely haphazard fashion. In some cases, the statements themselves have been reconfigured (eg to allow mark to market or fair value accounting to reduce the dependence on historical cost) or else additional information has been provided outside the statements, through the use of footnotes and the management discussion and analysis (MD&A) statement qualitative strategic information. But the centrality of the statement-based reporting, as codified in the FASB's Concept Statement No. 1 has been retained, along with their underlying implicit assumption that it is important to restrict the scope of information provided to users in order to avoid overwhelming them (akin to the recent proposals for a condensed and simplified version of mutual fund prospec-

tuses). The end result is a highly aggregate, episodic flow of information from the firm in which a small set of standardised information attempts to satisfy the widely varying needs of users.

This approach also implies that auditing is also focused on the attestation of mandated financial statements. Thus auditing is also episodic and focused largely on whether the firm has correctly condensed and aggregated its information into those statements (which is what 'prepared in accordance with GAAP' literally means). Providing assurance on information on a more concurrent basis is held to be outside the scope of the external auditor and assigned to the internal auditors instead. But it has also become steadily apparent that the mandated statements cannot be considered independently of the underlying firm data, and the firm's accounting and control infrastructure that gives rise to that data and records, manipulates and aggregates it. Thus, as with financial reporting, auditing has been periodically expanded, albeit also in a largely haphazard fashion, first to encompass general examination of controls, and with the passage of Section 404 of the Sarbanes-Oxley Act, to a detailed attestation of financial reporting controls. The lack of other audited information has also resulted in auditors becoming insurers of last resort, as users who are forced to view the firm through those statements come to see the auditors as gatekeepers for the firm, and so hold them responsible not only for the accuracy of their accounting representations, but for the decision relevance of their content.

With the financial reporting environment almost exclusively focused on the income statement and the balance sheet, it is not surprising that at least some actors in financial markets have also have tended to view a firm largely through the prism of those documents. In an extreme, this can lead to forms of functional fixation, where form can trump content, as when information in the statements themselves dominate the market's reaction even when information in footnotes modifies or contradicts

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it.<sup>30</sup> In turn, firms expend vast resources in fighting accounting changes that impact the income statement even if that same information is presented elsewhere and could be readily used to recalculate the reported numbers, as in the ongoing debate over stock option expensing.<sup>31</sup>

On the other hand, financial markets today are increasingly dominated by professionals who are not only capable of handling highly disaggregate financial data and forming their own conclusions about it, but actively do so. Thus, some analysts use the financial statements issued by firms as a resource from which they extract specific information that they insert, along with other external information, to construct their own independent model of firm performance, and discard the version presented in the 10K. The point that their representatives, the CFA, makes is that this is a roundabout procedure prone to distortion and error that can be avoided by giving their members the information they want in the form they need in the first place.

In summary, we put forward the hypotheses that (a) the focus of the financial reporting system on the mandated statements constrains the analysis that users are able to perform, and, flowing from that, (b) the lack of other instruments of communication lead firm managers to use those statements to signal information, requiring a continuing focus on the form of those statements, independent of their content and (c) the fact that assurance is provided on only those statements means that they have to receive disproportionate weight, regardless of their information value.

### REENGINEERING BUSINESS REPORTING

Our conclusion from this analysis is that if the financial reporting system was being built from scratch today, it should look very different, taking into account fundamental changes in the two drivers of financial reporting. First, the dominance of market making by professional investors, which includes such intermediaries

as pension and mutual funds which is how most ordinary individuals now enter the market (including presumably, any remaining widows and orphans). Indeed, even those remaining individual investors, such as day traders, are probably far better educated about markets and have access to far more analytic resources and information from online and media sources than even the plutocrat investors of the 1930s, dependent on their ticker-tape machines. Secondly, a reengineered reporting system would also take into account the reduction in the variable costs of disclosures to technology-enabled firms, while at the same time taking a broader view of the cost of reporting to take into account also the opportunity cost to the firm from faulty disclosures and the cost to professional investors of having to extract the data they need from statements that were not designed for their needs. The fact is, as SEC Commissioner Glassman acknowledged, 'reporting standards and mechanisms are in a "catch-up" mode' and have failed to keep pace with users increasing sophistication or the power of their technologies that operate in very different ways from the manual systems that existed when the current reporting systems had their genesis.

Taken together, the consequence of these two changes is that a system being designed today has to rethink the entire process by which financial data held by the firm is translated into decision-relevant information by users. The first issue to be recognised is that this financial reporting process takes place both within the firm and outside of it, with a handover of financial statements taking place at the boundary between the firm and its users. By contrast, that part of the process external to the firm certainly does not receive the same weight as the concerns of the firm preparing the statements in the FASB's Conceptual Statements, as the CFA notes with some chagrin. As the forces affecting the costs and benefits of financial information have changed, however, it is time to ask whether the location of that handover boundary point is still appropriate: whether the firm

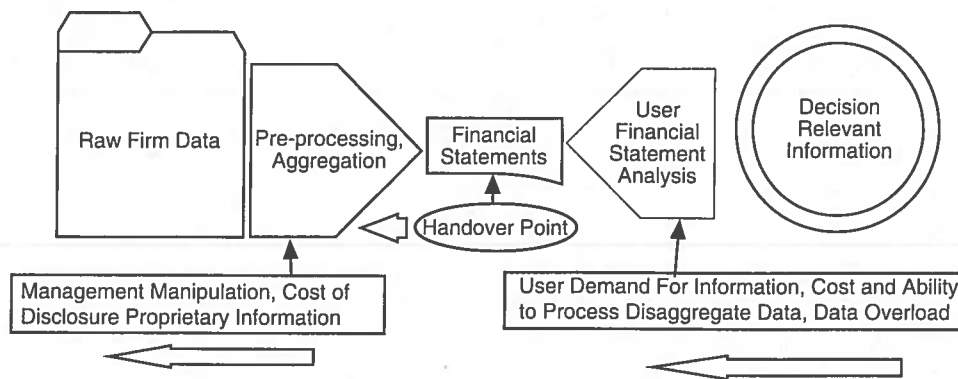


Figure 2: The process of business reporting, spanning the firm and the user and the handover point

should continue to aggregate and condense information extensively before releasing it, or whether sophisticated users would prefer to have access to more information in closer to its raw format so that they can manipulate and aggregate it as they see fit, meaning that they do not have to take as given the choices of either the firm or the standard setters (Figure 2).<sup>32</sup>

That is not to say that firms will not prepare income statements and balance sheets, or that they will not retain their centrality in reporting. But the question is whether users should be restricted to that one perhaps self-serving method of aggregation and condensation or whether they should be allowed to better see how that report was created in the first place — thus allowing them to make an informed judgment as to whether the statements can be accepted at face value or whether it is more appropriate to use the data underlying that report as inputs into their own models of firm performance. Reducing the emphasis on the income statement and balance sheet will not only increase the scope of information available to the market, but would also reduce the likelihood of functional fixation, since it would become clearer that the format chosen by the firm in accordance with current GAAP is just one way of presenting that information, and not the only way.

Admittedly, any recalibration of the financial reporting process would require many critical

issues to be addressed, including (a) the trade-off between meeting the needs of sophisticated users for more data against the concerns of the firm's managers about revealing competitive data, (b) what is gained and what is lost when firms process information less and users have to do more and (c) how much assurance will be provided with the information and who will provide it.

These three are not independent issues, since aggregation is an extreme form of information processing in which a great deal of information is potentially lost. It also allows for those who have access to the raw information, the firm's managers, to shape the degree and form of summarising that suits their interests best. At present, managers constrained only by their ability to get their interpretation of GAAP through the auditor, direct their energies towards making one metric of firm performance, earnings per share, as favourable for them as possible. Reducing the degree of pre-processing and aggregation of information by the firm would presumably also reduce the ability of firm managers to manipulate that information. On the other hand, it would put more of the burden on users to understand perhaps complex, firm-specific accounting issues and while some, such as those the CFA represents will clearly welcome this, those closer in capability to the 'widows and orphans' may not — assuming that they actually depend



on the information directly in the first place, as opposed to leaving such matters to professionals in mutual and pension funds.

A reengineered financial reporting system will inevitably impact the role of auditing. If more information is issued more frequently, auditing will have an impetus to move away from an annual focus towards a more continuous auditing model.<sup>33,34</sup> Moreover, with more disaggregate information being reported, auditing will also shift its emphasis away from verifying the way in which the firm aggregates and condenses its data, towards a broader conceptualisation of assurance, particularly data-level assurance.

This conceptualisation of the forces driving the reengineering of the financial reporting process is not unique to us. While not all will agree with all the particulars described above or draw the same conclusions, it is in broad terms the underlying motivation behind the initiatives of the CFA, the CICA and the AICPA among others, and shades of these views can even be detected in the harmonisation project of the conceptual models of the IASB and the FASB. Starting at the same starting point does, not, however, guarantee ending up at the same place. Political and constituent pressure will lead the bodies behind the various initiatives to produce outcomes that vary in the degree of change that is proposed.

## CONCLUSION

As technology is the driver of the 21st century economy, so it is the fundamental basis of a reengineered reporting system, both as a tool for measurement and communication of firm performance and conceptually, in helping shape expectations for what is possible in business reporting. Applying the lessons from earlier technology implementations, the best outcomes arise when processes are built to match the capabilities of the technology rather than using technology to simply automate existing processes. Thus the need to first understand, and then reengineer the processes of business

reporting in order to bring about consistency between the way in which firms use technology to create value and the way in which their performance is measured and reported.

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