



LETTER OF COMMENT NO. 18

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March 12, 2009

FASB Technical Director,  
File reference No. 1630-100

To Whom It May Concern:

I am writing to comment as an individual. I am an accounting professor at Hofstra University. I was previously on the faculty of Pace University and Lehman College of City University of New York. I received my doctorate in accounting from the Stern School of Business of New York University in 1997. I have been a CPA since 1980, and a certified valuation analyst since 2008. My work experience includes 8 years with Arthur Andersen and four years as a financial executive of the WPP Group.

I wish to applaud the FASB and IASB for taking up this important topic. The Discussion Paper presents some improvements on the current methods of reporting. The concepts of cohesiveness and disaggregation are helpful. However, more can and should be done to improve financial reporting.

I have three major points, and a number of minor ones. They are addressed in detail in the attached memorandum.

First, the economic environment has dramatically changed since the FASB issued its first Statement of Accounting Concepts in 1978, and financial reporting needs to adapt. Far greater transparency is required. Suspicion of corporate reporting is greater than ever. Changes in top management compensation have led to greater incentives for managers to manipulate accounting data. There has been a wave of accounting frauds in

this decade around the world. The inability of creditors to obtain adequate trustworthy information on their prospective borrowers has contributed to the current credit crisis. The breakdown in private lending markets has led companies to ask governments around the world for aid in surviving; companies must convince governments and the public that they are worthy of public investment.

Some of the adaptations that are required include: a change in the balance between keeping proprietary information private and disclosure; a greater consideration of the information needs of the public and government; and more transparency of management compensation issues. The primary purpose of financial statements must expand beyond providing decision-useful information for private sector investors and creditors to incorporate *accountability* for the use of funds.

Second, the Discussion Paper has taken too limited an approach to the issue of display. Attempting to use static tables (e.g. financial statements) with one figure per year for each caption as the primary means to report the “amount, timing, and variability” of firm financial inflows and outflows is the equivalent of bringing a knife to a gunfight. Firms now internal use far more timely and sophisticated systems for gathering data, and report to management on “dashboards” (graphical displays and tables) with interactive, drill-down features. The Boards should explore means of integrating greatly expanded interim data into basic financial reports, using graphical means and /or interactive reports. I provide examples of some static graphical displays.

The Discussion Paper focuses much more on *what* should be presented than on the mechanics of *display*. Display issues are mainly treated by example in the appendix.

There is no citation of any work on how people perceive data, or on the theory or methods of data display – table design, graphic design, or dashboards.

Third, the Discussion Paper is not specific enough about the presumed decision models that users are employing. Greater clarity is needed in order to guide decisions about display.

*I hope these comments help the Boards in their approach to this important topic.*

If there are any questions about matters raised in this comment letter, I can be reached at 134 Hofstra University, Hempstead, NY 11549-1340. The telephone number is (516) 463-6993, and my email is [Daniel.tinkelman@hofstra.edu](mailto:Daniel.tinkelman@hofstra.edu).

Sincerely,

Daniel Tinkelman

**Memorandum attached to Comment Letter by Daniel Tinkelman to File reference**

**No. 1630-100**

**Prepared, March 12, 2009**

**Introduction**

This memorandum is my response to the Discussion Paper published in October, 2008 by the FASB and the IASB.<sup>1</sup> It contains my personal views and does not reflect those of any organization.

**Impact of Changes in the Economic Environment on Display Issues**

Paragraph 9 of the “Environmental Context of Objectives” section of FASB Statement of Accounting Concepts No. 1, states “... the objectives set forth stem largely from the needs of those for whom the information is intended, which in turn depend significantly on the nature of the economic activities and decisions with which the users are involved. Accordingly, the objectives in this Statement are affected by the economic, legal, political, and social environment in the United States.”<sup>2</sup>

This Discussion Paper’s impact is not limited to the U.S.; it will be used in over 100 countries with differing “economic, legal, political and social” conditions. The Discussion Paper fails to consider any impact of differing international conditions.

Even in the United States, conditions today are very different than they were in 1978. I write this comment letter during a financial crisis. Financial instruments developed after 1978 have turned toxic. Some credit markets have stopped working, due to inability by lenders to assess the financial condition of potential borrowers. The Dow

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<sup>1</sup> FASB. Discussion Paper. Preliminary Views on Financial Statement Presentation. October, 2008.

<sup>2</sup> FASB, Nov. 1978. Statement of Financial Accounting Concepts No. 1. Objectives of Financial Reporting by Business Enterprises.

Jones industrial stock average this month fell to its lowest point since 1997. Bernie Madoff pled guilty today to running a massive Ponzi scheme.

Changes in management compensation since 1978 have increased the incentives for management to manipulate income. Over the last decade, a number of major scandals have taught investors to be wary of financial reports. The list includes Enron, WorldCom, Bernie Madoff's Ponzi scheme, Parmalat, and a host of others around the world.

The frauds of the past decade and the increased role of government in the current crisis should affect financial reporting in two important ways:

First, there is a far greater need for transparency in financial reporting, to help organizations dispel distrust. Traditionally, standard setters have tried to balance companies' desires to keep certain information proprietary with the information needs of outside investors and creditors. I argue that in the current environment, greatly increased disclosure is needed to make company reports plausible. [On March 7, a New York Times columnist wrote that even G. E., long a widely admired company, needed to provide far more transparency to reassure investors; statements by its C.F. O. are not enough. "But no investor is going to take [the C.F.O.'s] word for it – not anymore. The only way it can assure investors is to do something it has long been reluctant to do – open the kimono and disclose its assets and how it values them."<sup>3</sup>]

The Discussion Paper makes a good start in this direction by calling for disaggregated data. The requirement to separate cash movements, accruals, and revaluations is helpful. However, the disaggregated data presented are all on an annual basis; disaggregation by time is also needed to reveal "window dressing" and shifts of income between periods.

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<sup>3</sup> Joe Nocera. March 7, 2009. "Behind the Curtain at G. E." New York Times, pages B1 and B5.

Andrew Fastow, Enron's CFO, made a note in his diary about how the company achieved its desired financial results for the last quarter of one year. "Q4 1999: 8 days / 6 deals/ \$125 million."<sup>4</sup> Disaggregation by time would have revealed that Enron was not, as it claimed to be, a company that managed risk well and had relatively smooth income. Joe Nocera's article about G. E. indicates it also met its earnings targets every quarter for years "because of GE Capital, which often sold assets at the end of the quarter to make up for any shortfall." After the market shock following the collapse of Bear Sterns, "GE Capital was unable to play its usual end-of-the-quarter games."<sup>5</sup>

I understand that the Boards are seeking to defer consideration of interim financial reporting, and the impact of new technologies such as XBRL, to a later stage of their deliberations.<sup>6</sup> I respectfully suggest that they accelerate this discussion.

Second, national governments are now major capital providers to companies. In the U.S., in the last year, the government has provided funds to Freddie Mac, Fannie Mae, the largest banks, the largest insurance company, and the three major car companies, among others. Britain, Ireland, Iceland, and other countries have either nationalized banks or provided major amounts of capital. The Japanese government is now providing capital to finance exports by Toyota, Sony, and other companies.<sup>7</sup> Other governments are also providing export financing. While this role of governments is especially prominent now, it is hardly unprecedented: Sweden, the U. S., and Japan,

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<sup>4</sup> Bethany McLean and Peter Elkind. 2004. *The Smartest Guys in the Room – The Amazing Rise and Scandalous Fall of Enron*. Updated Paperback Edition. Penguin Books: New York.

<sup>5</sup> Nocera, *op. cit.*

<sup>6</sup> See paragraph 1.21 of the Discussion Paper and paragraphs BC7 and BC8 of Exposure Draft, *Conceptual Framework for Financial Reporting: The Objective of Financial Reporting and Qualitative Characteristics and Constraints of Decision-Useful Financial Reporting Information* (Issued 5/29/08)

<sup>7</sup> Catherine Dougherty, March 4, 2009, "Countries Stepping in to Finance Export Trade". New York Times, Page B1.

among others, have taken actions over the last twenty years to deal with problems in their banking systems. Governments are also considered potential capital providers “of last resort” to other companies that have not yet asked for funds. The Discussion Paper gives no recognition to the key role today of government as a capital provider. The Boards’ Exposure Draft on the objectives of financial statements, in paragraph OB8, has only a glancing mention of governments as one of the parties that might find financial information useful.

Government providers of capital have different needs than private providers. Government’s decision to provide capital is not primarily motivated by a desire to profit; it is motivated by the desire to achieve other social goals. Once the capital is provided, governments are legally and morally bound to provide *accountability* for the funds to the citizenry. The Government Accounting Standards Board, in its Concepts Statement No. 1, said in paragraph 3 that “Financial reporting helps fulfill government’s duty to be publicly accountable.” In paragraph 56, it states that “Accountability is the cornerstone of all financial reporting in government...” and “Accountability requires governments to answer to the citizenry – to justify the raising of public resources and the purposes for which they are used. Governmental accountability is based on the belief that the citizenry has ‘a right to know.’” Both the need to assess the social consequences of an entity’s operations and the need to account for any public investment must affect reporting.

Consider the decision problem facing the U. S. government with regard to subsidizing General Motors. Part of the decision does relate to traditional lending and investing considerations. However, much of it relates to General Motors’ impact on the country. What jobs does it create? What suppliers, communities, and retirees depend on

it? What lending institutions would fall if G. M. defaults? Conventionally formatted financial statements are not designed to answer these questions.

Consider also news reports in recent months that reflect the expectation of accountability. President Obama has condemned the provision of large bonuses given by financial firms that have given bonuses after receiving U. S. aid. There has been widespread criticism of the amount spent on office decoration by the former CEO of Merrill Lynch. On Friday, March 6, a report of testimony by Donald L. Kohn, the vice chairman of the Federal Reserve before the U. S. Senate Banking Committee, indicated that the Senate wanted to know how funds provided to help keep A. I. G. afloat were used. Senator Richard Shelby is quoted as saying “We need to know who benefited, and we’re going to find out.” The vice chairman of the Federal Reserve demurred, wanting to respect A.I. G.’s customers’ privacy, but agreed to ask the other governors of the Fed to reconsider. Mr. Kohn said “We’re in a new world, and new types of transparency are required.”<sup>8</sup>

#### **Consider a Statement of Sources and Distributions of Resources**

I propose that a separate Statement of Sources and Distribution of Resources be prepared. This statement would include, as sources of resources, all revenues, gains, borrowings, and capital provisions. Losses in value and depreciation would be netted against these sources. The Distribution section would indicate *who* received distributions of resources from the entity in the period. It should list, as a minimum:

- shareholders (dividends and share repurchases)
- lenders (interest and repayments)

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<sup>8</sup> Mary Williams Walsh. March 6, 2009. “Senators Ask Who Got Money From A.I.G.” New York Times. Page B1.

- borrowers from financial institutions
- executives and highly compensated employees
- directors
- other workers (salary and benefits, but not including payroll taxes)
- employee benefit trusts
- vendors and subcontractors
- local governments
- national governments and social trust funds run by governments (e.g. Social Security)
- shareholders of companies acquired during the period
- investees
- the entity itself, in terms of retained or reinvested funds

Note that the emphasis is on the identity of the parties that receive distributions.

For this purpose, whether an organization sends money to a government to pay an excise tax, a customs duty, or an income tax is unimportant. While the payment of payroll taxes on factory labor and the payment of factory wages are usually grouped together in financial statements, since they both relate to the same function, and have the same variability and timing, they benefit two different parties: workers and governments.

The concept of earnings is not central here, so the statement mixes income statement items such as revenues and gains with other elements of financial statements, such as borrowings. The public is interested in not just whether banks are earning money, but who they are getting funds from and who they are lending to.<sup>9</sup>

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<sup>9</sup> Mixing elements is not unprecedented. Government fund financial statements in the U. S. follow a “current financial resources” focus and a modified accrual basis of accounting. See Codification of

The issue of accountability is more critical, and the concept of materiality less important, than in traditional financial statements, which focus on decision-usefulness. Therefore, management compensation needs to be reported. If it is in fact material, then it is also decision-useful. If it is immaterial compared to sales and other benchmarks, then management can better defend the level of its compensation.

Timing and volatility are not central concerns here, so annual figures should be adequate.

A Statement of Sources and Distributions of Resources for General Motors could be of great benefit in forming public debate over its requests for subsidies. It would show, among other things, the value of the cars it produces, the amounts it gives to workers, the amounts it pays to subcontractors and to local governments, pension funds, and so forth.

Such a report would have considerable historical precedent. In the 12<sup>th</sup> century, in England, sheriffs who collected revenues for the King had to come to the Treasurer once each year, and account for the revenues. They did this using the “exchequer-table”, which had a “checkerboard” pattern of columns and rows. Counters were placed on the table showing both the revenues the sheriff was charged with, and the various credits for money he had given to the crown, or spent properly. Scotland used a similar system.<sup>10</sup> In late medieval England, stewards of large manors had to maintain records of work done and of rents due or received from the tenants. They used a system of “charge and

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Governmental Accounting and Financial Reporting Standards as of June 30, 2008, published by the Governmental Accounting Standards Board, Section 1600.

<sup>10</sup> Boyd, Edward. “Early Forms of Accounts”

discharge” accounts which was widely used for centuries, and has survived in certain aspects of estate accounting.”<sup>11</sup>

Another example is the American railroads communicated their financial situation to their employees and other stakeholders in the period following World War II.

“.... railroads were in a protracted battle with their largely unionized work forces over pay, hours of service and work-rules. At this time, most railroads were spending more than 50 cents of each revenue dollar on labor costs while total profits, if any, were only a few pennies out of each revenue dollar. An industry text of the era...recommended the use of graphical presentations in an attempt to overcome the workers’ limited education and their widely-held misconception of high profitability...One way to present an easily understood message that railroads earned a small profit was through the ‘railroad dollar’.”<sup>12</sup>

A graphic pie chart, using a silver dollar as the “pie” for the Southern Pacific Railroad, showed what fraction of each dollar of revenue was distributed for wages, payroll taxes, federal taxes, other taxes, fuel, materials and supplies, depreciation, equipment rents, interest, other expenses, and dividends, and what fraction was retained in the business.<sup>13</sup>

There are other precedents to this idea. A report by a Brazilian company, Companhia Vale do Rio Doce, cited in an international accounting text<sup>14</sup>, includes a statement of added value that shows the “distribution of added value” to employees, government, financiers, stockholders, minority interest, and retained earnings. Soviet accounting also

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<sup>11</sup> Newman, Maurice S. 1979. Historical Development of Early Accounting Concepts and Their Relation to Certain Economic Concepts. Working Paper no. 11. In The Academy of Accounting Historians Working Paper Series Vol. I, working papers 1-20. ed. By Edward N. Coffman. Virginia Commonwealth University

<sup>12</sup> Feeney, Kevin. 2004. Railroad Annual Reports in the Post World War II Era (1946-1975): A Study in Voluntary Compliance. Doctoral Dissertation, Pace University, New York.

<sup>13</sup> Ibid.

<sup>14</sup> Timothy Douplik and Hector Perara. 2009. International Accounting. 2<sup>nd</sup> Ed. McGraw-Hill/Irwin. New York.

prescribed schedules showing how much each enterprise had produced, and how the value of the production was distributed among various parties.<sup>15</sup>

### **Confining the discussion to annual financial statements is too limiting**

The Discussion Paper has unwisely limited its focus to presenting financial data in the form of tables, i.e. financial statements.<sup>16</sup> According to Littleton, “A financial statement really means any formal tabulation of the financial facts of an enterprise.”<sup>17</sup>

“How can we make financial statements better?” is not the best question. A more fruitful one is “What is the best way to convey decision-useful information to capital providers about the amounts, timing and variability of flows of resources to and from companies?” While accountants can be proud of our long history of providing information<sup>18</sup>, we should be aware of methods of data display developed in other fields.

Any elementary descriptive statistics textbook suggests a variety of statistics to describe the variability of a distribution. These include the maximum, minimum, range, median, percentiles, interquartile range, standard deviation, etc. The Discussion Paper calls for the use of *none* of these statistics to describe the variability of economic flows. There is no call to report the median values, or the ranges, of daily sales or cash balances

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<sup>15</sup> Ehiel Ash and Robert Strittmatter, 1992. *Accounting in the Soviet Union*. Preager: New York.

<sup>16</sup> This limitation is clear from the Discussion Paper’s title and from the discussion of the scope of the project in Chapter 1. The Exposure Draft titled *Conceptual Framework for Financial Reporting: The Objective of Financial Reporting and Qualitative Characteristics and Constraints of Decision-Useful Financial Reporting Information* (issued 5/29/08) indicates that the Boards are not yet ready to consider aspects of financial reporting outside the financial statements.

<sup>17</sup> A. C. Littleton. 1933. *Accounting Evolution to 1900*. New York: American Institute Publishing Company.

<sup>18</sup> The first author to recommend the presentation and use of financial statements was Angelo Pietra, 1586. The first to recommend allocating income and expense into the definite accounting periods to which they pertained was Lodovico Flori, in 1636. (See Frederic E. Gamble, as quoted in *The Academy of Accounting Historians Working Paper Series Volume 2*, Edited by Edward N. Coffman, *The Academy of Accounting Historians*, 1979. Britain’s Companies Act of 1844 required companies to distribute audited balance sheets to shareholders. (See Michael Chatfield, 1977. *A History of Accounting Thought*. Revised Edition. New York: Robert E. Krieger Publishing Company.) In the U. S., the Securities Acts of 1933 and 1934 required public companies to publish financial statements.

or trading gains or losses. The only statistic presented for income and cash flow items is the sum of the daily values. The only statistic about the timing” and “variability” of assets, liabilities, and equity accounts that is to be presented is the last data point in the year-long series of balances.

The year-end date can not even serve as a random sample of the 365 daily values during the period. By tradition, the fiscal year end is normally a low point of activity, so the values on that date are unrepresentative. Also, since managers know that the year-end is the date is the only one being reported, they can “manage” balances on that date.

Quantitative data can be conveyed using narratives, tables, graphics, or combinations of those methods. The information provided can be static or interactive (giving the user an ability to “drill down” for more data). According to Edward Tufte, “Tables usually outperform graphics in reporting on small data sets of 20 numbers or less. The special power of graphics comes in the display of large data sets.”<sup>19</sup>

Due to the Boards’ desire to disaggregate data, and the display of subtotals of the separate operating, investing, financing, tax, and equity sections, financial reports are becoming large data sets. The examples in the Discussion Paper have more or less double the lines of data now on traditional financial statements. The Toolco Statement of Comprehensive Income in the Discussion paper has 60 line items of numbers, and the Statement of Financial Position has 57. My research assistant (Ms. Xiao Chen) randomly examined the most recently filed financial statements for 20 of the Fortune 500 companies, and found the median number of lines of numbers on their income statement is 25, and the median number of lines on those corporate balance sheets is 35. As the

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<sup>19</sup> Edward R. Tufte. 1983. *The Visual Display of Quantitative Information*. Graphics Press: Cheshire, Connecticut.

number of data points grows, the readability of tables declines. The examples in the Discussion Paper are in six or seven point font, compared to Word's default standard of ten point.

Graphical alternatives suggest themselves, especially if the Boards wish to display interim data. Numerous graphical techniques for displaying data have been developed and popularized in the scientific community by such authors as John W. Tukey and William S. Cleveland.<sup>20</sup> In recent years, "executive dashboards" have been developed that provide up to date, high level measures of performance in an easily readable form for corporate leaders. These dashboards generally combine some summarized tables with graphs. They often have interactive features, allowing users to adjust the data displayed to show greater detail as needed.<sup>21</sup> Dashboards have become common enough for them to be described in the series of books "for dummies."<sup>22</sup>

### **Graphically incorporating interim data provides much more information**

Interim financial data are key to achieving the Boards' goal of reporting the "amounts, timing and volatility" of economic flows to and from companies. Annual figures simply lack sufficient detail on the timing and volatility of activity.

I have adapted the Toolco example in Appendix A of the Discussion Paper, and created 2009 and 2010 Statements of Comprehensive Income for three companies: Toolco A; Toolco B; and Toolco C. The annual figures for all three companies are identical. However, the interim data are quite different. One company has relatively

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<sup>20</sup> Cf. John W. Tukey. 1977. *Exploratory Data Analysis*. Addison-Wesley Publishing Company. Reading, MA. and William S. Cleveland, 1993. *Visualizing Data*. 1993. Hobart Press, Summit, NJ.

<sup>21</sup> See Stephen Few, 2006. *Information Dashboard Design: The Effective Visual Communication of Data*. O'Reilly Media, Inc. Sebastopol, Ca.

<sup>22</sup> Michael Alexander. 2008. *Excel 2007 Dashboards & Reports for Dummies*. Wiley Publishing Inc. Hoboken, N. J.

steadily (and slowly) growing levels of revenues, expenses, and income over two years. A second had a one-time burst of sales and expenses late in 2009, which lasted into early 2010, before sales and costs went back to the original, lower level. The third company, has large increases in revenues (but not costs) late in each and every quarter. This could of course be a tip-off to either “real” earnings management or of fraud.

The original example in the Discussion Paper has 60 lines with data, for 2 years, and therefore gives 120 data points. To cram all those lines in, the original example used 7 point font.

In the three pages that follow, I show statements with monthly “sparklines” for key captions for the three companies. “Sparklines are *datawords*: data-intense, design-simple, word-sized graphics”<sup>23</sup> The following is a sparkline showing a company’s monthly operating income during a year, using color to indicate losses and profits, and presenting the minimum and maximum levels after the graph:  -971|164

Strategic use of sparklines allows me to disclose 648 data points<sup>24</sup>, using 9 point font, meaning that over five times as much data is presented using a more readable font than the original example. If I had chosen to insert additional sparklines, such as for earnings per share, labor costs, or depreciation, I could have increased the number of reported data points even more. I used Word, Excel, and a commercially available graphics product costing about \$200 to create these examples.

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<sup>23</sup> Edward Tufte, *Beautiful Evidence*, 2006. Graphics Press LLC. Cheshire, Ct. Dr. Tufte invented this concept.

<sup>24</sup> The 648 points are comprised of: 39 sets of maximum/minimum figures; 39 sparklines, with 12 data points each; and 51 sets of annual figures for two years

The process of graphing shows which items are, literally, vanishingly small compared to income or revenues. I chose not to present sparklines when the graphs would be too small to allow analysis. Thus, sparklines are only shown for 2009 realized gains.

Any experienced financial analyst can quickly see from the sparklines which of the companies has steady growth, which had a one-time revenue and cost spurt, and which has a suspicious pattern of revenue bursts late in each quarter.

Also, there is no need to come up with arbitrary definitions of why an item such as the spike in investment income in one month in 2009 is “unusual” or “infrequent”; it simply stands out on the graph.

The three examples follow.

**TOOLCO A – STATEMENT OF COMPREHENSIVE INCOME for years ended December 31, 2009 and 2010**

	2009 Monthly	2009 Year	2010 Monthly	2010 Year
<b>BUSINESS -- Operating:</b>				
Sales—Wholesale	[167 179]	2,091	[179 200]	2,290
Sales—retail	[51 59]	648	[48 71]	697
<b>Total revenue</b>	[218 238]	<u>2,739</u>	[233 269]	<u>2,987</u>
Materials	[72 82]	(925)	[82 92]	(1,043)
Labor	[29 80]	(450)	[30 45]	(405)
Overhead—depreciation		(215)		(219)
Overhead—transport		(108)		(129)
Overhead—other		(27)		(32)
Change in inventory		(47)		(60)
Pension		(46)		(52)
Loss on obsolete and damaged inventory		(10)		(29)
<b>Total cost of goods sold</b>	[144 159]	<u>(1,828)</u>	[155 171]	<u>(1,969)</u>
<b>Gross profit</b>	[70 80]	<u>911</u>	[73 101]	<u>1,018</u>
Advertising		(50)		(60)
Wages, salaries and benefits		(53)		(57)
Bad debt		(15)		(23)
Other		(13)		(13)
<b>Total selling expenses</b>	[9 21]	<u>(130)</u>	[9 20]	<u>(153)</u>
Wages, salaries and benefits		(298)		(321)
Depreciation		(58)		(60)
Pension		(47)		(52)
Share-based remuneration		(17)		(22)
Interest on lease liability		(16)		(15)
Research and development		(8)		(8)
Other		(15)		(16)
<b>Total general and administrative expenses</b>	[35 43]	<u>(459)</u>	[37 48]	<u>(494)</u>
Share of profit of associate A		22		24
Gain on disposal of property, plant and equipment		-		22
Realized gain on cash flow hedge		4		4
Loss on sale of receivables		(2)		(5)
Impairment loss on goodwill		(35)		-
<b>Total operating income (loss)</b>	[-10 36]	<u>310</u>	[16 58]	<u>416</u>
<b>BUSINESS--Investing:</b>				
Dividend income		50		54
Realized gain on available-for-sale securities	[0 100]	108		18
Share of profit of associate B		3		8
<b>Total investing income</b>	[0 100]	<u>161</u>	[0 18]	<u>80</u>
<b>TOTAL BUSINESS INCOME</b>	[25 90]	<u>471</u>	[16 61]	<u>496</u>
<b>TOTAL FINANCING INCOME (LOSS), net</b>	[-25 -7]	(205)	[-25 -2]	(203)
<b>INCOME TAX EXPENSE</b>		<u>(125)</u>		<u>(134)</u>
<i>Net profit (loss) from continuing operations</i>	[-2 35]	<u>141</u>	[-13 41]	<u>159</u>
<b>DISCONTINUED OPERATIONS, net of tax expense</b>	[1 14]	71	[1 32]	70
<b>NET PROFIT (LOSS)</b>	[4 39]	<u>212</u>	[-7 42]	<u>229</u>
<b>OTHER COMPREHENSIVE INCOME (after tax)</b>				
Unrealized gain on available-for-sale securities (investing)		35		37
Revaluation surplus (operating)		4		3
Foreign currency translation adjust--consolidated subsidiary		(2)		2
Unrealized gain on cash flow hedge (operating)		7		13
Foreign currency translation adjust--associate A (operating)		(1)		(1)
<b>TOTAL OTHER COMPREHENSIVE INCOME</b>	[-4 15]	<u>43</u>	[-5 20]	<u>54</u>
<b>TOTAL COMPREHENSIVE INCOME</b>	[1 43]	<u>255</u>	[0 48]	<u>283</u>
Basic (diluted) earnings per share		<u>6.14 (5.96)</u>		<u>7.07 (6.85)</u>

**Legend:** Monthly Revenue and expense bars are scaled to 270; income dots from -25 to 100. Red indicates zero or losses. [Minimum / maximum] monthly values are shown after the graphs

**TOOLCO B -- STATEMENT OF COMPREHENSIVE INCOME for years ended December 31, 2009 and 2010**

	2009 monthly	2009 Year	2010 monthly	2010 Year
<b>BUSINESS -- Operating:</b>				
Sales—Wholesale	[102 373]	2,091	[115 370]	2,290
Sales—retail	[24 140]	648	[35 125]	697
<b>Total revenue</b>	[127 511]	<u>2,739</u>	[149 495]	<u>2,987</u>
Materials	[42 178]	(925)	[49 165]	(1,043)
Labor	[25 75]	(450)	[20 61]	(405)
Overhead—depreciation		(215)		(219)
Overhead—transport		(108)		(129)
Overhead—other		(27)		(32)
Change in inventory		(47)		(60)
Pension		(46)		(52)
Loss on obsolete and damaged inventory		(10)		(29)
<b>Total cost of goods sold</b>	[88 347]	<u>(1,828)</u>	[111 278]	<u>(1,969)</u>
<b>Gross profit</b>	[39 186]	<u>911</u>	[33 217]	<u>1,018</u>
Advertising		(50)		(60)
Wages, salaries and benefits		(53)		(57)
Bad debt		(15)		(23)
Other		(13)		(13)
<b>Total selling expenses</b>	[4 31]	<u>(130)</u>	[8 23]	<u>(153)</u>
Wages, salaries and benefits		(298)		(321)
Depreciation		(58)		(60)
Pension		(47)		(52)
Share-based remuneration		(17)		(22)
Interest on lease liability		(16)		(15)
Research and development		(8)		(8)
Other		(15)		(16)
<b>Total general and administrative expenses</b>	[32 47]	<u>(459)</u>	[34 50]	<u>(494)</u>
Share of profit of associate A		22		24
Gain on disposal of property, plant and equipment		-		22
Realized gain on cash flow hedge		4		4
Loss on sale of receivables		(2)		(5)
Impairment loss on goodwill		(35)		-
<b>Total operating income (loss)</b>	[-31 117]	<u>310</u>	[-15 145]	<u>416</u>
<b>BUSINESS--Investing:</b>				
Dividend income		50		54
Realized gain on available-for-sale securities	[0 100]	108		18
Share of profit of associate B		3		8
<b>Total investing income (loss)</b>	[0 100]	<u>161</u>	[0 18]	<u>80</u>
<b>TOTAL BUSINESS INCOME (LOSS)</b>	[2 117]	<u>471</u>	[-2 150]	<u>496</u>
<b>TOTAL FINANCING INCOME (LOSS), net</b>	[-25 -7]	(205)	[-25 -2]	(203)
<b>INCOME TAX EXPENSE</b>		<u>(125)</u>		<u>(134)</u>
<b>Net profit (loss) from continuing operations</b>	[-16 59]	<u>141</u>	[-16 76]	<u>159</u>
<b>DISCONTINUED OPERATIONS, net of tax</b>	[1 14]	71	[1 32]	70
<b>NET PROFIT (LOSS)</b>	[-10 65]	212	[-11 84]	229
<b>OTHER COMPREHENSIVE INCOME (after tax)</b>				
Unrealized gain on available-for-sale securities (investing)		35		37
Revaluation surplus (operating)		4		3
Foreign currency translation adjust--consolidated subsidiary		(2)		2
Unrealized gain on cash flow hedge (operating)		7		13
Foreign currency translation adjust--associate A (operating)		(1)		(1)
<b>TOTAL OTHER COMPREHENSIVE INCOME</b>	[-4 15]	<u>43</u>	[-5 20]	<u>54</u>
<b>TOTAL COMPREHENSIVE INCOME</b>	[-13 68]	<u>255</u>	[-7 87]	<u>283</u>
Basic (diluted) earnings per share		6.14 (5.96)		7.07 (6.85)

**Legend:** Monthly Revenue and expense bars are scaled to 511; income dots from -31 to 150. Red indicates zero or losses. [Minimum / maximum] monthly values are shown after the graphs

**TOOLCO C – STATEMENT OF COMPREHENSIVE INCOME for the years ended December 31 2009 and 2010**

	2009 Monthly	2009 Year	2010 Year	2010 Year
<b>BUSINESS -- Operating:</b>				
Sales—Wholesale	▄▄▄▄▄ [140 220]	2,091	▄▄▄▄▄ [170 220]	2,290
Sales—retail	..... [30 81]	648	..... [40 83]	697
<b>Total revenue</b>	▄▄▄▄▄ [175 300]	<u>2,739</u>	▄▄▄▄▄ [217 303]	<u>2,987</u>
Materials	..... [72 82]	(925)	..... [82 92]	(1,043)
Labor	..... [29 80]	(450)	..... [30 45]	(405)
Overhead—depreciation		(215)		(219)
Overhead—transport		(108)		(129)
Overhead—other		(27)		(32)
Change in inventory		(47)		(60)
Pension		(46)		(52)
Loss on obsolete and damaged inventory		(10)		(29)
<b>Total cost of goods sold</b>	▄▄▄▄▄ [144 159]	<u>(1,828)</u>	▄▄▄▄▄ [155 171]	<u>(1,969)</u>
<b>Gross profit</b>	..... [27 145]	<u>911</u>	..... [50 139]	<u>1,018</u>
Advertising		(50)		(60)
Wages, salaries and benefits		(53)		(57)
Bad debt		(15)		(23)
Other		(13)		(13)
<b>Total selling expenses</b>	..... [5 24]	<u>(130)</u>	..... [8 24]	<u>(153)</u>
Wages, salaries and benefits		(298)		(321)
Depreciation		(58)		(60)
Pension		(47)		(52)
Share-based remuneration		(17)		(22)
Interest on lease liability		(16)		(15)
Research and development		(8)		(8)
Other		(15)		(16)
<b>Total general and administrative expenses</b>	..... [32 47]	<u>(459)</u>	..... [34 50]	<u>(494)</u>
Share of profit of associate A		22		24
Gain on disposal of property, plant and equipment		-		22
Realized gain on cash flow hedge		4		4
Loss on sale of receivables		(2)		(5)
Impairment loss on goodwill		(35)		-
<b>Total operating income (loss)</b>	..... [-20 93]	<u>310</u>	..... [4 103]	<u>416</u>
<b>BUSINESS--Investing:</b> Dividend income		50		54
Realized gain on available-for-sale securities	..... [0 100]	108		18
Share of profit of associate B		3		8
<b>Total investing income (loss)</b>	..... [0 100]	<u>161</u>	..... [0 18]	<u>80</u>
<b>TOTAL BUSINESS INCOME (LOSS)</b>	..... [-17 178]	<u>471</u>	..... [10 103]	<u>496</u>
<b>TOTAL FINANCING INCOME (LOSS), net</b>	..... [-25 -7]	(205)	..... [-25 -2]	(203)
<b>INCOME TAX EXPENSE</b>		<u>(125)</u>		<u>(134)</u>
<b>Net profit (loss) from continuing operations</b>	..... [-24 83]	<u>141</u>	..... [-11 56]	<u>159</u>
<b>DISCONTINUED OPERATIONS, net of tax</b>	..... [1 14]	71	..... [1 32]	70
<b>NET PROFIT (LOSS)</b>	..... [-20 89]	<u>212</u>	..... [-5 57]	<u>229</u>
<b>OTHER COMPREHENSIVE INCOME (after tax)</b>				
Unrealized gain on available-for-sale securities (investing)		35		37
Revaluation surplus (operating)		4		3
Foreign currency translation adjust--consolidated subsidiary		(2)		2
Unrealized gain on cash flow hedge (operating)		7		13
Foreign currency translation adjust--associate A (operating)		(1)		(1)
<b>TOTAL OTHER COMPREHENSIVE INCOME</b>	..... [-4 15]	<u>43</u>	..... [-5 20]	<u>54</u>
<b>TOTAL COMPREHENSIVE INCOME</b>	..... [-19 96]	<u>255</u>	..... [3 61]	<u>283</u>
Basic (diluted) earnings per share		6.14 (5.96)		7.07 (6.85)

**Legend:** Monthly Revenue and expense bars are scaled to 303; income dots from -25 to 180. Red indicates zero or losses. [Minimum / maximum] monthly values are shown after the graphs

[Some technical notes on these examples follow:

Figures have been rounded to three significant digits of comprehensive income. This is in accordance with normal recommendations on clarity of tables, and seems unlikely to impair decision-usefulness.

The 2009 and 2010 columns are in reverse order from those in the Discussion Paper. Since the sparklines should be read from left to right, it is more natural to have the annual figures flow from left to right as well.

I have left in almost all the lines containing data that were in the Discussion Paper. Data removed includes: financing income that was netted against financing expense; taxes related to discontinued operations; certain subtotals identified as optional in the Discussion Paper.

Certain amounts have been modified to make more line items and subtotals “material” compared to sales and income. Wholesale sales have been reduced by 500 in both years from the original example to make various other figures, as a percentage of sales, more significant. Gross profit and operating income are lower by 500 as well. Investment income was increased by 100 in 2009. Financing expense was increased by 100 each year. Since pretax income is lower in my example, income taxes have been lowered. In the original example, the net loss on discontinued operations was quite small relative to net income -- around 5%. I arbitrarily assumed an after-tax income from discontinued operations of 71 in 2009, versus income from continuing operations of 141, or around 50%. In the original example, the OCI items are individually and in aggregate quite small relative to bottom line comprehensive income. For 2010, they amount to just 23 out of 561 of comprehensive income, or around 5%. I increased the total figure for OCI each year by 30, which had the effect, when combined with all the other changes to revenues and expenses, of making the OCI items account for between 10 and 15% of comprehensive income. I did not recompute earnings per share. Figures are presented just to show they would fit on the page.

Monthly data for revenues, expenses, and gross margin are presented using bar graphs, all scaled to the highest monthly revenues of the two-year period. This means a reader can compare the heights of the various bars to see both the time trend for a particular item, as well as the relative importance, relative to sales, of different captions. Minimum and maximum figures are shown, which also helps the reader judge scale.

Income tends to be small relative to sales, and, if plotted using the same scale as sales, the graphs would not be helpful. Because income is important to users, I used a second scale to display monthly data for such income-related captions as operating income, discontinued operations, net profit, etc. To help avoid confusion, the sparklines for income items are presented using dots rather than bars. Again, monthly minimum and maximum figures are shown.]

The preceding examples retain the tabular form of presentation as the basis of presentation. Sparklines have been inserted into financial statements as secondary elements. While I believe the sparklines convey a large amount of incremental information regarding the trend and variability of earnings components, the small graph size impairs their usefulness. Data can not be read off in a way that allows input into a financial model. There are several ways to deal with this objection.

The first is to make additional minimal tradeoffs between the detail presented in tabular form, and that presented through graphs. Elimination of a relatively small number of lines with immaterial balances would permit Toolco to increase the size of its sparklines, increasing their legibility. Deleting seven lines, which each have values of 10 or under each year, would permit the use of 10 point font for the captions and figures, and two points larger fonts for the graphs. Here are the graphs for net income for Toolco C, under three font sizes:

- i. 14 point, as shown here 
- ii. 16 point, which is two points larger 
- iii. 18 point 

A second approach would be to make the presentation interactive, and to allow the reader to access the data underlying each graph.

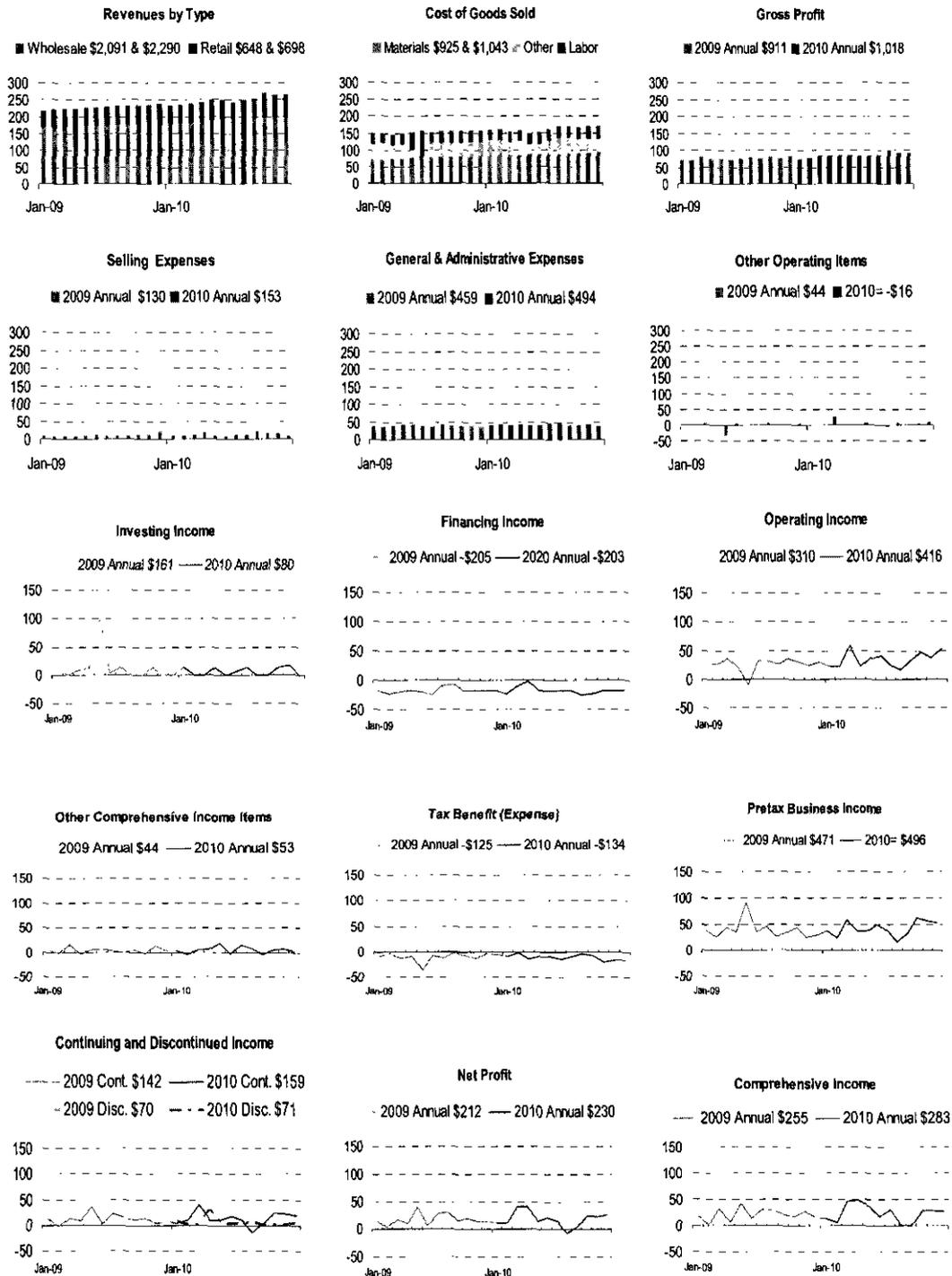
A third approach would be to make the financial statements secondary to the graphics. The following three pages each contain 15 graphs showing data for Toolco A, B, and C, on the same assumptions used above. Because the graphs are now primary, there is more room for readable scales, and the vertical axis can be higher than a single line of text. Of course, the graphs could be made interactive.

The displays on the three following pages each include 34 annual figures, and 504 monthly figures are displayed graphically, for a total of 538 data points., far more than the 120 data points in the original Toolco example.

Bar graphs are used for revenues, expenses, and gross profits, scaled to the highest level of sales. Line graphs are used for income captions, scaled to the greatest monthly losses and income captions in the period. Annual totals are shown in the headings of each graph. In most of the graphs, 2009 and 2010 data are in different colors.

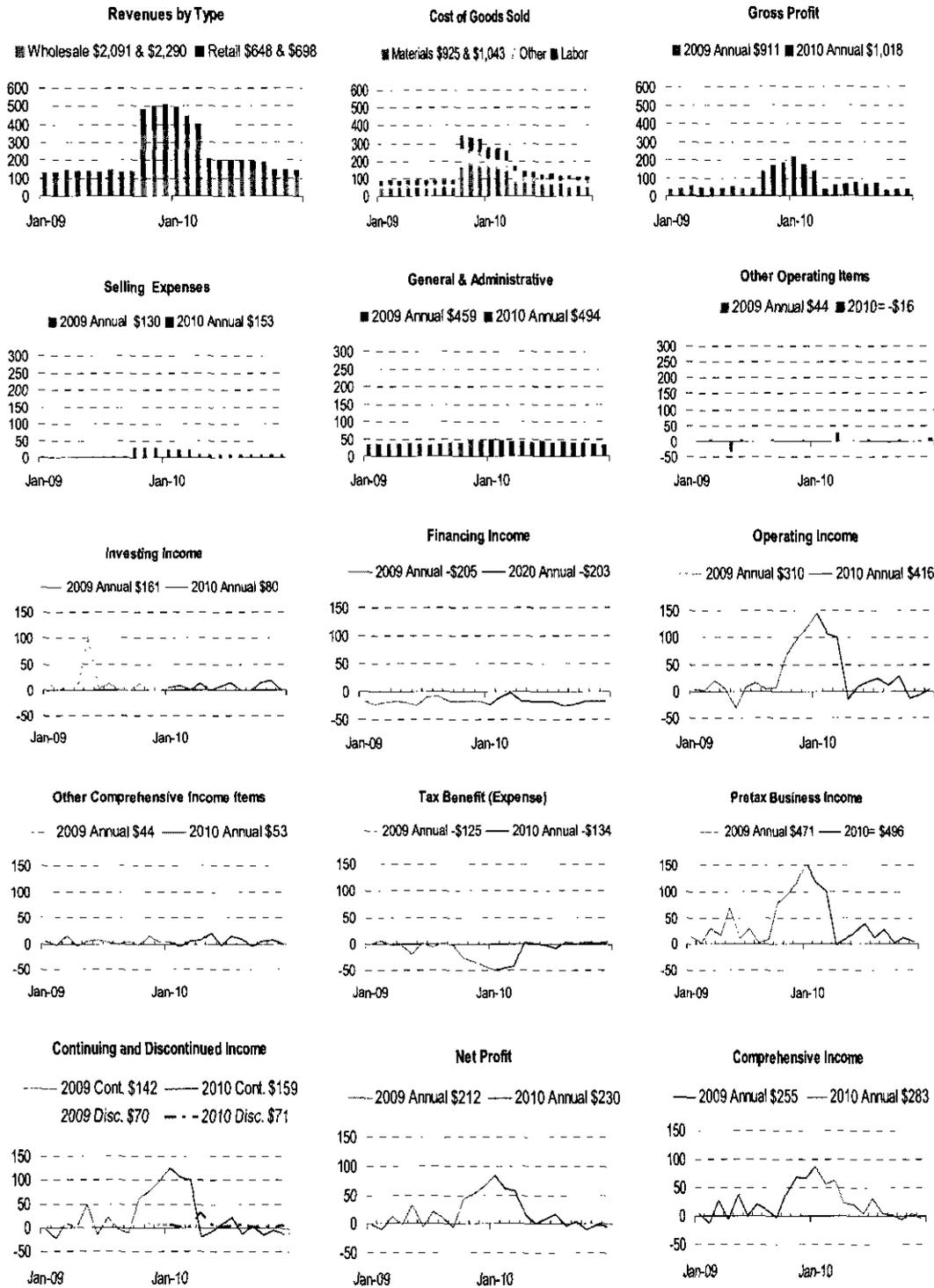
Again, an experienced analyst would quickly be able to discern the differences in the timing and variability of economic flows among these three companies with identical annual figures.

## Toolco A — 2009 and 2010 Monthly Revenues, Expenses, and Profit (Annual Figures Shown in Legends)



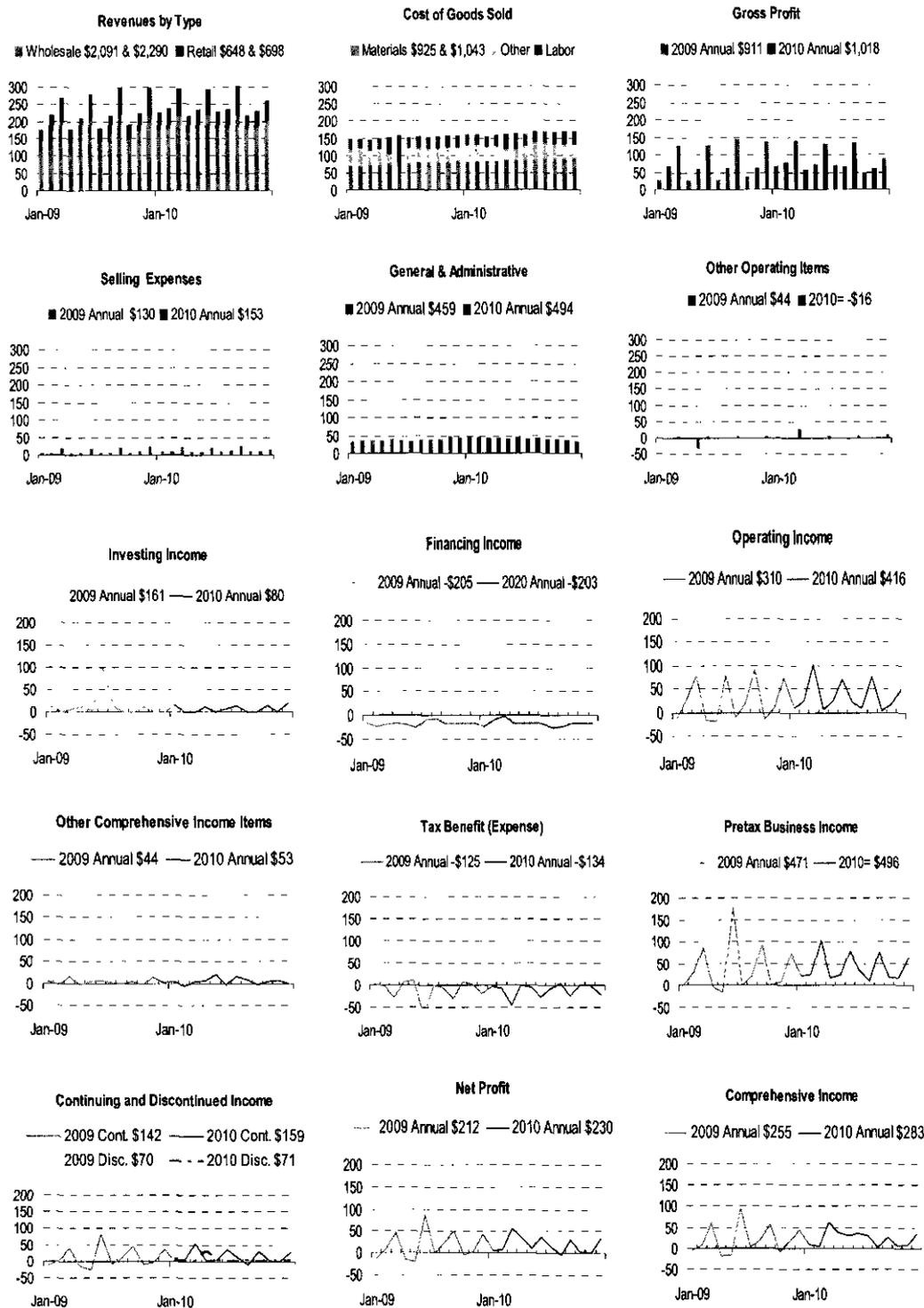
**Scales:** Bar graphs -- highest monthly total revenues. Line graphs -- from greatest monthly gross profit to largest monthly loss.

## Toolco B – 2009 and 10 Monthly Revenues, Expenses, and Profit (Annual Figures Shown in Legends)



**Scales:** Bar graphs: highest monthly total revenues. Line graphs: greatest monthly gross profit to largest monthly loss.

## Toolco C — 2009 and 2010 Monthly Revenues, Expenses, and Profit (Annual Figures Shown in Legends)



**Scales:** Bar graphs -- highest monthly total revenues. Line graphs -- from greatest monthly gross profit to largest monthly loss.

The same approaches could also apply to the cash flow statement and the balance sheet. I have not created balance sheet and cash flow examples using Toolco, but I attach two examples that I created, using my own judgment, “inspired by” publicly available quarterly and annual data for Sears (in the year it merged with Kmart) and for Toys ‘r Us, to demonstrate how the impact of a merger and a highly seasonal business can be seen in monthly balance sheet sparklines. I have used a traditional balance sheet format, but the examples could be adapted easily to the proposed new format. The point is that monthly data can be presented graphically in a useful manner.

In my toy company example, the balance sheet shows considerable seasonal variation. Total 2007 and 2008 assets [■■■■■■■■ 8,295|10,918 and ■■■■■■■■ 8,224|10,851] peak in November with figures more than 25% greater than the year-end figures. The 2007 inventory [..... 1,690|4,200] peaks at more than double its yearly minimum. Accounts payable sparklines for 2007 and 2008 [..... 958|3,100 and ..... 1,202|3,300] show similar patterns, as the company uses supplier credit to finance its inventory purchases.

**Toy Company Example -- Balance Sheets as of February 3, 2007 and February 2, 2008**

	<u>Fiscal 2007</u>		<u>Fiscal 2008</u>	
	Monthly	Year-End	Monthly	Year-End
<b>ASSETS</b>				
<i>Current Assets:</i>				
Cash and cash equivalents	..... 152 1,300	\$ 765	..... 200 873	\$ 751
Short-term investments		0		168
Accounts and other receivables		230		256
Merchandise inventories	..... 1,690 4,200	1,690	..... 1,760 4,100	1,998
Prepaid expenses and other current assets		<u>172</u>		<u>220</u>
<i>Total current assets</i>	..... 2,850 4,958	<u>2,857</u>	..... 2,770 5,298	<u>3,393</u>
Property and equipment, net	..... 4,316 4,410	4,333	..... 4,280 4,400	4,385
Goodwill, net		365		366
Deferred tax assets	..... 95 610	95		197
Restricted cash		148		131
Other assets		<u>497</u>		<u>480</u>
<i>Total Assets</i>	..... 8,295 10,918	<u>\$ 8,295</u>	..... 8,224 10,851	<u>\$ 8,952</u>
<b>LIABILITIES AND STOCKHOLDERS' DEFICIT</b>				
<i>Current liabilities:</i>				
Short-term borrowings		151		0
Accounts payable	..... 958 3,100	1,303	..... 1,202 3,300	1,534
Accrued expenses and other current	..... 687 860	848	..... 762 1,000	996
Income taxes payable		142		128
Current portion of long-term debt		<u>66</u>		<u>50</u>
<i>Total current liabilities</i>	..... 2371 4,545	<u>2,510</u>	..... 2,307 4,790	<u>2,708</u>
Long-term debt	..... 5,722 6,716	5,722	..... 5,722 6,400	5,824
Deferred tax liabilities	..... 74 529	74	..... 21 43	21
Deferred rent liabilities		248		261
Other non-current liabilities		282		374
Minority interest in Toys - Japan		<u>134</u>		<u>153</u>
<i>Total Liabilities</i>	..... 8,970 11,702	<u>8,970</u>	..... 8,934 11,481	<u>9,341</u>
<i>Stockholders' Deficit</i>				
Common stock		0		0
Additional paid-in capital		4		10
Accumulated deficit		-584		-419
Accumulated other comprehensive income (loss)		<u>-95</u>		<u>20</u>
<i>Total Stockholders' Deficit</i>	..... -940 -564	<u>-675</u>	..... -740 -330	<u>-389</u>
<i>Total Liabilities and Stockholders</i>	..... 8,295 10,918	<u>\$ 8,295</u>	..... 8,224 10,851	<u>\$ 8,952</u>

Each bar represents one month. Subscripts are minimum and maximum values. Colors denote positive and negative values, maximums, and minimums. **SCALE:** Zero to highest liability. Missing bars are small values.

The Merged Department Stores balance sheet on the next page follows the same format and color conventions. The fiscal 2006 total asset sparkline [ 8,455|33,592] shows significant changes at the date of the merger during the third month of fiscal 2006. The 2006 sparklines for goodwill and trade-names have only ten bars, because their values largely derive from the purchase accounting for the merger. Bars for various other captions, such as long-term debt, are almost imperceptible before the merger, but become visually significant afterwards.

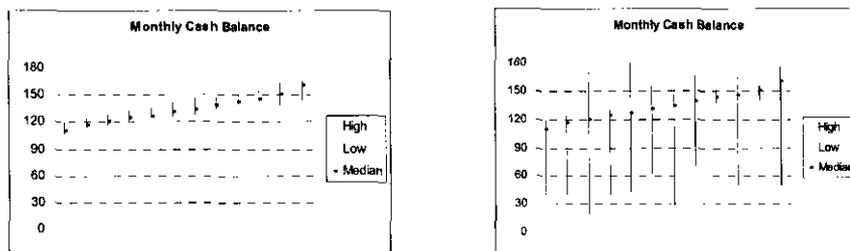
The sparklines for fiscal 2007 indicate significant seasonal variation in current assets [ 14,395|17,681], especially inventory [ 9,100|14,000]. While the range from smallest to largest levels is not as pronounced as at the Toy Company, in 2007 the peak inventory level was over 50% higher than the lowest level. In contrast, long-term assets had little monthly variation in 2007. Accounts payable shows seasonal variations that relate to the fluctuations in inventory.

**Merged Department Store**  
**Balance Sheets as of January 28, 2006 and February 3, 2007**  
*With Monthly Sparkbars showing minimums/maximums*

(In Millions)	<u>2006 monthly</u>	<u>Jan. 28, 2006</u>	<u>2007 monthly</u>	<u>Feb. 3, 2007</u>
<b>ASSETS</b>				
Cash and cash equivalents	1,202 4,440	\$ 4,440	1,901 3,968	\$ 3,968
Accounts receivable		811		847
Merchandise inventories	3,281 12,400	9,068	9,100 14,000	9,907
Prepaid expense & other current assets		372		372
Deferred income taxes		516		312
<i>Total current assets</i>	7,345 18,114	<u>15,207</u>	14,395 17,681	
Land		2,146		2,105
Buildings and improvements		5,920		5,981
Furniture, fixtures and equipment		2,268		2,408
Capital leases		367		352
<i>Gross property and equipment</i>		10,701		10,846
Less accumulated depreciation		(878)		(1,714)
<i>Total property and equipment, net</i>	315 10,141	<u>9,823</u>	9,132 9,500	<u>9,132</u>
Goodwill	0 2,057	1,684	1,692 1,885	1,692
Trade-names and other intangible	0 4,039	3,448	3,437 3,470	3,437
Other assets		411		399
<b>TOTAL</b>	8,455 33,592	<u>\$ 30,573</u>	29,722 32,631	<u>\$ 30,066</u>
<b>LIABILITIES</b>				
Short-term borrowings		\$ 178		\$ 94
Long-term debt and leases - current		570		613
Merchandise payables	1,127 6,000	3,458	3,100 6,000	3,312
Income taxes payable		449		359
Other current liabilities	705 4,200	3,917	3,800 4,200	3,965
Unearned revenues		1,778		1,709
<i>Total current liabilities</i>	2,287 13,370	<u>10,350</u>	9,759 12,990	<u>10,052</u>
Long-term debt and capital leases	366 3,438	3,268	2,849 3,550	2,849
Pension and postretirement benefits	1,000 2,630	2,421	1,648 2,400	1,648
Minority interest and other liabilities	727 3,713	2,923	2,630 2,850	2,803
<i>Total liabilities</i>	4,388 22,566	<u>18,962</u>	17,352 20,740	<u>17,352</u>
<b>SHAREHOLDERS' EQUITY</b>				
Contributed capital	3,291 10,258	10,260	10,256 10,393	10,395
Retained earnings	938 2796		2,130 4,208	3,688
Treasury stock--at cost		(642)		(1,437)
Accumulated other comprehensive income(loss)		(205)		68
<i>Total Shareholders' Equity</i>	4,067 12,296	<u>11,611</u>	11,162 13,166	<u>12,714</u>
<b>TOTAL</b>	8,455 33,592	<u>\$ 30,573</u>	29,722 32,631	<u>\$ 30,066</u>

All monthly graphs are scaled from zero to \$33,592, the highest monthly total assets. Missing bars represent months with very small values. Brown / Dark blue bars are yearly minimums/maximums.

Monthly figures need not be month end balances or totals. Compact graphic elements can display both the central tendency of daily data and the extremes. The following two graphs contain one line per month describing daily cash balances. The top of the line is the maximum of the daily balances, the bottom is the minimum, and the median is the marked point of the line. The medians are the same for both graphs, but the graph on the right shows much more daily volatility.



If you want to report the amounts, timing, and variability of financial data, you need to report interim data. If you want to squeeze interim data into the same report as the annual figures, you need graphs. Traditional annual financial tables simply can't do the job. Graphs can, with elegance and beauty.

**The Discussion Paper does not deal adequately with display issues**

The basic focus of the Discussion Paper is on *what* needs to be disclosed; issues of display per se are not adequately addressed. There are no citations to studies of table design, graphic design, or the psychological literature dealing with people's ability to handle information displays.

Thus, although the Discussion Paper invites comments on certain alternative display options, the Boards are not relying on any underlying theory of display or perception to guide them in evaluating the options, or the responses to their questions. I

suggest the Boards obtain further information on the findings of these related fields before finalizing their deliberations.

It is not clear how the Boards intend the financial statements to be used. If they are to be used like telephone directories, then as long as the reader can find a desired number quickly, the presentation method is not important. Whether certain data are on the same page as other data is unimportant. If they are to be read and studied for interrelationships, then issues of font size and formatting that facilitates comparisons become more important.

Of 60 line items of numbers on the Toolco Statement of Comprehensive Income example in the Discussion paper, 19 were totals or subtotals that a user could derive from other numbers already presented. What is the theory behind providing this proportion of arguably redundant data?

I also note, as an accountant and an educator of future accountants, that the vast majority of accountants have no training in table design and data display. These are not presently part of the accounting curriculum, yet are important to communication. The Boards, in the Discussion Paper, leave management with options in what captions to include, or how to format their reports, but give management no help in understanding how design choices will affect the ability of users to process data. Some guidance would be very helpful.

As one example, should managers round their data, or give all the significant digits?<sup>25</sup> The degree of rounding that is appropriate in individual line items is unclear.

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<sup>25</sup> Cf. A. S. C. Ehrenberg, 1977. Rudiments of Numeracy, *Journal of the Royal Statistical Society*, Vol. 140 (3) 277-297. Ehrenberg recommends rounding to two significant digits. Cf. also Irwin M. Jarett and Yair Babad. 1988. *Guidelines and standards for accounting graphics*. *Journal of Accounting and EDP*. Summer. 4-14.

Presumably, major decisions on investment and credit would not require more specific figures than the three significant digits in earnings per share, but the examples in the appendix show seven digits for sales.

As another example, paragraph 3.46 says

“If presenting by-function subcategories and by-nature information within those subcategories results in a statement of comprehensive income that management believes is too lengthy or detracts from the overall understandability of the information in that statement, an entity may present some or all of its by-nature information in the notes to financial statements....”

How is a management not trained in design issues to judge whether additional categories make the statement “too lengthy” or “detract from the overall understandability” of the information? The examples in the Discussion Paper use six or seven point font. Does that “detract from the overall understandability”, or is it meant to show that small type size is not a problem?

### **Greater Clarity is Needed Regarding User Decision Models**

Jacque Bertin wrote “Information is the reply to a question.”<sup>26</sup> The Discussion Paper is not specific about the question or questions that the intended audience is asking. While in various places the Discussion paper indicates users want certain information, it did not say how they will employ it. This impedes the design of the optimal data display. An entity can’t judge what information is needed without reference to a user decision model.

Several examples clarify this critique.

First, the guidance on how much disaggregation of comprehensive income is appropriate is hopelessly vague. Paragraph 2.10 of the Discussion Paper says:

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<sup>26</sup> Jacques Bertin. 1981. *Graphics and Graphic Information Processing*, translated by William J. Berg and Paul Scott. Walter de Gruyter & Co.: Berlin.

2.10. In applying the disaggregation objective, an entity should include, as appropriate, additional line items in its financial statements to explain the components of its financial position, performance, and cash flows. The Boards acknowledge that there is a delicate balance between having too much information and having too little information. Thus, it is important that application of the disaggregation objective should lead to sufficient but not excessive disaggregation.

Paragraph S7 says “To the extent that it is practical, an entity should disaggregate, label, and total individual items similarly in each statement.” Paragraph 3.42 states: “An entity should disaggregate by function income and expense items within the operating, investing, financing asset, and financing liability categories in the statement of comprehensive income to the extent that this will enhance the usefulness of the information in predicting the entity’s future cash flows.” Without knowing how users make predictions, the financial preparer has no criteria to use to decide whether a particular caption is helpful or not.

Second, it is unclear whether the Boards’ change of the definition of investing and operating cash flows meets user needs. The Discussion Paper cites research on the usefulness of cash flow statements, but that research was based on the current definition of investing and operating cash flows. Under current definitions, expenditures on fixed asset acquisitions, and on acquisitions of other companies, are investing cash flows; under the proposed format, they would generally be operating. What decision model is being used that treats merger expenses as operating cash flows?

Third, the discussion of why the Boards want companies to disclose expenses by nature follows, with a critical phrase italicized:

3.51. The Boards initially expressed a preference for presenting information in the statement of comprehensive income by function because they thought that doing so usually would describe an entity’s overall operations better than would disaggregating information by nature. The Boards also observed that

disaggregating information by function is more consistent with the higher-level functional categories in the classification scheme (the operating, investing, financing assets, and financing liabilities categories). However, users of financial statements told the Boards that although this disaggregation assists in the analysis of overall business trends (such as in gross margins and operating margins), *it aggregates items with different economic drivers (for example, labor and raw materials) and thus reduces the predictive value of the information.* Therefore, the Boards propose disaggregating the by-function information within the categories by nature as well.

If I am reading this correctly, the users do not actually care about the *nature* of expenses. They care instead about predicting how total expenses respond to underlying *cost drivers*. If this is the case, then expenses should be reported, not by nature or by function, but by *cost driver*. If that is truly what would be helpful to users, the Boards should accommodate them by requiring:

- expenses on the statement of comprehensive income grouped by cost driver. Such drivers might include
  - o volume
  - o raw material price changes
  - o labor price changes
  - o interest rate changes
  - o exchange rate changes
  - o key business decisions, such as restructuring
  - o casualty losses
  - o profitability (for such expenses as income taxes and bonuses)
- A separate statement, similar in format to the statements of functional allocation now used for U. S. nonprofit organizations, that shows how natural expenses are allocated to the various cost driver categories.

Note that both income taxes and bonuses are driven by profits. It is not clear, absent a discussion of decision models, what is so special about income taxes that they require separate treatment in the financial statements.

### **Other**

#### **(Comments related to questions in the Discussion Paper)**

*Question 1 of Chapter 2 – related to other objectives the boards should consider*

As discussed above, I believe that the greater government role in the economy requires the Boards to consider “accountability”, as that term is used in GASB publications, as an additional objective of financial reporting.

I do approve of the concepts of cohesiveness and disaggregation being applied in this Discussion paper.

*Question 5 of Chapter 2 relates to the management approach (See also Question 12 of Chapter 3, regarding cash equivalents)*

I have some concerns about the use of the management approach.

One concern relates to the distinction the Boards draw between cash equivalents and cash. A company can easily at the end of the fiscal period achieve any mix it wants between cash and cash equivalents. Classifying these two items into different sections of the statement of financial condition, gives management a “window dressing” tool.

I do not see the issue of risk of loss of cash equivalents as significant. Such instruments are usually very safe. In the rare case when losses occur, management would know of them in time to disclose the subsequent events in its financial statements. (Cash is not totally risk-free in today’s banking environment, either.)

*Question 9 of Chapter 2*

The Discussion paper changes the classification of cash flows for acquiring fixed assets, and for acquiring entire companies, from investing (where they are now) to operating, as long as the assets acquired are being used in the core business. I note that all the research studies cited in the Discussion paper on the usefulness of cash flow data based their conclusions on the old definitions. Since companies occasionally spend very large amounts on new factories, or in acquiring other companies, the new definition may have greater volatility than the traditional one.

In the examples in appendix to the Discussion Paper, there are no mergers, and the expenditures on acquisitions of fixed assets are relatively modest. But significant mergers are not uncommon. In a random sample of 20 of the Fortune 500 companies for the latest three fiscal years, 7 reported outflows for acquisitions of other companies in an amount of over 25% of operating cash flows during at least one of the three years shown. *Question 16 of Chapter 3, relating to disaggregation on the Statement of Comprehensive Income*

As discussed above, the decision models that the users are presumed to be employing has not been specified. This makes management's decision of an appropriate level of disaggregation very difficult. If what users really want is to know costs by cost driver, then the reports should try to give that data. My suggestions in this regard are stated above.

*Question 26 in the Discussion Paper – Related to Infrequent and unusual items*

Paragraphs 4.48 through 4.53 of the Discussion Paper indicate a desire by the FASB (but not the IASB) to have entities highlight infrequent or unusual transactions. I note that if companies disclose interim data graphically, unusual and infrequent items

will show up automatically in the graphs. In the Toolco examples I presented earlier, a spike in investment income in one month is obvious, without a need for the Boards to try to prescribe a definition of how unusual it is.