



## **After Enron: 10 pragmatic questions for non-executive directors to ask the auditors**

**Robert Bittlestone, Metapraxix Ltd**

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### **Introduction**

For the benefit of any readers who have recently returned from a three-month sabbatical on Mount Athos (and I know of at least one), 2002 hasn't been a great year so far for certain multinational businesses, nor for their directors, auditors or investors. The global economy had not yet recovered from the Sep 11th World Trade Centre bombings when the unexpected collapse in December 2001 of Enron, one of the world's largest and fastest-growing corporations, raised some fundamental questions about the reliability of the information that businesses present to their shareholders.

Fallout from the Enron bankruptcy is now spreading across the global economy. The accounts of well-established corporations such as Rolls-Royce and GE are being scrutinised with a new degree of forensic zeal and rarely does a week go by without some company admitting misplaced optimism in its external financial disclosure. The jury is out on whether Enron's auditor Andersen will survive in its present form and indeed whether the "Big 5" global audit practices will be allowed to continue to offer advice on tax and legal matters, corporate finance, general consulting and corporate recovery services alongside

their captive audit market. Consequently the audit profession is itself increasingly under siege, with respected journals such as *The Economist* running a cover page showing four distressed businessmen locked in a cage below the sign "Don't feed the accountants". This year's University recruitment interviews will be interesting for graduates seeking a career in this discipline: it's not entirely clear who will be interviewing whom.

Non-executive directors are becoming increasingly concerned about their responsibilities in these matters. To be a member of the Board of a company that is under scrutiny for mis-reporting is not a trivial matter. In November 2001 Jean Eaglesham, writing a review of a recent legal survey in the *Financial Times*, pointed out that:

*"Company directors are fundamentally ignorant about their liability for corporate insolvency...Many directors may be vulnerable to disqualification proceedings, or even lawsuits, because of their poor knowledge of their legal duties and responsibilities."*

Central to this debate are questions about the role of auditors and non-executive directors, in particular the effectiveness of their advisory

contribution and the independence of that advice. Many erudite views have already been expressed on this complex and multifaceted subject and I for one do not propose to add another personal opinion to this debate. Patricia Hewitt, the UK trade and industry secretary, has in any case announced that there will be independent reviews of both of these functions and no doubt these exercises will unearth much wisdom.

However, it is difficult to plan a

journey effectively without a map, and even harder if each traveller is using a different mental map of what purports to be the same territory. I believe it may therefore be valuable to establish a clear and shared understanding about the nature of the journey that corporate information undertakes as it travels from the foothills of real business transactions via the Base Camp of accounting conventions until it reaches the lofty (and evidently somewhat fogbound) heights of external financial disclosure.

## Mapping the territory

Figure 1 is a sketch-map of the basic information terrain for a typical large company with multiple subsidiaries. The simple diagram indicates that there are eight distinct steps between the base of the mountain and its summit. It is a core proposition of this paper that these steps need to be understood individually, since they possess quite different characteristics.

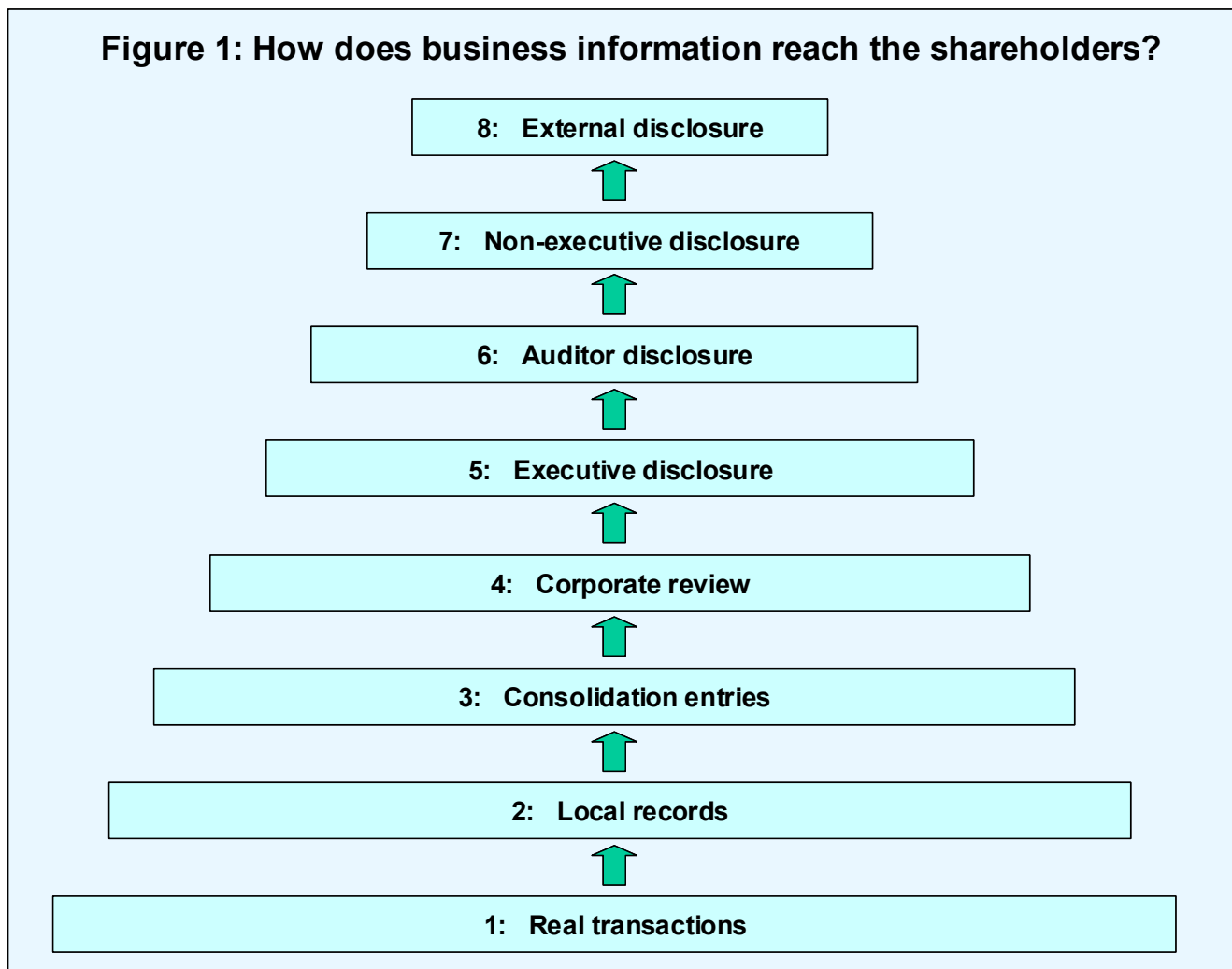
Step 1 is the start of the journey: it is labelled "Real transactions". This refers to moment-by-moment physical interactions between the firm and its customers, suppliers, bankers and other counterparties. Under this nomenclature, whenever a company sells something, buys something, makes something, wins an order, employs or fires someone, receives or pays out cash, advertises, impresses or distresses a potential customer, researches a new product or indeed performs any other corporate task, it is performing a "real transaction".

Step 2 is labelled "Local records", which are the set of computer or paper-based systems in which companies record a subset of the real transactions of step 1. The focus here is on the word "subset", because the nature of the Step 2 record is by no

means complete. Sometimes this is because it can never be complete -- for example, when a TV advertisement turns off a potential customer at home -- but sometimes the Step 2 local records are incomplete because of management incompetence or deliberate fraud. This is the stuff of "the field audit" to which we will return, but meanwhile let us keep climbing up the mountain.

Step 3 says "Consolidation entries", and here it is important to remind ourselves that large-scale business scandals generally involve large-scale corporations with multiple subsidiaries -- often 100 or more. In these businesses each subsidiary is required to transcribe at regular intervals (usually monthly) a subset of the Step 2 information into a company-wide computerised tool called a consolidation system. This step is necessary so that the numbers can be added up, but we should note in passing that (a) it creates a further reduction in the volume of upwardly reported real transactions, and (b) the consolidation entries now represent the only record of the subsidiaries' activities which can realistically be accessed further up the chain of command.

**Figure 1: How does business information reach the shareholders?**



Step 4 says "Corporate review", which refers to the use of the information in step 3 to diagnose current or potential problems at the subsidiaries. In a large company this review takes place at multiple levels up the corporate hierarchy and in some cases this may mean that the parent corporation does not have full access to the data contained in step 3. However, usually the head office can access all the data if it wishes to, although in practice it generally delegates the more detailed tasks of review to the appropriate divisional teams.

Step 5 is labelled "Executive disclosure", by which I mean the distribution of financial reports and other performance briefings to the full-time directors, executives and managers within the corporation. These documents are supposed to

answer the question "Is there a problem?", a requirement typically addressed via comparisons against budgets, forecasts, last year's values and other targets.

Step 6 refers to "Auditor disclosure". In principle the auditors receive as much information as the executives -- in fact they see a great deal more, since they have the right of access all the way down the information mountain as far as Step 1. However, in practice this arrangement doesn't work in the way that one might imagine, because the auditors don't look at their clients' information every month: in fact they tend to perform a full audit only once a year. Harold Wilson's infamous comment that "*A week is a long time in politics*" could perhaps be borrowed here: "*A year is too long a time in audit*". I return to

this crucial issue of the frequency of audit review in subsequent paragraphs.

Step 7 constitutes the information that is provided to the non-executive directors, generally in the form of the Board report each month or each quarter, and we will be considering its contents later in this paper.

## **The view from the summit**

The air is thin at the top of most mountains and Figure 1 is no exception. Each arrow denotes a reduction in information content and so it is interesting to assess the total extent of this reduction within the average multinational firm. How much information is lost between step 1 and step 8?

It is difficult to estimate the underlying information content in step 1 because this includes a significant number of transactions which are not measured or recorded at all. If however we start at step 2 and compare this instead with step 8, we can then reliably assume that we will have calculated a lower bound for information loss - in other words, the actual information loss will be worse than our estimate.

So let us consider a typical international corporation with perhaps 100 subsidiaries worldwide and with total annual sales revenues of say £5 billion. Each subsidiary maintains local records such as the following:

- Orders and sales by customer and by product
- Production and distribution costs by category
- Customer and product profitability

Finally, Step 8 is termed "External disclosure" and this includes the Annual Report and Accounts, the Interim Report halfway through the year, the Preliminary Announcement of the annual results and also regular Press announcements and briefings, together with occasional profit warnings. For US companies the list also contains quarterly SEC filings and various associated reports.

- Marketing, distribution, R&D and administration costs
- Balance sheet aggregate values
- Individual account details e.g. of amounts owed by customer
- Cash flow and bank balances

There will be at least 1,000 line items or "accounts" in the above list that are maintained within the local records of the subsidiary. In practice the number of individual accounts is more likely to be around 10,000, but our calculations of information loss will again be more credible if we choose to take the lower figure.

These 1,000 line items are recorded by each of our 100 subsidiaries every month, which corresponds to a minimum total of 1.2 million numbers each year for the corporation as a whole. The addition of budgets, forecasts, currency conversions, single period versus year-to-date schedules and other comparisons increases this total very substantially: a conservative estimate would be to around 5 million numbers per year. This then is the raw material at Step 2 of our information mountain.

If a deliberate attempt is made to defraud a company then there may be no indication of the rogue real transaction in the local records at all.

In such a case no amount of forensic analysis of these 5 million numbers will help us to detect the problem. However, the nature of the double entry accounting system makes it quite difficult to remove all traces of a deviant real transaction within the local records of the subsidiary, particularly when this involves a large gulf between profit and cash, as is often the case. More often than not the local records will contain the underlying evidence of deliberate fraud or management incompetence, but it may require some detective work to find it.

What about the contrasting information content of step 8, external disclosure? If we restrict our calculations to the formal schedules within the annual Report and Accounts, omitting for the moment the accompanying Notes, then we normally see perhaps four or five principal schedules comparing the latest year with its predecessor for perhaps 50 accounting lines each. This corresponds to around 500 numbers for the formal schedules. The Notes to the accounts will themselves contain additional schedules, so for the avoidance of criticism let us be generous and

round up this total to say 2,500 numbers altogether in the typical Annual Report. To this we need to add the Interim Report and other periodic briefing documents. In overall terms we are probably looking at something in the region of 5,000 numbers disclosed externally by large corporations every year.

The eight steps in our mountain therefore reduce the original information content from about 5,000,000 numbers to around 5,000: a reduction of a thousandfold. With the exception of rogue transactions that are not locally recorded at all, the underlying 5,000,000 numbers will usually contain the vital forensic evidence of deliberate fraud or management incompetence that the shareholders need to guide their investment decisions. But how likely is it that the end product of this reduction of information by 1,000 times as the mountain is climbed will yield the same quality of information? What are the chances that the combination of regular corporate review and audit scrutiny will ensure that both non-executives and outside shareholders are properly informed about these risks?

### **Needles in a haystack**

The auditors do have access to the underlying 5,000,000 numbers, but they also need to complete the task of scrutiny in a cost-effective manner if they are to maintain their profitability. An audit therefore represents a compromise between exhaustive review and specific inquiry. Over many years various general principles have emerged that underly the audit process and it is worth examining some of these.

- Since time immemorial, the

primary audit task has been to compare and explain the difference between account balances this year versus the balances last year.

- If there is no difference, then there is nothing to explain and the focus moves on to the next account.
- There is little or no scrutiny of the individual intervening months or of the underlying trend of the information being reviewed.
- This means that an account which presented an unusually high value

in the final month of last year will not usually be flagged as exceptional if it also presents an unusually high value in the final month of this year.

There is an unkind anecdote which draws attention to this particular kind of investigative style:

*"How did the auditor cross the road?"*

*"I don't know."*

*"Nor did he, so he looked up how they did it last year."*

Many years ago I was discussing this problem with the newly appointed CFO of a major UK multinational group. He had been concerned to ensure that none of the group's subsidiaries were inadvertently omitted from the audit, so he had asked the audit partner how he had confirmed that this was the case.

*"Simple: we took last year's list from*

*the previous annual report and we added the acquisitions and removed the disposals."*

*"But how do you know that last year's report was correct?"*

*"Umm – I think we did it the same way then."*

*"Let's play it safe this year. Perhaps you'd like to go to Companies House and get a copy of the official record."*

The auditor returned a few days later.

*"Do you want the good news or the bad news?"*

*"Let's hear the good news first."*

*"We've found 8 of your subsidiaries that haven't been included in your Annual Report for the last ten years, but now we can correct that omission."*

*"And the bad news?"*

*"Two of them are suing each other."*

## **Identifying the villains**

A title such as this conjures up visions of the Fraud Squad and handcuffs at dawn, but the reality is that the selective nature of the audit process described above encourages some managers to indulge in a strange game of skill in which points are awarded to those executives who succeed in distorting external disclosure while keeping themselves technically blameless in terms of the audit rules. Precedents for this kind of behaviour were typically established inside such a company many years back and it takes a brave manager or accountant to challenge accepted practice.

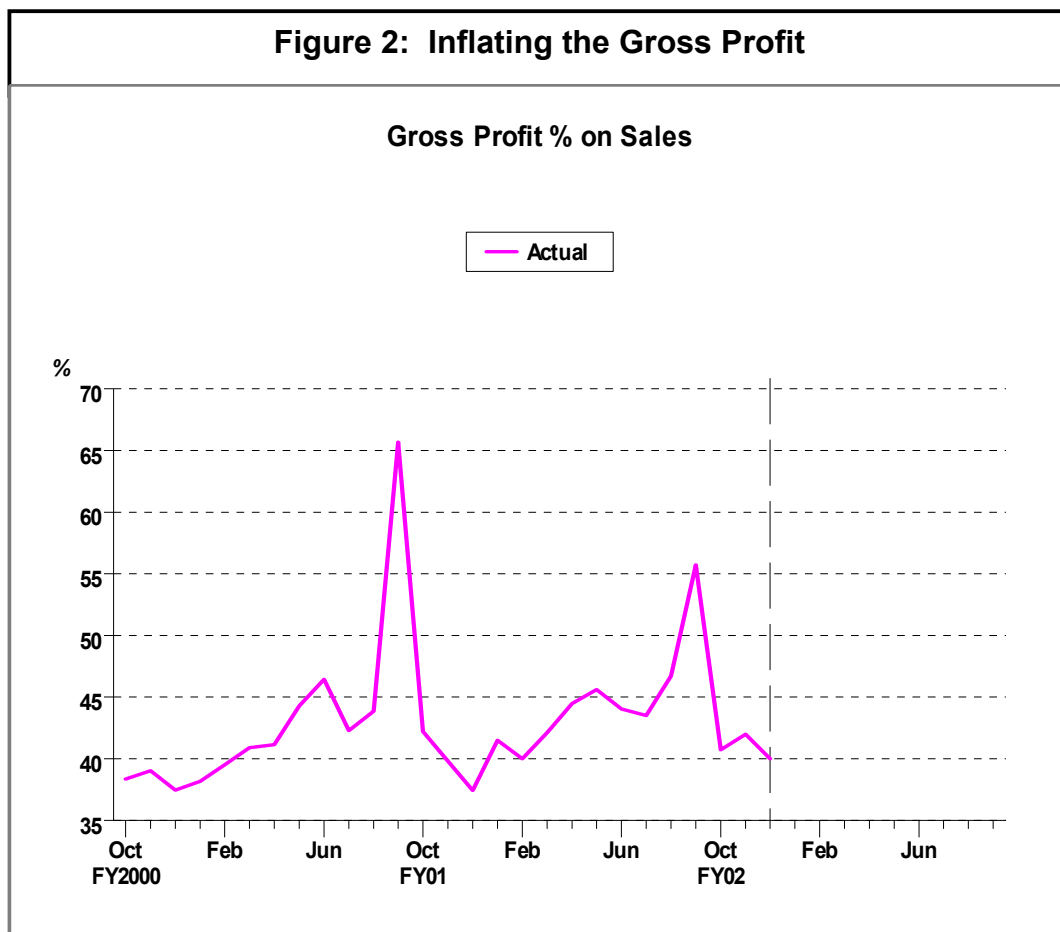
This is particularly problematic in relation to practice such as "stuffing the channel" (i.e. booking excess sales

of returnable goods to a distribution network) or "inflating the GP" (i.e. recording an unrealistically high gross profit on the sales of the final month of the year and correcting this in the first month of the following year). In these cases the difficulty faced by an incoming and unusually virtuous subsidiary management team is that the act of correcting their predecessors' mistakes will almost always generate a sharp drop in reported profitability and consequently in their own management bonuses.

However, notwithstanding the existence of 1,000 account lines for each of 100 subsidiaries, it is usually quite easy to spot aberrant accounting when presented with the

underlying trend of a particular villainous item. Figure 2 is an actual (anonymised) example of the above-mentioned "inflating the GP" syndrome that was recorded by a UK multinational. This particular series

was identified automatically (see below); the visual evidence prompted a review of comparable data from across the group which resulted in a reduction of around £20 million in the company's declared profitability.



### The automated detective

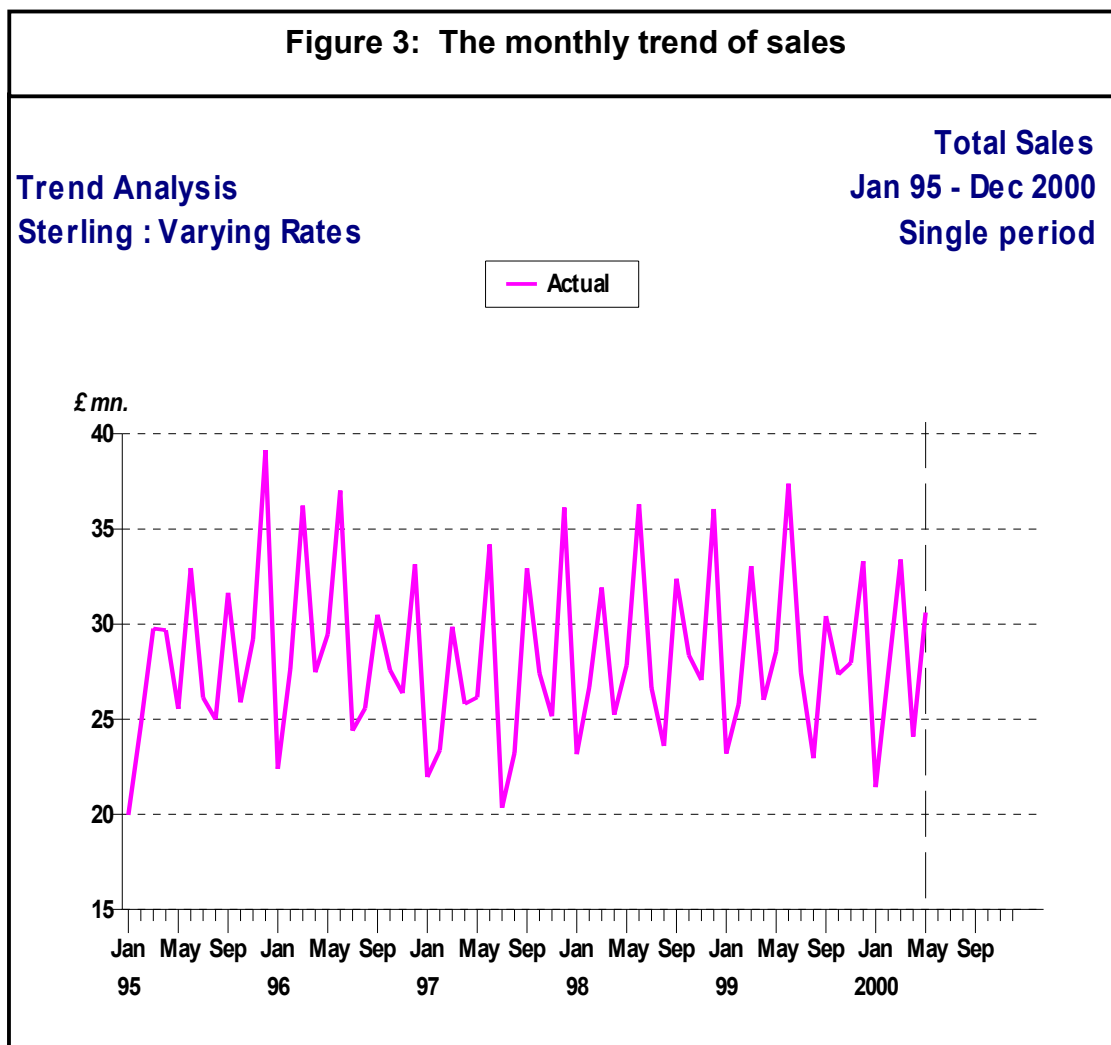
I was recently telephoned by the operating company for my Visa card. They had noted a number of unusual overseas transactions culminating in a significant UK charge for "Bands and Entertainment". My immediate concerns about a Pop Idol wannabee on the loose across Europe brandishing my plastic were replaced by the reassuring recollection of a skiing holiday and a postal lottery for opera tickets. So what prompted the Visa company to call me?

A moment's consideration of the volume of transactions involved will convince you that a computer-based system is used by Visa as the initial sieve of this underlying data, followed by manual review and telephone calls where necessary. The same form of partnership between man and machine is used for DNA tracing, for fingerprint identification and more recently for cervical smear detection, where the identification of dangerous tumours requires many years of training for a human operative.

Patterns of information such as these last few examples are subtle and the corresponding computer programs that are needed to identify problem areas are likewise advanced. By contrast, the level of skill required to identify a problem such as that in Figure 2 is really rather elementary and the corresponding automation techniques can be found in any GCSE syllabus statistical textbook (at least

standard deviation of 100,000 data series in a matter of seconds if the data is available in main memory, or within a few minutes if access to the hard disk is required. It can then proceed to sort all these results in descending order of magnitude and to present the highest values first.

The subsidiaries and accounts at the top of this list represent the most



until the next revision to the UK examination system).

For example, the statistical measure known as "standard deviation", which calculates the amount of variability in a time series, will easily detect outlying values such as those in Figure 2. A modern computer - just a normal PC - can calculate the

unusual values within the database. These will not necessarily be those of the largest financial magnitude, but they are the most unexpected in relation to the usual monthly variation of the data series concerned.

Those readers who can remember their statistics will recall that for a wide variety of data series that

correspond to a “Normal” distribution, a value of 2 standard deviations above the average indicates that the chance that the outlying data value is consistent with the usual variability of the series is less than 5 percent. To state the converse, the chances are 95 percent or more that such a data series would benefit from further

forensic investigation.

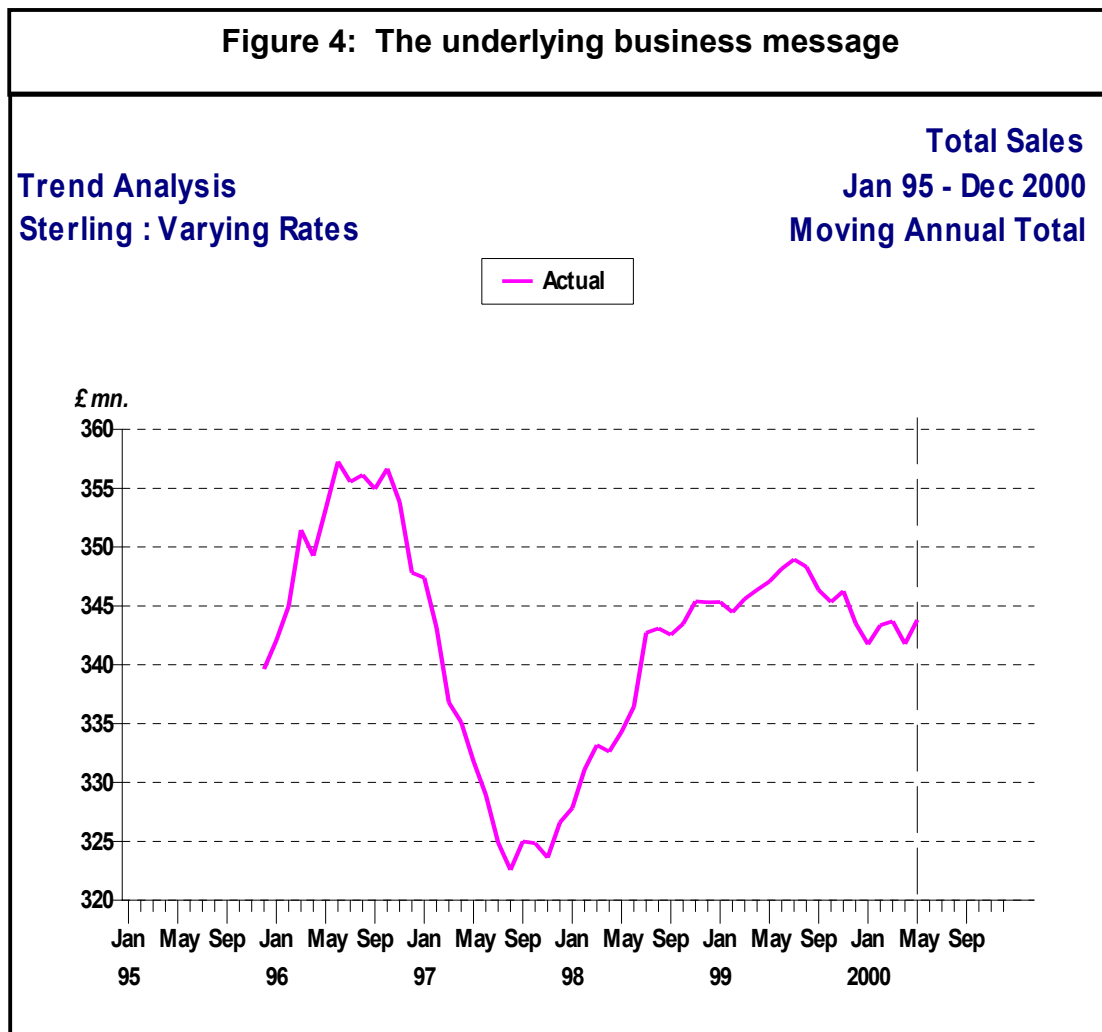
The application of simple techniques such as this to the consolidation system set out in step 3 can be largely automated and provides a rapid and objective first filter for unusual transactions, particularly if the task is performed every month.

### It all happened so suddenly

The collapse of Marconi and other companies was from time to time accompanied by statements to the effect that a catastrophic drop in demand appeared out of a clear blue sky, thereby providing the Board of Directors with insufficient time to communicate appropriately with the banks and shareholders. Vague and

perhaps sympathetic visions are conjured up of a freak tidal wave or a lone iceberg in an otherwise untroubled ocean. Is this view generally realistic?

Figure 3 depicts the historic sales values for a division of a manufacturing multinational. These



are again actual figures that have been anonymised for this paper. There is evidently considerable variation in the data and the observant reader will also note a quarterly pattern to the figures. But what kind of statement or early warning could an auditor make about this performance?

Unfortunately none at all in the first instance, because as we have noted, the audit of today does not generally focus on monthly values, nor on underlying trends over a five-year period. There is not much point in using an annual audit as an early warning sign in a fast changing industry where customer demand can slacken dramatically within the space of a few months. As Harold Macmillan once pointed out, it's like *"trying to catch a train using last year's Bradshaw"* [the railway timetable of the era].

What then is the underlying message

### **The iceberg syndrome**

The example of Figures 3 and 4 clearly indicates a consistent downward trend that can easily be spotted in highly variable data. This by no means implies a Titanic-like encounter with a freak iceberg, but the iceberg analogy is a powerful analogy that reminds us of something else: the asymmetric comparison between a subsidiary's maximum profit versus its maximum loss.

In our indicative multinational with 100 subsidiaries and £5 billion sales, the subsidiaries will not be of a uniform size. There will be a few £250 million monsters and then a long tail of much smaller subsidiaries, dwindling down to annual sales of £5 million or less. Nobody pays very much attention to these small

of Figure 3? Actually we can deploy a technique that is even simpler than the standard deviation. If we smooth the data of Figure 3 by calculating the rolling total over a 12-month period, we arrive at the chart of Figure 4. This shows beyond any reasonable doubt that the annual rate of sales for this business peaked some months ago and it is now in decline.

These kind of interpretations of subsidiary data may already be generated locally by the subsidiary concerned, but one of the arguments of this paper is that the auditors of a multinational group have an unmatched opportunity to perform this kind of early warning analysis exhaustively across all the major accounts in each of a client's many subsidiaries, simply by applying straightforward automated techniques every month to the existing consolidation system at step 3 of the information mountain.

subsidiaries because it is said that *"they can never make much of a contribution to the group"*. Unfortunately this comment is fatally flawed: in order for it to be true the word "positive" must precede the word "contribution".

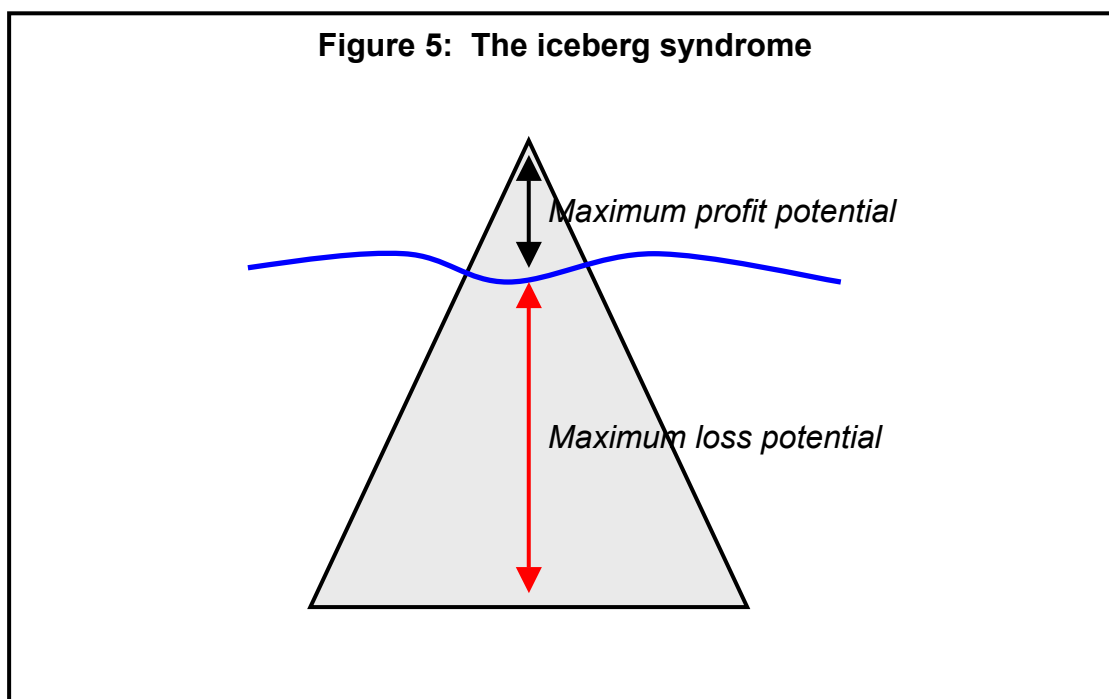
In a good year a £5 million subsidiary might contribute a maximum of £1 million profit to a corporate group, but in a bad year it is quite capable of losing £3 million or more. If you multiply this potential loss by the appropriate number of small subsidiaries, the resulting figure can be quite frightening.

The implications of this simple observation for the role of the non-executive director and the auditor are

quite profound. Traditionally auditors are expected to use commonsense criteria such as “materiality” in order to prioritise their efforts. The conventional wisdom says that there is no point in spending significant time auditing a small subsidiary since its results are unlikely to matter very much to the group as a whole. However, the Iceberg Syndrome suggests that this logic is unreliable.

This is true not only for the auditors, in step 6 of our information mountain, but also for disclosure to executive and the non-executive

directors, in steps 5 and 7. Most Board reports focus on key numbers for the group as a whole and for its major divisions. It is almost unheard of for a Board report to list the underlying trends for every subsidiary because (a) there are too many of them and (b) that's what the divisional managers are supposed to do. However, the asymmetric profit/loss profile of the Iceberg Syndrome indicates that the directors should be briefed on exceptional and unusual results in any subsidiaries, no matter what their size.



### **What should non-executive directors ask the auditors?**

The examples and advice provided on the previous pages are incorporated on the final page of this paper into a set of ten questions that an incoming non-executive director might consider asking the company's auditors.

Of course there is no reason why some of these checks cannot be performed by the internal financial team itself, but to return to Enron, it

is clear that in some circumstances, an internal audit will provide insufficient assurance to a non-executive director that he or she is discharging the requisite duties.

There are several helpful sources of advice on this topic, such as the Web site run by solicitors Collyer-Bristow, who state that:

*“Directors owe a duty to use reasonable skill and care in discharging their duties...Non-executive directors are directors for all purposes, as the law makes no distinction between executive and non-executive directors.”*

A moment or two of reflection would suggest that chasing for answers to the questions overleaf is a low-risk

strategy for a non-executive director. After all, if the worse should come to the worse, it will at the very least provide documentary evidence of a director’s personal concern over these matters, while in less dramatic circumstances it will serve to remind the rest of the Board that there continues to be no such thing as a free lunch.

**Ten pragmatic questions for non-executive directors to ask the auditors**

<b>Director's Question</b>	<b>Auditor's Answer</b>
<b>1. When did you last validate the relationship between our subsidiaries' real transactions and their own local records?</b>	
<b>2. When did you last confirm that our consolidation system correctly reflects subsidiaries' locally recorded performance?</b>	
<b>3. How often do you perform a diagnostic review of the contents of our consolidation system?</b>	
<b>4. Do you apply automated tests to detect unusual subsidiary performance?</b>	
<b>5. Have you identified any turning points in business indicators such as orders or sales?</b>	
<b>6. Do you check our smallest subsidiaries (since while they may never make much profit they could record huge losses)?</b>	
<b>7. Do our Board reports contain the results of tests 4, 5 and 6 above or is this information presented only to divisional management?</b>	
<b>8. How much of this information are we disclosing to our bankers and shareholders?</b>	
<b>9. Are we as non-executive directors able to access the underlying trends in any of our subsidiaries?</b>	
<b>10. If this were your business, what would keep you awake at night?</b>	



**For further details of the consultancy and software techniques discussed in this article, contact our Business Development Division**

© 2002 Metapraxix Ltd., Hanover House, Coombe Road, Kingston upon Thames, Surrey KT2 7AH, U.K.  
 tel: +44 (0) 20 8541 2700 fax: +44 (0) 20 8546 2105 e-mail: [info@metapraxix.com](mailto:info@metapraxix.com) website: [www.metapraxix.com](http://www.metapraxix.com)