

Facing up to e-commerce reality

At the ACT's Autumn Paper, Sir David Walker of Morgan Stanley provided some food for thought on the technology edge all companies need to have.

More and more businesses are taking part in the technology revolution, but how relevant is e-commerce to your business? Let's start by looking at some of the facts about the electronic market:

- the global volume of e-commerce transactions is likely to be \$3 trillion in 2003, rising to more than \$5 trillion in 2004 from its current level of about \$300bn. This represents an increase of almost 20 times in four years and these estimates are constantly increasing;
- the volume of European e-commerce transactions is expected to grow at a compound annual rate of more than 130% a year;
- the difference in price/earnings (P/E) multiples between the most highly valued and the least highly valued sectors in the MSCI Europe index is more than 30bp (basis points); and
- Morgan Stanley Dean Witter's key global study, the Technology Edge, identifies the firms that have a key advantage in the use of technology as a competitive tool – the so-called technology edge. Does your company have a technology edge? And, if not, what are you doing about it?

Recent fluctuations in the market may have prompted some to view inappropriate valuations as indicative also of similar exaggeration of the significance of technology. The Nasdaq is down by about 2,000 points, or 40%, from its highs, and many high-flying internet stocks have crashed. But, as with all cataclysmic technological change, we need to distinguish between the promise of the new technologies – which is vast – and the returns to investors in the new technologies – which are not so predictable. Investment returns from these new technologies, for which there will be intense competition, may be difficult

It would be a mistake to think that just because internet stocks have dramatically declined that connectivity and the internet can be dismissed

to capture. And, because of the uncertainty associated with underlying technologies, business models and eventual profitability, it is hardly surprising that the performance of individual stocks in the new technology space has been volatile. However, experience with earlier technologies suggest that the eventual impact of the newest technologies will be far more pervasive and profound than we would infer merely from the trading performance of individual companies. It would be a mistake to think that just because internet stocks have declined dramatically that connectivity and the internet can be dismissed – they

are going to have a profound impact on your business. Note also that, in a recent poll, 95% of analysts consulted take the view that more innovative companies enjoy a share price premium, and 90% believe that the importance of innovation for shareholder values has increased over the last 10 years.

Evidence is already abundant as to the economic impact of these new technologies. The ability to use them efficiently is likely to become the defining basis of competitive advantage and an important differentiating strategy for companies.

Impact of new technologies

The new technologies are becoming ever more visible and real in their macroeconomic impact, particularly in the US. Alan Greenspan, Chairman of the Federal Reserve, said recently: "The most recent wave of technology has engendered a pronounced rise in US rates of return on high-tech investments, which has led to a stepped-up pace of capital deepening and increased productivity growth."

When Greenspan first addressed these issues a few years ago, many observers were dubious about the overall economic impact of the new



Speakers at the Autumn Paper (l to r): John Taysam, Philippa Foster Back (chair), Per Larsson, Ruth Porat, Sir David Walker

technologies because evidence for a significant impact could not readily be found in the economic data. But Greenspan, relying on his famous intuition and grasp of US economic data, conjectured that the sheer profusion of technological innovation in the US was bound to be having a significant impact. He was, as ever, percipient. US productivity has increased and recent data offers increasingly clear support for this.

Federal Reserve economists suggests that productivity growth in the US has increased by at least one percentage point in the second half of the 1990s and that most of this is due to information technology. At one level, this may seem a small number. But if this productivity growth of 1% is sustained, it is 1% of a \$10 trn economy, generating extra economic output of almost \$100bn a year in perpetuity.

Similar improvements in productivity have not yet shown up in data for other countries. This is partly because investment levels in IT have lagged those in the US. There is some evidence that a minimum critical mass of technology investment is needed to exploit fully the economic benefits of connectivity which rely importantly on 'network effects'.

It may be that capital stock levels in Europe and elsewhere need to catch up with those in the US before productivity gains become apparent.

As we will discuss later, lower levels of IT stock pose both a huge challenge and a huge opportunity for UK and Continental European businesses in the years to come.

Application in business

To follow is a quote from the 2000 Economic Report of the US President: "The internet plays a significant role today in providing new distribution channels for wholesale transactions between businesses. By one estimate, business-to-business (B2B) e-commerce is expected to grow from \$43bn in 1998 to over \$3 trn by 2003.

Using the internet, companies can automate the order process and reduce costs. One key supplier of computer components had routinely been receiving orders by phone or facsimile from several hundred customers all over the world. Processing these orders was cumbersome, and moving several hundred of these customers to a web-based solution promised to improve customer

Business-to-business
e-commerce is
expected to grow
from \$43bn in
1998 to over
\$3trn by 2003

service and give managers better access to information on the status of orders. The firm built a website targeted to these customers and soon was able to move \$1bn in orders per month online."

The report gives just one example of a company achieving dramatic increases in operating efficiency, identifying new markets and taking a decisive step ahead of the competition. In general, a complex product specification for a customised product is likely to be far more error-prone when carried out via telephone or fax than when done through the internet. In one US example, the error rate for product configurations fell from 25% to just under 2%, resulting in savings in operating costs of more than \$300m a year.

Cases similar to this abound in Europe. But the opportunity goes beyond this to the full exploitation of the power of connectivity and the information that it generates to create genuinely new ways of doing new business, rather than regarding the technology as just a way of doing existing business, only faster, cheaper and better.

One example made possible by glob-



Guests enjoy the evening

al connectivity is the ease with which larger numbers of buyers and sellers can be reached in a centralised electronic location in an online auction.

The entire purchasing process can now be put out to online tender (or auction) to take advantage of fluctuations in the market prices of your inputs in 'real-time'. One company, for example, achieved cost savings of about 20% by conducting an online 'reverse auction' for its requirements for printed circuit boards. Here, the creation of the auction capability allowed it to connect with other suppliers worldwide.

This also created a demand for an additional service – the firm had to be confident that the global suppliers identified could meet quality and other requirements and someone had to perform this certification.

This points to the fact that in the new information age there will be a significant role for new information gatherers of this kind – or 'infomediaries', as they are sometimes called. Note also that for new suppliers to participate in the online auction, they will need to ensure that their technology and processes are compatible with the purchasing companies. In general, there is a huge onus on all companies to upgrade their processes so they can participate in these new online markets.

This use of information technology can be both an opportunity and a threat. Existing suppliers must be aware that there is a large fringe of potential competition that is limited only by its ability to tap into the global electronic network. And even efficient suppliers must be concerned that new entrants into their business can erode their competitive edge.

Success stories

Intel has successfully effected the transition to e-business. Over the past two years, the company has shifted some 75% of its orders online. Quarterly sales have jumped from \$5.9bn, when the programme was launched, to \$8.3bn in the most recent quarter. Intel employs no more sales staff than it did, and order errors have fallen by 75%. The CEO now wants to make Intel into a '100% e-corporation' by automating internal business processes as well as its supply chain.

Intel's CEO says: "Progressive use of information technology will distinguish the winners from the losers – not only in



Discussing the evening's speeches

the dotcom world, but also throughout every manufacturing and service sector in the global economy."

However, even technological prowess of this high order is not sufficient to guarantee immunity from market volatility – recent earnings disappointments have caused Intel stock to fall from a recent high of \$75 to current levels of about \$35. Notwithstanding this recent volatility, the Intel stock price is still up roughly five-fold since 1995.

Technology and P/E multiples

Let's now turn to the impact of new technology in generating higher multiples for your stock. Polarisation of value in the equity markets has become a fact of life in the last few years, and size and technological prowess are important drivers of this polarisation.

The largest organisations in the MSCI Europe index have a P/E of 21.4, compared to a P/E of only 8.7 for the smallest firms. But technology is an even more important driver of valuations than size. The technology, media and telecom sectors (TMT), even after recent market volatility, have a P/E of 47.9. This compares to an average P/E for all stocks of 17.9, and a P/E for the least highly rated sectors of 10.3.

This means that the difference in the stock price for a company with earnings per share of £1 is more than £37. These P/E multiple differences have been growing with time – the TMT sector, all importantly influenced by the new technologies, has seen the greatest multiple expansion.

This represents a real challenge for many businesses. Technology makes you bigger and size, in turn, brings its own benefits in multiple expansion, allowing you to acquire even better

technological capabilities, in a virtuous circle for those companies that have mastered the new realities.

We believe 'technological edge' will be a key driver of equity market performance going forward. This work is an extension of Morgan Stanley Dean Witter's Competitive Edge work of five years ago, in which we tried to identify firms globally that had a significant competitive advantage.

Recently we have zeroed in on the technological basis of competitive edge. We considered companies that were using technology as a way to deliver a competitive edge to their customers.

For the creators and sellers of technology a strong position in critical technologies and, more important, a culture and business model to translate that position into leadership in the future was considered a key. For technology users technology is often considered as a commodity, freely available to all. But some companies seem to be able to leverage technology to create a sustainable competitive advantage because they have the right systems, processes and culture.

In MSDW's study of 2,000 firms, 279 were found to have the 'technology edge'. These were further narrowed down to 26 stock names that we thought should be core holdings in any portfolio that attempts to discriminate between companies on the basis of their use of technology.

The resulting list is a disparate one. It includes technology firms (Cisco, America Online), car manufacturers (Ford), energy companies (Royal Dutch Petroleum) and financial institutions (American International Group (AIG) and Mellon Financial). The broad industry range of MSDW's identified 'technol-

ogy edge' companies suggests clearly that any company in any sector can achieve a technology edge.

Business-to-business exchange

This need to develop a technology edge has transformed the approach many companies have taken to connectivity with their suppliers and their customers. Perhaps most strikingly of all it has even altered interactions with competitors, as evidenced by the proliferation of B2B exchanges in which businesses participate with their most significant rivals.

In some cases the value associated with these exchanges has been quite controversial. But to us there is no clearer evidence of connectivity than the ability to participate in this new form of electronic commerce. Even if full participation in an exchange is not the eventual outcome for businesses, the very act of making yourself 'exchange-compatible' will open up new and important avenues of connectivity. In fact the technological requirements for participation in a B2B exchange, either as a founding member or a participant, go a long way towards enabling a business for full connectivity to the electronic marketplace.

An internet enabled B2B exchange is fundamentally different from a financial exchange that will rarely change the fundamental business patterns of market participants. Unlike a commodity or financial exchange, it does not merely facilitate transactions, but if designed correctly can become a key part of the business process. The key differentiating factor in a B2B exchange is the fact that transactions are 'information rich'. Each order or transaction generates information that can be stored to build up a repository of potentially valuable information that can be analysed to streamline business processes in the future. Further, the fact that a transaction is occurring can intelligently trigger other necessary transactions and processes automatically.

Take for example the online global air freight exchange GF-X.com. Its website at GF-X.com lists some of the services available – electronic scheduling and routing, real-time capacity availability and pricing, intelligent search capabilities. It is a neutral, one-stop shop in which GF-X.com provides a single neutral portal for obtaining comparative information on routes and capacity availability. It also offers a forum for ini-

tiating transactions, reverse markets, auctions and permanent bookings of global air freight capacity. Note the additional services of 'electronic scheduling and delivery services', and 'search capabilities' which are unique to internet-based, information-rich exchanges. One can imagine many additional services that an internet-based B2B exchange might offer – credit risk management and assessment, catalogue management and so on.

The important point here is to look beyond the first round of creation of a new and most efficient exchange mechanism, although these are well understood and include better information, more buyers and sellers and lower costs of excess inventory. The second order effects that arise as business processes are transformed are the keys to the larger value that will be created by the new B2B exchanges. The ability to use the information from exchange transactions effectively in the conduct of one's own business might well become a key basis of competitive advantage in the emerging new economy. And this is not a zero sum game because all participants potentially can benefit from the transformation of business processes and systems offered by B2B e-commerce.

The process of adaptation

Let's now turn to the challenges facing UK and European businesses in adapting to these changes. An important index of the ability of companies in any economy to adapt successfully to the challenges of new, connected ways of doing business is the amount of information technology equipment they have available.

Data on IT suggests that UK and Continental European corporates significantly lag their US counterparts. On our estimates, the gap between the Europe and the US in the capital stock of IT is in excess of \$200bn.

Closing this gap will be challenging enough, but it is made even more challenging by noting that rates of growth for capital spending in IT in Europe have been slower than in the US in the last few years – 7% in the US, against 5.5% in Europe. Closing the gap will therefore require a higher rate of growth than in the US and analysts calculate that to close this gap with the US over the next five years would require additional spending of more than \$250bn a year.

Some firms seem to be able to leverage technology to create a sustainable competitive advantage because they have the right systems, processes and culture

To the extent that IT spending in the US accelerates relative to the trend of the last few years, then the task for Europeans will become even harder. And, of course, the challenge relates not only to the scale of new technology investment, but also its quality.

New technology and business organisations – questions for you

In the short-term at least, there is a demand/supply mismatch in relation to the resources needed to furnish business with robust, scalable and leading edge technologies. Many firms are saddled with 'legacy' software systems that were developed – now we can say with 20/20 hindsight – with inadequate attention to the internal compatibility of their systems, or for the ease with which they could allow external connectivity. In a recent survey of IT executives the Forrester Group, the research company, found that 72% of global IT executives thought that software integration 'is critically important to their e-commerce strategy'. It was also noted that 'software integration is hard work', and the study identified four key product capabilities that are required as companies integrate their systems.

These are:

- an industry standard infrastructure;
- universal connectivity;
- scalability to cope with the growth in e-commerce transactions; and
- accessible and easy to understand business tools that can be used by everybody within the company, not just IT professionals.

Just listing these requirements in this manner will bring home to many of you how far away many companies are from this state of technological receptivity and preparedness.

Transforming your business

At some level digitalising your firm and enabling connectivity can transform the very nature of an organisation. As processes become more standardised, digitised and automated, the sources of a firm's comparative advantage will become even more clearly defined.

Engaging in the digital transformation of your business to allow the electronic conduct of all of your business processes will expose the fact that a number of firms undertake many business functions that they are not particularly good at and that could quite easily be done by somebody else.

While the idea of outsourcing is not new, digital transformation and connectivity enable a much wider range of functions to be outsourced.

For example, it is now possible to outsource a large part of the human resources (HR) function – the processing-intensive parts of the HR function that deal with payroll, statutory requirements and the like can be quite easily be done outside the firm. This can leave the HR personnel who are retained within the company with a greater ability to focus on strategic HR management and on the attraction and retention of the best talent.

Performing any function internally that can be better performed externally will no longer be a viable option, and there will be no premium for performing commoditised services. These are some questions that I believe every business must confront in this new era:

- how efficiently is your e-commerce capability linked to both business units and corporate functions and to what extent has it become internalised and become part of your corporate DNA;
- have you identified all your commoditised activities (and not just business processes);
- could these commoditised activities be more effortlessly outsourced – are egos or institutional politics and the like standing in the way; and
- what new opportunities for your mainstream businesses does e-commerce open up, beyond improving the transactions of existing business? ■

Sir David Walker is Chairman of Morgan Stanley Dean Witter.