Societal

MAY 1999

FROM THE VALUE'S UNCERTAINTY TO THE VALUE OF UNCERTAINTY

By Jean-Florent Rérolle Ernst & Young partner, in charge of Corporate Finance and «Value Based Management «. He also lectures in corporate finance at the ESCP.

Has the financial market gone mad? A growing number of observers are beginning to question the market's ability to analyze available information correctly. How could one rationally justify the current market value of large groups currently recording losses? To give just one example, what kind of explanation could be given to the fact that the market value of AOL (America On Line) exceeded that of American Express in December 1998 to total US$50 billion, i.e. a P/E The PER [price earning ratio] is the relationship between the stock market price and profits per share. of 300?

The situation is, to say the least, uncomfortable. On the one hand, value creation seems more than ever on the top of companies' main preoccupation. On the other, value creation mechanisms appear increasingly to elude a comprehensible economic rationale. The companies which disregard this problem and concern themselves with value creation continue to use techniques or conventional scorecards despite their limitations and their clear inability to reflect what is a complex and changing reality.

New approaches should therefore be devised if we wish to solve the new puzzle of value creation. Given the extent of the upheaval in question, structured and accepted approaches are unlikely to be developed quickly. However, it is already possible to outline a sketch of the new world of value creation towards which we are steaming at full speed.

The value mantra

In recent years, growing pressure from active and professional international investors has caused European companies to express a clear and avowed interest in creating value. The first type of attitude, a minimalist one, entails implementing value creation indicators (Economic Profit, EVATM, VEC and ROCE etc.) The Economic Profit, (or EVAÓ [economic value added]) is the difference between operating results after taxes and the capital expense aimed at paying fund providers. The capital expense is calculated by multiplying the economic assets of opening by the cost of the capital to the company; ROCE (return on capital employed) is the operating result after taxes in relation to the economic assets of opening.. They are used as a vector for communication aimed at investors. The second, more voluntary reaction uses frequently rigid systems and procedures structured around these indicators with the aim of providing a framework for management decisions and for comprising part of managers' remuneration packages according to their compliance with imposed financial regulations. Both these approaches are very poorly suited to the characteristics of the modern economy.

Setting up sensors does not in itself lead to value creation. The conventionally

used indicators frequently have only an historic and accounting function. Furthermore, the correlation between developments in these indicators over the short term and trends in companies' stock market value has never been demonstrated to unanimous satisfaction. Indicators are included in financial communications (which themselves are very conventional) and are therefore far from meeting investors' requirements. The information given out remains backward looking, event-based and of a general and accounting nature, whereas the shareholder is attempting to think ahead about the future of his or her investment on an on-going basis in light of economic and strategic data and, if possible, with confidential analyses.

A further, more activist, approach is aimed at motivating managers to reduce the economic assets they have been entrusted with as much as possible. The key words are: reduce working capital requirements, withdraw from operations with below-par profitability, optimize investments and invest in assets with higher profitability levels than the cost of capital. Such systems are based on short-term, accounting performance indicators and generally include value based compensation motivation packages, which may often cause managers to under-invest.

For both these approaches overlook a critical point. A company's value is based on the investors' conviction that its management can create competitive advantages over the long term. The value of a company may be broken down into two parts: on the one hand, the value of current assets which result from its ability to generate a certain profitability in the future; on the other, the value of all future growth opportunities resulting from the cash flow of future investments. The latter depends on the investment rate, the profitability of new investments, the cost of financial resources and the duration of the competitive advantage during which the economic return will be higher than the cost of capital For a general presentation of company assessment methods, see *Evaluation d'entreprise : Principes et méthodes*, J-F. Rérolle, *Revue Fiduciaire Comptable* n°223, Novembers 1996.. At the end of the day, these elements boils down into the amount and the growth of the net operating result of the company.

The concept of the competitive advantage is vital: companies can create value only if they successfully build, maintain and develop competitive advantages. This concept has been widely developed by strategists. A financial equivalent is the concept of financial rent (or goodwill) defined as the company's ability to generate a economic rate of return above that of a given reference point This reference point may be intrinsic (company capital cost) or analogous (in relation to other companies in the sector). This basic principle will certainly remain unchanged. However, the new economic era that we have entered is radically changing the conditions under which this principle is applied.

A total change in the economic environment

The current financial volatility we can observe is merely the mirror of the growing instability of competitive advantages. They are not harder to develop than before. On the contrary, current economic and technical conditions make them frequently easier to create, especially in communications, information and services industries. It is, however, more complex to maintain a competitive advantage when two trends are combining to make it fundamentally unstable. The first is the growing influence of an intangible economy; the second the

emergence of the law of increasing returns.

We live in an intangible economy, which can be expressed in several ways:

· Product and service inter-penetration has ushered in a more complex exchange, which is hard to measure against conventional criteria because it integrates a growing proportion of information and emotions *Blur, the speed of change in the connected economy*, S.Davis and C.Meyer, Addison Wesley, 1998.. The need to establish a strong position on a market has caused radically new behavioral patterns. When Computer Associates International introduced its new accounting program, Simple Money, in 1993, the first million copies were distributed at no charge. Netscape gave its Internet browser for free to users to re-establish its market share.

· The creation of «business webs» each day unravels the conventional relationships that existed between partners or between competitors. It is now usual to witness two competing companies form an alliance to grab an opportunity or to see a company assist the growth of its suppliers or manufacturers of complementary products. For example, IBM and Apple created the Power PC together; Sun Microsystems established a $100 million capital risk fund to help start-ups specializing in products that complement Java; Intel has acquired holdings in 125 recently-established Silicon valley companies.

· The proportion of intangible capital in companies' economic assets is continuously growing, thereby making measurements of investment profitability more complex and uncertain. Industrial or service companies' market value may be ten or fifteen times higher than their tangible assets as listed in their accounts. The true value of Bill Gates' company does not appear in its accounts - it is elsewhere, in the company's intangible capital.

The emergence of a law of increasing returns is the second instance of a radical transformation of competitive conditions. The economist B. Arthur states in his book *Increasing returns and path dependence in the economy* , University of Michigan Press, 1994 that in an information economy characterized by its speed, its intangibles and its connectivity, a curious thing occurs in the classic, 'universal' law of diminishing returns: it doesn't apply! Although the manufacturing costs of a software program are considerable at the outset, duplication and transmission cost practically nothing. The challenge facing a hi-tech company is therefore to create a standard by increasing its market share as quickly as possible. Partners offering complementary products and services help in turn consolidate the standard, making the entire business web increase in value. It may be that this law of increasing returns might extend to economic sectors other than those directly related to information technology.

The emergence of standards and increasing returns are not in themselves a guarantee of stable competitive positions or value. On the contrary, we can observe a phenomenon whereby value moves quickly between companies within the same sector or between sectors. The phenomenon is in itself the reflection of more volatile competitive positions. Even in companies which manage to create value and emerge as market leaders, the financial, commercial and intellectual means of their competitors can quickly change the situation. We should not forget that speed is one of the major features of the new economy. We only have to think about Microsoft's recent tribulations which we all thought was invincible!

Conventional methods are insufficient

The relevance of conventional approaches to assess companies or measure performance is therefore seriously in question:
· How can we assess a company's long-term value This is the very issue of calculating end value in an assessment when dealing with increasing returns and ephemeral competitive advantages that need to be constantly renewed?
· How do we take account of operating risks in new markets which, by definition, have only a low systemic risk? How can we integrate shared risks in a business web?
· How should financial structure be dealt with, given that the equity value (and its growth) tends to be far more significant than that of debt, thereby restricting the value of tax savings implicitly included in the cost of capital as generally calculated?
· Which pricing and profitability levels should be included in the analysis given new commercial requirements: free products to lock-up a customer base, technical progress given for free to the customers, a widespread trend to lower prices, etc.
· How do we take account of the value of relations established with suppliers, competitors, customers, employees and decision-makers?
· How do we measure the value of a portfolio of company's options and ensure that it can be used for the greatest profit of its shareholders when the time comes to exercise them?

It can be seen that, generally speaking, the vital issue at stake is how to measure and manage intangible assets. A recent study P.Artus, F. Hubert, N. Verlé, *Caisse des Dépôts et Consignations*, n°98-20 17 July 1998. demonstrated that intangible assets have been valued in French companies at four times their book value in the last three years and that growth in the Tobin Q cannot be considered a matter of mere speculation, but must be analyzed as the market's ability to exceed outdated accounting conventions. Consequently, high-performance companies know that tangible assets tend to become 'liabilities' in a new economy that demands flexibility and mobility. This may explain the basis for development of such groups as Sidel (massive recourse to sub-contracting to manufacture goods) and may explain out-sourcing operations (IT and real estate).

The above difficulties in evaluation also apply to measuring performance. If the company's purpose is to create value, management control and compensation system must be based on indicators designed to have sufficient correlation with market value to ensure that line staff approve and use them.

From this point of view, methods based on accounting values can only distort the judgment of managers who use them. EVATM stipulates that utilized assets must generate at least the cost of capital. This is very attractive for mature and industrial companies with a negative goodwill. This measure is deleterious to all companies that must develop their intangible assets (the majority of which cannot be re-evaluated to have them treated as tangible assets) and whose value depends first and foremost on the companies' and their executives' long-term performance and flexibility.

A new value framework

It is therefore urgent to develop a new value framework for this new economic environment. It is only by having a clear view of the system's critical components that companies will be able to consider requisite organizational and strategic modifications.

The key components of such a system are presented in the following diagram.

There are three vital points in this renewed vision.

1. The first concerns the manner in which value is created. Value always stems from the existence of a competitive advantage, although the advantage in question can no longer be defined as strictly as before. In a world of constant, profound and rapid change, companies must continuously reposition themselves. Companies can no longer develop a product, have it accepted by its initial customers and then extend it to other markets and eventually 'milk' its strategic segment. Companies' survival and expansion require mobility and innovation. The very nature of strategy is changing. How can we continue to claim to position a company in its environment when the company's very frontiers are gradually disappearing? In many sectors, the definition of strategy has become totally theoretical because the fate of these companies depends more on the future of the web of which they are part than on their own On the opposite, interdependence of companies constitutes a major risk as suggested by the Y2K's fear as it is not sufficient to be prepared : your partners have to be too. . Strategic decisions are taken in more tactical, short-term ways. The factors that count are the excellence of strategy execution, the mobility and the mobilization of the entire organization. At the same time, action-driven companies must plan ahead for the future by developing portfolios of options and making sure that they will be able to exercise them when the time will come. The value of growth opportunities in a connected economy is becoming a vital factor in assessing companies. The more options the company buys or develops (i.e. research programs, limited investments to remain in competition or just, as in a poker game, to 'see' what the others have in hand or experimenting, etc.), the more flexible In this context, a company will prefer relying on equity funds rather than on debt the company is with regard to the future and the higher it is valued by its shareholders.

2. The second point applies to the nature of the assets in place. Creating value always entails making investment choices and ensuring that the ensuing profitability is enough given the risk taken. In the connected economy, however, companies must radically revise their definition of utilized assets. Tangible assets are too static to be considered a critical asset in an environment that favors flexibility. Intangible assets must therefore be given preference. The latter make it possible for the company to implement its strategy. Structural capital includes all the relationships the company has succeeded in weaving together with its customers (i.e., the influence of its brand and its «customer connections»), but also with its partners (suppliers, allies, etc.) to date. When we talk about structural capital, the term means more than customers alone. A company's value is based on the quality of the alliances it has developed or on the strategic or technical position that will enable it to develop such in the future (a company itself can be an option for a competitor). In addition, there is no need to insist on the importance of human and intellectual capital to the company. The performance of companies which have successfully implemented genuine management systems for these assets can attest to its fundamental role in the new economy (cf. the famous example of

Skandia, a Swedish insurance company which has been a pioneer in the field).

3. The third point applies to the links between the real market and the financial market. If the company's recognized value is insufficient, the company may no longer be able to finance its development. Not only will the company be unable to make the acquisitions ensuring more rapid growth, but it will also run the risk of staining its reputation and consequently find itself unable to attract the best human capital available (it should not be forgotten that talent can be paid more easily with stock options than through a salary). On the other hand, a recognized value far in excess of the value created may impose managerial pressure which is as pointless as it is unbearable. Management's role is therefore to reconcile these two values by implementing a financial marketing.

In this context, each company must opt for the most effective organization to ensure on-going change. General management must work in two directions:
· towards the financial market - by devising and implementing a relevant financial marketing
· towards the real market - by creating the conditions for effective strategy execution.

Financial marketing

The pre-eminence of financial markets is an underlying trend which companies should not under-estimate. This revolution has surreptitiously made company leaders and their financial directors change role from buyers of resources to equity vendors. Companies have to excel on their 'real' market - but also on their 'financial' market - to be competitive over the long term. Competition is very lively on both markets. We would be deluding ourselves if we thought we could blithely overlook the adverse consequences of one or other of these two battlefields.

Financial marketing should not be confused with financial or investors'communication *From Shareholder Communication to Financial Marketing*, Jean-Florent Rérolle, Ernst & Young Cahiers n°3, 1999. As recent events on financial markets have shown, 'conventional' communication has only a very limited role to play. This should come as no surprise. It should not be forgotten that it attempts to influence the behavior of particularly sophisticated players There is a consensus on the fact that markets are «semi-efficient», i.e. that the share price integrally and immediately reflects the information published for public consumption. . The task is therefore a hard one. If companies wish to have at least some influence over their most powerful shareholders, they must adopt a radically different approach.

A recent study by Ernst & Young Measures that matter, Ernst & Young LLP, 1997. in the USA showed that 35% of investment decisions were based on non-financial indicators. The most decisive concerned strategy execution (can the company apply its strategy, whatever it may be?), management credibility, quality of strategy, innovative capacity, the ability to attract and keep talented staff, market share, management experience, value-based compensation package and the quality of the company's main processes.

In this context, the issue is to:
· Develop a shareholder knowledge base. In addition to databases used to identify investors and their basic strategies, the company must organize itself

to implement an organization, technology and procedures systematically to collect shareholders' and observers' opinions and ideas about the company itself, but also about its main listed and unlisted competitors. Furthermore, the company's executive team must take a special interest in significant shareholders who decide on the share price and with whom on-going dialogue must be organized.
· Conduct regular studies of the financial market. It is possible to go further in understanding the community of shareholders. The Ernst & Young study mentioned above led to the development of a working method and, thanks to complex statistical techniques, allow a real analysis of the market in order to identify investors' expectations with regard to a given company and to compare them against their expectations for their main competitors. No one would think about launching a product without a prior market study. Why should we act differently on the financial market?
· Increase the number of analysts tracking the stock. Analysts are naturally an important target for company - not so much because of their influence to make recommendations (which is frequently over-estimated), but because they are a channel of information from which investors can find data which have already been processed.
· Bring investors' expectations about the company's abilities closer in by identifying the expected return of the investor. Investing in projects which return is higher than the cost of capital and striving to ensure that this difference remains positive and increasing This is a standard formula in EVA-type approaches. are not enough to create shareholder value. The company's share price integrates the anticipated profitability of all subsequent investments. If it transpires that investments will generate lower profitability than previously planned by the financial community, despite having a positive EVA, the share price will necessarily fall.

The growing porosity in the frontiers between the company and the outside world and the development of business webs are both strategic requirements in the new economy and constraints for shareholder marketing. The company will have to continue to develop relations with its shareholders on the basis of its strategic and organizational ability to generate options and execute, and will have to give it up its easy, but ineffective, advertising messages.

Strategy execution

In addition to the on-going search for greater osmosis between the real and financial markets, companies must excel in strategy execution.

New models of organization are becoming vital in the new connected market. They will give priority to adaptability, innovation, flexibility, experimentation and permeability of frontiers so as better to merge into environments with similar features. True effectiveness will stem from managers' ability to create organizations verging on chaos, to resist centralization, thereby placing decision-making authority on the periphery where the company's action lies. This situation will raise formidable issues of strategy consistency unless a clear vision is assigned to all the numerous decision-making centers. Value discipline is a vital compass to help companies steer their way through.

Traditional planning has been made basically illusory thanks to the radical, on-going changes in the economy and technology and has therefore become secondary in relation to strategy implementation. Value creation in a connected

economy requires:

· the introduction of financial aspects in strategic analysis. Systematic application of financial aspects in the decision-making process makes it possible not only to better understand where value is created and destroyed, but also to plan ahead for operational risks. Evaluation must find its true role within the framework of value discipline: that of a decision-making tool. This is less a matter of knowing what the value is than or trying to understand how it is developed. From this point of view, classical methods turn out to be too general to take account of the complexity of the economic environment. We could mention among the means of improving the situation *La création de valeur dans une économie connectée*, Jean-Florent Rérolle, *Analyse Financière*, September 1998 the use of «net adjusted present value», probability-based simulation models (as Monte Carlo models) and AxiaTM, a performance measurement tool developed Ernst & Young whose correlation with the stock market price is much greater than EVATM.

· giving priority to organizational and strategic flexibility. The implementation of an option based matrix for managerial choices is extremely useful ibid.. Executives must systematically identify and develop portfolios of options. As in all investment choices, it is possible to implement documented procedures in which the determining factors in the value of a real option are clearly quantified. These include investment opportunity duration (existence of an option), current value of desired cash flow if the option is exercised, value of the investment to be made in the future (exercise price), uncertainty of desired cash flows (volatility) and the cost of the expectation (risk of seeing a competitor acquire a position on the market, for example). Strategies to increase the value of these options are subsequently defined. They are then regularly monitored to ensure that the option can be exercised or abandoned at the most appropriate moment. This form of options gymnastics will be one of the key competencies in tomorrow's organizations.

· adopting a significant financial policy. Naturally, operational decisions must be made in tandem with consistent, significant policies. Financing decisions (dividend policy, share repurchase, cessions, financial structure, etc.) do not create value in themselves. On the contrary, they support industrial decisions and are used to send strong signals to the market. For example, the decision to repurchase shares is part of a rationale of maturing company which does not enjoy enough investment opportunities to use a plethora of cash. A company with too high debt levels would decide to reduce its dividends to signal to the market about its decision to adopt a more reasonable. Naturally enough, the adroit use of these signals is a delicate issue and requires a firm grasp of how financial markets operate in general and of the behavior of the company's shareholders in particular.

· monitoring progress achieved. The complexity of the environment requires that value created be monitored not only by financial measurement, but also by non-financial indicators that recognize the importance of intangible assets in the value of our companies. Value management still consists too often in implementing one or more financial indicators around which mobilization is organized, without taking the effort to understand strategic, organizational and human factors that enable a company to create value over the long term. On the contrary, it is on these factors that we must concentrate after understanding their link with shareholder value. One of the most effective techniques in

identifying these factors is the value scorecard for each company strategic center. As part of a clearly participating approach The balanced scorecard, R.Kaplan et D.Norton, Harvard Business School Press, 1996., this technique consists of establishing a consensus within the executive team on the basis of strategic objectives and competitive advantages required for success. The main action levers in a shareholder / customer / process / human resources outlook and their interactions are then identified within the framework of value creation. A few relevant indicators are then defined against the four main axes described above. These scorecards can then be drilled down in the entire organization.

Conclusion

The pre-eminence of financial markets is an underlying trend which companies should not under-estimate. Firstly, the likely bankruptcy of our retirement systems will inexorably lead to a situation resembling the USA and its pension funds. Secondly, the Euro and the emergence of global financial markets will make it much easier to compare European companies, thereby accentuating the intensity of their struggle to access financial resources. The mediocre will necessarily see their situation worsen. Finally, the development of financial markets will profit from the need to offer employees shares and stock options to attract the best people.

Executives will have to revise their attitudes radically in light of the rapid changes brought about by the connected economy. The greatest intellectual revolution they will have to undergo is the acceptance of a market sanction and the search for honest, balanced dialogue with investors. This market logic should not be too difficult to impose given that we can already see that the way real markets function is gradually becoming close to financial markets, especially in the way prices are set, along with quality and quantity levels and the rapid exchanges of information between consumers and companies.

Given an environment which is increasingly difficult to master, companies will have no choice but to experiment and constantly renew their relations both with their customers and their consumers to satisfy them more efficiently. This is the conceptual, cultural and organizational ability to adaptation that is called for by the Value Discipline Expression used by Ernst & Young to describe «Value Based Management» (see *Les Echos* dated 24 April 1998 and the March 1998 supplement in the *Business Digest*).

INSERT
The Amazon.com model

The Amazon.com / Barnes & Noble match can be used better to understand the transformation occurring in value creation. Both companies are leading booksellers, although each has a different development model. B&N is a conventional bookstore; Amazon.com is the world's biggest virtual bookseller. The former's turnover totaled US$ 3.1 billion, i.e., 5.7 times that of the latter (US$ 542 million). Despite the difference in scale, B&N's market value amounted to US$ 2.2 billion in December 1998, compared to US$ 11.1 billion for its electronic rival. How can be explain this discrepancy which has further increased in recent weeks with the extraordinary surge in Internet-related stock? A more detailed analysis of both adversaries clearly shows that this difference is more than justified.

The two companies have clearly different growth outlooks. Amazon.com is fully part of tomorrow's commerce practice. Forrester Research Inc. estimates that electronic commerce will amount to US$ 333 billion in 2002 in the USA alone, i.e., 2.3% of Gross Domestic Product. It is believed that E-business will account for 6% of GDP in less than ten years' time. A major proportion (20%-60%) of sales by several industries will be made electronically. IT products and books will be the most affected by this trend.

Offering over three million titles (compared to B&N's 175,000), Amazon.com is considered one of the model precursors of tomorrow's electronic commerce. With an extremely user-friendly interface, Amazon.com features all the offerings of the connected economy era:

· it operates 24 hours a day in real time for a worldwide customer base

· it is interactive; visitors can obtain information on a book, as well as on those which have been ordered by other customers at the same time. Customers can read extracts and criticism from other readers as well as reactions from authors

· the system learns, anticipates, filters and tailors its service: once listed on the site, customers are regularly kept informed of new work published on the same theme. Amazon.com aficionados are a true virtual community and are very attached to the concept, as demonstrated by the retention rate: 64% of all orders are made by former customers; the rate of book returns is 2% (compared to 30% for its competitor).

Amazon.com recorded sales growth of 300%; B&N recorded 10% growth in sales. The platform developed by Amazon enables it to extend its sales to other products and quickly acquire very strong competitive positions on new markets. For example, Amazon displaced the sector's leading CD vendor, Cdnow, only three months after deciding to sell CD's. Several directions for growth are under study: electronics, games, software, clothes, gifts, travel, subscriptions, etc. Amazon.com has developed a portfolio of options which it will exercise as and when the market matures. Investors are aware of this and have expressed it in the share price.

In addition to this growth perspective, the two companies have distinctly different financial dynamics. Amazon.com generates a positive cash flow, in contrast to B&N, which must invest major resources in operations. To confront an Internet site, B&N has 1011 stores. Amazon's inventory amounts to US$ 17 million, i.e., 2% of its competitor's. Stock rotates 24 times a year (compared to three times at B&N). The terms of payment for its suppliers make it possible to have overflowing cash assets that are more than sufficient to cover operational requirements despite its growth. In the last quarter of 1998, Amazon used up US$ 600,000 in cash, but its customer base increased by 37%!