A New Paradigm for Managing Shareholder Value

John Ballow, Roland Burgman, Göran Roos and Michael Molnar

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A staggering proportion of enterprise value depends not on current operations, but expectations concerning growth opportunities, what Accenture calls future value. Much of that future value depends, in turn, not on the resources (assets)[1] that traditional accounting practice handles well—monetary and physical assets—but on the resources it hardly handles at all—intangible and intellectual capital. And many of the most successful companies in the last decade are organized around new business models like value shops and value networks. In this research report we discuss these important issues and introduce a new methodology for managing shareholder value, one that manages all components of valuation by managing all of the company's resources.

Introduction

If anything has changed in the business world over the last couple of decades, it is the pace of business change. Yesterday's high performers are often today's laggards, if one can still find them listed at all. Many of yesterday's shining stars, whether in the realm of business thought or business action, mistook what was superficially new for what was really new, responding to the cacophony of boom and bust rather than to the steady creak of a tectonic shift.

Companies that aspire to sustainable high performance must attend to sustained changes in business reality, according to Accenture research. In an ongoing collaborative research effort between Accenture and AssetEconomics, a leading think tank focused on the drivers of enterprise valuation, we have identified three distinct though related sustained shifts. First, how investors value companies has changed, seemingly irrevocably—they are now placing enormous weight not on the value of current operations but on the expectations for future growth. Second, many of the most successful companies in the US and world economy are more dependent on intangibles and intellectual capital for creating shareholder value than the old mainstays of monetary and physical resources. Third, many of these same companies are using business models other than the once-ubiquitous value chain.

Because of these fundamental sustained changes, we believe the task of managing shareholder wealth also has altered, requiring innovative, more expansive ways of thinking about resources and how they can be used to create value for today and tomorrow. Management that ignores the implications of these changes risks mismanaging both the most important component of their valuation as well as their most important value-creating resources. By introducing the Future Value Management™ Methodology (or FVM™)[2], forward-thinking executives now have a tool to identify, measure and manage the drivers of future value.

Future value: A key component of shareholder value

Future value has a history. In their seminal 1961 paper, "Dividend Policy, Growth and the Valuation of Assets," Merton Miller and Franco Modigliani divided company value into two components:

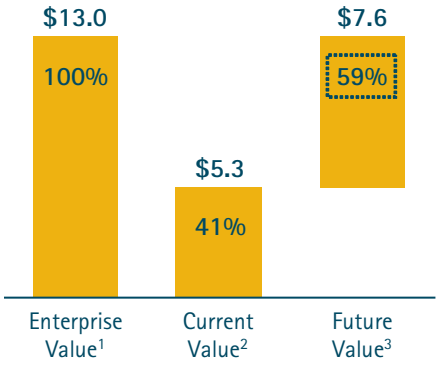
1. The present value of the uniform perpetual earnings on assets currently held, and

2. The present value of company opportunities for investments in real assets that will yield more than the normal market rate of return.[3]

Share prices, then, rest on two sets of expectations: the first concerns returns on current assets; the second, returns on assets the company is in position to acquire. On the basis of this distinction, Carl Kester,[4] and Richard Brealey and Stewart Myers,[5] developed a model (subsequently known as the KBM model) that divided the market value of a company into the value of assets-in-place and the value of growth opportunities.

However, while the kernel of the concept of future value was formalized in 1961—that expectations about the future are a component of share prices—future value has never received the equal billing with current value it deserves from executives, analysts or shareholders in general.[6] So while executives typically know everything there is to know about how the market evaluates their company's current operations, they lack an equivalent framework for assessing how the market is assessing their company's future value. And then because they tend to follow the reliable maxim of sticking to what they know, they tend to ignore what often is the most significant component of their company's value. The competency they have,

Exhibit 1: Current Value vs. Future Value
(Russell 3000, May 2003)



1 Enterprise value equals market value of debt and equity less excess cash at May 30, 2003
2 Current value defined as NOPLAT/WACC and represents the present value of current operations in perpetuity
3 Future value is defined as enterprise value minus the value of current operations and represents future incremental value the market expects the company to create, beyond the value delivered by current operations

Source: Russell 3000 data, AssetEconomics, Inc.

managing current operations, is often not the competency they urgently need, getting a handle on future value.

We have found, for example, that as of May 2003,[7] future value accounted for 77 percent of market capitalization and 59 percent of the enterprise value[8] of the companies on the Russell 3000, an index that covers 98 percent of all listed US equities (see Exhibit 1).

Exhibit 2 shows that for some industry groups, the proportion of their value that is due to future value is even more staggering.[9] Future value as a percent of enterprise value is extremely high in the technology sector, with software and services, media, and technology hardware and equipment at or above 100 percent. It is also high in telecommunication services (87 percent), and automobiles and components, utilities and transportation (between 60 and 75 percent). Of the 22 industry groups, 12 have an enterprise value that is more than 50 percent reliant on future value. In fact, in terms of absolute value, the $7.6 trillion of future value represented in the Russell 3000's $13.0 trillion of enterprise value (59 percent) is greater than the Gross Domestic Product of every country other than the United States,[10] and even greater than the US federal debt.[11] Obviously, then, those companies that are in these industry groups—many of which are the growth sectors of the US and world economy, and those which aspire to being the lead companies in more stable sectors—have good reason to manage not only for today but for tomorrow, and to spend as much time, effort and expertise on positioning themselves for capturing growth opportunities as for managing current operations.

Exhibit 2: Future Value by Industry Group (Russell 3000, May 2003)

Industry Group	No. of Companies #	Current Value (CV) $ million	Future Value (FV) $ million	Enterprise Value (EV) $ million	FV as a Percent of EV %
Energy	113	$346,888	$394,896	$741,784	53.2%
Materials	134	$263,747	$298,577	$562,324	53.1%
Capital Goods	187	$518,050	$416,639	$934,689	44.6%
Commercial Services & Supplies	145	$164,674	$186,930	$351,604	53.2%
Transportation	52	$102,405	$287,745	$390,150	73.8%
Automobiles & Components	40	$88,607	$192,749	$281,356	68.5%
Consumer Durables & Apparel	122	$186,960	$36,215	$223,175	16.2%
Hotels, Restaurants & Leisure	79	$146,795	$66,140	$212,935	31.1%
Media	97	($47,143)	$776,438	$729,295	106.5%
Retailing	166	$479,462	$381,682	$861,144	44.3%
Food & Drug Retailing	28	$145,014	$46,173	$191,187	24.2%
Food, Beverage & Tobacco	70	$573,139	$172,745	$745,884	23.2%
Household & Personal Products	22	$142,871	$144,054	$286,925	50.2%
Health Care Equipment & Services	212	$317,986	$281,780	$599,766	47.0%
Pharmaceuticals & Biotech	169	$407,249	$667,742	$1,074,991	62.1%
Banks	288	$630,742	$124,255	$754,997	16.5%
Diversified Financials	64	$478,710	$167,958	$646,668	26.0%
Insurance	92	$296,581	$98,891	$395,472	25.0%
Software & Services	206	($374)	$519,025	$518,651	100.1%
Technology Hardware & Equipment	311	($273,259)	$1,285,411	$1,012,152	127.0%
Telecommunication Services	49	$89,295	$610,300	$699,595	87.2%
Utilities	99	$274,684	$481,348	$756,032	63.7%
Totals	**2,745**	**$5,333,083**	**$7,637,693**	**$12,970,776**	**58.9%**

Source: Russell 3000 data, AssetEconomics, Inc.

Intangible assets and intellectual capital: Important drivers of future value

Some of the assets that drive future value are intangibles and intellectual capital. And part of the reason that executives lack a framework for managing future value is that one of their main sources of information, the traditional accounting system, overlooks many intangibles and almost all types of intellectual capital.

Accounting practice reflects the business past, not the business present or future. Its worldview was formed during a time when businesses created value through tangible resources, such as buildings, equipment, or the transformation of raw materials into intermediate and finished products. In today's knowledge-based economy, companies are much more likely to create value by using intangibles and intellectual capital resources such as proprietary processes, brands, relationships and knowledge. As well as it has served business in the past, and as much as its resistance to fads has served to keep the trust of the investing public, accounting practice is now several decades behind business realities.

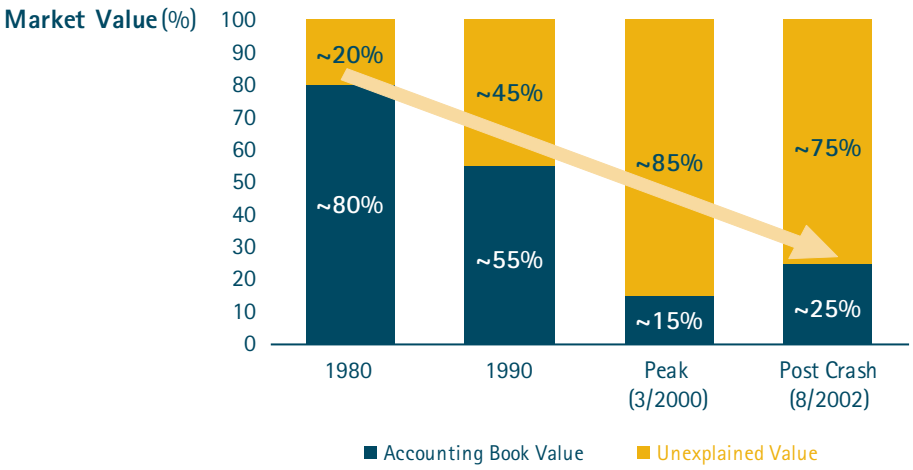
Exhibit 3 exhibits the decreasing relevance of accounting book value among S&P 500 companies between 1980 and 2002. It shows the market-to-book ratio: how much of a company's market value can be accounted for by the traditional accounting assets on the balance sheet. Traditional accounting assets made up 80 percent of market value 20 years ago—today they explain only 25 percent.

It has been argued that intangible assets, especially those that fall under the rubric of intellectual capital, can explain much of the premium between market value and book value. Whether all of it or merely some of it, companies have become more and more reliant on intangibles and intellectual capital at the same time that market value has dwarfed book value. This suggests that managing the former well may bring about a welcome increase in the latter.

Through our research and work with Accenture clients, we have seen that intellectual capital is especially important to the success of high-performance businesses, and that this class of resources deserves equal recognition alongside traditional economic resources. Without the side-by-side consideration of these resources, management will find it hard to argue for investing in them, difficult to develop current strategies around them, and too easy to sacrifice them under the pressure of other agendas and performance reviews.

How, for example, should a company that is breaking new and contested

Exhibit 3: The Growth of Unexplained Value (S&P 500, 1980-2002)



Sources:

Lev, Baruch. "Intangibles: Management, Measurement, and Reporting," Brookings Institution Press, 2001

Lev, Baruch. "Remarks on the Measurement, Valuation, and Reporting of Intangible Assets". Economic Policy Review (Federal Reserve Bank of New York), September 2003

Accenture Analysis

ground like eBay evaluate its legal capability? Given the issues it faces in electronic commerce, state sales tax applicability, process patenting, counterfeiting and debt recovery, it needs legal expertise, but in what shape? What advantages does centralization of these activities or the experience gained from being directly involved in these legal areas bring to the company? Should it build a department that can proactively participate in the formation of state and federal regulations? What are the advantages of having a robust, experienced and forward-thinking legal function in-house versus contracting for services when required? Whatever the right answers are, considering a legal department merely as another cost center without considering the

Exhibit 4: A Complete Resource Classification System

Resource Recognizability	Resource Form: Traditional Accounting Resources — Monetary	Traditional Accounting Resources — Physical	Intellectual Capital Resources — Relational	Intellectual Capital Resources — Organizational	Intellectual Capital Resources — Human
Tangible Resources	• Cash • Investments • Receivables/ debtors • Payables/creditors	• Property • Plant • Equipment • Inventory - Finished goods - WIP - Parts/raw materials	• Customer contracts • Formal alliances, JVs, supply agreements	• Software Systems • Formalized processes • Codified knowledge • Patents • Brands • Mastheads	• Management contracts • ESOP programs • LTI programs
Intangible Resources	• Credit ratings • Undrawn facilities • Borrowing capacity (relative to like companies, based on character) • Borrowing covenant slack • Receivables certainty • Quality of earnings • Balance sheet strength	• Plant flexibility • Plant modernity • Infrastructure surrounding plants • Stranded assets? • Tradability of assets? • Access rights • Balance sheet strength • Inventory (good and usable, obsolete, redundant)	• Customer loyalty - Behavioral - Attitudinal • Quality of supply contracts • Right to tender, right to compete, right to design • Strength of stakeholder support (including opinion leaders) • Networks • Regulatory imposts	• Structural appropriateness • Informal processes • Organizational reputation • Brand meaning (strength, stature) • Productivity of R&D process • Quality of corporate governance • Know how, show how • Tacit knowledge	• Top management quality • Top management experience • Ability to execute on strategy • Bench depth • Problem-solving ability • Employee loyalty - Behavioral - Attitudinal • Personnel reputation

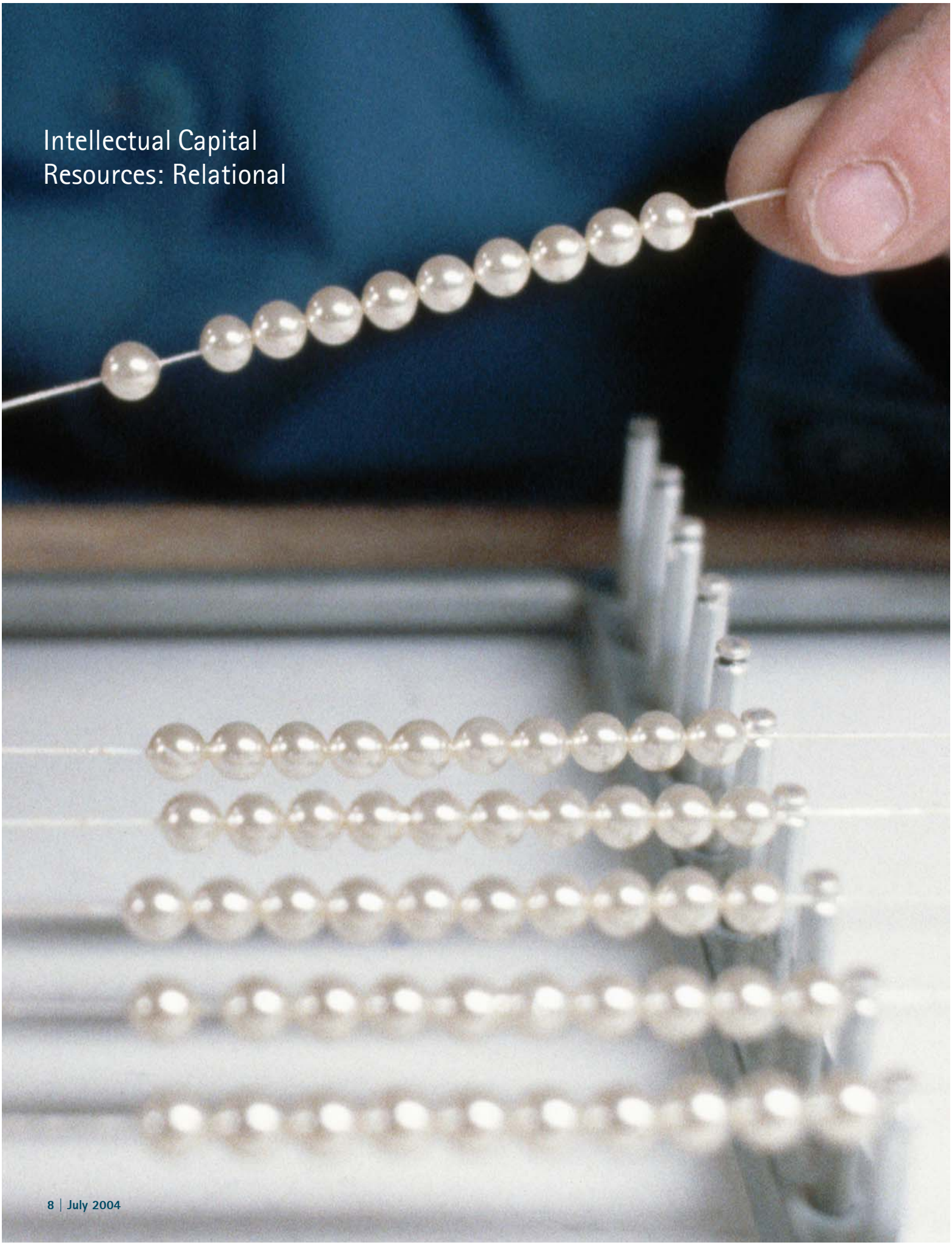
Source: AssetEconomics, Inc.

Note: Contents of each box are not all-inclusive but merely meant to show examples.

Tracked by traditional accounting systems

Not tracked by traditional accounting systems

Intellectual Capital Resources: Relational



value it provides exposes it to whip-sawed budgets, inadequate resources and the need to constantly justify its existence.

In Exhibit 4 we present a broader asset framework, distinguishing resource forms (the horizontal axis) from resource recognizability (the vertical axis). Whether a resource is tangible or intangible is a question about its recognition. Whether it is a traditional accounting resource (that is, monetary or physical) or an intellectual capital resource (relational, organizational or human) is another matter altogether, having to do with the resource form. So, then, while many intellectual capital resources are intangible, many are, in fact, tangible, such as customer contracts and codified knowledge. The same is true of traditional accounting resources.

The recognition of the three intellectual capital resource forms—relational, organizational and human—acknowledges that each form has different ownership, behavioral and control attributes—both from each other and especially from traditional accounting resources. Unlike monetary or physical resource forms, the three intellectual capital resource forms often have non-linear returns to scale, non-diminishing return behaviors and are not necessarily owned or controlled by the company (see Exhibit 5). For example, investing in equipment is not like investing in training for employees, for employees can leave and will take all of their training with them. In short, one cannot manage intellectual capital as one does money or a plant, as little as this may be acknowledged in conventional theory.[12]

Moreover, mastery of the varying attributes of resource forms is not sufficient for making reliable investment decisions. Management also must consider the many ways they can use their resources to create value, especially in regard to intellectual capital. For example, a company that has control of a group of competent people could deploy these resources in any of these five ways:

1. It can sell man-hours, the transformation of a human resource into a monetary resource.

2. It can have its people craft a prototype, the transformation of a human resource into a physical resource.

3. It can have its people generate a new customer, the transformation of a human resource into a relational resource.

Exhibit 5: Characteristics of Company Resources

	Traditional Accounting Resources		Intellectual Capital Resources		
	Monetary	Physical	Relational	Organizational	Human
	Cash and investments	Property and equipment	Key relationships	Proprietary processes and brands	Competent employees
Ownership Is the resource owned by the company?	Yes	Yes	No	Yes	No
Additive Does usage decrease resource balance?	Yes	Yes	No	No	No
Economic Return What type of economic return is applicable?	Diminishing marginal returns	Diminishing marginal returns	Increasing marginal returns followed by decreasing marginal returns	Increasing marginal returns followed by decreasing marginal returns	Increasing marginal returns
Network Economics Are network economics applicable?	No	Probably	Possibly	Possibly	No

Source: AssetEconomics, Inc.

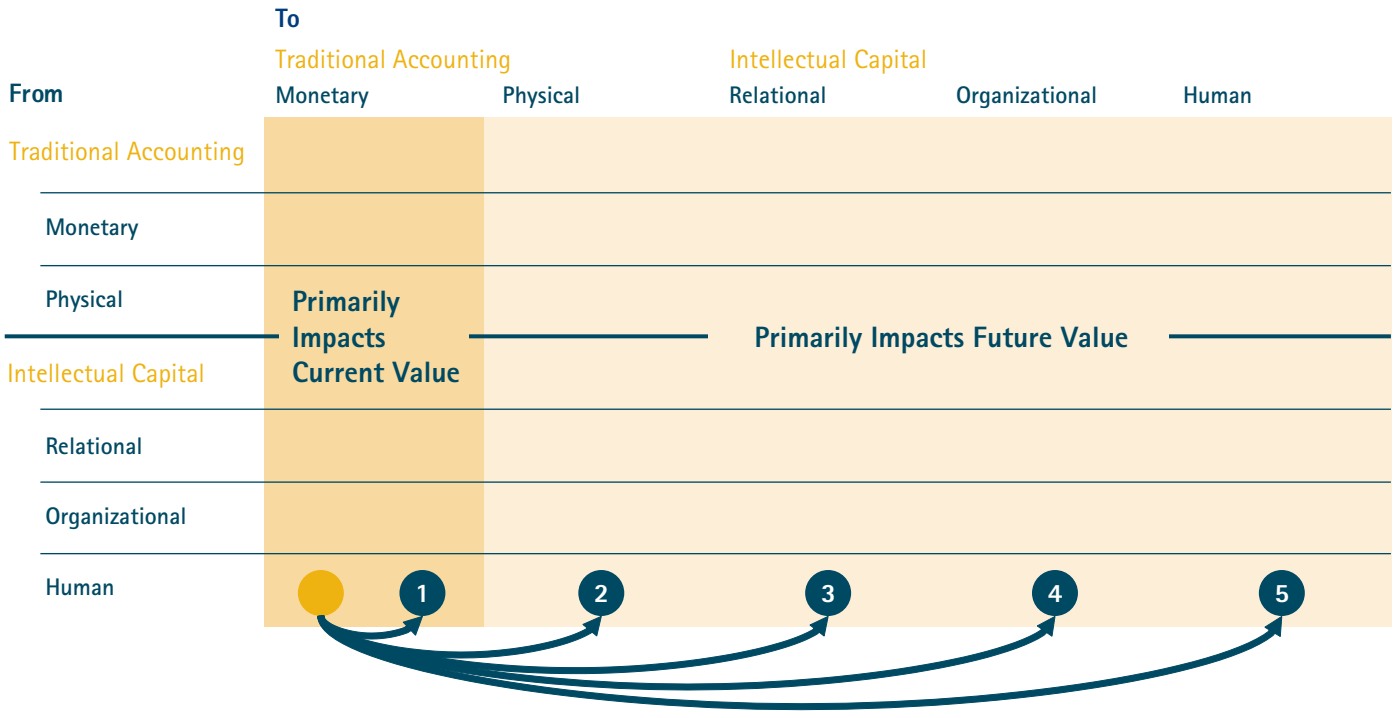
4. It can have its people design a new process, the transformation of a human resource into an organization resource.

5. It can have its people train another person, the transformation of a human resource into another human resource.

The manner in which resources are deployed and transformed will affect value in different ways. Ultimately, whatever transformations result in current period cash flows will affect current value. Exhibit 6 shows that transformations that have their end-points outside of the monetary column will primarily have an impact on future value. Using this example, option one primarily impacts current value whereas options two through five primarily impact future value because they are preparing the company to create cash in the future.

For most companies,[13] the crucial challenge is how to deploy intellectual capital, for up to now they have lacked a reliable methodology for identifying, measuring and managing intellectual capital resources.[14] In the United States, much of the debate in the field of accounting about tangibles is about how to define a resource for the purpose of recognizing it on the balance sheet.[15] While important, it is less relevant to the management challenges of today. What is relevant is how to identify and quantify the causal impact of investments in intangible and intellectual capital resources.

Exhibit 6: Transformation of Resources from One Form into Another



Source: Accenture and AssetEconomics, Inc.

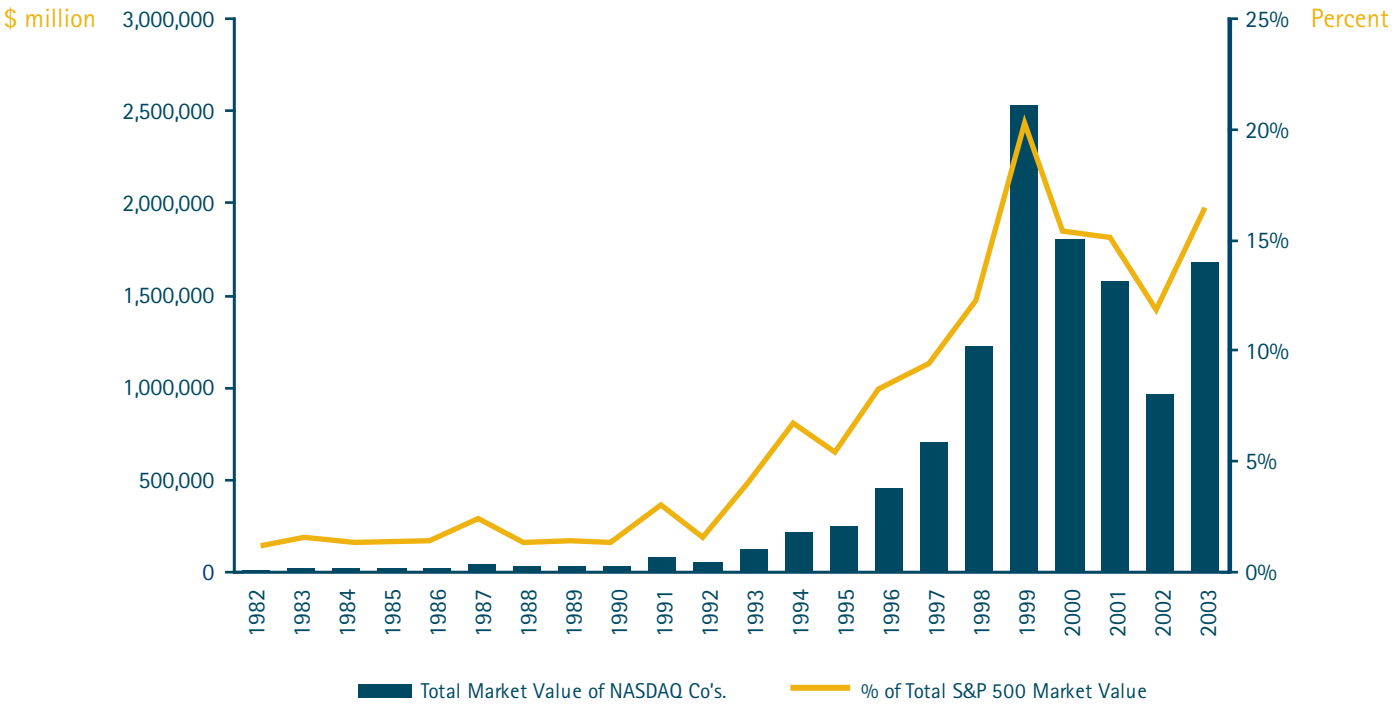
New business models rely on intellectual capital

Describing a business model as new is always somewhat misleading. Business has always been business and the ways of creating value have always been present. What is different today is that two value creating business model archetypes that have not figured large in the US economy are now much more prevalent, and economically important. In the mid-1990s Charles Stabell and Oystein Fjeldstad[16] introduced the value shop and value network as two competing organizing principles to the value chain associated with Michael Porter. Of course, value shops and value networks reach much farther back than the last decade, or even the last century. What had changed was that they had grown so important that it only took someone especially perceptive to notice that they worked differently than value chains.

In the past 10 years they have only grown more important. Value shop and value network companies (for example, Cisco, Microsoft, PeopleSoft, Comverse Technology, eBay, Amgen, Priceline, Sun Microsystems, Amazon and Yahoo!) now have some of the largest market capitalizations in the US economy. Many of these same companies have been part of the surge of NASDAQ-listed companies gaining admission into the S&P 500. NASDAQ-listed companies are more likely than NYSE-listed companies to depend on intellectual capital rather than physical resources to create competitive advantage, and are more likely to organize themselves as value shops or value networks. Before 1993, there were less than 25 NASDAQ-listed companies in the S&P 500, accounting for less than five percent of its equity market value. At the end of 2003, 74 companies were in the S&P 500, accounting for 16.3 percent of the index's value. Exhibits 7 and 8 show the number of the NASDAQ-listed companies in the S&P 500,[17] which covers 67.9 percent[18] of the market value of equities[19] in the United States.

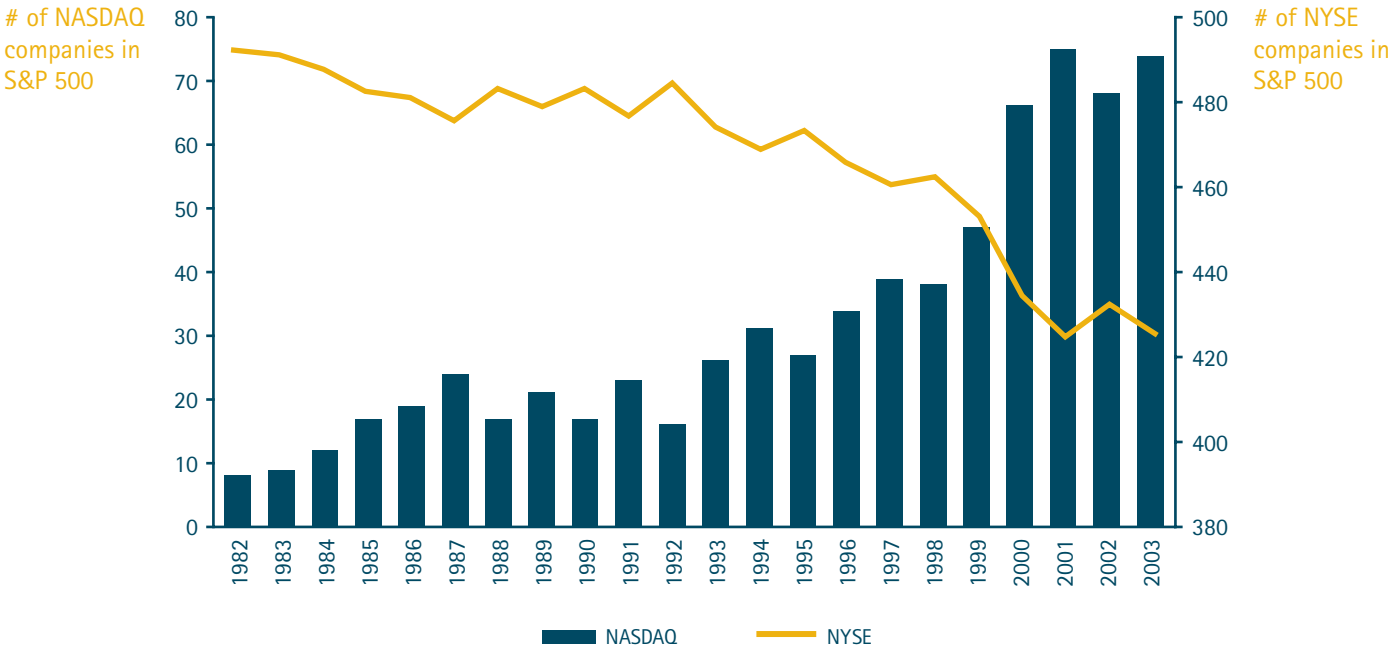
Exhibit 9 presents key attributes of the three value logics.[20] First, each business model has a different focus. The value chain focuses on transforming inputs to product or service outputs; the value shop focuses on solving a problem or exploiting an opportunity; and the value network focuses on mediating or causing transactions between customers. Second, they have quite different focuses for their major business processes. For example, for IT, best practice management for the various business models shifts—for the value chain from production productivity to production agility, for the value shop from decision support to knowledge management, and for the value network from infrastructure support to customer insight.[21] Finally, as shown in Exhibit 10, they tend to rely on different resources for creating competitive advantage and sustainable shareholder value. Whereas value chains rely on monetary and physical resources, value shops and networks rely more on intellectual capital resources.

Exhibit 7: Dollar and Percentage Value of NASDAQ Companies in the S&P 500 (1982-2003)



Source: AssetEconomics, Inc.

Exhibit 8: Comparing the Number of NASDAQ and NYSE Companies in the S&P 500 (1982-2003)



Source: AssetEconomics, Inc.

Exhibit 9: Types of Business Models: Value Chains, Shops and Networks

	Value Chain (Production)	Value Shop (Problem Solving)	Value Network (Mediation)
Key Capabilities	Chains must master all the key aspects of **making** products, **moving** them through distribution channels and **marketing** them to customers	Shops must be good at **matching** and **mobilizing** the right mix of resources (people, financial, knowledge) needed to solve a specific problem	Networks must excel at **monitoring** customer behaviors, clustering customers together, **mediating** exchanges between them and **multiplying** these exchanges by finding and exploiting new connections
Result	The ultimate result of the chain process is the **product**	The ultimate measure of the success of the shop process is the **outcome** that results from implementing a solution	The end result generated by value networks are value-creating **connections** between customers
Best Way to Price	It is essential for chains to understand their true **costs** and to make sure that how they price products realistically reflects these costs	Customers of shops pay for solutions to their problems and are typically prepared to pay based on the **value** of the solution and expertise received rather than the cost	The **rights** of usage or connection between customers is the best way for value networks to price their services
Source of New Value	Chains generate new value by **optimizing** the cost, time and quality of processes	Shops generate new value by capturing and exploiting **knowledge** about problems and their solutions	Networks generate new value by identifying new **clusters** of customers or customer usage patterns that enable them to multiply exchanges between customers
Key Question	For chains the key question is **how**: (for example) • To find customers for products? • To make the process more efficient? • To make the chain more responsive to changes in supply or demand?	For shops the key question is **what**: (for example) • Is the problem/opportunity and how can it be solved or exploited? • Resources are needed and how can they be mobilized? • Knowledge of the problem or opportunity do we have?	For networks the key question is **who**: (for example) • Do we need to bring into the network (or kick out)? • Are the good users of the network? • Can we sell excess capacity to?

Source: Chains, Shops and Networks: The Role of IS in New Models of Value Creation, Foundation Strategic Innovation report, Computer Sciences Corporation, 1998.

Exhibit 10: Basis for Competitive Advantage by Business Model

	Primary Business Model		
Resource Form	Value Chain	Value Shop	Value Network
Monetary	**Primary** basis for competitive advantage		
Physical	**Primary** basis for competitive advantage		**Secondary** basis for competitive advantage
Relational	**Secondary** basis for competitive advantage	**Secondary** basis for competitive advantage	**Primary** basis for competitive advantage
Organizational	**Secondary** basis for competitive advantage	**Secondary** basis for competitive advantage	**Primary** basis for competitive advantage
Human		**Primary** basis for competitive advantage	

Source: AssetEconomics, Inc.

Intellectual Capital Resources: Organizational

The case of eBay

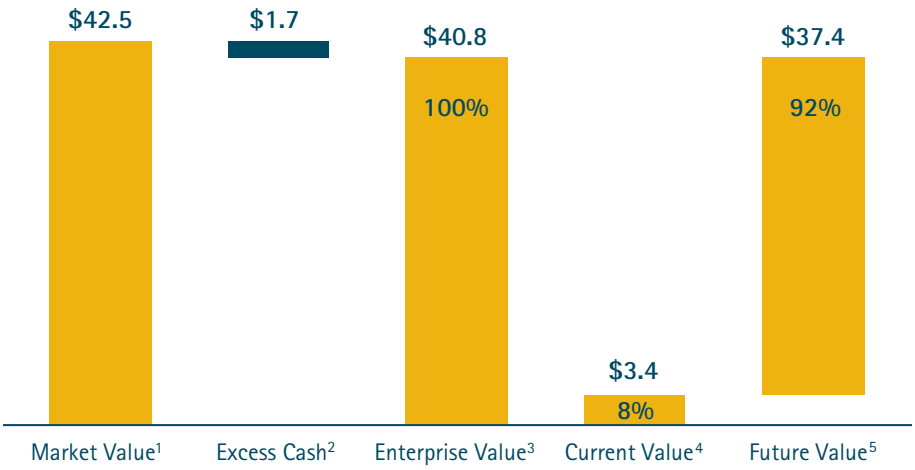
We have argued that companies seeking to become high-performance businesses need to recognize three new facts about doing business today:

1. Future value, although it generally has never received sufficient recognition from executives, analysts and shareholders, has always mattered. And with changes in the economy over the last decades, it matters so much that no one can safely continue to ignore it.

2. Intangibles and especially intellectual capital, although neglected by traditional accounting practice, play a large role in driving future value.

3. New business models like the value shop and value network depend more on intellectual capital than traditional accounting resources. Companies organized around these

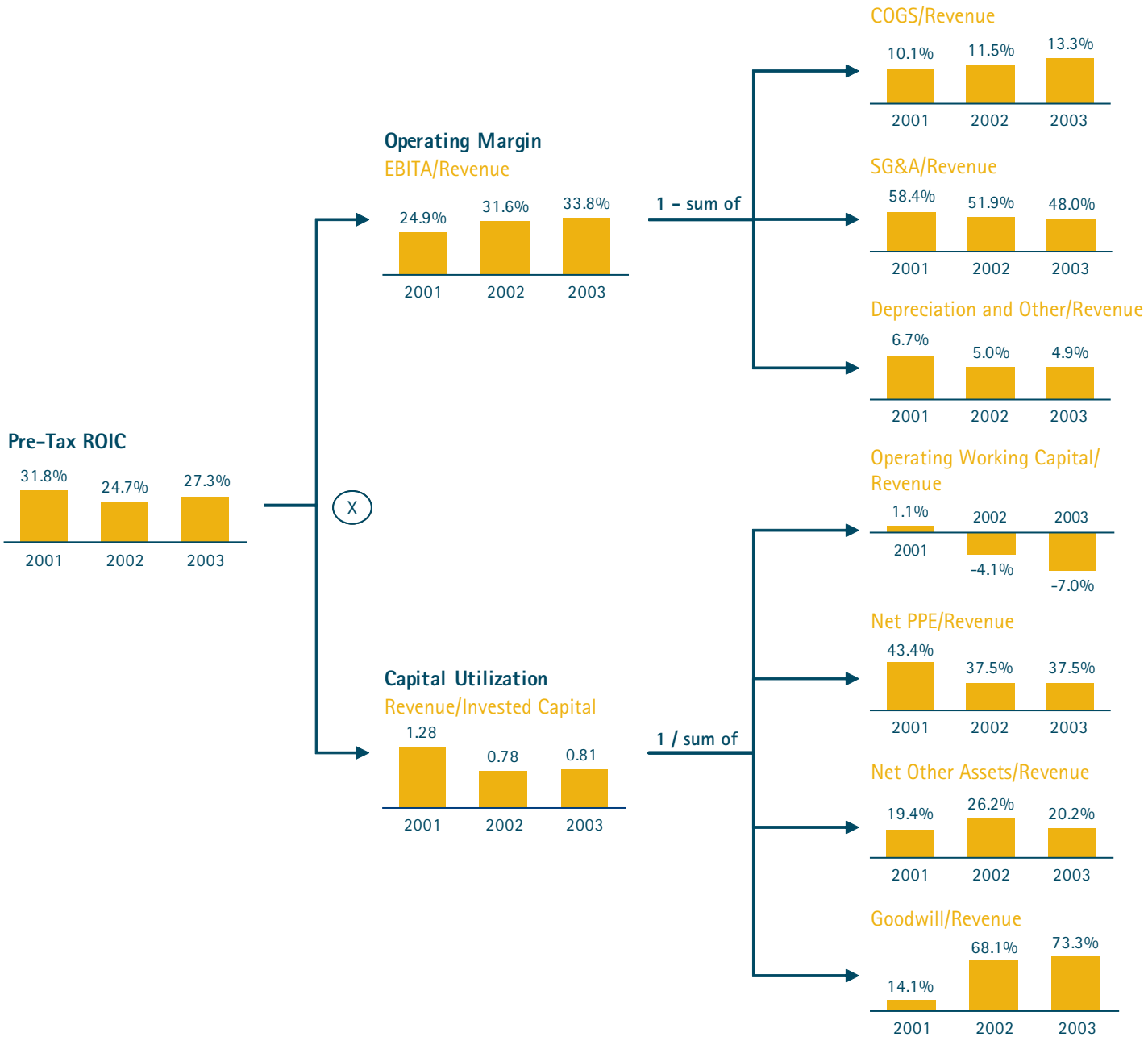
Exhibit 11: eBay—Enterprise Value Decomposition (December 31, 2003)



1 Market Value based on shares outstanding and stock price as of 12/31/2003, plus long term debt
2 Excess cash based on balance sheet cash as of 12/31/2003, minus operating cash (assumed to be 2% of revenues)
3 Enterprise value equals market value less excess cash
4 Current value defined as NOPLAT/WACC and represents the present value of current operations in perpetuity
5 Future value is defined as enterprise value minus the value of current operations and represents future incremental value the market expects the company to create, beyond the value delivered by current operations

Sources: Factset, Accenture Analysis

Exhibit 12: eBay—DuPont Financial Analysis (2001-2003)



Sources: Factset, Accenture analysis

value logics are often the highest performing companies in the US economy.

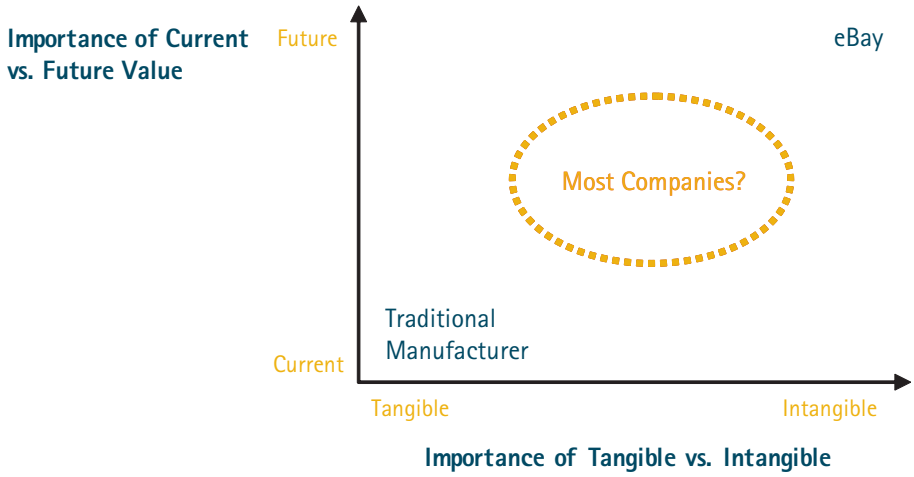
Online marketplace eBay is the perfect example of a company that is built around one of the newly named value logics, the value network. Its key capability is bringing customers together and mediating their exchanges. It creates value by identifying new clusters of customers or new needs of old customers and developing new online auction categories for these customers to explore and participate in. Its primary bases for competitive advantage are relational, organizational, and to a lesser degree, human—all intellectual resources. And it is extraordinarily successful, with most of its market value being in its future value. At the end of 2003 its equity market value was an astonishing $42 billion; at the end of April 2004 it had reached an even more astonishing $50 billion.

Let us look at the components of eBay's value more closely. Exhibit 11 shows the decomposition of eBay's enterprise value for 2003. Enterprise value (including net debt)[22] is divisible into three simple components: average net capital employed, the perpetuity value of current economic profit and future value. Future value accounted for 92 percent of eBay's enterprise value in 2003, a figure that rose even higher by 2004.

Exhibit 12 is a DuPont analysis of eBay's financial statements from 2001 to 2003. This traditional approach of examining the balance sheet and income statement to identify value drivers[23] can only account for 8 percent of eBay's enterprise value. In other words, whatever improvement management can get from reigning in accounts receivable or managing inventory more tightly will have a negligible affect on value. Moreover, if management adopts the sort of current earnings focus that the DuPont analysis encourages, it would likely sacrifice a great future for a marginally improved present, reducing the investment in intangibles and intellectual capital to buff up the income statement. For example, key investments in the future would be items like marketing expenditures and product development, both of which will often fall in the expense item of SG&A. With SG&A trending at 50 percent of revenues for the past few years, management might be tempted to cut them to the bone to enhance this year's profit, and thus destroy eBay's future.

Few other companies will present as perfect an example as eBay, but most other companies have to deal with the same issues. Most companies are likely to fall somewhere between eBay and a traditional non-branded manufacturer, being less dependent on intellectual resources and future value than eBay and more dependent on both than a traditional manufacturer (see Exhibit 13). The problem is that although the business reality has been steadily shifting from traditional manufacturing to eBay, value chain to value shop or network, most companies are still stuck with the management tools, processes and mentality of a traditional manufacturer.

Exhibit 13: Today's Management Space—Between eBay and a Traditional Manufacturer



Source: Accenture

Managing all components of valuation using all the resources of the enterprise

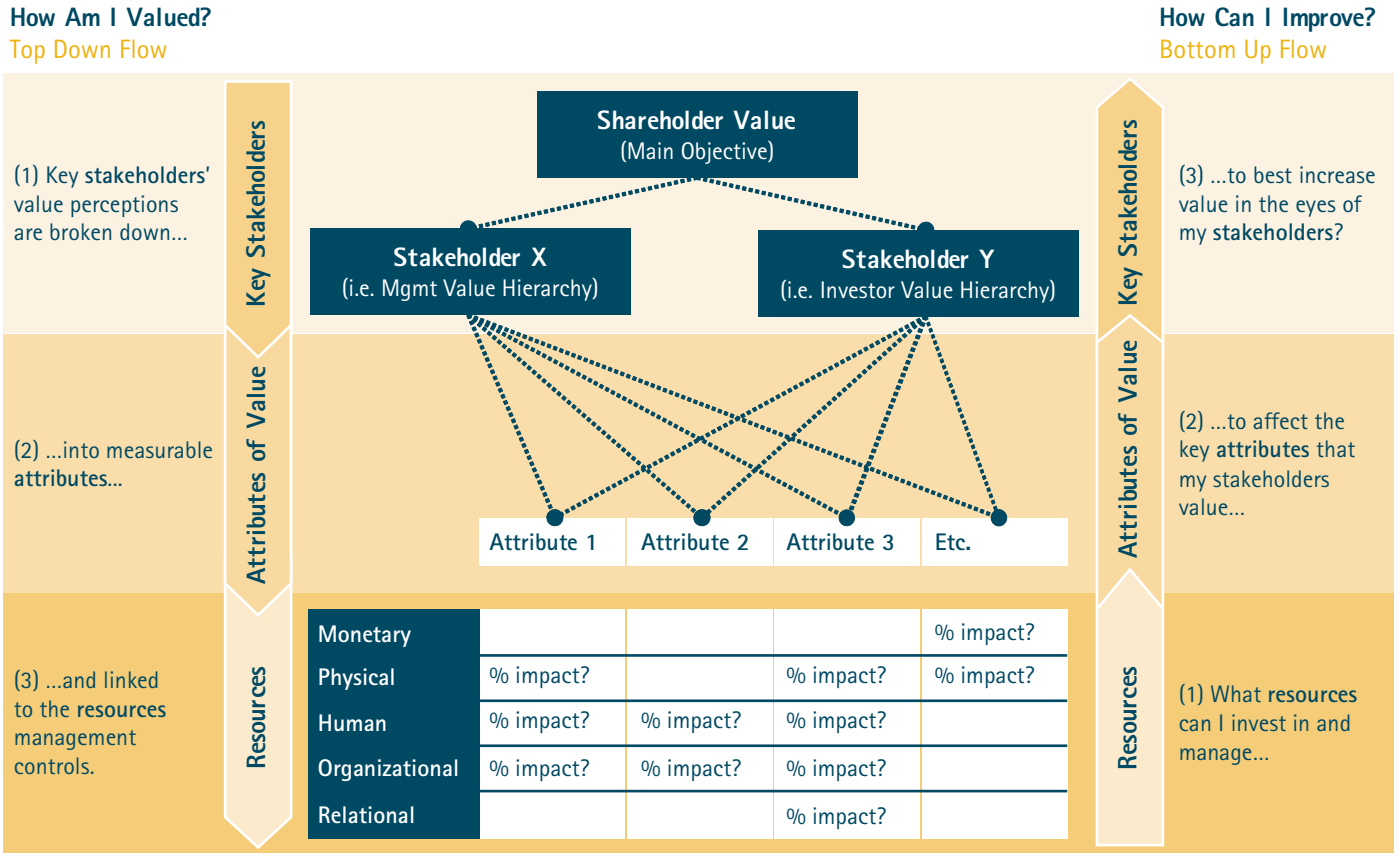
Executives leading high-performance businesses need a methodology that gives future value and current value equal billing, that gives side-by-side consideration to monetary and physical resources and relational, organizational and human resources, and that does not subordinate newer business models to older business models. The Future Value Management™ (FVM™) methodology has been created (see Exhibit 14) to meet these needs. First, we put in the very center of the model the complete set of resources—monetary, physical, relational, organizational and human—and tie them to the key attributes that stakeholders value. Second, because the model does not share the traditional bias towards monetary and physical resources, it is not biased toward the logic of the value chain—it provides insights regardless of how one's company is organized. Finally, because our aim is the sustainable creation of shareholder value and does not have a predetermined disposition towards whether it comes from current or future value, the model does not skew managerial attention away from the future to the present.

The model begins with perceptions and ends with actions. We start with stakeholder perceptions, tracing them to measurable attributes and then to resources. Using scenario analysis and sensitivity testing, we then predict the consequences of different combinations of resources, value drivers and transformations. Finally, we trace back out suggested changes in resource allocation and management to measurable attributes and stakeholder perceptions, and then to the effect on total shareholder value. We are thus able to plan and make business cases knowing what resources affect what attributes, and what attributes affect what stakeholders, as well as the trade-offs that might improve overall shareholder value performance.

Exhibit 15 compares the FVM™ methodology to a traditional approach to identifying, measuring and managing value drivers.

As we saw in the discussion of eBay, a traditional approach like DuPont analysis misses everything that is important in the valuation of a company like eBay—companies that do not fit into traditional business models, do not rely on traditional economic resources, nor drive most of their value from current operations. Moreover, because it misunderstands what companies like eBay are about, these traditional approaches have all the potential to give all the wrong advice on how to fix something that is not actually broken, but actually thriving.

Exhibit 14: The Future Value Management™ Methodology—A Conceptual View



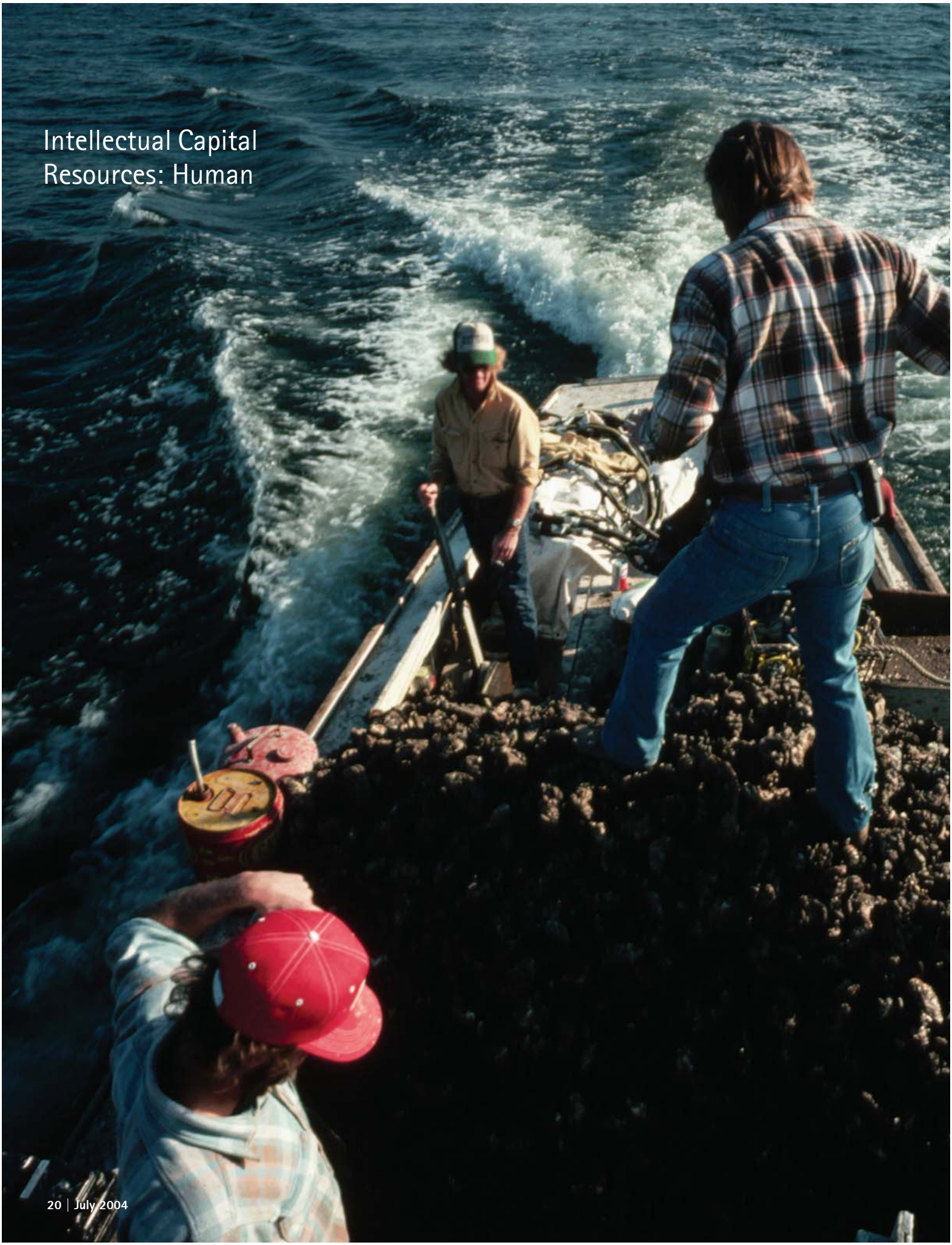
Source: Accenture and AssetEconomics, Inc.

Exhibit 15: Answering Key Management Questions—Comparing the FVM™ Methodology to Traditional Approaches

Key Management Questions	Typical Approach	Issues with Typical Approach	FVM™'s Solution
What are the key value drivers of my business?	• Intuition • Classic DuPont financial analysis • Focus on traditional accounting assets	• Not comprehensive (lack of proper consideration of intellectual capital)	Takes into account **all resources**, traditional accounting and intellectual capital, in an integrated manner
How do I determine what value drivers have the largest impact?	• Intuition • Spreadsheet analysis • Classic finance & accounting metrics	• No feedback among variables • Relationship among drivers is not linear in reality • No account for time delays	Modeling is **dynamic** allowing for feedback and time delays to be understood
How do I make the optimal trade-offs regarding strategies and resource allocations?	• Intuition • Non-comprehensive spreadsheet analysis • Usually only one point of view considered	• Ineffective in all but the most simple of business models • Cannot handle complexity over time	Combination of above, with an **understanding of value perceptions** of key stakeholders, allowing for a more **optimal trade-off** analysis

Source: Accenture and AssetEconomics, Inc.

Intellectual Capital Resources: Human



Conclusions

High-performance business management will always ultimately be an art form.

However, to be effective and efficient, the management of companies has always required appropriate tools and techniques for understanding contemporary management problems. We have argued that new forms of value creation are now very much part of the mainstream economy and that these new forms leverage intellectual capital and intangible resources. We have presented an approach to unraveling the complex nature of these value logics through a methodology that identifies and measures both the firm's valued attributes as well as the resources and activities that the firm manages in order to deliver performance on these attributes.

We believe that the management of all high-performance businesses will increasingly require proactive management of intellectual capital and intangible resources in order to deliver improved sustainable returns to shareholders.

Notes

1 Through this Report we use the term resources in lieu of assets to represent a broader view than the accounting view of assets. Resources have two forms—assets (the things we own or have access to) and capabilities (the things we can do).

2 Note that Future Value Management Methodology™ and FVM™ are trademarks of AssetEconomics, Inc.

3 Merton Miller and Franco Modigliani, "Dividend Policy, Growth and the Valuation of Shares," Journal of Business 34 (October 1961): 411-433. Note that both present value calculations use the same "cost of capital" discount rate.

4 W. Carl Kester, "Today's Options for Tomorrow's Growth, Harvard Business Review 62, no. 2 (March-April 1984): 153-160.

5 Richard A. Brealey and Stewart C. Myers, Principle of Corporate Finance—6th Edition (New York: McGraw-Hill, 2000), 73-76, 82-83.

6 This might be explained by historically lower growth expectations. The S&P 500 price earnings (P/E) multiple has climbed steadily around a strong upward trend since a P/E low of 6.9 times in May 1980 through a peak P/E of 45.7 in March 2002 to a P/E multiple in January 2004 of 23.2. Refer Neil Davis Research Inc. at http://www.comstockfunds.com/files/NLPP00000/026.pdf

7 We used May 30, 2003 share prices, but, in all other respects, end of the financial year 2002 data.

8 Enterprise value equals the market value of equity plus net interest bearing debt obligations (NIBDOs).

9 Standard & Poor uses the Global Industry Classification Standard (GICS) of 10 sectors and 24 industry groups for its S&P 500 index. We use this second level of industry group classification here. The ten sectors are energy, materials, industrials, consumer discretionary, consumer staples, health care, financials, information technology, telecommunication services and utilities. In 2002, the twenty-two industry groups contained in this data base were energy, materials, capital goods, commercial services & supplies, transportation, automobiles & components, consumer durables & apparel, hotels, restaurants & leisure, media, retailing, food & drug retailing, food, beverage & tobacco, household & personal products, health care equipment & services, pharmaceuticals & biotechnology, banks, diversified financials, insurance, software & services, technology, hardware & equipment, telecommunication services and utilities.

10 Measured on a Purchasing Power Parity basis, estimated World 2002 GDP is $49 trillion, US GDP $10.45 trillion, China GDP $5.989 trillion. Refer to CIA—The World Factbook at http://www.cia.gov/cia/publications/factbook/rankorder/2001rank.html

11 The US Federal Debt was estimated at $7.1 trillion as of March 1, 2004. See the US National Debt Clock at http://www.brillig.com/debt_clock/.

12 While relational, organizational and even human resources can be subject to contract and thus "owned," enforcement of ownership rights is highly problematic. Ownership is, therefore, a matter of degree and in the cases of relational and human resources, reciprocal in nature.

13 For an application of these ideas to the industry level, see Göran Roos and Lisa Fernstrom, "Differences in Value-Creating Logic and Their Managerial Consequences: The Case of Authors, Publishers and Printers" (paper presented at the Australian International Conference on the Future of the Book, Cairns, Australia, April 23, 2003), and Göran Roos and Lisa Fernstrom, "Value-Creating Logics in the Publishing Industry" (paper presented at the 25th McMaster World Congress on the Management of Intellectual Capital, Hamilton, Ontario, Canada, January 14-16, 2004).

14 For discussions of the weaknesses in existing methodologies, see Stephen Pike and Göran Roos, "Mathematics and Modern Business Management" (invited paper for the Performance Management Association Symposium, INSEAD, France, July 28-29), forthcoming in the Journal of Intellectual Capital, and Daniel Andriesen, "The Value of Weightless Wealth-Designing and Testing a Method for the Valuation of Intangible Resources" (PhD diss., Nyorede University, 2003).

15 For example, see Section IV in John R. M. Hand and Baruch Lev, eds., Intangible Assets: Values, Measure and Risks (Oxford: Oxford University Press, 2003).

16 Charles B. Stabell and Oystein D. Fjelstad, "Configuring Value for Competitive Advantage: On Chains, Shops and Networks," Strategic Management Journal 19 (1998):413-437.

17 The Standard & Poor website states the following: "Although the S&P 500 focuses on the large-cap segment of the market, with over 80 percent coverage of U.S. equities, it is also an ideal proxy for the total market." See http://www2.standardandpoors.com/NASApp/cs/ContentServer?pagename=sp/Page/IndicesIndexPg&r=1&b=4&s=6&ig=48&i=56.

18 The S&P 500 listed only 7.6 percent of the companies on the NYSE and NASDAQ exchanges, but these companies accounted for 67.9 percent of the total value of the NYSE and NASDAQ exchanges. Source: AssetEconomics, Inc. analysis.

19 S&P value of $10.285 trillion versus NYSE value of $12.158 trillion and NASDAQ value of $2.988 trillion (total exchange value of $15.146 trillion) at the end of 2003.

20 For the value logic comparisons and the IT illustration, we are indebted to the Computer Sciences Corporation Foundation Report, "Chains, Shops and Networks: The Role IS in New Models of Value Creation," Foundation Strategic Innovation Report, Computer Sciences Corporation, 1998, at http://www.cscresearchservices.com/foundation/library/value/RP01.asp.

21 Ibid.

22 Net debt is the sum of all interest-bearing debt obligations (including off-balance sheet items like operating leases) less surplus cash and marketable securities.

23 A value driver combines resources and transformations, usually more than one resource and more than one transformation. Value drivers need to be distinguished from outcomes, especially financial outcomes. Thus, revenues and costs are not value drivers but are rather the consequences of value drivers.

About the Authors

John J. Ballow

John J. Ballow is a partner in the Accenture Finance and Performance Management service line. He specializes in economic value analysis, value management, finance operations and strategy, and corporate financial management. Mr. Ballow has more than 25 years of experience as a corporate finance officer, advisor and strategist in financial management.
john.j.ballow@accenture.com

Roland Burgman

Roland Burgman is the cofounder of AssetEconomics and its CEO. He has more than 25 years working in the area of value based management focusing on value driver analysis and enterprise value management issues. His focus has been on the practical implementation of management concepts and tools that deliver insight and are capable of being devolved in complex organizations. His specializations are in managing for shareholder value (with a focus on the relationship to intangibles and intellectual capital), business reporting (internal and external) and corporate governance (with a focus on emerging markets). Mr. Burgman has extensive corporate and board level management experience.
roland.burgman@asseteconomics.com

Göran Roos

Göran Roos is one of the pioneers of modern intellectual capital science. He founded Intellectual Capital Services, a leading think tank on methodologies for the identification, management and measurement of intangibles; he cofounded AssetEconomics, an organization focused on measuring and managing intangibles for shareholder value; and he cofounded Hands and Minds, a joint venture with the De Bono Institute on real-time strategy identification and implementation processes. Mr. Roos has written numerous books and articles on intellectual capital and strategy, and he was named one of the 13 most influential thinkers for the 21st century by the Spanish business journal *Direccion y Progreso.*
goran.roos@asseteconomics.com

Michael J. Molnar

Michael J. Molnar is a visiting research fellow at the Accenture Institute for High Performance Business. His work has focused on assisting executive teams with finance, strategy and general decision-making issues across a variety of industries. He has earned an M.B.A. in finance and an M.S. in decision sciences. He is a CPA (certified public accountant), CMA (certified management accountant), and CFM (certified in financial management).
michael.j.molnar@accenture.com

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www.accenture.com/institute

100 William Street, Wellesley, MA 02481
United States of America
+1 617 454 4180