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***Title:***

***“The New Economy - a New Paradigm for Managing for Shareholder Value”***

# “The New Economy - a New Paradigm for Managing for Shareholder Value”

## Abstract

This paper discusses the managerial issues arising out of the present stock market valuation of “new economy” firms. It links intellectual capital thinking and accounting theory thinking to create an understanding of the differences between intangible and intellectual capital assets as well as adding CAPM thinking to develop a managerial model for managing the future value component of the listed firm.

## Introduction

We have heard much about the new economy and its management challenges. Interestingly, the discussion has diminished somewhat since the dot.com bubble burst in 1999. It shouldn't have. That unhappy event for many investors has masked a serious consideration of what is structurally new and different in the US economy in particular. The US economy has changed radically. Stock market valuation underpinnings are seemingly irrevocably altered. We have fundamentally new forms of enterprise that first, employ new business models and second, grow and compete, leveraging quite different asset forms than those that we have conventionally relied upon.

The responsibility for managing shareholder wealth now has new implications for understanding what assets are to be managed, how and what is to be communicated to whom, under what conditions, through what mediums.

This paper outlines the changed nature of the economy, the unavoidable and profound importance of future growth value in the market valuation of equity, the challenge that confronts management in managing for value for companies in many industry groups, the broader understanding of the ways in which value can be created and that must be exploited to compete in the future and finally, a new basis for managing for shareholder value.

## 1. The Changed Economy

The economy has changed. We are used to hearing about the New York Stock Exchange's (NYSE's) Dow and National Association of Securities Dealers Automated Quotation's (Nasdaq's) indices and their growth over the last several years. Indeed, the Dow in early 2004 is again well above 10000. The Nasdaq lags substantially in terms of its return to past glory. These facts are well known. What is less well known is the intrusion of Nasdaq-listed companies into Standard & Poor's S&P 500 index as permanent members.

At the height of the dot.com boom in 1999, Nasdaq-listed companies represented over 20.6% of the S&P 500's market value. After the dot.com market implosion at the end of 2002, that value was still 11.9%. Nasdaq-listed companies that represent the new economy and are amongst the US economy's prime shareholder value creators include Microsoft, Cisco, Amazon, Yahoo! and Amgen. Indeed, eBay, a company with a market capitalization of over \$40 billion in early 2004 and that joined the S&P 500 in late 2003, only had its IPO in 1997, a mere 7 years ago.

The new economy is identified in Figures One and Two below. These Figures show a twenty-year history of the NYSE and Nasdaq exchanges by number of companies listed, and the market value and asset backing of the companies listed at year-end for the NYSE.

Figure One: NYSE Market Value, Number of Listed Firms and Listed Firm Asset Backing

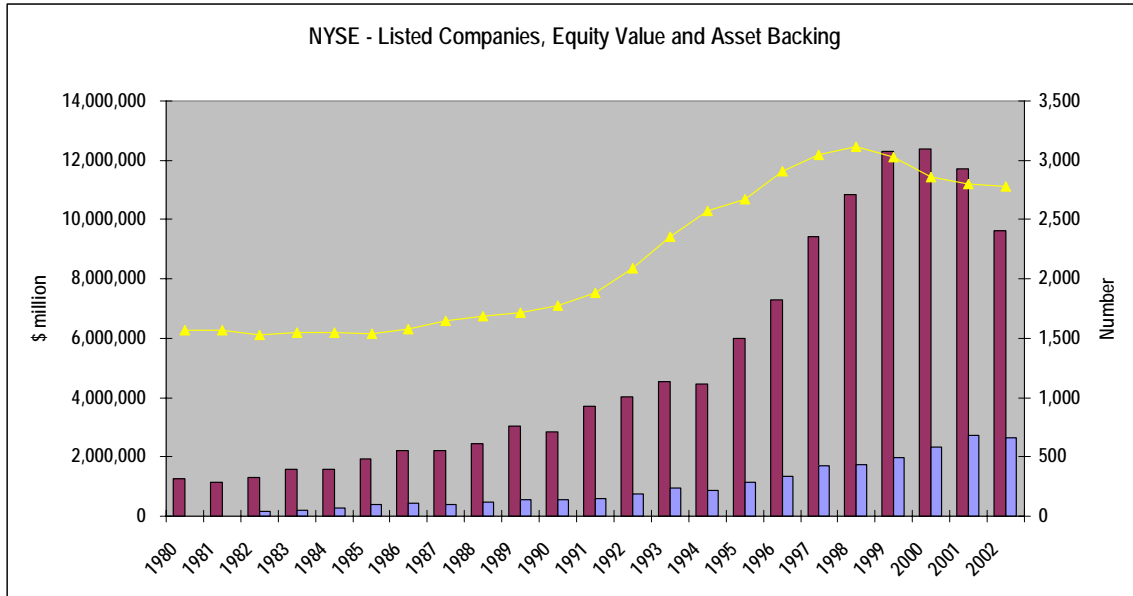
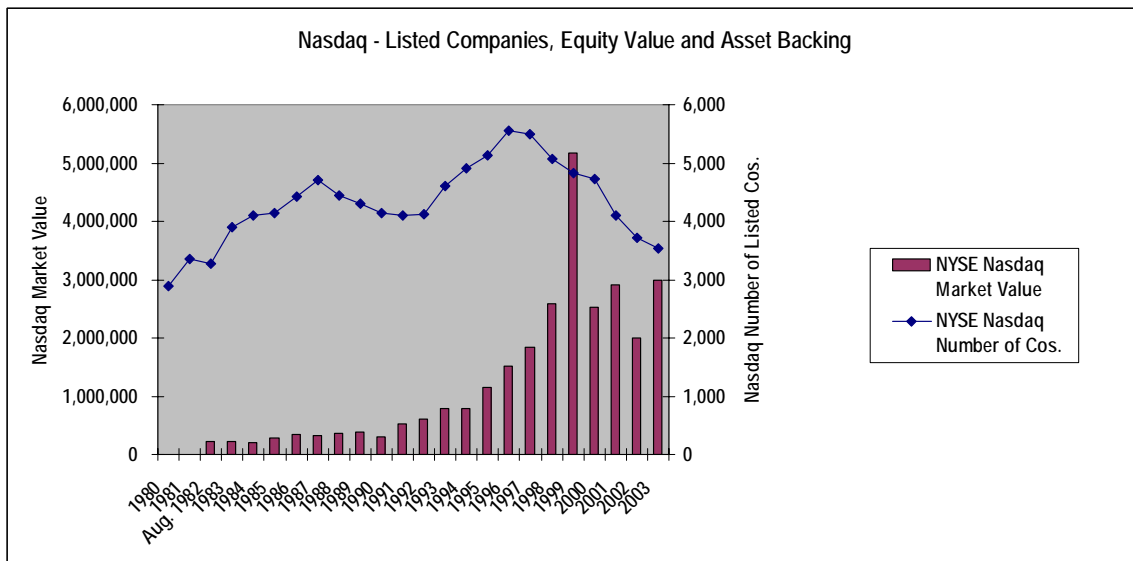


Figure Two: Nasdaq Market Value and Number of Listed Firms



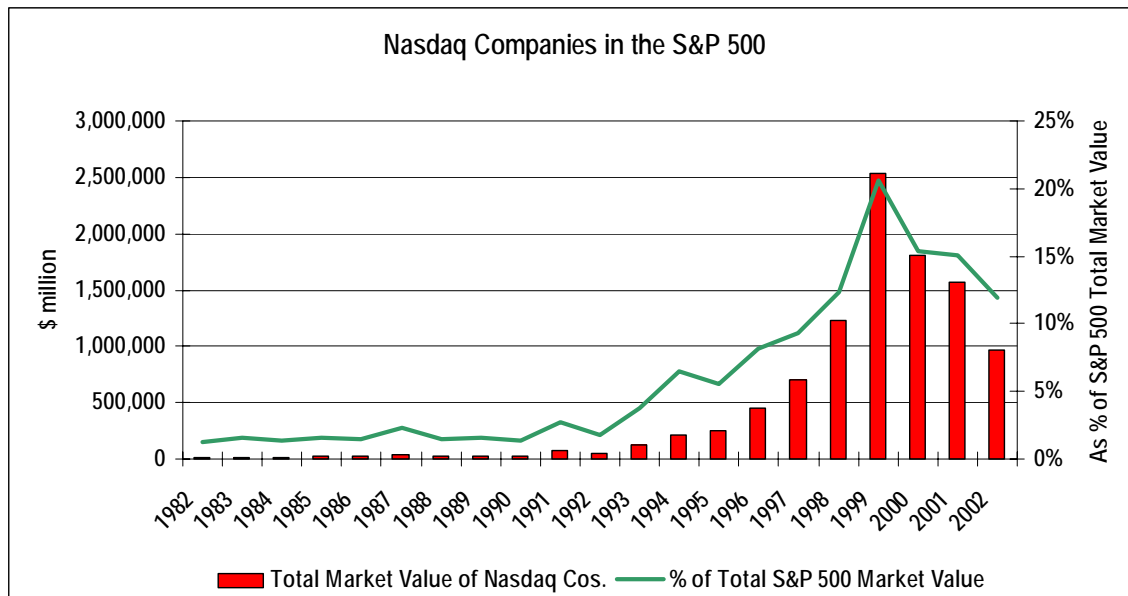
The NYSE is the home of the old economy while the Nasdaq is the home of the new economy. The asset backing of companies listed on these exchanges is quite different. With an exception in

the early 1980s and in the early 2000s, the market to book multiple for NYSE companies ranges between 6 and 8 times. For Nasdaq-listed companies there has been tremendous growth in market capitalizations with market to book ratios climbing to their peak of 18 times in 1999, but still remaining at 12 times in 2003.

How important have these Nasdaq-listed companies become in the US economy? And do they represent anything fundamentally new? We will see that these companies are very important and that they do represent a fundamental change.

The S&P 500<sup>1</sup> represents some 67.9% of the market value of equities in the US<sup>2</sup> out of 6,288 companies listed on the NYSE and Nasdaq at the end of 2003<sup>3</sup>. Nasdaq-listed companies are now a permanent feature of this bell-weather index. And they represent new forms of doing business. The emergence and importance of the new economy in the US is demonstrated by the number and value of Nasdaq-listed companies in the S&P 500, as shown in Figures Three and Four.

Figure Three: Dollar and Percentage Value of Nasdaq-listed Companies in the S&P 500



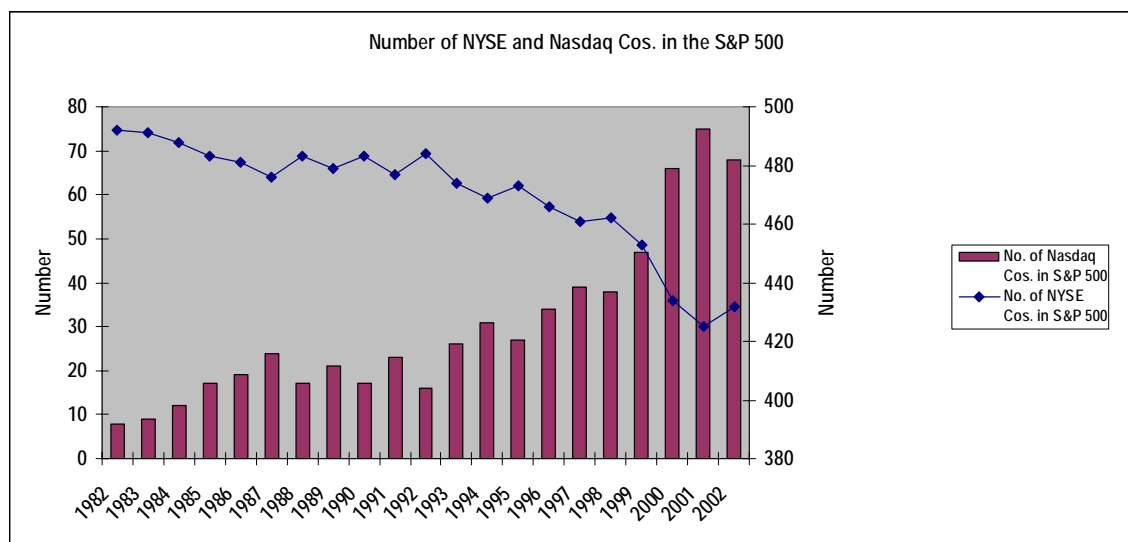
<sup>1</sup> The Standard & Poor's web site states the following ... "Although the S&P 500 focuses on the large-cap segment of the market, with over 80% coverage of U.S. equities, it is also an ideal proxy for the total market". For a description of the S&P 500, refer to

<http://www2.standardandpoors.com/NASApp/cs/ContentServer?pagename=sp/Page/IndicesIndexPg&r=1&b=4&s=6&g=48&i=56>

<sup>2</sup> S&P value of \$10.285 trillion vs. NYSE value of \$12.158 trillion and Nasdaq value of \$2.988 trillion (total value of \$15.146 trillion) at the end of 2003.

<sup>3</sup> The S&P 500 accounted for 67.9% of the value of the NYSE and Nasdaq exchanges with 7.6% of the companies listed at the end of 2003.

Figure Four: Number of Nasdaq-listed Companies in the S&P 500



## 2. Future Growth Value - a Little Understood Phenomenon

Share prices can be decomposed into two elements - the value of “assets-in-place” and the value of growth opportunities. This distinction is central to the valuation of firm equity.

Merton Miller and Franco Modigliani, arguably the fathers of modern finance, split firm value into:

1. The present value of the uniform perpetual earnings on assets currently held, and
2. The present value of the opportunities the firm offers for making additional investments in real assets that will yield more than the “normal” market rate of return<sup>4</sup>

Both present value calculations are made using the same “cost of capital” discount rate.

Carl Kester<sup>5</sup>, and Richard Brealey and Scott Myers<sup>6</sup>, developed a model (subsequently known as the KBM model) for separating the overall market value of a firm into the value of assets-in-place and the value of growth opportunities (also known as growth options).

So we have known (at least formally since 1961) that expectations about the future have been included in share prices.

The question that is important for us now is - How big a contribution to share prices do future growth expectations make? The answer for today's listed companies in the US is - a lot. As at May 2003 (using end of 2002 financial data but May 30, 2003 share prices), the Future Growth Value (FGV) for the Russell 3000, an index that accounts for the equity value of over 98% of listed

<sup>4</sup> Merton Miller and Franco Modigliani, “Dividend Policy, Growth and the Valuation of Shares”, *Journal of Business*, Vol. 34 (October), 1961, pp. 411-433.

<sup>5</sup> W. Carl Kester, “Today's Options for Tomorrow's Growth”, *Harvard Business Review*, Vol. 62, No. 2 (March-April), 1984, pp. 153-160.

<sup>6</sup> Richard A. Brealey and Stewart C. Myers, *Principles of Corporate Finance*, 1<sup>st</sup> Edition, McGraw-Hill, 1981.

US equities, represented 77.3% of companies' equity Market Value and 58.9% of listed companies' Enterprise Value<sup>7</sup> (EV).

The FGV component of EV has grown over time ... and is now a fundamental part of the US economy.

The phenomenon varies by industry group<sup>8</sup>. Figure Five illustrates the FGV/EV percentages for the Russell 3000.

Figure Five: Enterprise Value and Future Growth Value of Firms  
Comprising the Russell 3000 - 2002

Sector	No. Cos.	Current Value \$ m.	Future Growth \$ m.	FG as % EV	Enterprise Value \$ m.
Energy	113	346,888	394,896	53%	741,784
Materials	134	263,747	298,577	53%	562,325
Capital Goods	187	518,050	416,639	45%	934,690
Commercial Services & Supplies	145	164,674	186,930	53%	351,604
Transportation	52	102,405	287,745	74%	390,150
Automobiles & Components	40	88,607	192,749	69%	281,355
Consumer Durables & Apparel	122	186,960	36,215	16%	223,176
Hotels Restaurants & Leisure	79	146,795	66,140	31%	212,935
Media	97	(47,143)	776,438	106%	729,295
Retailing	166	479,462	381,682	44%	861,144
Food & Drug Retailing	28	145,014	46,173	24%	191,187
Food Beverage & Tobacco	70	573,139	172,745	23%	745,884
Household & Personal Prods	22	142,871	144,054	50%	286,925
Health Care Equipment & Services	212	317,986	281,780	47%	599,766
Pharmaceuticals & Biotech	169	407,249	667,742	62%	1,074,991
Banks	288	630,742	124,255	16%	754,997
Diversified Financials	64	478,710	167,958	26%	646,668
Insurance	92	296,581	98,891	25%	395,472
Software & Services	206	(374)	519,025	100%	518,651
Technology Hardware & Equipment	311	(273,259)	1,285,411	127%	1,012,152
Telecommunication Services	49	89,295	610,300	87%	699,595
Utilities	99	274,684	481,348	64%	756,032
<b>Totals</b>	<b>2,745</b>	<b>5,333,082</b>	<b>7,637,693</b>	<b>59%</b>	<b>12,970,775</b>

Clearly, the technology sectors have extremely high FGV/EV percentages with Software & Services, Media, and Technology, Hardware & Equipment at and over 100%, Telecommunication

<sup>7</sup> Net Interest Bearing Debt Obligations (NIBDOs) are added to equity Market Value to establish Enterprise Value.

<sup>8</sup> Standard & Poor's uses the Global Industry Classification Standard (GICS) of 10 sectors and 24 industry groups for its S&P 500 index (as well as for all its other indices). 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. The twenty-two industry groups contained in this data base in 2002 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.

Services in the range 75% to 100% and Utilities, Automobiles & Components, and Transportation in the range 60% to 75%. Of the 22 industry groups, 12 have an enterprise value that is more than 50% reliant on FG.

The absolute value that is represented by FGV is should also be put into perspective. The \$7.638 trillion of FGV represented in the Russell 3000's \$13.100 trillion of EV (58.3%) is greater than the Gross Domestic Product of any other country than the US<sup>9</sup> and greater than the US Federal Debt<sup>10</sup>.

What we can conclude is that the responsibility for managing for shareholder value has become greater (in terms of the husbanding of shareholder wealth) at the same time as the basis for managing that wealth has and continues to shift to intangible and intellectual capital assets from traditional economic assets for many companies that now represent both significant positions amongst the US economy's foremost companies and the economy's global growth future. Companies like Microsoft, Amazon, Amgen, PeopleSoft and even eBay typify the future and the new management challenge.

### 3. eBay - An Illustration of the Management Challenge for New Economy Firms

An illustration of the new management challenge is eBay.

EBay's equity market value was \$43.5 billion plus in early March 2004. Its equity market value at the end of 2002 was \$21.1 billion. An astounding additional \$22.5 billion of equity market value has been created since the end of 2002.

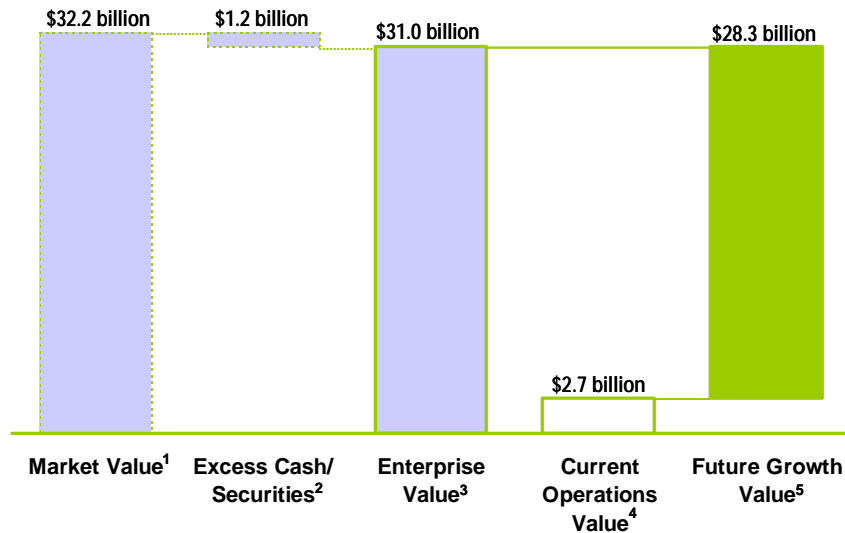
EV (including net debt) can be broken into three simple components - average net capital employed, the perpetuity value of current economic profit and future growth value. This decomposition of eBay's EV for 2002 is shown in Figure Six below for 2002. This decomposition illustrates the point made in the previous section - that future growth value can be a very large part of EV, in eBay's case at the end of 2002, some 87.9%. This percentage is obviously much larger at the beginning of 2004.

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<sup>9</sup> World GDP data include the following - world GDP \$49.000 trillion, US GDP \$10.450 trillion and China GDP \$5.989 trillion. Refer to CIA – The World Factbook at <http://www.cia.gov/cia/publications/factbook/rankorder/2001rank.html>

<sup>10</sup> The US Federal Debt was estimated at \$7.1 trillion as at March 1, 2004. Refer to US National Debt Clock at [http://www.brillig.com/debt\\_clock/](http://www.brillig.com/debt_clock/)

Figure Six: eBay Inc. Enterprise Value Decomposition - 2002



<sup>1</sup> Market Value based on shares outstanding and stock price as of June 6, 2003, plus long term debt

<sup>2</sup> Excess cash based on balance sheet cash as of 12/31/2002, minus operating cash (assumed to be 2% of revenues)

<sup>3</sup> Enterprise value equals market value less excess cash

<sup>4</sup> Current value of Operations defined as NOPLAT/WACC and represents the present value of current operations in perpetuity

<sup>5</sup> 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

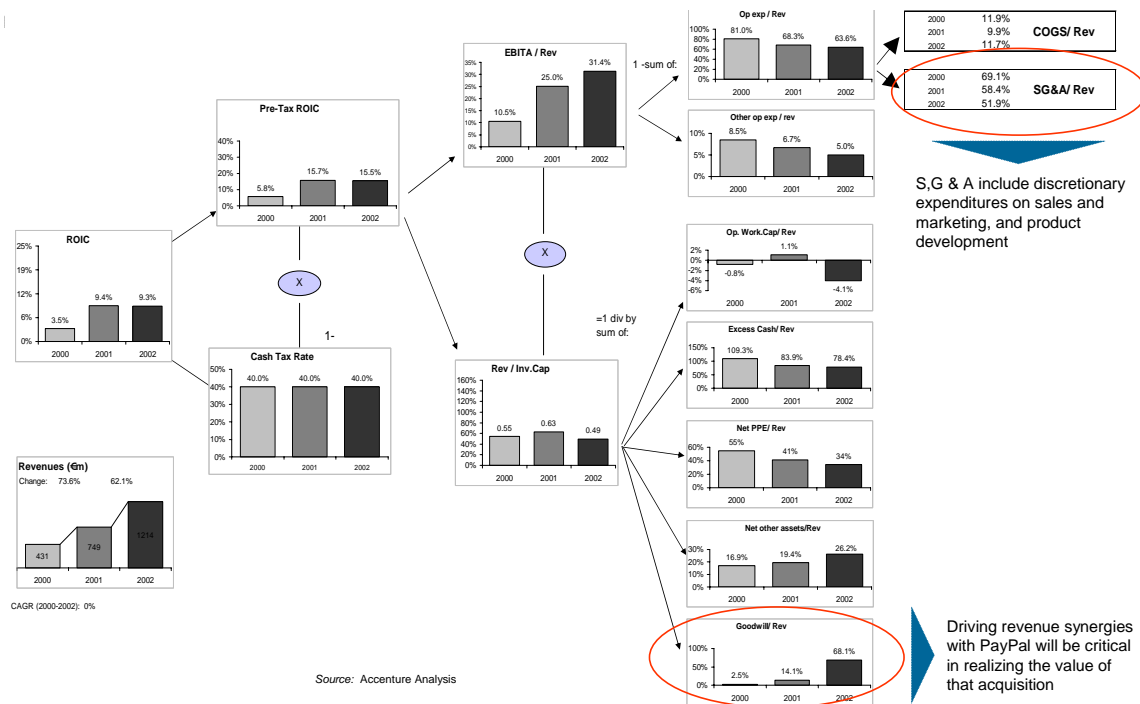
Sources: Factset data, Compustat, Worldscope, Accenture analysis.

Two other points that are a little less obvious flow from this analysis and are illustrated in Figure Seven.

First, the traditional DuPont approach to identifying value drivers through the income statement and balance sheet links the value drivers so identified to less than 5% of the EV, that is, any traditional value drivers like reigning in accounts receivable or managing inventory better will have a miniscule affect on value. Second, and even more perverse, it is likely that expenditure categories that contain investments on intangibles and/or intellectual capital assets will receive a quite disproportional "cost down" or "cost out" focus as they will inevitably represent a relatively high cost/revenue percentage within, say, an SG&A expense category and could easily be the target of management cost reduction strategies.

In the case of eBay, for example, sales and marketing, and product development are 51.1% and 16.2% of SG&A, respectively. Given that these two expenditure classes account for 114.1% of income before taxes (and minority interests), if eBay's management were being rewarded on achieving profit or EPS goals, there would be a strong incentive to cut down on these expenditures even though these expenditure represented the basis for shareholder wealth gains in the future.

Figure Seven: DuPont Analysis of eBay's Financial Statements



Thus, not only do traditional value driver identification methodologies deal with only a fraction of EV and what it takes to manage for EV, but they also potentially cause management to diminish investments in those assets which are the basis for that EV because those investment are not being recognized as investment in the creation of intangible and intellectual capital assets.

The new management challenge is how to recognize the assets that matter for the purpose of creating and managing for long term sustainable shareholder value - for companies that represent the new economy (new business models leveraging intellectual capital assets where EV is fundamentally comprised of future growth expectations).

#### 4. Intangibles and Intellectual Capital Assets - Not Necessarily the Same Thing

The accounting discipline's debate about intangibles in the US has long been about the definition of an asset for the purpose of recognizing the value on the balance sheet. While important, this objective is not fundamental. What is fundamental is the managerial need to identify, quantify the causal impact of and manage the consequences of intangible and/or intellectual capital assets.

Why draw a distinction between intangibles and intellectual capital assets?

The answer is that they are not necessarily the same thing. We argue that whether an asset is tangible or intangible represents a debate about the recognizability of the asset while an argument about whether an asset is a traditional economic asset (monetary or physical) or an intellectual capital asset (relational, organizational or human) represents a debate about the form of the asset.

This is not a semantic distinction. What we are proposing is that there is a broad class of assets that has not been properly acknowledged in management's lexicon - intellectual capital assets. This class of assets needs to be equally recognized alongside traditional economic assets. Not to do so open many companies up to a "wrong view" - that somehow intellectual capital assets are inferior (if they are recognized at all). The non-equality of these assets of course makes it hard to argue for investment in them, hard to develop coherent strategies around them and makes them vulnerable to capricious management and performance review (since there is no "logical" basis for evaluating their contribution to shareholder value outcomes).

Figure Eight separates out the idea of asset form from asset accounting recognizability. From this rendering, the argument that intangibles and intellectual capital assets are not the same thing is self-evident. There are plenty of intellectual capital assets that have a tangible expression. Likewise, there are plenty of traditional economic assets that have intangible expressions. Common sense and experience tells us that institutional investor (buy-side) and investment bank (sell-side) analysts take many traditional economic asset intangibles into account in their valuations ("conditioning" valuation models), analysts' reports and recommendations.

Figure Eight: Complete Asset Classification System

		Asset Type				
		Traditional Accounting Assets		Intellectual Capital Assets		
		Monetary	Physical	Relational	Organizational	Human
Asset Recognition	Tangible	<ul style="list-style-type: none"> <li>Cash</li> <li>Investments</li> <li>Receivables/ debtors</li> <li>Payables / creditors</li> </ul>	<ul style="list-style-type: none"> <li>Property</li> <li>Plant</li> <li>Equipment</li> <li>Inventory               <ul style="list-style-type: none"> <li>Finished goods</li> <li>WIP</li> <li>Parts / raw materials</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Customer contracts</li> <li>Formal alliances, JVs, supply agreements</li> </ul>	<ul style="list-style-type: none"> <li>Systems</li> <li>Formalized processes</li> <li>Codified knowledge</li> <li>Patents</li> <li>Brands</li> <li>Mastheads</li> </ul>	<ul style="list-style-type: none"> <li>Management contracts</li> <li>Documented accessible skills inventories</li> </ul>
	Intangible	<ul style="list-style-type: none"> <li>Credit ratings</li> <li>Undrawn facilities</li> <li>Borrowing capacity (relative to like companies, based on character)</li> <li>Borrowing covenant slack</li> <li>Receivables certainty</li> <li>Accruals convertibility</li> </ul>	<ul style="list-style-type: none"> <li>Plant flexibility</li> <li>Plant modernity</li> <li>Infrastructure surrounding plants</li> <li>Stranded assets?</li> <li>Tradability of assets?</li> <li>Access rights</li> <li>Balance sheet strength</li> <li>Inventory (good and usable, obsolete, redundant)</li> </ul>	<ul style="list-style-type: none"> <li>Customer loyalty               <ul style="list-style-type: none"> <li>Behavioral</li> <li>Attitudinal</li> </ul> </li> <li>Quality of supply contracts</li> <li>Right to tender, right to compete, right to design</li> <li>Strength of stakeholder support (including opinion leaders)</li> <li>Networks</li> <li>Regulatory imposts</li> </ul>	<ul style="list-style-type: none"> <li>Structural appropriateness</li> <li>Informal processes</li> <li>Organizational reputation</li> <li>Brand meaning (strength, stature)</li> <li>Productivity of R&amp;D process</li> <li>Quality of corporate governance</li> <li>Know how, show how</li> <li>Tacit knowledge</li> </ul>	<ul style="list-style-type: none"> <li>Top management quality</li> <li>Top management experience</li> <li>Ability to execute on strategy</li> <li>Leadership Capabilities</li> <li>Problem-solving ability</li> <li>Employee loyalty               <ul style="list-style-type: none"> <li>Behavioral</li> <li>Attitudinal</li> </ul> </li> <li>Personnel reputation</li> <li>Workforce adaptability</li> <li>Employee engagement</li> </ul>

Source: AssetEconomics Holdings  
 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

Why is this classification important?

In and of itself, Figure Eight makes separates the issue of the management of asset form from the issue of accounting recognizability. They are different problems. Second, the recognition of the three intellectual capital asset forms (relational, organizational and human) acknowledges that each of these asset forms represents different ownership, behavioral and control phenomena. Unlike the two traditional economic asset forms (monetary and physical), the three intellectual capital asset forms have non-linear returns to scale, do not exhibit diminish return behaviors and are not necessarily owned or controlled by the firm. In short, the management skills required to manage intellectual capital assets is fundamentally different to skills conventionally required (and taught in business schools). A new managerial dawn has arrived.

Does all this matter?

The recognition of these new managerial realities is fundamental since the ability to manage intellectual assets comprehensively, consistently and coherently (in the context of a prevailing business model and intended strategy) is key to delivering shareholder value for many of our largest and most important firms today. Managing this is the basis for competition for these new economy firms. Managing by instinct is not sufficient since the US economy in particular will be increasingly represented by companies representing the new business models that leverage intellectual capital assets.

## 5. What Are the New Business Models?

Describing a “new” business models is somewhat of a misnomer.

What we have are the business models that have represent the value creating logics we have always had - the value chain, value shop and value network. What is different today is that the value chain is no longer all pervasively all important. The idea of the three value logics we have identified was introduced in the early 1990s by Charles Stabell and Oystein Fjeldstad and published in North America in 1998<sup>11</sup>. In essence, Stabell and Fjeldstad proposed that value chain thinking (exemplified by Michael Porter’s work) was not the only thinking that could underpin business models. Value shop thinking and value network thinking were introduced as important organizing principle alternatives.

What we have see since that time has been the emergence of value network firms as among the largest market capitalization companies in the US economy. Representative of value network and value shop firms are Microsoft, Cisco, PeopleSoft, Comverse Technology, eBay, Amgen, Sun Microsystems, Priceline, Amazon and Yahoo! All of these companies represent the new economy, all are Nasdaq-listed, all are asset “lite” relative to their revenue turnovers<sup>12</sup>, and all are S&P 500 companies.

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<sup>11</sup> Charles B. Stabell and Oystein D. Fjeldstad, “Configuring Value for Competitive Advantage: On Chains, Shops and Networks”, *Strategic Management Journal*, Vol. 19, 1998, pp. 413-437.

<sup>12</sup> The average share price to book ratio for this list of 10 companies in March 2004 was 4.77 times (range 2.32 (Comverse Technology) to 8.93 (eBay) times)

A comparative outline of the “new” business models is shown in Figure Nine<sup>13</sup>

What is clear from Figure Nine is that we are dealing with business models that have a different logical focus (chain - transform inputs to product/service output, shop - solve problem or exploit opportunity, chain - mediate or cause transactions between customers), have different bases for creating competitive advantage and therefore long-term sustainable shareholder value and have quite different foci for their major business processes (for e.g., for IT - chain -from production productivity to production agility, shop - from decision-support to knowledge management, network - from infrastructure support to customer insight<sup>14</sup>).

Figure Nine: Three Value Logics - Value Chains, Value Shops and Value Networks

	Value Chain (Production)	Value Shop (Problem Solving)	Value Network (Mediation)
Key Capabilities	Chains must master all the key aspects of <b>making</b> products, <b>moving</b> them through distribution channels and <b>marketing</b> them to customers	Shops must be good at <b>matching</b> and <b>mobilizing</b> the right mix of resources (people, financial, knowledge) needed to solve a specific problem	Networks must excel at <b>monitoring</b> customer behaviors, clustering customers together, <b>mediating</b> exchanges between them and <b>multiplying</b> these exchanges by finding and exploiting new connections
Result	The ultimate result of the chain process is the <b>product</b>	The ultimate measure of the success of the shop process is the <b>outcome</b> that results from implementing a solution	The end result generated by value networks are value-creating <b>connections</b> between customers
Best Way to Price	It is essential for chains to understand their true <b>costs</b> 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 <b>value</b> of the solution and expertise received rather than the cost	The <b>rights</b> 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 <b>optimizing</b> the cost, time and quality of processes	Shops generate new value by capturing and exploiting <b>knowledge</b> about problems and their solutions	Networks generate new value by identifying new <b>clusters</b> of customers or customer usage patterns that enable them to multiply exchanges between customers
Key Question	For chains the key question is <b>how</b> : (for example) <ul style="list-style-type: none"> <li>• To find customers for products?</li> <li>• To make the process more efficient?</li> <li>• To make the chain more responsive to changes in supply or demand?</li> </ul>	For shops the key question is <b>what</b> : (for example) <ul style="list-style-type: none"> <li>• Is the problem/opportunity and how can it be solved or exploited?</li> <li>• Resources are needed and how can they be mobilized?</li> <li>• Knowledge of the problem or opportunity do we have?</li> </ul>	For networks the key question is <b>who</b> : (for example) <ul style="list-style-type: none"> <li>• Do we need to bring into the network (or kick out)?</li> <li>• Are the good users of the network?</li> <li>• Can we sell excess capacity to?</li> </ul>

Source: AssetEconomics Holdings, Inc.

<sup>13</sup> We are indebted to the Computer Sciences Corporation Foundation Report, “Chains, Shops and Networks: The Role of IS in New Models of Value Creation”, for these value logic comparisons and for the IT illustration. Refer Computer Science Corporation, Chains, Shops and Networks: The Role of 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> .

<sup>14</sup> As for the above.

## 6. An Unavoidable Management Challenge

What has occurred in with the changed nature of the economy is the following:

- More and more enterprise value is being driven by future growth expectations
- Alternative business models are becoming more and more important
- These alternative business models rely primarily on intellectual capital assets for the creation of shareholder value
- Many of these intellectual capital assets are intangible
- Managements have little (if any) background in identifying, measuring and especially managing intangible intellectual capital assets - no manager working today has any real training in this!

These assets also have different behaviors to those of traditional economic assets - in particular, the law of diminishing returns does not always apply. The salient characteristics for the management of the five asset forms identified in Figure Eight are shown in Figure Ten. It is clear from this representation that we are dealing with quite different asset management phenomenon from those that typify traditional accounting assets and around which all business school management theory and illustrations are built.

Figure Ten: Characteristics of Firm Assets

	Traditional Accounting Assets		Intellectual Capital Assets		
	Monetary	Physical	Relational	Organizational	Human
	(i.e. cash and investments)	(i.e. property and equipment)	(i.e. key relationships)	(i.e. proprietary processes)	(i.e. competent employees)
<b>Ownership</b> Is the asset owned by the firm?	Yes	Yes	No	Yes	No
<b>Additive</b> Does usage decrease asset balance?	Yes	Yes	No	No	No
<b>Economic Return</b> 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
<b>Network Economics</b> Are network economics applicable?	No	Probably	Possibly	Possibly	No

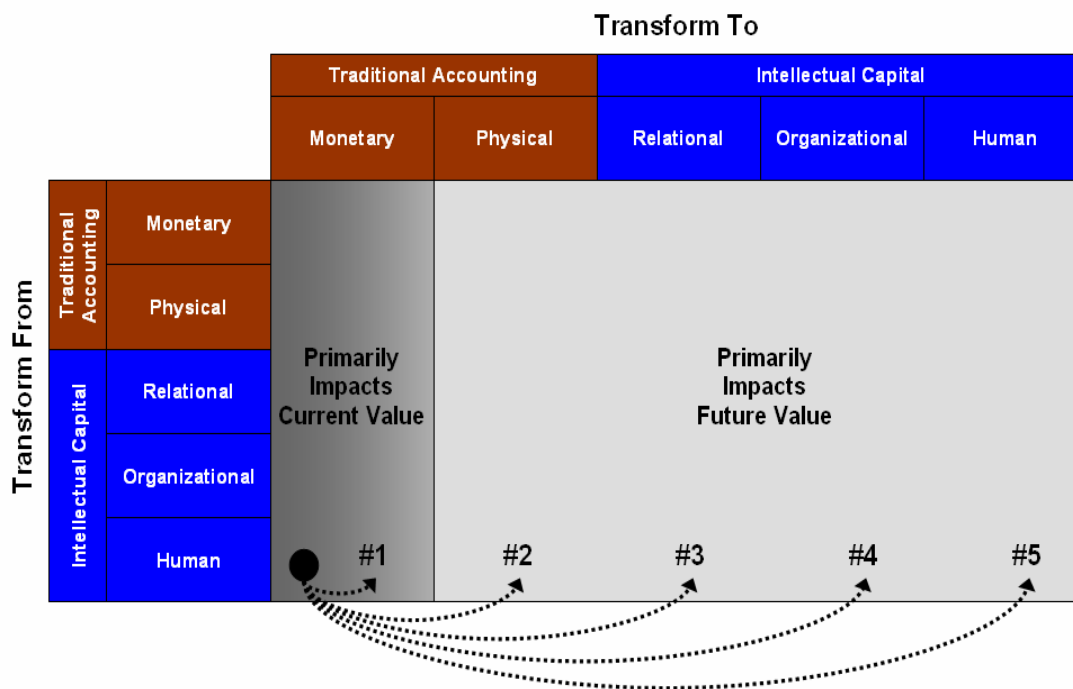
Source: AssetEconomics Holdings

Why are these asset characteristics important?

In terms of coming to grips with managing intellectual capital assets, we have to understand that the focus of management for creating shareholder value is in transforming the assets at their disposal, not merely the possession of these assets. This fundamental management task has become implicit in today's management thinking and embedded in the management strategy and the processes that support strategy - largely as a result of the Business school training that we have all received. The rest is managed by intuition and experience - supported by ad hoc evidence of what works and what doesn't (the saying often (but not only) attributed to Lord Leverhulme (purveyor of soap products to the masses), "I know half of my advertising budget is wasted, the problem is that I don't know which half", comes to mind). The concept of Intellectual Capital Asset transformation was introduced by Roos & Roos (1997) and further discussions can be seen in e.g. Dragonetti & Roos (1998), Roos & Jacobsen (1999), Gupta & Roos (2001), Chatzkel (2002), Marr, Gupta, Pike & Roos (2003), Fernström, Pike & Roos (2003) and Roos (2003).

The nature of the asset transformation task is shown in Figure Eleven.

Figure Eleven: Transformation of Assets from One Form into Another



Source: AssetEconomics Holdings, Inc.

The deployment of an asset is the key decision that affects transformation.

Management often has several options available in how to deploy an asset and this is particularly true with intellectual capital assets. For example, a firm that has control of a group of competent people could deploy them in any of these five ways:

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

- It can have those people craft a prototype - the transformation of a human resource into a physical resource
- It can have those people generate a new customer - the transformation of a human resource into a relational resource
- It can have those people design a new process - the transformation of a human resource into an organizational resource
- It can have those people train another person - the transformation of a human resource into another human resource

The manner in which assets and resources are deployed will affect value in different ways. Ultimately, whatever transformation results in current period cash flow will affect current value as defined. The transformations in Figure Eleven that have their end-points outside of the cash 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 as they are setting up the firm to create cash in the future.

The management activity of deployment traditionally has been well enough understood. For the most important firms in the US economy, management has typically transformed tangible physical assets into monetary assets. This imperative is still true in most instances. However, it is also true that the chain value logic is no longer the ubiquitous model for creating significant shareholder wealth. Further, we can anticipate that the “new” shop and network business model-based firms will become increasingly more important both in terms of their individual and collective absolute size and economic presence.

The question of how, where and when to deploy intellectual capital assets is fundamentally important to the management of the firms that represent these business models<sup>15</sup> in particular and until now we have had no methodology through which intellectual capital assets can be identified, measured and managed (or transformed) aiming at growing future value<sup>16</sup>.

What we will propose here is our approach to unravelling this complex issue.

## 7. Managing for Future Growth - Seeing, Measuring, Managing and Telling

The new economy circumstances that are confronting the management of many firms in the US economy is complex since the departure from the traditional value chain model based on traditional

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<sup>15</sup> For an application of these ideas on the industry level see Göran Roos and Lisa Fernström, “Differences in Value Creating Logic and Their Managerial Consequences: The Case of Authors, Publishers & Printers”, Paper presented at the Australian International Conference on the Future of the Book, April 23, 2003, Cairns, Australia and Göran Roos and Lisa Fernström, “Value Creating Logics in the Publishing Industry”, Paper presented at 25<sup>th</sup> McMaster World Congress on the Management of Intellectual Capital, January 14-16, 2004, Hamilton, Ontario, Canada.

<sup>16</sup> For discussions of the weaknesses in existing methodologies see, for example, Stephen Pike and Göran Roos, “Mathematics and Modern Business Management”, Invited Paper for the Performance Management Association Symposium, INSEAD, July 28-29, 2003 and forthcoming in Journal of Intellectual Capital, 2004; and Daniel Andriesen, The Value of Weightless Wealth – Designing and Testing a Method for the Valuation of Intangible Resources, Ph.D.-Thesis, Nyroede University, 2003.

economic assets has gone in multiple directions simultaneously. To summarize the above, these managements are managing firms where a very high proportion of EV is represented by future growth expectations, where “new” business models prevail, where the assets that give rise to distinctive competence and competitive advantage (and therefore underpin strategy) are of an intellectual capital nature and where the bases for extracting competitive advantage are reliant on managing the transformation of these assets are unheralded.<sup>17</sup>

The approach we have developed focuses on two related outcomes for the listed firm - its economic profit performance and its enterprise value. The first outcome is driven by management and the second outcome by the equities capital market. According to received finance theory these two outcomes reconcile over time but are not necessarily in sync at any one point in time. What we believe about this will be strongly conditioned by our beliefs of the CAPM. Nonetheless, management’s role is to deliver the best sustainable economic profit over time with the view that this outcome, together with appropriate disclosure and reporting to that market, will result in the best share price for the firm, under a *ceteris paribus* assumption. Management can do no more. The market will make of the firm’s performance and its disclosures and reporting what it will in the context of all market investment opportunities and all prevailing sentiments and beliefs.

Given the realities of the new economy and its management challenges, and the fact that traditional tools based well with the accounting paradigm are incapable on their own of addressing the issues we have raised<sup>18</sup>, it is imperative that we approach the problem of understanding what assets are to be managed, how, for what ends using what performance metrics in order to deliver shareholder wealth, from a fresh point of view and using fresh tools.

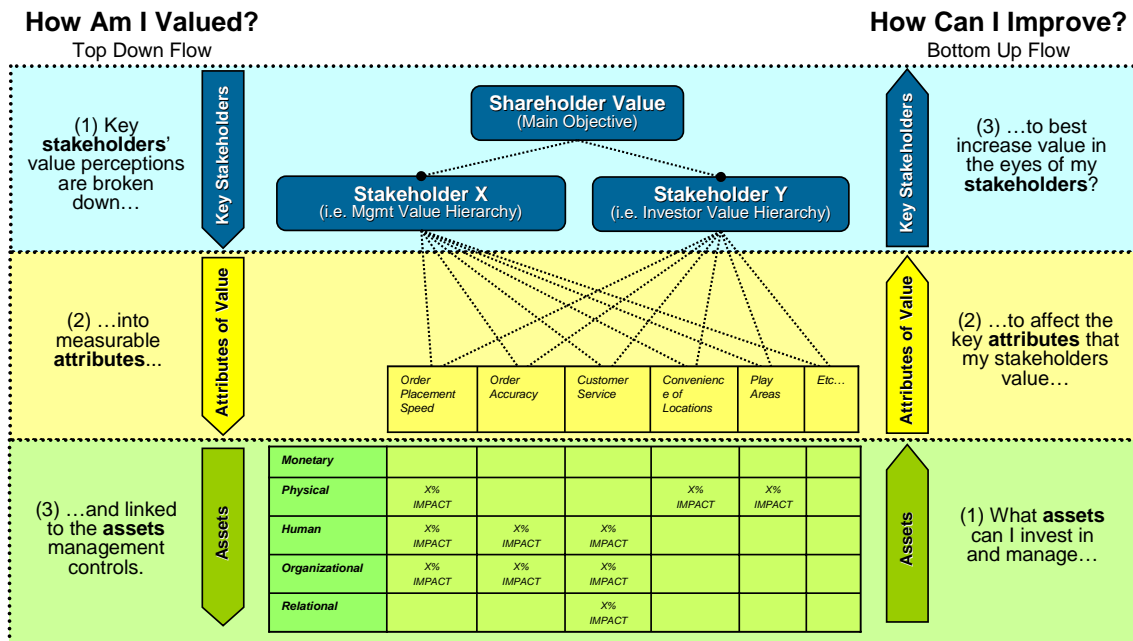
Our methodology, known as the Seer Methodology, is shown in Figure Twelve.

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<sup>17</sup> For example, relationships between assets are non-linear, growth economics prevail, issue of scale and critical mass are much more to the fore, considerable delay structures between enactment and result exist, and ownership and especially the ability to control outcomes are much less direct and certain.

<sup>18</sup> This is true since the traditional tools used to establish firm value drivers use the income statement, balance sheet and cash flow statement as a point of departure. The implicit assumption is that all the information necessary to identify all value drivers is contained in these statements. Clearly, this is not true. It never was true. Nonetheless, the assumption that these statements contained most of what was relevant and that it was good enough has been a valid working basis for uncovering and determining the importance of what should be managed and the expectations that might be held for performance improvement if certain actions were to be taken.

Figure Twelve: Seer Methodology Conceptual Overview



Simply, our Seer Methodology identifies the outside-in value determining attributes of value that are important to stakeholders (not necessarily limited to shareholders or their surrogates - institutional investors and sell-side analysts) and the inside-out value determining perceptions of management in relation to “what matters”. We are thereby able to identify:

- The attributes that seen by these stakeholder groups to define value, the value that is being placed on each attribute by the stakeholder groups individually and en mass
- The attributes for which there is considerable upside on improving performance
- The attributes for which there is considerable downside on declining performance
- The attributes for which there is performance improvement potential as a result of nature of the attribute

These attribute perceptions are linked to the assets that create them through business modeling the firm using a different approach which does not use the financial statements as the point-of-departure, but rather a cause and effect approach which models the major processes of the business in a dynamic, interconnected way . Through this, the firm’s value drivers are established as a combination of assets and their transformation (deployments) uniquely selected by the firm. Subsequently, through scenario analysis (sensitivity testing) we are able to establish what value changing outcomes to expect if specified changes were to be made. For each stakeholder group then, we can know:

- what matters
- how much what matters, matters

- what doesn't matter
- how little what doesn't matter, doesn't matter

As a result of all this analysis, we are able to plan and make business cases knowing what attributes of value to invest in (and what attributes not to invest in) to enhance value to specific stakeholders, as well as the nature of the trade-offs that might be made to improve overall shareholder value performance.

The potential impacts on the firm of having a complete basis for identifying, measuring and managing the value drivers of the firm will be reflected in the firm's major management activities - for example - in strategy development, resource allocation, performance measurement and incentives, and organizational design. The management questions that will be better answered are shown in Figure Thirteen.

Figure Thirteen: Potential Impacts on the Firm

<b>Strategy Development</b>	<ul style="list-style-type: none"> <li>• How can we better manage assets to meet investors expectations for value growth?</li> <li>• What is needed to align all assets (monetary, physical, relational, organizational and human) with the needs of our business portfolio?</li> <li>• Which strategic alternatives will use utilize the optimum mix of resources to maximize our value?</li> </ul>
<b>Resource Allocation</b>	<ul style="list-style-type: none"> <li>• How do we integrate our CapEx and OpEx budgeting processes?</li> <li>• What resource allocation tools are needed to be able to prioritize high value assets and investment opportunities?</li> <li>• What changes are needed to our budgeting process and systems to better manage those discretionary expenditures that are major determinant of our value?</li> </ul>
<b>Measurement and Incentives</b>	<ul style="list-style-type: none"> <li>• What kinds of information on intangible assets is needed to provide actionable data on all key value drivers to our management teams?</li> <li>• How do we recognize and differentiate between expenses and true investments?</li> <li>• How can we design performance targets and incentives to recognize optimum performance levels on various attributes?</li> </ul>
<b>Organizational Design</b>	<ul style="list-style-type: none"> <li>• What steps should we take to manage our company's unique business model?</li> <li>• How can we better leverage our mix of internal and external assets?</li> <li>• How do we ensure that we "own" and "control" our strategic assets ("things we have" and "things we can do")?</li> </ul>

With these insights, we can compare the SEER Methodology to the traditional DuPont approach to identifying, measuring and managing the firm's value drivers. This is shown in Figure Fourteen.

Figure Fourteen: SEER Solution Compared to the Typical Approach to Identifying Value Drivers

Key Management Questions	Typical Approach	Issues With Typical Approach	SEER's Solution
<b>What are the key value drivers of my business?</b>	<ul style="list-style-type: none"> <li>• Intuition</li> <li>• Classic DuPont financial analysis</li> <li>• Focus on traditional accounting assets</li> </ul>	<ul style="list-style-type: none"> <li>• Not comprehensive (lack of proper consideration of intellectual capital)</li> </ul>	Takes into account <b>all assets</b> , traditional accounting and intellectual capital, in an integrated manner
<b>How do I determine what value drivers have the largest impact?</b>	<ul style="list-style-type: none"> <li>• Intuition</li> <li>• Spreadsheet analysis</li> <li>• Classic finance &amp; accounting metrics</li> </ul>	<ul style="list-style-type: none"> <li>• No feedback among variables</li> <li>• Relationship among drivers is not linear in reality</li> <li>• No account for time delays</li> </ul>	Modeling is <b>dynamic</b> allowing for feedback and time delays to be understood
<b>How do I make the optimal trade-offs regarding strategies and resource allocations?</b>	<ul style="list-style-type: none"> <li>• Intuition</li> <li>• Non-comprehensive spreadsheet analysis</li> <li>• Usually only one point of view considered</li> </ul>	<ul style="list-style-type: none"> <li>• Ineffective in all but the most simple of business models</li> <li>• Cannot handle complexity over time</li> </ul>	Combination of above, with an <b>understanding of value perceptions</b> of key stakeholders, allowing for a more <b>optimal trade-off</b> analysis

What is apparent from Figure Fourteen is that there are many shortcomings with the traditional approach for managing new economy companies. The approach we have developed, we believe overcomes these. While there a number of new aspects to the methodology, the discomfort of dealing with these will be well worth the payoff of having a framework for being able to comprehensively deal with the management issues that confront us in managing that new economy business models that represent so much of shareholder wealth and the future growth value that is tied up in virtually all companies in the US.

The final aspect of managing for shareholder value is determining what should be communicated, to which stakeholders, under what circumstances, through which mediums in order to maximize long-term shareholder value. This is the province of investor relations and communications management. Suffice to say that the approach outlined above will provide the basis for what can be communicated to various stakeholder groups. It will be a separate management decision as to what should be communicated.

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