Recommended Reading

Q&A: Baruch Lev on the End of Accounting

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We recently visited Professor Baruch Lev in his office at NYU Stern School of Business to discuss his new book, *The End of Accounting*. In the book, Lev declares corporate financial reports “unfit” for investment decisions due to the deficiency of the data. He outlines three causes of the decline in the value of financial reports, chief among them the complete absence of information about corporate innovative activities.

Our long-time readers will be familiar with Lev’s work, which forms the basis for our Knowledge Leaders investment strategy. In his decades-long study of financial records, Lev first discovered a link between a firm’s knowledge capital and its subsequent stock performance, ultimately identifying a market inefficiency that leads highly innovative companies to deliver excess returns. We have named this market anomaly the Knowledge Effect.

In the interview below, Lev calls himself a contrarian. He explains why many analysts and managers reject his recommendations, preferring not to reveal any more corporate information than necessary. He describes how this behavior misleads investors, and offers ideas how investors can overcome it. Our investment process that begins by capitalizing intangibles – in which we recalculate a company’s financial footprint to incorporate its valuable knowledge stores – is based on this academic foundation. We hope you find Professor Lev’s perspective compelling. We do.

**GC:** Can you tell us a little about your background? How did it lead to your unique focus on intangibles?

**BL:** I did my undergraduate schooling in Israel, where I also played basketball for Israel. I went to University of Chicago, got my MBA and PhD and eventually stayed on as part of the faculty. After that I taught at the University of California at Berkeley, in both the Business School and the Law School. At the time, I was also a partner with a consulting firm that did a lot of litigation support. My interest in intangibles came directly from this consulting work. I was in charge of securities valuations for a variety of big cases, and I did a lot of valuations for emerging industries. Since I was an accountant, I started with financial reports as my primary information source. It quickly became clear to me -- particularly for industries such as cellular phone companies and biotechnology – that financial reports were not only completely useless, but they were and
still are actually misleading. For example, in cellular phone companies, most people don't know that the retailer gets paid by the provider when they sign up a new customer. This is why sometimes the retailer will give you a phone for free. So when the retailer hooks you up with a provider, let's say Verizon, the retailer gets $300-400 for it. Customers stay with companies usually four to five years, so that's a big investment that ultimately pays off.

Accounting rules require the provider to expense these extremely valuable customer acquisition costs. At that time, the more successful the provider was at building the franchise and acquiring customers, the larger the losses they showed because those acquisition costs had to be expensed. This caught my attention.

In addition to the consulting work, I was doing a lot of research into identifying which fundamental factors determine value. At that time -- I'm talking very early on for cellular phone companies -- the fundamental factor that was determining value was the penetration rate or the number of customers in an area that you are licensed to service. Of course this information isn’t on the balance sheet or the income statement of the company.

So I started writing papers on the real value creators and realized that it's not just those emerging companies, it's all companies that have real value creators that can’t be found on financial statements. Because in any competitive environment, even if you are just talking about traditional industries, you have to innovate.

The greatest strength of Walmart is not that they have large stores. Other retailers also have large stores. What separates Walmart is that they have incredible business processes. When you buy an item at Walmart, that information goes straight to a supplier. They have managed to shift the entire inventory to their supplier’s balance sheet. So even in traditional industries, you have to innovate to survive. Another example is car insurance. Progressive and others have started experimenting with small devices that you can plug in to the car to track your driving behavior. They claim that if you are a careful driver, such as you don't speed, you don't stop every five seconds, etc., they will reduce your premiums by 14%. This is huge. And I'll point out that car insurance isn’t a high-tech or science-based industry. And even here intangibles play a very key role.
developing new products and two were trying to reduce costs. They also asked me to estimate their return on brand investments because their main brands’ patents, well-known patented plastic products, had long ago expired and they were investing heavily in maintaining the brands. They told me all kinds of stories about how they would go to this designer or that designer, trying to convince them to use their branded product despite the fact it was a bit more expensive than their competitor. They knew intangibles were important but they were asking me a very tough question: how should we allocate our resources?

I remember when I presented to the board I was slated to speak 1-2:30pm, and by 7pm the board was still discussing R&D and asking questions like, “If we move $200 million from this type of R&D to this other type of R&D, what will be the ramifications?”

GC: How has the thinking around intangibles has evolved over the past several decades?

BL: At the beginning of the 1990s, people were just excited to hear us talk about intangibles. But eventually, people started asking much more serious questions, more difficult questions, more challenging questions. For example, I was hired by a major chemical company about a decade ago to estimate their return on a dollar invested in R&D. We looked at three different types of R&D: one was

GC: What about joint ventures?

BL: Six or 7 years ago I was hired by another major chemical company, and they had hundreds, if not thousands of joint ventures going on. They suspected that through the joint ventures, their “partners” were basically stealing knowledge from them. So we designed a system to track those partners that were stealing by mapping how technologically far from the company’s patents the partners’ patents were before and after the joint venture. For those companies that were stealing, their patents got closer and closer to the technology that the company owned after the joint venture.

Several years ago, McKinsey wrote an article on alliances and joint ventures. They said that they had lots of clients with hundreds of alliances, some with even more alliances, and that only 1 in 5 actually track their alliances. Four out of 5 weren’t tracking their investment or return on investment. Of course, it’s very easy to track ROI based on what you are aiming to get from the alliance. If it's a marketing alliance, then it should increase sales and things like that. But they said no one was doing it and my hunch is that they weren’t tracking it because accounting rules don’t require any information about alliances.
GC: SFAS #2 – the Financial Accounting Standards Board’s infamous 1974 ruling which required all R&D be expensed rather than treated as investment -- seems to rob investors of information about innovation investments but also instructs managers to give non-structured qualitative information about these projects. What do you think has been the impact of SFAS #2 over the last 40 years?

BL: There are many bad accounting standards but that is probably the worst. In fact, it was voted the worst. About 15-18 years ago, Harvard Business School held a big meeting between the regulators, FASB, the SEC, and the academics. In a written questionnaire, they asked attendees to list the three worst accounting standards. SFAS #2 came in first. So it’s not just me saying it. The standard doesn’t make sense because, as you say it’s from 1974, a period of time before major industries like software, like biotech – where intangibles are so important -- came into being. The whole economy has changed but this thing (SFAS #2) is still here. We have a footnote in the book about it, if you look at the reasoning, it is quite childish. We quote from SFAS #2. The ruling says, "The future benefits of R&D were not established, even with hindsight." Well first of all you cannot establish anything without hindsight. But more important, to say that companies that spend six, eight, ten billion dollars on something that has no future benefits doesn’t make sense. I mean these CEOs would have been kicked out long ago if they were just wasting that much money. So the reasoning is terrible, and it’s out of date.

GC: Under International Financial Reporting Standards (IFRS), research is still expensed, but development costs are capitalized?

BL: Exactly, they capitalize development cost. And there are several studies, including my own, that show that from investor's perspective, the capitalized value is a highly valued asset. It’s easy to show that is important to share prices. You run a regression between the values of the capitalized asset with all other assets and liabilities to see whether the regression coefficient is significant. And when you do that you see it is highly significant, which means investors welcome the capitalization. With IFRS, we have at least a step in the right direction, and it’s working. Other people tell me that just putting a capitalized value on the balance sheet is not enough and that you actually should estimate the real value. I don't subscribe to that because it’s very difficult to estimate the proper real value. For example, I don't know how to value patents at an early stage, but they should still be considered investments, rather than expenses. And ultimately, the main advantage of capitalizing intangibles is not on the balance sheets. The main advantage is correcting the income statements. That's something that people don't understand. Because when you expense intangibles, if the rate of investment in intangibles increases, it understates earnings. But in many cases, it overstates return on equity and return on assets because the denominator doesn't have the assets. So, it's a small denominator or a large numerator.

GC: We have found in our work that expensing intangibles also understates the amount of capital that can be profitably employed in an industry.

BL: Exactly, yes. That’s a very important point. After the chemical project, the American Chemistry Council asked me to analyze the ROI of R&D for the entire industry. And, indeed, I found that the
return on investment in R&D in the chemical industry was 26 or 27%, which is twice the cost of capital there. Economic theory would tell you that when the return is higher than the cost of capital, you should expand in investing. For some reason, they don't. Maybe because you have to expense it for financial reporting and that results in lower earnings. One more thing that I would mention is the accounting for intangibles in government reports, which we talked about it in the book. In the US, in the National Income and Product Accounts, investments in software have been included since 1999, and now R&D and other intangibles are capitalized. People think government always lags behind the private sector, but in this case the government is much more advanced in their understanding of intangibles than the private sector. A major problem with changing the accounting treatment of intangibles is that there are extremely strong vested interests that don't want accounting practices to change. That has taken me a long time to understand.

**GC:** In what way?

**BL:** Many years ago I become friends with a professor from MIT that went on to establish a very successful technology company. Even though he came from an engineering background, accounting issues were very dear his heart. We became close friends and one day he pulled me aside in his office and told me, “Baruch, I’m going to explain to you why we CEOs love expensing intangibles.” He said that if you expense R&D, you have an extremely powerful earnings manipulation tool. If you want to increase earnings than you can cut R&D and no one second guesses you. If someone says you are cutting R&D because you are manipulating earnings, it is very easy to respond by saying, “No, I didn’t. We just didn’t have an attractive project at this time.” If we capitalize R&D, this flexibility goes away. After all my years in accounting, this was a revelation.

Another reason managers don’t want to capitalize intangibles is because intangibles are risky. They would remove everything that is not cash from the balance sheet if they could [chuckle]. If an investment loses its value and you have to write it off then there are all kinds of embarrassing questions from the board and from shareholders. So in the minds of managers, it is much better to expense everything immediately, you see. The issue here is not just that regulators are somehow blind, there are huge forces working against change. Accountants also don't want to capitalize intangibles because they have to attest to this value. Suppose there is a bankruptcy, and from the R&D, or the brand, or IT, whatever is capitalized, you don't get the value on the balance sheet. The accountants are concerned that they'll be sued. So it’s a very difficult battle, but one I want to be a part of.

**GC:** Your new book seems to be pushing your research into new areas. Can you describe what’s new?

**BL:** Yes, I believe we take a step forward in this book. While of course we embrace the notion of capitalizing intangibles, we are looking at more than just intangibles. We are looking at strategic assets in general, both tangible and intangible assets. For example, oil fields for oil and gas companies are highly strategic assets. In the book, we broaden the spectrum to all strategic assets which create...
value and also have the following two conditions. First, their supply is limited – like wireless spectrum or landing rights of airlines -- and second, they are very difficult to imitate, at least in the short term. Good examples are Google’s brand, or Amazon’s. We focused on these assets, and we developed a report which we called the Strategic Resources and Consequences Report.

GC: Can you give us some examples of these strategic assets?
BL: Sure, the product pipeline of pharmaceutical companies is a good example. First of all, the product pipeline is not required to be reported by GAAP. So once again current financial statements aren’t really providing valuable information. You can find information on the pipeline in the materials accompanying the conference call. So we looked at academic studies that assigned probabilities to the success rate of drugs in different phases of clinical tests and FDA approval. If you are in phase one, what’s the probability of getting to the market? If you are in phase two or phase three, what’s the probability? Also, what kind of drug is it? Is it for immunology or cardiology, etc. Ideally, you would want to develop a product that has a very big market like cardiology. So once we have a probability of success based on the development phase the product is in and the size of the end market, we can assign an estimate that will reflect the potential for the entire product pipeline. Ultimately, you are looking for what is the trend of the product pipeline. If the outlook of the product pipeline is weakening then future sales growth expectations must be decreased significantly. My research partner and I are writing an article for the Financial Analyst Journal that will give readers a concrete grasp of our Strategic Resources and Consequences Report.

GC: You relay a fascinating stat in the book, fundamental reported information represents about 5% of the information in a stock price.
BL: This amazed me! My co-author did the computing, he is a magician with these things. There were many things that I expected, but this extremely low number surprised me. I asked him to repeat it, then I asked a PhD student to check it. But every time, the math resulted in this very low number.

GC: Given the weak relationship between reported financial data and stock prices that you outline in your book, if you were to start an investment fund today, what information would you use to make decisions about how to allocate capital?
BL: I would create an edge with information that others are not using, the kind of information we are proposing in the book. Some is provided by the companies, and if it is not, you can ask for this information in conference calls. In most cases, they’ll give it to you. In the book, I chose insurance companies as one of the four examples of industries where financial statements don’t tell the whole story, to illustrate that its not only high-tech and science-based companies where my framework is useful. We spent the whole year going over hundreds of conference calls to understand what investors want to know. There are a lot of people going to the SEC and other agencies with ideas about how financial reports should be reformed, but they actually have no idea what investors really need. We used conference calls to figure out what investors need. For an insurance company, some companies
like Allstate provide information on the frequency and severity of claims, which are extremely important indicators. These indicators are affected by the quality of cars, quality of the road, or inexperience of drivers. None of that is GAAP information. We did a very small empirical test in which we took severity and frequency data from the companies that provided it and correlated the data with stock returns. Controlling for earnings and other things, the new data was definitely associated with stock price changes. This is an example of the information that I would look for. I was surprised how frequently companies will provide this information. I gave an early version of the book to some friends, just a couple of chapters. One of them who was a CEO, now retired, said, “Baruch, I'm going to disappoint you. We CEOs know that the financial reports don’t provide the right information. That’s the reason why there is a huge surge in non-GAAP information. Not just the non-GAAP earnings, but also information like the product pipeline. Things that are not required to be reported. That's what we try to give.”

GC: Early on in the book, you show some great charts making the case that for all companies, financial data has lost its predictive value, a trend that has only increased over the last 50 years. For an investment industry that is so grounded in using reported financial information, what are the consequences for the investment community?

BL: I have no doubt about that. I'm sure that most people are getting mediocre results from the financial reports. They must be. So even though in business schools we teach future analysts to try and predict whether a company will beat the consensus, the research shows the return on that type of analysis is very low because the earnings don't reflect the fundamentals of the company. It's as simple as that. But again, there are lots of vested interests there. I had dinner yesterday with a very close friend of mine. He's on the board of a big fund, and he talked with their CEO about me appearing and talking to their analyst team. The CEO said, "I met two analysts, and they were very critical of your book." I asked, "What did they say?" Maybe they were holding back but the main complaint was that my framework was adding to the current heavy burden. They said, "We now work with a huge amount of information. And here (Lev) comes in with an additional report we have to look at." That's what my friend told me that analysts don’t like about my work.

GC: Well, we very much liked it! And think it is important reading for any portfolio manager. Thank you very much for the time, Professor Lev.

Baruch Lev is the author of *The End Of Accounting and the Path Forward for Investors and Managers*. He is the Philip Bardes Professor of Accounting and Finance at NYU’s Stern School of Business. Follow his *Lev End of Accounting Blog*, an ongoing discussion on the book and related issues.

Read Gavekal Capital’s white paper on the academic foundations of our investment process, which includes a study of Dr. Lev’s findings here: *The Knowledge Effect – Excess Returns of Highly Innovative Companies*. 