



"All men dream: but not equally. Those who dream by night in the dusty recesses of their minds wake in the day to find that it was vanity: but the dreamers of the day are dangerous men, for they may act their dreams with open eyes, to make it possible."

Lieutenant Colonel Thomas Edward Lawrence, aka Lawrence of Arabia
(16 August 1888 - 19 May 1935)

BUSINESS MODELS AND FINANCIALS

We've been discussing business plans over the last several newsletters. Our final newsletter on this topic focuses on how different business models affect the valuations that companies can reasonably achieve.

This letter looks at the linkage between company valuations and business models. In working with companies that are struggling to create meaningful value, this process often leads to tackling very tough and difficult decisions relative to strategic issues, such as, product development and placement, channel distribution, internal versus external development, etc.

BASICS

What determines the value of a company is, at least in principle, quite simple. It is the discounted cash flows of the company into the future, called the [net present value \(NPV\)](#). However, in the real world of investing, valuations can be based upon a wide variety of metrics. Some of the most common metrics ordered by what we consider to be decreasing legitimacy in the determination of corporate valuations are: net [free cash flow](#); [net income](#); [earnings before interest and taxes \(EBIT\)](#); [earnings before interest and taxes less depreciation and amortization \(EBITDA\)](#); and revenue. From time to time, businesses are valued on non-economic metrics that feel as if they should indicate the value of the company. This often occurs when a fundamentally different business model emerges, as happened in the early days of Internet companies, when the business world didn't yet know how to value these companies.

In addition, businesses are valued upon a mix of historical results and results that are forecast into the future. Practically, the forecasts of companies, or executive, with a consistent track record of performance are often judged to be more credible.

Key Point: Free cash flow and net income are generally strong indicators of corporate value.

Key Point: Metrics, such as EBITDA or revenue are riskier to use in understanding corporate value, as they are often used when the enterprise is not generating cash.

LIFE ISN'T FAIR

Not all companies are valued equally. Even within a single vertical sector, valuations can vary dramatically. Besides the obvious differences due to financial and operational performance differences among companies in the same sector and space, companies within a value chain can be judged differently depending on where they sit in the supply chain hierarchy. For example, if you consider components, modules, sub-systems, and software in a vertical technology sector, companies producing goods and companies supplying services at different parts within that supply chain will be valued very differently. Sometimes this is clouded by the metrics that are traditionally used to value companies in one link of the chain versus the next: some companies may be typically valued on an EBITDA basis, others on revenue growth, others on operating profit, and some on P/E multiples. Of course, in some spaces certain metrics are used because there are no profits! This, in itself, should be viewed as a warning flag but seldom is seen that way. Hope springs eternal in some sectors.

If one metric, such as price to sales (P/S), is selected and this metric is compared across the companies in the vertical sector, then some patterns of valuation become apparent. In general, increasing valuations and decreasing volatility follow the pattern of the least valued companies being component manufacturers (regardless of internal or external manufacturing capabilities), followed by hardware companies, then companies that extensively develop software or provide specialized service capabilities.

The discussion will focus on some of the reasons that produce these valuation results. The hope here is not to discourage companies from working on basic material or component technology and devices, rather it is to encourage them to think of ways to deal with certain fundamental issues to help them with ongoing value generation.

Key Point: Understand why different metrics are used for different sector valuations and what the underlying implications of these choices mean.

Key Point: Not all revenue is valued the same.

COMPONENT COMPANIES

Let's start with the least valued, and most volatile, companies in the supply chain: component manufacturers. Why do these companies, who have to work so hard to develop wonderful technological products, typically get the short end of the stick? First, they have to invest substantial money to keep current with their products: equipment is expensive, high R&D levels are often required simply to have the technical capabilities to make competitive products, and design-in cycles are typically long and require extensive qualification. These characteristics tend to depress financial metrics like [return on invested capital \(ROIC\)](#).

Component manufacturers often exist in an environment with relatively few customers and several competent competitors, resulting in depressed margins and earnings. In

addition, component suppliers have the most volatility in demand; while this feels just super good in bull markets, the high variability in demand increases the overall cost of running the business. Missteps can be the difference between profit and loss, not just for a product line, but also for the company. This makes the job of achieving high, and steadily increasing, corporate value very difficult. This is a harsh environment in which to operate.

Little room for operational error gives investors pause resulting in lower valuations because the companies' revenue streams are less secure, earnings results are highly dependent on the competitive landscape, and technological and manufacturing costs tend to be very high relative to the margins achievable.

Companies that are expert in cost reduction, continual product introduction and operational execution can do fairly well in this space. Because of the extremely competitive market environment, less competent competitors occasionally fall by the wayside, and good companies can eventually become large market share players, but this process of consolidation can be quite prolonged and painful.

Key Point: Component players have limited, and demanding, customers. In addition, being at the end of the supply chain means demand is highly variable.

HARDWARE COMPANIES

Hardware companies produce parts at the subassembly and module level of integration. In all but markets of intense demand, these companies are typically valued more highly than component companies. The integration of components into subassemblies and/or modules typically requires fewer investment dollars for each dollar of revenue than component businesses, decreasing risk to investor returns. In addition, the design and the firmware/software incorporated into these products means that these companies often have a reasonably high level of intellectual property that is difficult to reverse engineer.

These companies are often selling directly to end-consumer or to companies only one step from end-consumers making the natural variation in demand less cyclic than for component companies. This serves to lower the overall cost of executing the business.

Finally, the ratio of suppliers to customers is often better at this level than at the component level, which does a couple of things. First, the marketing effort is larger and more difficult, in that determining or creating customer demand is becomes harder as the number of customers dramatically increases. However; this characteristic also reduces the overall level of competition. These factors all contribute to a better business environment, and typically higher corporate valuations.

Key Point: Being closer to end-customers makes good marketing more critical for success. This increased closeness decreases the volatility of revenue and earnings and helps reduce the level of competition within the market.

MANUFACTURING CHOICES

Before we move onto discussing companies that provide software or services, we'll take a brief digression to discuss manufacturing questions facing component and hardware companies. Do they manufacture internally or use contract manufactures (CM)? If CMs are used, are they used exclusively or is some internal manufacturing maintained? If some internal manufacturing capacity is used, which products are produced internally and for how long and through which phases of product life? The decision between keeping low fixed costs and minimal capital equipment expenditures and giving away a few points of margin to a CM is not trivial. To make a good decision here involves a thorough market and competitor understanding and a knowledgeable manufacturing supply chain organization.

Key Point: Insourcing and outsourcing decisions are complex. To be done well, these decisions require mature resources and analysis.

The older viewpoint that a company had to do all of its own manufacturing still persists in some companies. At the same time, we see countless people of the opinion that giving a CM a poorly designed product, and then letting the CM run free of substantial oversight, is a great way to get a product to market on a tight budget. Of course, both of these viewpoints are loaded with risk.

In the first case, the high infrastructure investment levels make achieving an interesting return very high. The disk drive companies prior to consolidation, or the over-capacity of the telecom suppliers in the years 2001-2005, or more recently the difficulties facing Solyndra or Tesla are all examples of high fixed cost structures creating severe business difficulties. Start-ups requiring a large infrastructure are at high risk. They must invest quite early on to develop the infrastructure. But demand can shrink, alternative technologies can appear, or cost points can sink, all before their infrastructure is actually complete enough to even ship substantial product. The high risk of achieving a good return on large investment needed for manufacturing capabilities not only dampens the valuations of these companies but it also makes acquiring capital investment more difficult.

Key Point: High fixed costs dramatically increase risk, decrease business flexibility, and make failure quite visible.

In the second case, companies that attempt to cheat nature and get into the production of a product on a shoestring budget face completely different problems. Our most common observation here is that a dramatic underestimation of the resources and money required to properly develop products coupled with an odd belief that little to no oversight of the contract manufacturer is required leads quickly (within a year) to failure. These beliefs are very wrong, but because going cheap, by definition, doesn't take much money, failures of this type are much smaller and quieter.

Key Point: Shortchanging product development and not understanding the oversight required when using contract manufacturers are typical mistakes for companies trying to get to market on the cheap.



Having finished that brief digression, let's return to the discussion of general business models.

SOFTWARE AND SERVICE COMPANIES

Software companies have many advantages. The product doesn't require an investment in a manufacturing infrastructure, implying that once developed the gross margins can be high. Quite often, the revenue is subscription based, greatly reducing variability in revenue.

Companies that provide services can often have recurring revenue streams. Typically service businesses that are not differentiated often have very modest valuations. However, if a service can be differentiated, protected by IP, and requires special training, skills, and/or equipment and is needed on a recurring basis, then that business model is akin to the software model just discussed and can also be highly valued.

Software and Service companies have the problem of establishing and maintaining a stable customer base. Thus, spending on customer acquisition, marketing and sales is often very high in these businesses. However, once a customer makes the decision to install a major software package, the customer tends to be disinclined to change vendors over time.

***Key Point:* Companies that can generate revenue with minimal expenditure on infrastructure can have excellent gross margin.**

***Key Point:* Recurring revenue streams are very attractive to investors, and are much more commonly found in software and service businesses.**

***Key Point:* A major risks for software or service companies are customer acquisition and retention. Because of this, these companies tend to invest heavily on understanding the market landscape and customer experience and satisfaction levels.**

CONCLUSION

The texture of revenue and operating profits heavily influences companies' valuations. Understanding the characteristics of both revenue and profit generation for a sector and a company, in particular, allows you to evaluate the robustness of the company's prospective earnings. When you understand the sector dynamics and can then evaluate the strength of a particular company within that sector, it is easier to determine the relative valuation of a company and understand the levers that affect that valuation.