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What is a business worth?

Over the years, I have read countless articles on the market and have discussed financial concepts with many people. From these interactions, I have observed that the vast majority of investors (and authors) have no idea how to calculate what a business is worth.

The preponderance of investors use what Howard Marks calls “first order thinking.” In the first-order worldview, good news means that a stock should move up, and bad news means that a stock should move down. At first glance, this thinking seems very logical. Such thinking is very simple and not mentally taxing. Unfortunately, such thinking leads to booms and busts. Assume a stock has a sequence of positive news. The first-order worldview would have the stock increase in price for each bit of news, without regard for its initial or final price.

Reality is far more complex. Higher-order thinking requires an investor to ask: “Even though the news is good, is this price too high?” or “Even though the news is bad, is the price too low?” Understanding what a business is worth provides both an anchor to answer such questions and a rational basis to go against the crowd.

Let us begin by considering the most simple possible business. This is a very steady business with no debt that makes \$1M of free cash flow every year. (Free cash flow is how much cash a business generates after it pays its operating expenses and capital expenditures.) How much is this business worth? To buy this business, would you pay \$2M? \$10M? \$100M?

It is actually impossible to answer this question with the information I have given you. To determine what the business is worth, you need to compare it against a “guaranteed” investment, such as high-grade bonds. To calculate what this business is worth, divide its free cash flow by the interest rate of the “guaranteed” investment -- because at the resulting price, the business will produce the same return as high-grade bonds. If interest rates were 10%, then the business is worth $\$1M/10\%=\$10M$. If interest rates were 1%, then the business would be worth $\$1M/1\%=\$100M$. At the end of the day, interest rates drive what all financial assets are worth, be they bonds, businesses, or baseball teams.

Let us now make the business slightly more complex. The business now has \$1M of debt, but it still produces the same \$1M of free cash flow, after interest payments. What is a business with debt worth? To understand this, consider an everyday analogy: owning a home with a mortgage. Having a mortgage does not affect what price you could sell your home for (your home’s value) -- but having a mortgage does affect your equity as an owner (homeowner’s equity = value of home - value of mortgage). Similarly, whether or not a business has debt, its overall value remains the same (just as having a mortgage does not affect a home’s sale price). But as with having a mortgage, having debt does decrease a business owner’s equity, which is equal to the value of the business minus the value of the debt. In the above example, assuming free cash flow of \$1M, debt of \$1M, and interest rates of 10%, the debt-laden business would be worth $(\$1M/10\%-\$1M)=\$9M$.



Clearly, reality is more nuanced than these simple cases. Businesses may be growing or shrinking, interest rates may be changing, and legislators may be revising rules the business plays by. The uncertainty of these factors inevitably leads to ranges for what a business is worth. For example, if interest rates will be somewhere between 9% and 11%, the simple debt-free business would be worth between \$9.1M and \$11.1M.

Currently, long-term interest rates are around 2.5%, but historically, long-term interest rates have averaged closer to 5%. This difference in rates corresponds to a 2x difference in what the stock market is worth. If long-term interest rates stay put for the next 30 years, stocks will be worth much more than they currently are, but if rates increase to their historical average, stocks will be worth somewhat less than they currently are.

At the end of the day, there are two truths about what a business is worth. First, interest rates dictate what all financial assets are worth, from bonds to businesses to baseball teams. (Remember the 10x increase in the business's value, when interest rates dropped from 10% to 1%.) Second, a business can be worth only as much as the cash that can be extracted from it, adjusted for the fact that money in the future is worth less than money today. In the short-term, emotions may drive a business's stock price (witness the short-lived bubble for money-losing companies like Pets.com), but in the long-term, logic and numbers prevail. The market eventually gets things right.

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