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The equity markets, over the last decade, have vacillated between extreme levels of fear and greed. Usually, periods of fear accompany economic downturns while periods of greed appear after many years of strong, unabated economic growth. Ironically, it is during periods of fear and uncertainty where great opportunities appear while long periods of growth lead to stretched valuations and many potential land mines. Occasionally, we find periods of time where a portion of the market is fearful of future economic growth while other parts are extremely optimistic. We appear to be in one of those periods of time today.

In 2008 and 2009, the markets traded as if nearly all companies would eventually go bankrupt. I managed a bond fund and an equity fund through this period. Believing credit spreads were too tight in 2005, 2006 and 2007, I sold most of our corporate bonds and purchased Government backed bonds. In 2008 and 2009, I was able to sell our Government bonds, as they were appreciating, and purchased A+ corporate bonds with yields of roughly 15% to maturity. These included Nordstrom, CBS, Johnson Controls, Fifth Third Bank, Charles Schwab, etc. These bonds were trading at roughly 70 cents on the dollar. Their stocks were extremely depressed as well. Assuming we received the long term average of a 50% recovery rate in bankruptcy, meaning that we would recover 50% of the par value of the bonds, the math was clear that we would “break even” with US Treasuries if roughly 30% of these companies went bankrupt each year. Think about this. The markets in 2009 were anticipating that within a decade, nearly 97% of public companies in America would be out of business. Well, it is almost ten years later and the markets are thriving. Almost none of the large companies failed as the market was anticipating. In fact, corporate earnings have been excellent over this time frame. (As an aside, these moves made this Bond Fund the best performing fund in the Morningstar Short Term Bond category for the trailing 1, 3, 5 and 10 years ended 6/30/2009).

The equity markets have also recovered mightily since 2009. From its depths, the S&P 500 has increased in value by over 250%. Today, credit spreads are again becoming tighter, price earnings ratios are rising, and the VIX index, a measure of market fear, is near an all-time low. What a difference a decade can make.

The interesting part is that the equity market has witnessed a historic divergence in performance between its sectors. Value stocks, including autos, financials, and other economically sensitive areas, are trading at very low valuations when compared to earnings and book values. The Vanguard Value Index Fund, as measured by Morningstar, has compounded at 5.4% per year over the last decade. On the other hand, growth stocks, overall, have performed exceptionally. This sector has been led by technology stocks. The Vanguard Growth Index Fund has compounded at 8.6% per year over the last decade. Thus, an investment in the Value Index would have compounded $1 to $1.69 while the Growth Index would have compounded that dollar to $2.28. So, an investment in Growth stocks would have produced a $0.59 better result for every dollar invested vs Value stocks. If this trend continued for the next 20 years, the differential would rise to over $7 for every dollar invested. Wow. What a result.

However, from the academic research of all the data going back to the first dates that records were kept, Value stocks outperform Growth stocks over long periods of time. So, something must be wrong. Either the old data was flawed, the earnings results of value stocks are permanently impaired for some reason, we have entered a new paradigm of growth driven by technological change and lack of competition, or valuations of growth stocks have risen dramatically in relation to their earnings. We don't believe that the data is flawed and also do not believe that the earnings of value stocks are permanently impaired. It does appear that the market believes, however, that we have entered a "new economic order" where valuations seem to matter less and less while earnings, especially those reported under Generally Accepted Accounting Principles (GAAP) rules, are deemed to be passé.

As an example, we thought it would be interesting to compare and contrast the cheapest stock in the S&P 500 Index and the most expensive: General Motors vs Amazon. Question: if we use a 10-year time horizon and assume that each group of shareholders needs to earn 10% per year, what would be the resulting share price that should be paid for each stock in today's market? We will go so far as to assume that GM does not grow its earnings while Amazon grows its earnings at 30% per year over the next decade. At the end, however, we will assume that GM trades at 6 times earnings and that Amazon trades at 20 times earnings. After all, every company eventually sees its valuation return to Earth. Even mighty Microsoft, Cisco Systems, Google and Apple have seen their share prices dip significantly below this level, from time to time, as the businesses mature.

Amazon reported $2.58 billion in GAAP earnings over the last 12 months per Morningstar. We will use that as their starting point. General Motors earned $10.08 billion. In ten years' time, General Motors will have earned $100.8 billion if we assume that they neither grow nor decline. Because they are not growing, we will assume that working capital needs remain constant and depreciation equals capital expenditures. We will also assume that GM pays out all this net income in dividends, for simplicity, as the company already has $14 billion of excess cash held for a rainy day. Amazon, on the other hand, will have earned $142.9 billion and we also assume that these earnings will be paid out as they are earned over the next decade in annual dividends, again for simplicity.

If, at the end, we assume GM has the same share count while Amazon, due to its very heavy use of stock based compensation, sees its share count expand by 1% per year, GM will continue to have the same 1.558 billion shares outstanding while Amazon will have 537 million shares, up from today's 486 million. Note that if Amazon's stock were to decline appreciably, as we will discuss later, their equity based compensation will accelerate the dilution to shareholders.

The results of this exercise are somewhat staggering. The Net Present Value of the cash flows for General Motors suggests that an investor should pay $54.72 per share today to earn 10% per year over the next decade. Thus, the stock should instantly increase 67% from today's price of $32.78 and then remain constant as dividends are received.

On the other hand, this illustration finds that an investor should pay $650 for Amazon stock today to earn 10% per year over the next decade. Thus, Amazon's stock should fall 32% from today's price of $967.

Importantly, the assumptions behind these results are somewhat realistic in GM's case and are ridiculous for Amazon. As the worldwide population grows, auto sales will continue to increase. In fact, auto sales have increased 2.8% per year over the last 20 years, largely due to the massive increase in demand out of China. Thus, to assume that GM stays flat would assume that they would continue to lose market share every year. This may be a good assumption, given their history, but we believe it is conservative.

Again, as a contrast, for Amazon to grow 30% per year, they would also have to grow revenue rapidly. Amazon generated $142.57 billion in revenue over the last 12 months. This revenue would need to grow at 30% per year if profit margins stay constant. If that was the case, Amazon would need to have $1.965 <u>Trillion</u> in revenue in 10 years. This is roughly 10% of current US GDP. Further, Amazon has 341,000 employees today. If that grows at 30% per year over the next decade, they would end the period with 4.7 million employees, or over double Wal-Mart's level and three times the amount of people in the United States Armed Services. <u>There have been no other cases of a company already generating $100 billion in revenue that subsequently grew 30% per year over the next decade</u>. The law of large numbers always seems to interfere. Thus, this time would have to be different. Very, very different.

Some will argue that Amazon could raise its profits by raising prices and/or reducing their "investments" to grow the business. Maybe that is true. We doubt it due to the highly competitive spaces that Amazon operates in, however, but it is plausible. What is not plausible is that Amazon continues to grow 30% per year without their low prices, free shipping or investments into new segments. Fast growth requires massive investments or razor sharp prices and service. In this case, you can't have fast growth and rising margins. Further, at the end of this period, if Amazon were to raise prices to create decent returns on shareholder's equity, competition would likely re-enter and, potentially, create negative sales growth for Amazon.

It is our assertion that Amazon will not grow to $1.9 Trillion in revenue, or anywhere close to that number, in ten years' time nor will the company experience significant increases in margins. Therefore, the stock of Amazon is worth far less than $650 per share today. In fact, we estimate that the company is worth roughly 50 times trailing earnings, or roughly $250 per share. Trees don't grow to the sky; competition will respond in time.

Many will say this is a cute exercise but you should use Amazon's "cash flow" instead of GAAP earnings as that is the preferred metric for the company. Preferred by who? It is Jeff Bezos's "favorite" metric, for one, and the company has convinced Wall Street to use that number but is it the correct metric? We are 100% sure that the proper number to use, for a long-term valuation, is GAAP earnings and not management's "cash flow". Let us explain.

GAAP earnings are a good starting point to determine what amount of money that a company could return to shareholders safely while keeping its equipment, brands, intellectual property, and balance sheet competitive. Is it a perfect metric? Absolutely not. Goodwill amortization is the big example of a non-cash expense that understates distributable earnings. At Berkshire Hathaway's latest annual meeting, which we attended, the company explained that by purchasing Precision Castparts, the combined earnings of the two companies were lowered by $400 million per year. What happened to those earnings? They were consumed by goodwill amortization. However, the cash generated by the two companies the day after closing was nearly identical to what it would have been had they remained independent. Thus, the GAAP earnings of Berkshire Hathaway are understating their cash flow by $400 million solely from the purchase of Precision Castparts. Other past purchases are similarly depressing earnings due to amortization of goodwill.

In Amazon's case, however, it is different. The first line of Amazon's year end 2016 earnings release follows:

"Operating cash flow increased 38% to $16.4 billion for the trailing twelve months, compared with $11.9 billion for the trailing twelve months ended December 31, 2015."

Wow. That sounds really impressive.

In 2016, the company earned $2.37 billion on a GAAP basis. The company today has a market capitalization of $467 billion. Thus, the stock is trading at 197 times 2016 GAAP earnings. However, the company stated, front and center, that they had $16.4 billion in "cash flow" in 2016. Thus, it is trading at a much more reasonable sounding level of 28 times "cash flow". This is how Wall Street justifies the valuation of the company.

Thus, to value Amazon, we should determine which number to use. If some, or all, of the differential between GAAP earnings and cash flow is distributable money that could be safely paid in dividends to shareholders while maintaining competitive operations and a strong balance sheet, we should consider using the cash flow number. However, if it would be unwise to return that cash flow to shareholders, we should use the GAAP number. If we are to use a 28 multiple on this cash flow, it should be shareholders' money to do with as they please, should it not? This cash flow should be adding to cash, paying off debts, or be available for dividends and share repurchases if it is truly distributable. It is not.

There are four main categories that separate Amazon's GAAP earnings of $2.37 billion and its cash flow of $16.4 billion: increases in payables, increases in unearned revenue from Prime memberships, stock based compensation, and lease accounting for capital expenditures. Let's start with payables. If a company can bill its customers immediately at the time of the order, subsequently deliver the product, and then pay the supplier of that product in 90 days, the company will create cash as it grows. For example, if a company such as this had $1 billion in revenue per year, they would create $250 million in cash ($1 billion divided by 4) from this timing differential between when the customer paid them and when they paid the suppliers. This is cash that they get to keep on their balance sheet but is cash that is owed to the suppliers. If the company increased its revenue to $2 billion, the cash level would increase to $500 million. Thus, as the company grew, they generated $250 million of extra cash, which using the financial analysis standard definition is considered cash flow. However, is this their money? No, it is akin to a loan that must be paid back some day. Further, if the company was to stop growing and stayed at the same $2 billion in revenue the next year, this $250 million of cash flow would disappear. Even more troubling, and is what we have seen in the past with the likes of Dell Computer, which had a similar negative working capital cycle, if the revenue were to drop, this would create negative cash flow.

Using increases in payables as a form of cash flow is similar to a company going to a bank and borrowing money and calling that cash flow. It is absurd to think that the market is paying 28 times this cash flow number as it is identical to an increase in debt. If this is the proper way to do things, I will gladly start a company, borrow $1 billion from a bank, invest the money in US Treasuries, call it cash flow and sell the whole thing to the market for $28 billion. Absurd.

The second component of Amazon's "cash flow" is their use of upfront payments for Prime memberships. In this case, Amazon takes in $99 today but must deliver products to customers for free for one year, thereby incenting a bunch of smaller deliveries that add to costs, and also provide their customers with entertainment content such as movies, music and self-produced TV shows. It is clear from the accounting numbers that we have seen from other research sources that Prime is either losing a fair amount of money or is barely profitable at best. It would be helpful if the company would break out the metrics of number of subscribers and costs per subscriber but, alas, no such luck. Regardless, using cash flow for this segment would be as absurd as using cash flow to value an insurance company. Insurers take in premiums today but pay out claims much later. Thus, they generate lots of cash as they grow. It would be absolutely ridiculous to pay a large multiple on this cash flow number as the expected losses on the policy would eventually consume nearly all of this upfront revenue. Thus, insurance companies trade as a function of book value and earnings, not cash flow. Similarly, Amazon should not be valued based upon 28 times this cash flow number. Like an insurer that pays claims later, Prime should be valued on earnings.

Third, the company uses stock based compensation to pay employees. In the case of the CFO, he is paid $160,000 in cash and $4.4 million in stock based compensation, which means that roughly 96% of his pay comes in the form of equity. Other key employees see stock based compensation at over 99% of total compensation. Using stock based compensation is perfectly acceptable as long as the employees are willing to take shares instead of cash and the company finds the dilution from this activity acceptable. Taken to an extreme, however, if the stock of Amazon were to fall to $1, resulting in a $486 million market cap, it would be absurd to see the company issuing ~$3 billion per year in shares to employees as the past owners will be diluted by about 80% annually. Thus, there is some stock price at which Amazon would choose to use cash instead of shares. For this reason, this expense cannot be ignored and added back to cash flow. Further, as it stands today, the company is, in essence, paying employees in cash and those employees are using over 96% of that cash to buy shares of Amazon at current prices in a “mini stock offering” that occurs each pay period. Thus, the cash flow that is created by adding this item back to GAAP earnings is really akin to a stock offering. It is absurd to think that it makes sense to pay 28 times the cash generated from executing a stock offering, is it not? If it makes sense to Amazon’s shareholders, I will start a company that promises to do something really cool, sell $1 billion per year of new equity to the markets, get a $28 billion market cap, and sell my shares to fund a rocket ship company. Oh, wait...

And finally, there is lease accounting. In essence, all companies have the choice of buying land, buildings and equipment or leasing. From a long-term perspective, it doesn’t really matter which option is picked assuming identical costs of financing. It is very much like the choice to buy or lease a car. There is no blanket “right or wrong” answer to which is best. It is purely a function of which option has the lower implied interest rate. Nobody asks you, if they have manners at least, whether you bought or leased your new car. Why? Because it really doesn’t matter. What matters is that you signed on the dotted line at the dealership. For Amazon, this is exactly the same. If the company spends $10 billion on property, plant and equipment, it doesn’t matter whether it is leased or not. Therefore, since Amazon tends to own half and lease half of its property, plant and equipment (PPE), it is ridiculous to subtract the capital expenditures that are owned from the cash flow figures but to ignore the capital expenditures undertaken under lease transactions. They are identical and should be treated as such. Thankfully, the accounting profession has awoken from their slumber on this topic and will soon be forcing companies to include debts arising from lease transactions on their balance sheets. This source of cash flow should soon disappear.

So, minus some smaller extraneous stuff, we are left with GAAP net income. This is the amount of money that could be paid to shareholders as a dividend, used for acquisitions, used to pay down debt, or used for share repurchases. Using “cash flow” to value this company, while good for management, is ludicrous. We are clearly in the minority on this issue, however, and remain very much like a combination of the “boy that cried wolf” and the little boy in Hans Christian Andersen’s “The Emperor's New Clothes”.

It is clear that the stock market is bifurcated. On one hand, we have companies in the auto and financial sectors selling at prices that are 40-50% lower than one would expect if a 10% future rate of return would be required. On the other hand, there are hundreds of companies, both public and private, that are selling “the future” and “technology” and “new paradigm” to get absurd valuations. Prospective returns for shareholders are simply a function of the valuation today, earnings performance while the shares are owned, and the valuation in the future. Those who are buying stocks such as Amazon at massive valuations better hope that the laws of competition and finance are somehow repealed.

There will be a massive revaluation within the market: stocks trading significantly below their intrinsic value should rise while those trading far above intrinsic value should be punished. Due to this, we believe a portfolio that owns value stocks, such as financials, autos and major oil shares while shorting the most expensive shares in the technology space, should outperform the markets by a material amount over coming years.

Sincerely,

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Disclosures

The Vilas Fund, LP is short Amazon.com, Inc. (AMZN), and long General Motors Company (GM).

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