Reflections & Observations

On Our Minds

While Brexit, US/China trade talks, and the Mueller investigation have dominated headlines, a few stories have flown under the radar. A little-known investor named Warren Buffet quietly adjusted the way in which he calculates his stock's worth by abandoning book value, a valuation metric he has relied upon for thirty years. This departure from book value, in its small way, reflects once again our economy's shift from the Industrial Age to the Digital Age. While it was once easy to calculate the value and profit of a company's product, such as a physical widget, it's more challenging today. How can we measure and value a new cloud customer, for example, when customer-related costs are more abstract than physical?

At its most basic, this shift signals our economy's move from the tangible to the intangible—from the production of physical items to the creation of ideas, the development of knowledge, and the facilitation of social relations. For centuries, investment valuations centered on an accounting of a company's physical assets, an approach that allowed all parties to agree on value. While the nature of physical assets changed over the years—from livestock, land, and buildings to machinery, vehicles, and computers—assets remained physical, and the basic principles of asset valuation applied. Today, however, our economy's dependence on intangibles presents a challenge to traditional valuation methods.

Much like Buffet's approach, LBA's investment methodology is rooted in value investing, an idea developed by Graham and Dodd in their 1934 book, *Security Analysis*. The basic premise of value investing involves buying stocks at less than their intrinsic value, which is calculated as the cash that would be left after a business's assets are liquidated and liabilities paid off. It's relatively simple to estimate the value of buildings, vehicles, and machinery, but determining the value of software, databases, patents, research and development efforts, and branding is difficult. Relying on book value works well when a business's assets are largely physical, but not when their assets are mostly intangible. So how do we, as investors, ensure these companies are trading at appropriate valuation levels?

At LBA, we rely heavily on free cash flow metrics to analyze a company. Free cash flow is easily measured and compared and can't be faked—it's a particularly useful metric in a world increasingly driven by intangible assets. You will now find free cash flow metrics in our client research reports.

A second metric that can't be manipulated is cash on hand. Companies such as Alphabet, Microsoft and Apple have accumulated massive cash hoards, due to their extreme profitability and minimal capital requirements. We discuss what these companies should do with these unprecedented cash reserves in this newsletter.

Another overlooked story was the meaningful addition of more China A-shares to the MSCI Emerging Markets Index (MSCI EMI). Why and how this change took place, we believe, warrants a discussion in this newsletter. Unlike its genteel approach to US trade negotiations, China strong-armed its way into the MSCI EMI, leaving foreign passive investors (and those who track them) highly exposed. Frankly, we don't understand why more people are not talking about this event.

We are excited to share several additional articles, including one that examines the disruption occurring in the advertising sector. A second piece analyzes the relative valuations of an emerging market index (MSCI's EMI) and the S&P 500. And for those who may be contemplating a divorce, we have an update on some very important tax law changes surrounding alimony and support payments. As always, the information in this newsletter is intended to help you better understand our investment decisions and strategy. We truly hope you enjoy reading our thoughts.

Diana B. Malcom
President

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Buffett Abandons Book Value

Berkshire Hathaway's 2018 annual letter is one of historical significance. After more than thirty years, Warren and Charlie are abandoning the practice of using Berkshire's per-share change in book value as a performance metric.

Over time, balance sheet book value has become increasingly disconnected from intrinsic value, especially for consumer, health care, and technology companies. These companies expense their research and development (R&D) and marketing investments—the primary investments behind value creation—as they are incurred; as a result, these expenses are absent from balance sheet values. This accounting approach is tedious for investors: not only does it require a detailed parsing of financial statements and management disclosures, it often makes traditional financial metrics less accurate (as Warren Buffet describes in the following paragraphs). As fundamental investors, we are intricately familiar with the investments our companies make. LBA's competitive advantage is our ability to see through headline quantitative metrics and arrive at better, more representative calculations of intrinsic value.

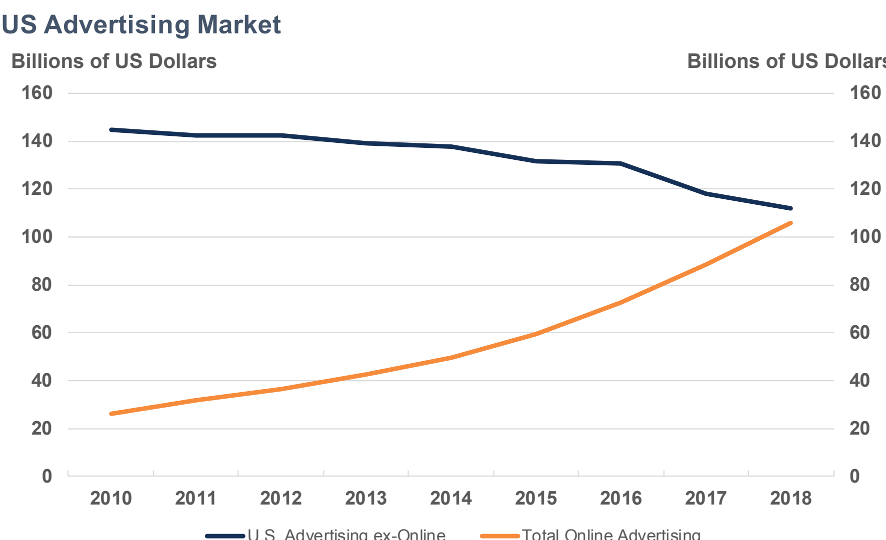
Read the full explanation from Berkshire's annual report (emphasis ours):

"Long-time readers of our annual reports will have spotted the different way in which I opened this letter. For nearly three decades, the initial paragraph featured the percentage change in Berkshire's ***per-share book value. It's now time to abandon that practice.***

The fact is that the annual change in Berkshire's book value—which makes its farewell appearance on page 2—is a metric that has lost the relevance it once had. Three circumstances have made that so. First, Berkshire has gradually morphed from a company whose assets are concentrated in marketable stocks into one whose major value resides in operating businesses. Charlie and I expect that reshaping to continue in an irregular manner. Second, while our equity holdings are valued at market prices, ***accounting rules require our collection of operating companies to be included in book value at an amount far below their current value,*** a mismark that has grown in recent years. Third, it is likely that—over time—***Berkshire will be a significant repurchaser of its shares, transactions that will take place at prices above book value but below our estimate of intrinsic value. The math of such purchases is simple: Each transaction makes per-share intrinsic value go up, while per-share book value goes down. That combination causes the book-value scorecard to become increasingly out of touch with economic reality.***"

Disruption Corner: Online Advertising

Online advertising is quickly stealing market share from legacy advertising channels, primarily print and television. By the end of 2019, online advertising will represent 50 percent of the total US advertising market.



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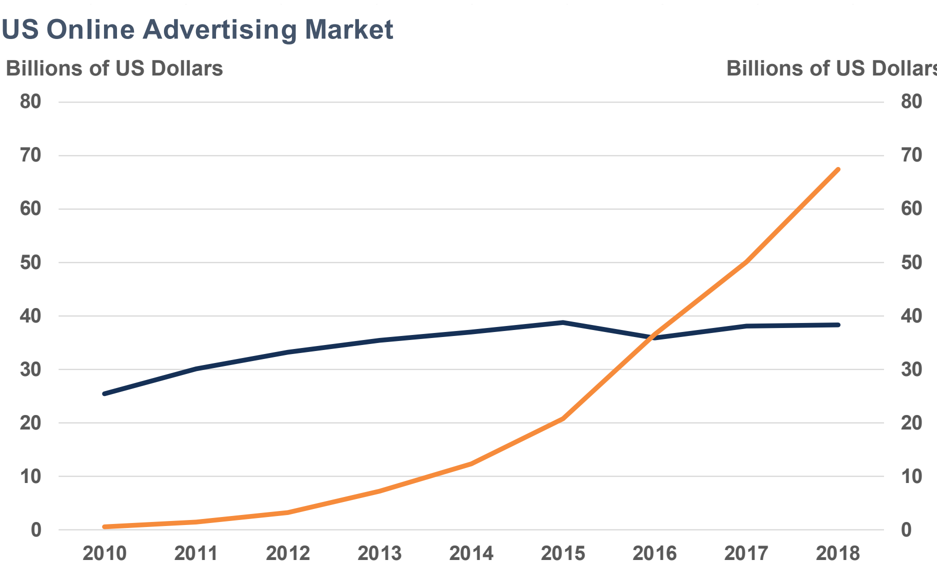
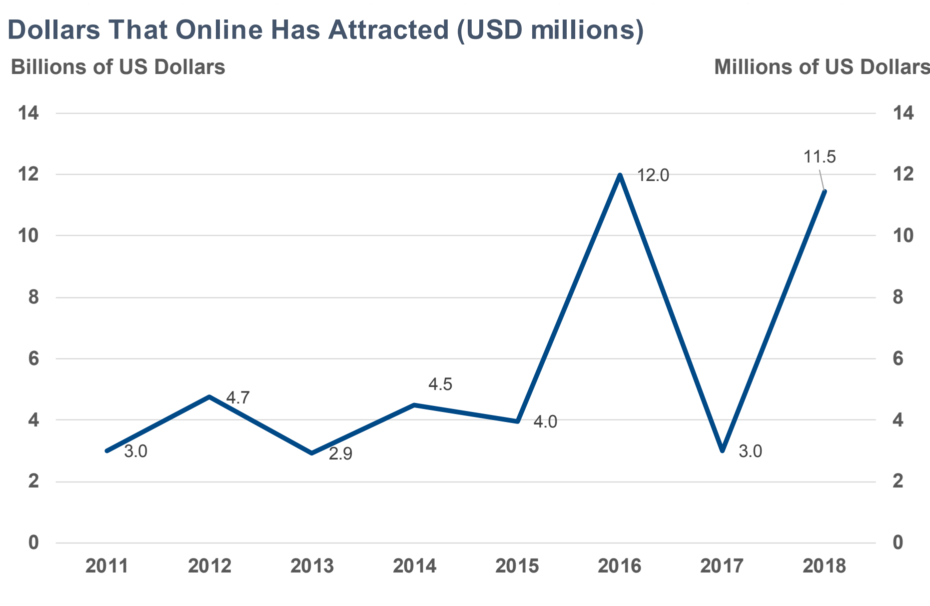
Disruption Corner: Online Advertising (cont.)

Mobile marketing opportunities are driving online advertising's growth. Since 2010, mobile advertising has grown at a 79 percent annualized rate, while desktop advertising, less impressively, has grown at a 5 percent annualized rate.



Online advertising is not only stealing share from traditional advertising mediums, it is also growing the total addressable market for advertising. Since the end of 2010, online advertising has grown by $80 billion, while traditional mediums have shrunk by $33 billion. Online advertising, it appears, is responsible for the $47 billion injection of new advertising dollars. Many consider online advertising a democratization vehicle for companies who could not previously afford glitzy print or television campaigns. Today's online advertising channels have depressed the average unit cost of advertising significantly. As a result, online advertising continues to attract new advertisers and to fuel the industry's overall growth.



Sources: IAB, Magna Global, JP Morgan

China's Index Manipulation

"If after ten minutes at the poker table you do not know who the patsy is, you are the patsy."

—POKER PROVERB

China has two main share classes of stock: A-shares and B-shares. A-shares were created almost exclusively for local investors. Until recently, foreign investors could not buy A-shares; even now government restrictions pose a challenge to foreigners eager to purchase—and especially sell—these shares. B-shares, which are for foreign investors, provide index funds and private investors direct exposure to a Chinese company.

MSCI Index Boosts A-Shares

On February 28, MSCI Inc. announced it would be quadrupling the amount of China A-shares (Renminbi denominated domestic shares) in its global benchmarks. MSCI Inc. is the largest index provider for passive investments, and the world's largest benchmark creator. The stated change will increase the A-share weight from 5 percent to 20 percent over the next nine months. As a result, the future MSCI Emerging Markets Index (MSCI EMI) will include 253 large-cap and 168 mid-cap China A-shares whose combined weight will represent 3.3 percent—up from 0.70 percent—of the index. Taking into account all share classes, China will expand to nearly 40 percent of the MSCI EMI.

MSCI grades markets across eighteen metrics that include capital-flow restrictions, short selling, and the rights of foreign investors. Evaluations range from "no issues" at the high end to "improvements needed" at the low end. In 2015, nearly all Chinese markets received scores of "improvements needed." These scores failed to improve over time (2016-2017).

Backdoor Benefits To MSCI

Does MSCI have a valid economic reason to add so much of one of the most nontransparent, gated, and volatile share classes in the world to their index? They do, but it's for the sake of their company's economics, and not the economics of investors. According to *The Wall Street Journal*, the declaration was made only after the Chinese government gave MSCI the following ultimatum: add more A-shares to the MSCI EMI or face a slowdown in Chinese business. Before MSCI's shift, several Chinese asset managers were instructed by the government not to conduct business with MSCI; in addition, the two Chinese national stock exchanges threatened to withdraw pricing data from MSCI's systems, a move which would severely impact MSCI customers throughout the world. Since the inclusion of "more" China, Chinese regulators have approved nine (up from one) Chinese exchange-traded funds that will track MSCI's indices (and supply MSCI with licensing fees).

A "Pump and Dump" Scheme

Why should China care about an increase of A-shares in the MSCI at all? Well, nearly all large A-share companies benefit from direct government investment, and/or investment by government officials. In addition, several members of China's communist party hold seats on these companies' boards.

China's head security regulator predicts foreign capital flows into Chinese stocks will double to $89.76 billion by the end of the year. The liquidity will fuel an increase in A-share stock prices, which in turn will enable the Chinese government and their officials to exit profitably. It is a classic "pump and dump" scheme that sacrifices foreign investors.

Who's the Patsy?

In 2018, capital raised by Chinese IPO listings offshore (US and Hong Kong) totaled $40 billion, far more than the $18 billion of capital raised on mainland China. Of those Chinese IPOs in the US, investors who purchased at the offer price lost, on average, about 16 percent of their investment. And now there is a concentrated effort to make foreign investors bail out domestic owners. Many investors tout the benefits of passive investment, but if you are currently at the poker table with China, MSCI, and (coming soon) other index providers, we recommend you cash in your chips and buy some US consumer staples. If you can't tell who the patsy is now, then there is no hope for you.

A Comparison of Price-to-Earnings: Emerging Markets vs. United States

We frequently hear from outside entities and the press that investing in emerging markets (EM) is an attractive proposition because EMs are significantly less expensive than US markets. We don't disagree with this assumption. When something is undervalued, we believe it should be bought. And after a quick price-to-earnings analysis of the MSCI Emerging Markets index (MSCI EMI, the primary benchmark for EM performance), EM does appear compelling.

Based upon earnings over the next twelve months, the MSCI EMI trades at a multiple of 13.3 times earnings, while the S&P 500 index (the primary benchmark used for the US) trades at multiple of 16.6. The MSCI EMI, it appears, trades at a 20 percent discount to the S&P 500. However, we question the veracity of this surface-level comparison because it does not account for the underlying makeup of the two indices.

At the end of February, 40 percent of the MSCI EMI was composed of companies in the financials, energy, and materials sectors. In the S&P 500, however, these sectors represent just 20 percent of the total index. This is an important distinction; these three sectors share traits—such as commodity-like products or services with few competitive advantages—that lead to poor overall economic returns. An index that is more heavily weighted to companies in these three sectors will naturally result in a lower price-to-earnings ratio.

To correct for this inconsistency, we applied the S&P 500's sector weightings to the MSCI EMI price-to-earnings ratios, effectively "equal-weighting" the indices. On this basis, the MSCI EMI trades for just under 15 times earnings—a 10 percent (not 20 percent) discount to the S&P 500. Clearly, index construction plays a key role in index evaluation. It is an oversimplification to say that EM investments are less expensive relative to US investments because of surface-level price-to-earnings ratios.

An Apples-to-Apples Comparison

of the S&P 500 vs. the Emerging Markets Index

Sectors	**Weights of Sectors**		**P/E Ratios by Sector Using Expected Earnings Over the Next 12 Months**		
	S&P 500	MSCI Emerging Markets	S&P 500	MSCI Emerging Markets	*EM - Assuming S&P 500 Weights*
Financials	13.3%	24.8%	11.5x	8.8x	
Technology	20.6%	14.6%	17.9x	12.3x	
Discretionary	9.9%	13.2%	18.8x	18.7x	
Communication Services	10.1%	12.0%	18.3x	19.5x	
Energy	5.4%	8.1%	17.9x	8.1x	
Materials	2.7%	7.4%	15.6x	9.8x	
Staples	7.1%	6.4%	18.2x	21.5x	
Industrials	9.8%	5.4%	15.3x	11.5x	
Real Estate	3.0%	3.0%	18.9x	6.8x	
Healthcare	14.8%	2.7%	15.6x	23.6x	
Utilities	3.3%	2.6%	18.5x	11.3x	
Total	100%	100%	*16.56x*	*13.31x*	*14.95x*
EM Discount vs the S&P 500:				**-20%** **-3.25x**	**-10%** **-1.62x**

Source: Factset

Data as of 3/13/2019

Big Tech, Fat Wallets: A Look at Microsoft, Apple, and Alphabet

At the end of 2018, the aggregate cash and investment holdings of Microsoft, Apple and Alphabet (Google) totaled $498 billion. This is an astounding amount; even if we subtract these companies' long-term debt obligations, their net cash totals $326 billion. Shockingly, we expect that figure to keep growing! Using last year's free cash flow figures as a starting point, we expect these three companies to accumulate cash at a rate of about $80 billion annually (excluding buybacks), even after accounting for our estimates for future dividend payments and debt maturities. In 2019, Microsoft will add $15 billion in cash to its balance sheet (a 27 percent increase in net cash), Apple will add $42 billion (a 28 percent increase), and Alphabet will add $22 billion (a 19 percent increase).

Too Much Cash?

Typically, one would argue that adding cash to the balance sheet signals financial strength, just as shrinking cash signals financial weakness. In a depressed operating environment, for example, cash flows might turn negative and force a company to seek alternative funding sources to cover current operations and liabilities. While we generally agree with this point of view, there is also such a thing as too much cash. In the case of these three tech behemoths, their cash holdings are so oversized that only after a 67 percent combined drop in free cash flow would they need to draw on balance sheet cash reserves to service dividends and debt maturities, a scenario we consider highly unlikely. During the last recession, Microsoft's free cash flow dropped by 14 percent (peak-to-trough), Alphabet's fell 17 percent, and Apple's actually increased 350 percent from 2007 to 2010, an anomaly primarily due to the launch of the iPhone. In the event of a 40 percent reduction in free cash flow—unlikely but more feasible than 67 percent—Microsoft, Apple, and Alphabet could continue to pay dividends and debt maturities while contributing $2 billion, $17 billion, and $13 billion, respectively, to balance sheet cash and investments. Clearly, these cash balances far exceed the needs of day-to-day operations.

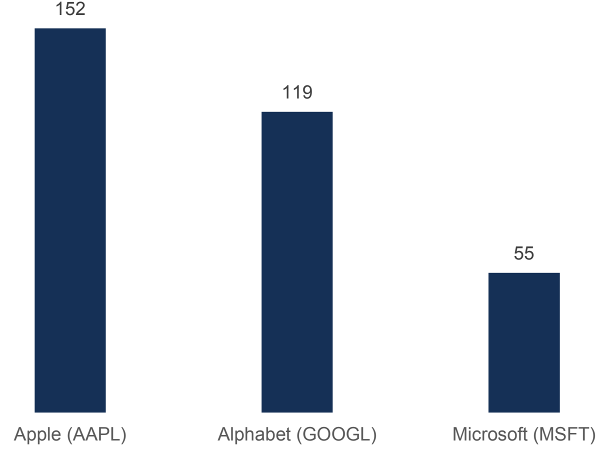
The Four Uses of Excess Cash

There are only four uses of excess cash on balance sheets. The first two are dividends and share repurchases, which effectively return cash to the owners of capital (the shareholders). These three companies have pursued capital returns in various forms, but we believe they could be far more aggressive. The remaining two uses are either to increase internal investments (sales, marketing, R&D, capital expenditures, etc.), or to purchase another company. Microsoft, Apple, and Alphabet have all been using their cash to make significant internal investments. Over the past five years, their cumulative research and development (R&D) and capital spending has grown faster than sales growth. R&D and capital expenditures have increased 132 percent (18 percent annualized), versus a 63 percent increase in sales (10 percent annualized). This statistic, we believe, proves that underinvestment is not the source of quickly-accumulating cash.

That leaves the last possibility for the excess cash—to acquire another company. Consider Microsoft, which, at $55 billion, has the lowest net cash balance of the three companies (Apple has $152 billion and Alphabet $119 billion). If Microsoft wanted to use its cash and investments to acquire a company, and if it had to pay a typical 30 percent premium to the market price, we can identify only thirty-seven technology companies on earth (excluding Microsoft) that have a market capitalization over $38.5 billion. Of those thirty-seven, how many would be a logical use of capital? We won't go through every company over $38.5 billion but typically, merging two very large companies is not a recipe for success so we assume that none of them would be a prudent use of capital. At a minimum, choosing from a list of only thirty-seven merger or acquisition opportunities is not ideal.

Bottom Line

Bottom line: this excess cash needs to be returned to shareholders. It doesn't just represent dead weight on the balance sheet—carrying high cash balances increases shareholder risk. With more cash on hand, management teams are likely to lose their financial discipline and overspend on overhead and splashy acquisitions with no economic rationale.



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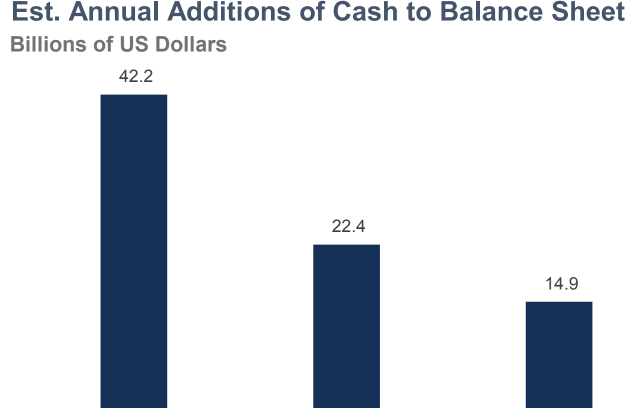
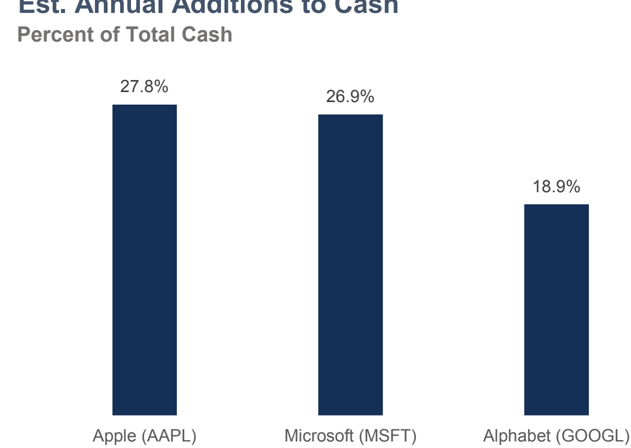
Big Tech, Fat Wallets: A Look at Microsoft, Apple, and Alphabet (cont.)



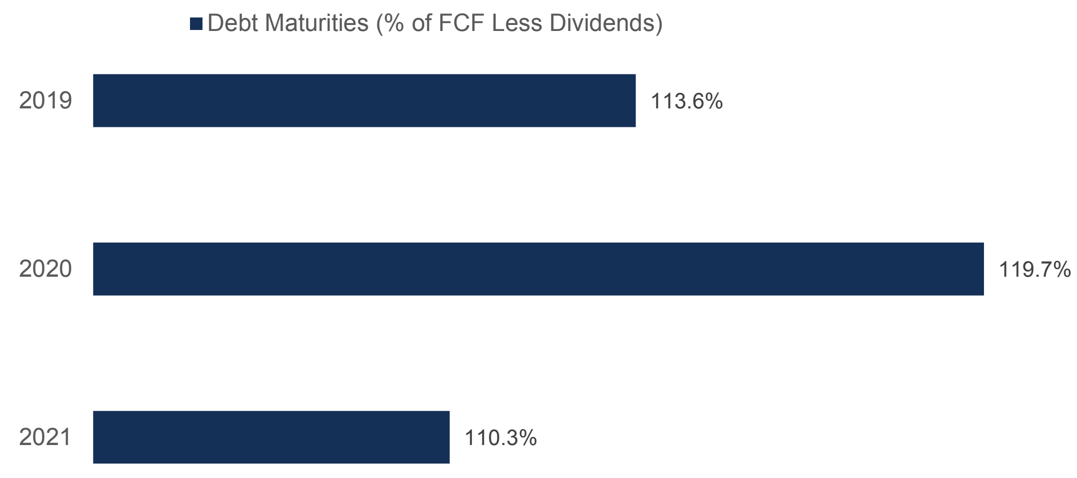


Five Reasons Why LBA Doesn't Buy (or Chooses to Sell) a Stock

Reason #1: High Debt Load Relative to Cash Flows

Featured example: McDonald's (MCD)

Over the past five years, McDonald's management has more than doubled the company's long-term debt. Consequently, the company's current free cash flow (net of dividend payments) is not enough to cover its looming debt maturities. Over the next six years, the company's maturities will average more than $2 billion per year. As these maturities occur, we expect McDonald's to face a cash shortfall, which will force the company to roll over part of its debt. Going forward, the stock price will be increasingly sensitive to slowdowns in revenue growth. The company's long-term debt load may also constrain its ability to substantially increase investments and capital spending—actions which may be required to remain competitive. While investors appear to favor McDonald's for now, we believe its debt load will impair its performance—and depress its stock price—when financing conditions become less favorable.



Reason #2: Disingenuous Management

Featured example: AT&T (T)

In the spring of 2014, AT&T announced its plans to acquire DIRECTV for $66 billion, extolling the growth that new revenue streams and cost synergies would provide to AT&T. Within a year of the acquisition, however, DIRECTV's year-over-year net subscriber metric fell dramatically; by 2017, the company was bleeding subscribers. In 2017 and 2018, DIRECTV lost 554,000 and 1.2 million subscribers respectively, net of additions.

Our aggravation lies with AT&T's management, who thinks the post-acquisition performance of DIRECTV is in line with previously communicated expectations. You may judge for yourself:

Excerpt From DIRECTV Acquisition Conference Call (May 19, 2014):

> **"So this combination of assets obviously will change our revenue mix. We think it will help us accelerate growth. But even more important, it gives us the opportunity to lead the way and to redefine the video entertainment business for mobile in a high-speed world…There is a significant amount of value beyond what we've articulated to you in the $1.6 billion cost synergies. There is a lot of value to be garnered from exactly this, bundling our products and services together."**
>
> ***– Randall Stephenson, Chairman & CEO of AT&T***

Excerpt From Earnings Call 3.5 Years After the Close of the Acquisition (February 8, 2019):

> **"The traditional [DIRECTV business], we expect that to continue to decline. We expected that when we bought DIRECTV…it was a typical synergy deal. You buy a declining business, you extract a lot of cost synergies."**
>
> ***– Randall Stephenson, Chairman & CEO of AT&T***

Mentions on the May 19, 2014 conference call:

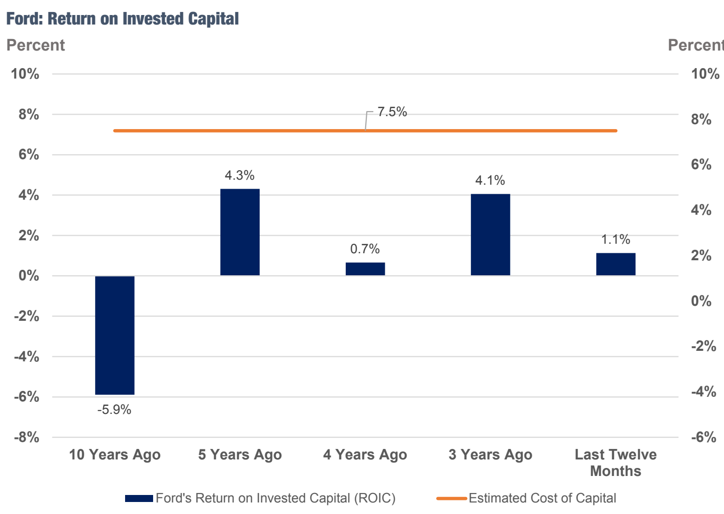
Decelerating: 0
Declining: 0
Lower: 0
Slower: 0

See disclosures on last page

Reason #3: Consistently Poor Returns Throughout an Economic Cycle

Featured example: Ford (F)

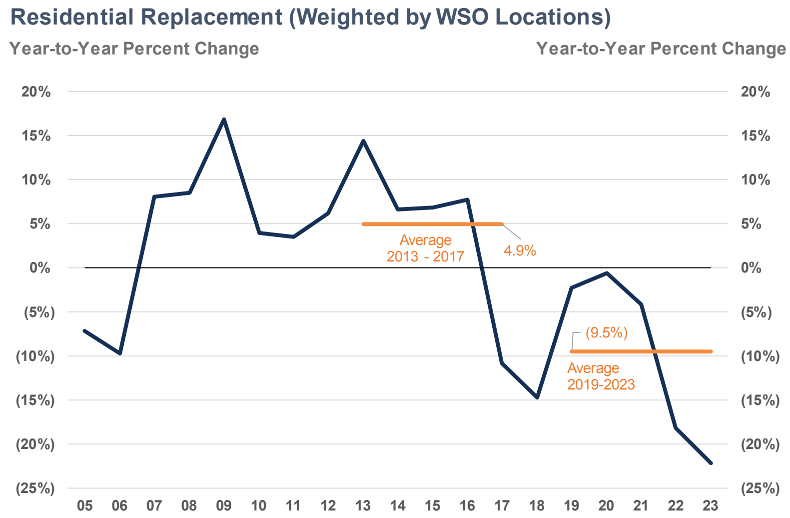
It can be very difficult for a commodity-producing company in a mature industry to earn steady profits, and Ford is no exception. There may be moments when companies like Ford shine, but we think it is generally best to avoid them. Return on capital measures how much profit is generated from capital invested in the company. If a company's earnings cannot support the estimated cost of capital, the company's value is deteriorating. As we seek companies to hold for the long-term, we avoid stocks with this profile. For the last ten years, Ford has not earned a positive return on the capital it has invested. Not surprisingly, the total return of Ford stock holdings from the recession lows of May 1, 2009 through May 1, 2019, was 154 percent, less than half of the S&P 500's return (311 percent) for the same time period.



Reason #4: Company-Specific Risk Factors

Featured example: Watsco (WSO)

Watsco is a Florida-based HVAC distributor with many appealing attributes, including significant insider ownership, low capital expenditure needs, low share of a fragmented market, and a solid capital allocation history. We estimate that roughly 40-45 percent of Watsco's HVAC business comes from residential replacement sales, while 20-30 percent comes from commercial replacement, 12 percent from new housing, and 5 percent from refrigeration. Over the past five years, the residential replacement market averaged a healthy 5 percent growth nationally (based on a weighted average calculation that factors in Watsco's location concentration). The next five years, however, will not be so kind to Watsco. Within the next one to two years, we think the HVAC industry will drop off a replacement "cliff" related to the 2004-2007 housing bubble. Watsco, with nearly 30 percent of sales coming from Florida, will suffer brutally. We estimate that the residential replacement market will quickly drop from 5 percent annual growth to a 10 percent annual decline (see chart), on average. While there may be some margin of error in our estimates, we are confident the directionality is accurate. Should our calculations be correct, we will revisit Watsco in 2022-2023 (our estimated trough).



Reason #5: Aggressive Accounting (also see Disingenuous Management)

Featured: United Parcel Service (UPS)
Under US generally accepted accounting principles (GAAP), management estimates of pension costs related to earned future benefits must (1) be based on “reasonable assumptions” and (2) be expensed in the period incurred. The company may offset its pension liability with an expected rate of return on its current pension plan assets—think of the pension cost as a gross (negative) number, and the expected rate of return on assets as a (positive) offset. The resulting net number flows through the income statement and affects the current period’s earnings.

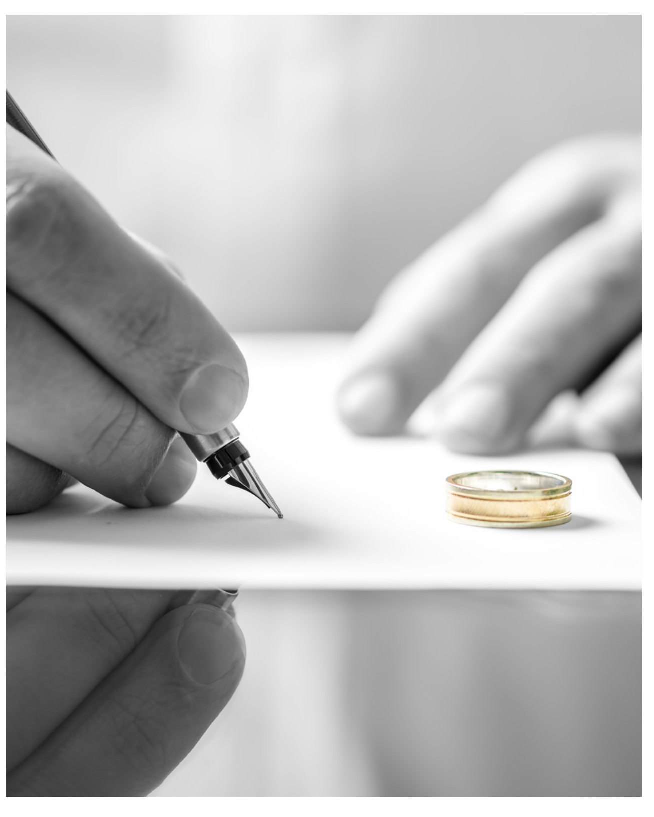
We believe that UPS is overstating earnings (by 12 to 17 percent) due to an overly aggressive expected return on its pension plan assets. The chart below illustrates the plan’s allocation and return history for all asset classes. We show that the weighted average of the plan’s return over the past twenty years, using returns from major benchmark indices, would have been about 5.7 percent. Somehow, UPS uses this same information to project a 7.7 percent rate of return for the future.

Two percentage points may not sound like a lot—indeed it’s customary (unfortunately) for companies to slightly exaggerate expected returns—but when the gross pension benefit cost comprises 40 percent of operating earnings (as is the case with UPS), the impact of two percentage points is significant. We estimate that UPS’s aggressive accounting adds about $0.73 to annual earnings per share (EPS). Stripping this amount from UPS’s 2018 GAAP EPS of $5.51 yields $4.78, implying the company’s earnings are overstated by 15 percent.

We consider this accounting practice grounds for removing an investment idea from consideration. It signals a lack of integrity on management’s part and begs the question: what else is going on behind the scenes?

	Asset Class	Year-End 2018 Allocation		Trailing 20Yr Returns		Return on 20Yr Avgs.	UPS Est. Annualized Return on Pension
Cash							
	Cash	**0.5%**	x	1.8%	=	0.0%	
Equities		**34.9%**					
	U.S. Large Cap	13.0%	x	5.6%	=	0.7%	
	U.S. Small Cap	1.3%	x	8.5%	=	0.1%	
	Emerging Markets	4.6%	x	8.8%	=	0.4%	
	Global	6.1%	x	4.4%	=	0.3%	
	International	9.8%	x	4.4%	=	0.4%	
Fixed Income		**41.6%**					
	U.S. Government	30.1%	x	4.2%	=	1.3%	
	Corporates	11.0%	x	5.6%	=	0.6%	
	Global Bonds	0.5%	x	4.1%	=	0.0%	
	Municipal	0.0%	x	4.6%	=	0.0%	
Other		**23.0%**					
	Hedge Funds*	7.8%	x	4.9%	=	0.4%	
	Private Equity	6.9%	x	13.1%	=	0.9%	
	Private Debt	2.1%	x	7.0%	=	0.2%	
	Real Estate**	5.2%	x	7.4%	=	0.4%	
	Structured	0.4%	x	3.5%	=	0.0%	
	Risk Parity	0.6%	x	5.0%	=	0.0%	
Total		**100.0%**				**5.7%**	**7.7%**

*10Yr Returns
**20Yr through 2017



Divorce

To protect families, we often need to discuss topics such as death, disability, old age, catastrophic personal property loss, liability insurances, and divorce. The 2017 Tax Cuts and Jobs Act ushered in a meaningful change in divorce laws that we would like to highlight. The change is an important consideration for those declaring divorce this year and in the future.

In the past, the higher-earning spouse deducted alimony payments on his/her tax return, while the recipient spouse added the payments to his/her taxable gross income. (The government will always get their money.) However, with the recent tax-law change, these terms are reversed. Now, the higher-earning spouse—not the recipient spouse—is responsible for the taxes. The changes took effect on January 1, 2019, but divorces finalized prior to this date have been grandfathered into the earlier approach.

The Tax Cuts and Jobs Act prompted several other changes concerning divorce, so give us a ring if you would like to discuss them.

The LBA Rules For Fixed Income

1. Invest for income and downside protection.
2. Ignore the ratings agencies; they are reactive and biased.
3. Low yield doesn't necessarily mean safety.
4. Conversely, high yield doesn't always imply high risk (although it does mean we should tread carefully).
5. Forecasting increases or decreases in the Federal-funds rate is a fool's errand designed to sell papers.
6. When stocks fall, fixed income prices tend to rise; you will be happy you own fixed income in a market selloff.
7. Sometimes, US Treasuries are preferable to corporate bonds despite the tax ramifications; sometimes the opposite is true.
8. From a tax base standpoint, municipal bonds currently carry more risk than people realize.
9. There has almost never been a cut to pensioners without a reciprocal cut to municipal bond holders.
10. It is important to stagger the maturity dates of fixed income securities.

We are proud to announce that

David Polansky

has recently earned the prestigious *Chartered Financial Analyst (CFA®)* designation.

Congratulations, David!

Lowell, Blake & Associates provides personalized financial services and support for individuals, families, nonprofits, and businesses. Reflections & Observations is our biannual newsletter to keep our clients and contacts “in the know” on new trends and valuable insights.

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