

A Question of Equilibrium

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“Sellers were out in force on the market today after negative news on the economy.” It’s a common line in TV finance reports. But have you ever wondered who is buying if so many people are selling?

The notion that sellers can outnumber buyers on down days doesn’t make sense. What the newscasters should say, of course, is that prices adjusted lower because would-be buyers weren’t prepared to pay the former price.

What happens in such a case is either the would-be sellers sit on their shares or prices quickly adjust to the point where supply and demand come into balance and transactions occur at a price that both buyers and sellers find mutually beneficial. Economists refer to this as equilibrium.

But the price at which equilibrium is reached can change. That’s because new information is coming into the marketplace continually, forcing would-be sellers and would-be buyers to constantly adjust their expectations.

That new information might be company-specific news on earnings. It might be news that has implications for specific industries—like a spike in oil prices. Or it might be an economic development

that affects the entire market, like a change in the unemployment rate. Given this constant flux in the flow of news and information and the changing expectations of participants, it can be reassuring to remember that for everyone selling shares there must also be buyers of those shares—or the trade will never take place. And whenever information changes, prices may change and quickly reach a new level of equilibrium.

Recent trading activity by market participants in shares of a US-based health care provider offers a clear example of how quickly prices adjust to new information. It was reported in late July 2018 that a large private equity firm was in talks to purchase the health care firm at a price valuing the company at \$65 per share. Prior to the announcement, shares of the firm were trading around \$48.

As we see in Exhibit 1, when the announcement broke, the market price for the stock adjusted overnight to just below \$65. In other words, after news of the impending sale hit the market, the supply and demand for the stock met at a new equilibrium price.



A Personal Note From Global Wealth Advisors

To borrow a thought from the Wizard of Oz, “Lions and tigers and stock market bears, oh my!” The last few months in the US equity markets have become some of the worst since the Great Recession of 2008. That being said, the last ten years have seen incredible growth and the 3, 5 and 10 year returns in those same markets show that.

So why all the volatility now? As we have said, investors don’t like uncertainty and there is plenty of that to go around. The major issues are: a potential government shut-down, trade negotiations with China, future interest rates hikes, OPEC and Brexit. That’s a lot all at once.

Given how well the long-term equity returns have been, these investors have decided to take profits and use a wait and see approach as to how these issues will affect earnings moving forward. That means a lot of cash, hundreds of millions of dollars, will be sitting on the side-lines waiting to be re-invested.

Here are some things to keep in mind during these volatile times. Interest rates are still low, GDP is strong, corporate earnings and wages are up, and unemployment is still low. Things look good economically for 2019 and now that stocks prices are down, those same money managers will be looking to buy. Like Warren Buffett, keep thinking long-term and you will be glad you did.

Jim Knaus Mike Krencicki

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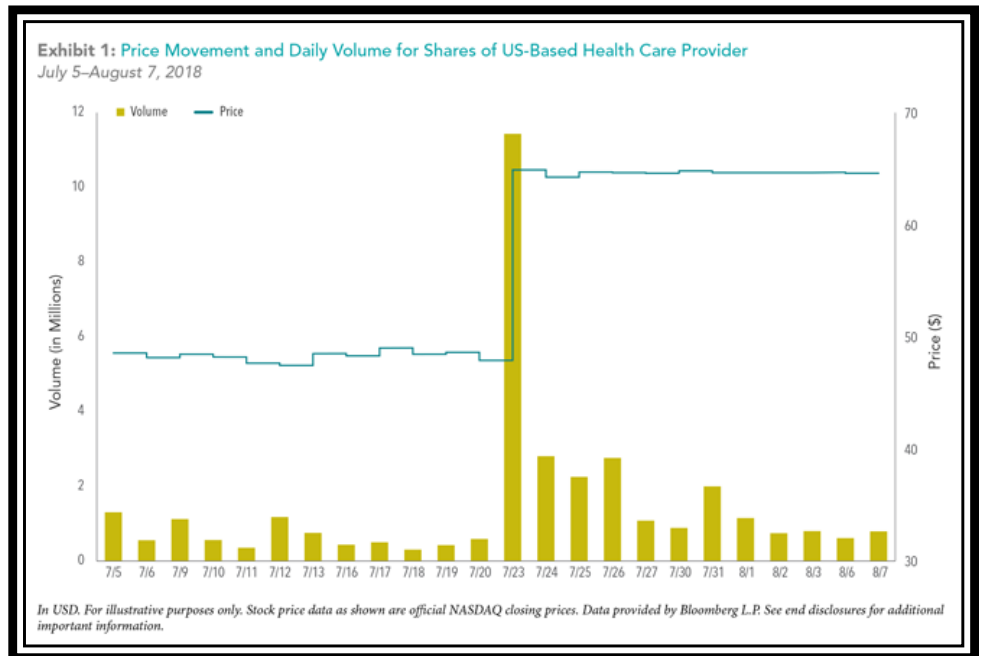
Given that security prices rise and fall based on a multiplicity of influences, how should investors interpret and act on these signals? We believe that trying to untangle all these influences and profit from perceived mispricing is not possible in a systematic and scalable manner.

An alternative approach is to start by accepting that prices are fair and reflect the collective expectations of market participants. While information frequently changes, this is quickly built into prices. Competition among buyers and sellers is such that it's not possible to consistently outguess the market.

The second step is to see that fairly priced securities can have different expected returns. And we can use market prices and security characteristics to identify those securities that offer higher expected returns.

The third step is to build highly diversified portfolios around these broad drivers of return, while implementing efficiently and managing the cost of buying and selling securities.

The final step is to apply discipline



and rebalance your portfolio to either stay within your chosen risk parameters or to adjust for changes in circumstances.

Ultimately, the market is like a giant information processing machine. All the influences mentioned above are constantly being assessed by millions of participants, and prices adjust based on those collective expectations.

The returns we expect from investing do not necessarily show up every day, every week, every month, or even every year. But the longer we stay invested, the more likely we are to capture them. So, rest assured that even when prices are falling, people are still buying. The market is doing its job, and we believe the rewards will be there if you remain disciplined. ●

The ABCs of Behavioral Biases (S – Z)

This is the last of six articles on behavioral biases. The final two topics are sunk cost fallacy and tracking error regret.

SUNK COST FALLACY

What is it? Sunk cost fallacy makes it harder for us to lose something when we also face losing the time, energy or money we've already put into it. It is the primary reason most people would choose to risk traveling in a dangerous

snowstorm if they had paid for a ticket to an important game or concert, while passing on the trip if they had been given the ticket for free. You're missing or attending the same event either way. But if a sunk cost is involved, it somehow makes it more difficult to let go, even if you would be better off without it.

When is it helpful? When a person, project or possession is truly worth it

to you, sunk costs – the blood, sweat, tears and/or legal tender you've already poured into them – can help you take a deep breath and soldier on.

When is it harmful? Falling for financial sunk cost fallacy is so common, there's even a cliché for it: throwing good money after bad. There's little harm done if the loss is a small one, such as attending a prepaid event you'd rather have skipped. But

in investing, adopting a sunk cost mentality – “I can’t unload this until I’ve at least broken even” – can cost you untold real dollars by blinding you from selling at a loss when it is otherwise the right thing to do. The most rational investment strategy acknowledges we cannot control what already has happened to our investments; we can only position ourselves for future expected returns, according to the best evidence available to us at the time.

TRACKING ERROR REGRET

What is it? If you’ve ever decided the grass is greener on the other side,

you’ve experienced tracking error regret – that gnawing envy you feel when you compare yourself to external standards and you wish you were more like them.

When is it helpful? If you’re comparing yourself to a meaningful benchmark, tracking error-regret can be a positive force, spurring you to try harder. Say, for example, you’re a professional athlete and you’ve been repeatedly losing to your peers. You may be prompted to embrace a new fitness regimen, rethink your equipment, or otherwise strive to improve your game.

When is it harmful? If you’ve structured your investment portfolio to reflect your goals and risk tolerances, it’s important to remember that your near-term results may frequently march out of tune with other “typical” returns. It can be damaging to your long-range plans if you compare your own performance to irrelevant, apples-to-oranges benchmarks. You’re better off sticking to the plan that was developed just for you.

We’ve now reached the end of our alphabetic overview of the behavioral biases that most frequently lead investors astray. ●

The ABCs of Education Investing

September 4, 2018

By: Dimensional Fund Advisors LP

With school back in session in most of the country, many parents are likely thinking about how best to prepare for their children’s future college expenses. Now is a good time to sharpen one’s pencil for a few important lessons before heading back into the investing classroom to tackle the issue.

THE CALCULUS OF PLANNING FOR FUTURE COLLEGE EXPENSES

According to recent data published by the College Board, the annual cost of attending college in the US in 2017–2018 averaged \$20,770 at public

schools, plus an additional \$15,650 if one is attending from out of state. At private schools, tuition and fees averaged \$46,950.

It is important to note that these figures are averages, meaning actual costs will be higher at certain schools and lower at others. Additionally, these figures do not include the separate cost of books and supplies or the potential benefit of scholarships and other types of financial aid. As a result, actual education costs can vary considerably from family to family.

To complicate matters further, the amount of goods and services \$1 can purchase tends to decline over time. This is called inflation. One measure of inflation looks at changes in the price level of a basket of goods and services

purchased by households, known as the Consumer Price Index (CPI). Tuition, fees, books, food, and rent are among the goods and services included in the CPI basket. In the US over the past 50 years, inflation measured by this index has averaged around 4% per year.¹ With 4% inflation over 18 years, the purchasing power of \$1 would decline by about 50%. If inflation were lower, say 3%, the purchasing power of \$1 would decline by about 40%. If it were higher, say 5%, it would decline by around 60%.

While we do not know what inflation will be in the future, we should expect that the amount of goods and services \$1 can purchase will decline over time. Going forward, we also do not know what the cost of

Average Published Cost of Attending College in the US

	Public Four-Year In-State	Public Four-Year Out-of-State	Private Nonprofit Four-Year
Tuition and Fees	\$9,970	\$25,620	\$34,740
Room and Board	\$10,800	\$10,800	\$12,210
Total Cost of Attendance	\$20,770	\$36,420	\$46,950

Source: The College Board, “Trends in College Pricing 2017.”

The ABCs of Education Investing

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attending college will be. But again, we should expect that education costs will likely be higher in the future than they are today. So, what can parents do to prepare for the costs of a college education? How can they plan for and make progress toward affording those costs?

DOING YOUR HOMEWORK ON INVESTING

To help reduce the expected costs of funding future college expenses, parents can invest in assets that are expected to grow their savings at a rate of return that outpaces inflation. By doing this, college expenses may ultimately be funded with fewer dollars saved. Because these higher rates of return come with the risk of capital loss, this approach should make use of a robust risk management framework. Additionally, by using a tax-deferred savings vehicle, such as a 529 plan, parents may not pay taxes on the growth of their savings, which can help lower the cost of funding future college expenses.

While inflation has averaged about 4% annually over the past 50 years, stocks (as measured by the S&P 500 Index) have returned around 10% annually during the same period. Therefore, the “real” (inflation-adjusted) growth rate for stocks has been around 6% per annum. Looked at another way, \$10,000 of purchasing power invested at this rate over the course of 18 years would result in over \$28,000 of purchasing power later on. We can expect the real rate of return on stocks to grow the purchasing power of an investor’s savings over time. We can also expect that the longer the horizon, the greater the expected growth. By investing in stocks, and by starting

to save many years before children are college age, parents can expect to afford more college expenses with fewer savings.

It is important to recognize, however, that investing in stocks also comes with investment risks. Like teenage students, investing can be volatile, full of surprises, and, if one is not careful, expensive. While sometimes easy to forget during periods of increased uncertainty in capital markets, volatility is a normal part of investing. Tuning out short-term noise is often difficult to do, but historically, investors who have maintained a disciplined approach over time have been rewarded for doing so.

RISK MANAGEMENT AND DIVERSIFICATION: THE FRIENDS YOU SHOULD ALWAYS SIT WITH AT LUNCH

Working with a trusted advisor who has a transparent approach based on sound investment principles, consistency, and trust can help investors identify an appropriate risk management strategy. Such an approach can limit unpleasant (and often costly) surprises and ultimately may contribute to better investment outcomes.

A key part of maintaining this discipline throughout the investing process is starting with a well-defined investment goal. This allows for investment instruments to be selected that can reduce uncertainty with respect to that goal. When saving for college, risk management assets (e.g., bonds) can help reduce the uncertainty of the level of college expenses a portfolio can support by enrollment time. These types of investments can help one tune out short term noise and bring more clarity to the overall investment

process. As kids get closer to college age, the right balance of assets is likely to shift from high expected return growth assets to risk management assets.

Diversification is also a key part of an overall risk management strategy for education planning. Nobel laureate Merton Miller used to say, “Diversification is your buddy.” Combined with a long-term approach, broad diversification is essential for risk management. By diversifying an investment portfolio, investors can help reduce the impact of any one company or market segment negatively impacting their wealth. Additionally, diversification helps take the guesswork out of investing. Trying to pick the best performing investment every year is a guessing game. We believe that by holding a broadly diversified portfolio, investors are better positioned to capture returns wherever those returns occur.

CONCLUSION

Higher education may come with a high and increasing price tag, so it makes sense to plan well in advance. There are many unknowns involved in education planning, and no “one-size-fits-all” approach can solve the problem. By having a disciplined approach toward saving and investing, however, parents can remove some of the uncertainty from the process. A trusted advisor can help parents craft a plan to address their family’s higher education goals. ●

¹ Source: US Department of Labor, Bureau of Labor Statistics, Economic Statistics. There is no guarantee investing strategies will be successful. Investing risks include loss of principal and fluctuating value. Diversification neither assures a profit nor guarantees against loss in a declining market.