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1. The Word "Investing"

In economics the word "investment" means spending for future production.¹ When firms build goods and services they spend for investment. At times they will fund that investment by raising capital and the process of building the goods involves the action of spending for investment. But what have the "investors" who provided that funding actually engaged in? Are they spending for investment or are they re-allocating some of their existing savings?

This might sound like Cullen making a semantic point, but it's important for the sake of understanding what we're doing when we allocate our portfolios. We are not, in a proper sense, "investing". We are reallocating savings. Firms invest when they spend and the value of our savings can change based on the impact of those investments, but the shareholders themselves are not actually investing.

Saving is not as exciting sounding as investing, but reallocating savings is the proper context in which to judge our asset allocations. This process is not the get rich quick scheme that many make it out to be. Allocating savings should be a prudent process that rewards the patient at the detriment of the impatient, as savers wait for the true investments firm's make, to accrue value.

Of course, we have to live with the taxonomy we have and not the taxonomy Cullen wants, so happy investing even if you're not actually investing.

2. Beating the Market

Investors, *I mean savers*, are often told they should try to "beat the market". But if you walk into a Certified Financial Planner's office they will never ask you if you want to beat the market because beating the market is irrelevant to someone's financial plan. In fact, the evidence shows that trying to beat the market is more often

than not detrimental to your long-term returns and probably your mental well-being.²

This obsession with beating the market has been largely driven by the way investment managers promote their strategies. In order to justify high fees investment managers sell the hope of market beating returns in exchange for the guarantee of high fees. The problem is that 90%+ of high fee managers fail to outperform a simple index fund.

DID YOU KNOW?

Despite being the face of “passive investing” Vanguard and other indexing firms have some of the largest and most active trading desks in the world as they have to actively manage all of the activity in their underlying indices.

The truth is that beating the market is not part of anyone’s financial plan. Instead, they should focus on optimizing their income, saving prudently and then diversifying their savings according to their financial plan and needs. Beating the market is not part of any sound financial plan and trying to do so is likely to reduce returns by churning up taxes and fees over time.

3. Passive Investing Isn’t a Thing

In 2009 I was reading the prospectus for a new hedge fund ETF, the first of its kind. It was a high fee fund tracking an underlying index of hedge funds that used a multi-strategy approach. It was clearly “active” by any traditional understanding, but the prospectus stated that the fund was “passive” because it used an indexing approach. It was clear that the fund was creating its own index and then “passively” tracking that index. In the broader scope of the financial asset world the fund was not remotely “passive” because it was deviating very actively from something like the S&P 500 or most other broad market indices. But because they tracked their own index they could call the fund passive.

This got me thinking about the meaning of the term “passive” investing because high fee active investors were using the term to market to investors and imply that they’re something they’re not. Part of this is the indexing and benchmark problem where an ETF issuer can create their own index and then claim to be passive because they track that index in a passive manner.

At the aggregated macro level there is only one “efficient market” portfolio and that is the portfolio of global financial assets. This portfolio, which I call the Global Financial Asset Portfolio, is the actual outstanding market cap value of all stocks and bonds.³ Anyone who deviates from this portfolio is technically being active as they deviate from “the market” portfolio. There are perfectly good reasons to deviate from that portfolio, but the lesson from all of this is that everyone is an active investor and no one can hold the exact GFAP.

The key point here is that passive investing isn't a real thing and instead what asset allocators should focus on is the cost of any activity they incur along the way as they actively manage their asset allocation. There are very smart ways to be active (low cost, tax efficient, diversified) and very silly ways to be active (high fee, tax inefficient and non-diversified). But beware of lazy black/white slogans that create the appearance of a fund being something it isn't.

4. Fractional Reserve Banking and the Money Multiplier

One of the most basic textbook lessons about banking is the idea that banks take in reserves or deposits and then “multiply” them in some fixed ratio. For instance, economics textbooks teach us that banks take in \$1 of deposits or reserves and can then multiply this into \$10 of new money. There’s a shred of truth to this, but the causality is important to understand because it does not run from reserves to more loans/deposits.⁴

In 2008 when the Federal Reserve began embarking on their QE crusade there were many economists and commentators who thought this might create the risk

DID YOU KNOW?

The Federal Reserve released research on this topic showing that the traditional Money Multiplier concept is incomplete at best and wrong at worst.⁵

of hyperinflation as the Fed flooded the system with reserves that banks might then “multiply” into more loans. But no such thing occurred and those of us who had studied Japan’s long running experiment with QE knew this well in advance.⁶

In reality, banks make loans and find reserves after the fact as needed. If the system does not have enough reserves for healthy banks to meet reserve requirements then the Central Bank *must* provide them. An unhealthy bank will appear reserve constrained at times, but the banking system as a whole cannot be reserve constrained as the Central Bank must supply reserves to allow banks to remain in compliance with regulations.

The reason flooding the system with reserves did not result in more loans is because banks do not take in reserves and multiply them in some fixed causal ratio. The money multiplier is not a thing and we do not reside in a “fractional reserve” banking system. We reside in a fractional capital system where banks take in deposits or reserves, earn cash flows from these assets/liabilities in various ways and then leverage their capital to create new loans. Reserves and deposits can influence a bank’s capital, but they are one of many causal factors influencing capital and lending.

5. The US Government is Going Bankrupt (Not)

Fallacies of composition are rampant in financial circles and there is perhaps no fallacy more prevalent than the idea that the government sector can go bankrupt like a household does.

The government sector is a huge aggregated sector that has a literal printing press. It cannot run out of money like an individual household can and the countries that default on debt usually engage in foreign debts or currency arrangements they don't explicitly control (such as the gold standard). But the more important point is that large aggregated sectors do not go bankrupt in the same way households do. For example, while an individual household can go bankrupt the aggregate household sector cannot go bankrupt. And in fact, the aggregate household sector's debts almost always increase with the exception of brief contractionary periods. That's because the economy relies on us creating assets AND liabilities that fund investment and consumption and help grow the economy. There's nothing inherently bad about more debt so long as it helps to create the assets that make that debt viable in the long-run.

But most importantly, governments do not generally default by becoming insolvent. They go bankrupt by hyperinflating their currency and hyperinflation and insolvency have very different causes. Insolvency occurs when you do not have enough money. Hyperinflation occurs when the government creates excessive money relative to existing resources.

Looking at the United States more directly, we should all be thankful for what the USA has built because it is the wealthiest economy in the history of mankind. As of 2024 the net worth of the US household sector is \$145 trillion. The US economy produces \$30T of goods and services every year. It's estimated that the US government has total resources of over \$150 trillion.⁷ These entities not only are not bankrupt, they are unfathomably wealthy.

None of this is to imply that governments do not need to be mindful of their spending. Instead, we should hope that governments spend prudently on projects that are likely to enhance resources and help the economy grow without creating excessive inflation while also remembering that default and "running out of money" are not the major economic risks for the government as a whole.

6. Inflation, Inflation, Inflation

Inflation is a very confusing topic. So confusing that economists still don't even agree exactly what causes it. So it's not surprising that many myths perpetuate around this topic.

Perhaps the best myth to start with is the idea that inflation is necessarily bad. The US economy has averaged 3.3% annual inflation over the last 100+ years. During that time the USA grew into the most dominant financial, economic and military power in human history. Living standards have boomed as poverty has collapsed and the average American is now part of the global top 1% in wealth.

While we don't know the ideal rate of inflation it's clear that an economy can prosper with some modestly low rate of positive inflation. This doesn't mean that 3.3% inflation is good. It could be that 0%, 1% or 2% is even better, but we know that some modest level of low inflation can still be consistent with a prospering economy.

Another myth along these lines is the idea that an increase in the money supply *is* inflation. And while it's true that the money supply can contribute to inflation it's also clear that, in a credit based system like the USA, the money supply will generally increase in the long-run as households and firms borrow to invest, consume and build the things that make life worthwhile. This is not necessarily inflation. In fact, borrowing money to produce valuable goods and services can be *deflationary* as loans can be used to create real resources before those loans are repaid (and the money is destroyed).

DID YOU KNOW?

Deflationary periods like the USA from 1865 -1930 are often cited as periods of great prosperity. And while it's true that growth was high during this period the US economy was also very volatile with 18 recessions, 6 financial panics and 3 Depressions.⁸

Inflation is properly defined as a change in the price level as defined by a basket of consumer goods. The most commonly cited inflation metric is the Consumer Price Index which is the US Government's metric for consumer prices. The money supply certainly has an impact on this metric, but it is also impacted by many other factors including resource supply, relative money supply, consumer behavior, etc.

Lastly, inflation is an extremely difficult thing to measure because there isn't real-time data measuring the consumer price basket for all goods/services and all of us experience inflation differently. This means that it can be useful to rely on many different measures of price changes both from the government, private sources and financial market metrics. All inflation metrics are flawed, but some are useful.⁹

7. American Living Standards are in Decline (Not)

Absolute living standards have never been better. But we are also more aware of our *relative* living standards than ever. The result is although our aggregate living standards have improved we often feel like our living standards are in decline because we're so aware of our relative standing in the world. Some data:

- 1) As of 2024 US household net worth is at all-time highs and the median American is in the global 1% of net worth and income.
- 2) US households spend less on necessities (shelter, food and clothing) as a % of income than ever. Items that were a luxury 100 years ago (college education, healthcare, etc) are now considered necessities.
- 3) US and global poverty rates have plummeted in the last 100 years.
- 4) Child mortality rates have plummeted in the last 100 years.

Are there still plenty of problems worth resolving? Of course, but modern living standards are far better than those of 50 or 100 years ago.¹⁰

DID YOU KNOW?

If you don't have a Bloomberg terminal you can easily find total return charts on stockcharts.com or by using the Yahoo Finance Historical Data feed under adjusted returns.

8. Bonds Lose Value When Rates Rise (and Price Return Charts)

One of the first things investors learn about bonds is that bond prices go down when interest rates go up. And while this is true in the short-term it is not necessarily true in the long-term.

For example a 10 year US Government bond yielding 5% will decline in value in the short-term by about 8% if interest rates increase from 5% to 6%. But if the bondholder holds this bond to maturity they will earn exactly 5% per year on average. Despite the decline in value in the short-term the bond still increases in value over the long-term.

One problem with the way investors experience this return is that they don't often see the total return of an instrument. This is due to the widespread use of price return charts and not total return charts. For example, most investing websites default to a price return which does not include interest and dividends from instruments. Brokerage statements also separate interest/dividends and principal changes for the purpose of tax reporting. The result is that investors don't always see the total return of their holdings unless they know where to look for the total returns.

In short, to properly calculate and judge the returns from bonds and any interest bearing instrument it's always wise to look at total returns and returns over proper time horizons.

9. Passive Investing Will Destroy the World

Building on #3 where we discussed how passive investing isn't a thing, we can also dismiss narratives about how passive investing is destroying the world. As we discussed, passive investing isn't a thing and our example showed that many new indexing strategies are just "passive" strategies that create their own index.

But there's another important lesson in this because a less active investor relies on more active investors to maintain their indices. For instance, the S&P 500 might look very inactive to the indexing investor who just holds SPY, but the reality is that SPY is changing every single day as the market caps of the underlying entities change. And those index changes are being managed every day by active investors who buy and sell the underlying instruments to match the index. In other words, more active investors help maintain the instrument that makes a less active investor's portfolio remain in balance with its index. So there cannot be "passive" investors without an active investor on the other side which means that it is quite literally impossible for passive investing to become the only way investors allocate.

More interesting is the question as to whether consolidation in a particular index can make markets more unstable? This again depends on the index construction and the active methodology an indexing company chooses. For example, has the creation and popularity of the S&P 500 index diminished market quality or created more unstable financial markets? Or another way of thinking about this is to ask whether markets would be better off without these sorts of diversified, low cost index funds? There's very little evidence to support this given that economies with large, developed financial markets tend to be large wealthy economies.

I think there's no doubt that financial markets will always be flawed to some degree. Index funds are imperfect, but the argument that they've made financial markets worse is ignoring the fact that before index funds existed our options were closed end funds, mutual funds and other high fee wrappers that had all the same flaws without many of the benefits.¹¹

10. Stocks For “The Long Run”

The investment management industry does a terrible job of communicating time horizons to investors. We talk in vague time horizons such as “the short-term” or “long-term”. I’ve done it repeatedly in this paper! And the problem is that this leaves too much room for interpretation. After all, what is the “long run”? Is it 1 year or 1 decade?

DID YOU KNOW?

Long-term assets are best thought of as inflation hedges that don’t provide principal protection in the short-term. Likewise, short-term assets generally give you short-term principal protection and give you little inflation protection.

This is unsurprising in part because we can’t quantify precisely what the time horizon of instruments like stocks are because they vary so much. And the result is that this vague terminology leaves investors feeling uncertain about the time horizon over which they should judge certain instruments and the time period over which they should utilize certain instruments.

When I created the Defined Duration strategy the purpose was to resolve this problem and help us better understand the proper time horizons over which certain instruments exist. For example, in the DD model stocks are an 18 year instrument that can be reliably expected to earn about 5-6% real returns over 18 years. Bonds are 5 year instruments on average that will earn 1-2% real. This can be done for any and all instruments in the model and the intent is to assign a proper time horizon for specific assets.

This type of clarity in time horizons not only helps us implement a corresponding financial plan, but it helps us better align assets to specific time horizons. This helps us behave better by better understanding not only how to judge instruments, but by also giving us a better baseline for being patient with how asset classes can be expected to perform over time.

1—See *Krugman, Paul and Robin Wells (2012), 2nd ed. Economics, p. 593. Worth Publishers.*

2—According to the 2023 SPIVA Scorecards from S&P 93.97% of active managers underperformed their benchmarks over a 20 year period.

<https://www.spglobal.com/spdji/en/spiva/article/spiva-us/>

3—The GFAP can be calculated using SIFMA Capital Markets Fact book, BIS data and the UBS Global Wealth Report. As of 2024 the GFAP was approximately 45% stocks and 55% bonds.

4—This should not be confused to mean that banks do not fund their lending from deposits and reserves or do not operate as financial intermediaries. A bank needs reserves to maintain regulatory requirements and can use deposits and reserves to help add to their capital. These are ultimately funding sources for the banks balance sheet even if they are not the only causal factor leading to an increased ability in lending. As I like to say, loans create deposits and deposits also fund loans.

5—See St Louis Fed:

<https://research.stlouisfed.org/publications/page1-econ/2021/09/17/teaching-the-linkage-between-banks-and-the-fed-r-i-p-money-multiplier?>

In recent years this narrative has changed from a fixed multiplier ratio to a loose multiplier ratio. This is more accurate, but still gets causation backwards as banks do not take in deposits or reserves and then make lending decisions.

6—Some economists responded to this narrative with another false narrative saying that Interest On Excess Reserves disincentivized banks from lending. There's some truth to this, but the bigger issue here was that there was little demand for loans and so banks couldn't extend loans at a rate that was above IOER.

7—IER estimated that mineral resources owned by the US government are valued at \$150T+. We also know that the US government owns \$8T in public buildings and land. Further, the US government has taxing authority over the highest producing economy in the world at \$30T per year.

<https://www.instituteforenergyresearch.org/fossil-fuels/coal/federal-assets-above-and-below-ground/>

8—This is usually cited in the context of another Peeve of mine in which people blame the Fed for everything. In fact, the period from 1913–2024, the era of the modern day Fed, has been remarkably stable with soaring living standards, low inflation and stable growth.

9—No, Shadow Stats is not one of the useful inflation sources and has been debunked based on a basic measurement error.

<https://www.fullstackeconomics.com/p/no-the-real-inflation-rate-isnt-14-percent>

10—The single best example of our surging living standards is the way every citizen now has a super computer, flash light, Walkman, camera, alarm clock, video recorder, messaging device and phone in their pocket. 30 years ago these items were impossible to acquire without spending tens of thousands of dollars.

Another common response to this is the idea that a modern family cannot live on one income like they could in the 1950s. But that's largely because the things we all demand (fancy tech-filled homes, fancy modern cars, etc) are all things that people in the 1950s didn't have. You could easily live like someone in the 1950s with few material possessions, a small home, no car, no phone, etc. Your cost of living would be very low and so would your relative living standards. In short, our incomes buy us less "necessities" because modern life necessitates much more "stuff", for better or for worse.

11—Hello, Michael Green.

NB—Special thanks to Cliff Asness who was the motivation for this paper. To read Cliff's original Peeves please see here:

<https://www.aqr.com/-/media/AQR/Documents/Insights/Journal-Article/My-Top-10-Peeves.pdf>

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