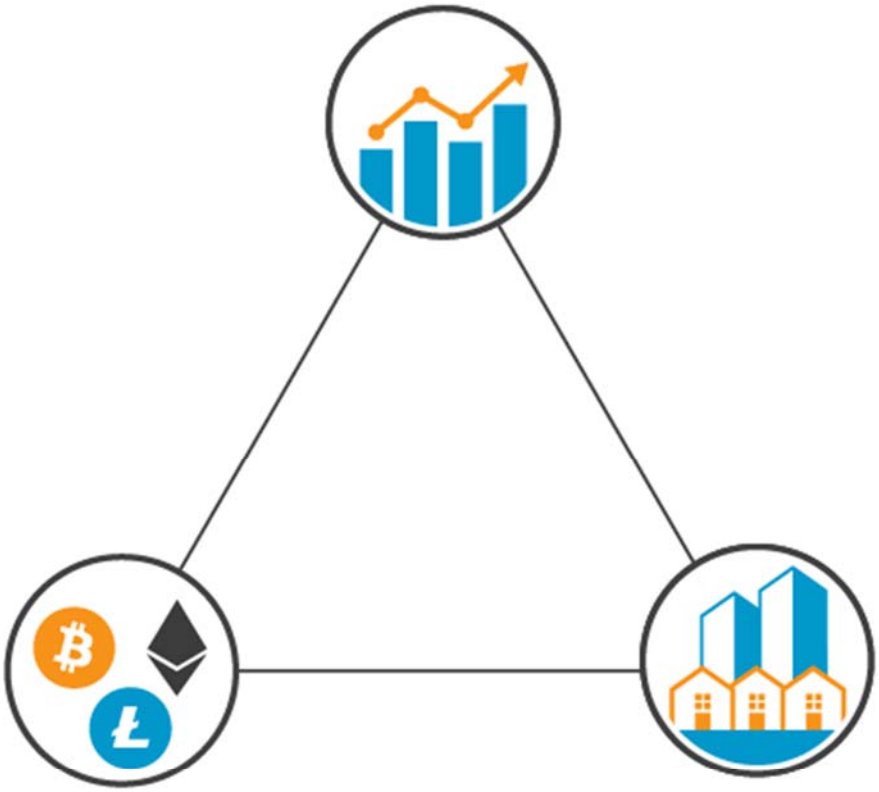
TRIANGLE INVESTING



WALL STREET PLAYBOYS

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The Product

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Introduction

Timing is really everything, we had no interest in writing an investing book but realized all of the questions coming in from our Questions tab (now discontinued) surrounded investing and personal finance. Luckily, right as we finished Q3 of 2017, we got an offer for a website that we couldn't refuse. When you suddenly free up 10 hours a week you have a lot more free time on your hands

Our opinions are heavily biased. We think most well off people end up living boring lives: 1) house, 2) a couple of cars, 3) no fun life experiences and 4) live to work when they are already rich. If we think about money as a tool, the value begins to change tremendously. There are people who have ~$10M and are miserable because they missed out on life and are already 40-50 years old. Their pursuit of money was nothing more than a trap since they didn't get to experience life at all. Now of course… We're not saying money is meaningless. Far from it. There is a balance that needs to be struck and we'll outline our *opinions* on when the balance is reached. We think everyone should be able to get to ~$1M in net worth by the time they are ~30 (our baseline value) And. In this book, we'll disclose our own personal opinions. The numbers are higher, the timelines are faster and the long-term net-worth number is likely below what most people would expect. Besides. Who wants to die with a $50M net worth? It means you left $50M of fun on the table before the grim reaper hit.

The second item… this is an opinion based product. The reality is that investing should be done entirely by yourself. *There are no guarantees in investing.* In fact, we would wager that a lot of the things we're invested in **will fail**. That is the entire point of diversification. If we invest in say five different asset classes and three out of the five succeed long-term… That's more than enough to live comfortably.

The third item… None of the items in here go against *Efficiency*. If your cash flow is not up to at least $10-20K a month, there is no reason to bother with investing. You're better off following all of the ideas outlined in *Efficiency*. ***Your first course of action is to get two streams of cash flow and there will never be an exception to this rule.*** If you are currently in a Career making $100K a year, this is not good enough. You should focus on following the rules outlined in *Efficiency*… Getting the second source of income to living wage… then think about investing. You'll need money to buy ads and scale your business.

The fourth item… Now that we've beaten the main points to death, the last item is coming to your own conclusions. While we are giving out what we're investing in as of January 2018, we would recommend checking back in every year or two to see if we've flipped the portfolio.

The fifth and final item…. Our numbers are not for everyone. Some people want $100M+, other people only need $500K, so please keep this in mind when looking at our opinions. If you plan on having more or less money, that will make an enormous difference on your portfolio management strategy. Our numbers (rough approximations) are given out in the first chapter which will give you an idea of the risk tolerance we run with. *The three asset classes we will cover are: 1) Stocks, 2) Real Estate and 3) Crypto Currencies.*

That wraps it up. We'll now jump into all of our money management opinions and investments. Just remember… *Until you've got multiple forms of income we would recommend fixing that issue first as beaten to death in Efficiency.*

Table of Contents

Special Thank You to RE Guy for Reading and Contributing to the Real Estate Section

Financial Benchmarks

Time to make everyone upset. The people shooting to become billionaires will say we're weak and the people who would be happy with $500K in net worth will say we're greedy. Since we're likely going to make everyone upset with the benchmarks, we think we hit it on the head! Why? Well if everyone disagrees with you it typically means you've hit something controversial and differentiated. This is great because you'll live a different life from the masses, something we strive for every single day.

Remember, there is no need for goals, we're simply answering a question we receive all the time. People seem to be obsessed with benchmarks so we'll give reasonable ones out assuming you're serious about becoming financially independent and well off.

The Three Basic Benchmarks: The three numbers to keep in mind are quite simple… **First:** $1 million by 30, **Second:** "four by four" meaning $4M by 40 and **Third:** $10M by 50. Those are the three most important ones to know and we think anyone can get to all three of those numbers. While it seems like a stretch to move from $1M to $4M in a decade, the compounding of investment income combined with a high income will get you there. If you've made it to a million dollars in the first 10 years of life, you'll simply need a diversified portfolio which should be up another ~150% combined with a continuous stable work ethic.

Now the Fun Part: The real numbers that we think are achievable without ruining your personality… Somewhere around *$3-5M by 35 and ~$12-18M by 45*. The reality? Getting to the high end of those numbers is not that difficult if you're building cash flows in an organized manner. Your returns likely slow down as you build up your net worth, however, the variability in returns also goes down. The standard deviation should be smaller and smaller and clipping 7% returns isn't out of the realm of probabilities. Some of your investments will go up 1,000%... Some will see declines. And. You will grow consistently.

How Do You Get There? At the end of the day there are really three things that help you get to the higher numbers we have listed. This would be 1) event driven income, 2) constant cash flow building and 3) exit multiples that ideally expand. These three items will drive the majority of your net worth, the remaining investment items are going to drive the numbers up.

The key is simply building the nest egg within the first 10 years. Once your nest egg gets to ~$2M the wind at your back drives you for the next 5-10 years since you should be doubling every 7 years or so (even if you double every 10 years, all you need to do is avoid pulling down on the principal to get to $4M).

Now how does each year look?

Getting Into the Numbers

Since everyone is following the rules outlined in Efficiency we're going to provide a quick look at the net worth you should have to get to each marker. We'll start at age 21 and move all the way to age 35. The rest of it is going to be up to you. If you're sitting on ~$4M at 35, some people will relax, others will push the gas. Since we likely lost a lot of people with the plan to get to 8 digits before turning 45, we'll stop at 35 to show how reasonable the numbers are. *(Remainder is largely compounding and stable cash flows)*

Let's start with an easy example… the most common way to get to ~$4M by 35. You simply work a high paying career and get a second source of income that covers your cost of living. In this scenario it is not unreasonable to hit the numbers below:

1) Your tax rate will likely hover around 35% (less at the beginning and higher at the end), however you can write off a lot of items with a secondary source of income. With a business you can write off office supply costs, travel etc. Your effective tax rate essentially goes down.
2) We use the 401K as an example, while we would only go up to the match using a maxed out number is likely the same. If you get a 5% match but make $250K a year in the late years, it'll essentially get you to $25K…. The $18K/year is used as an *approximate* to keep it simple.
3) You should have two big events in your life. Within 5 years you should have a second living income up and running (easily achieved by age 26) and second, you should see an inflection in your income by age 30. Either your career takes off, your business takes off or you sell your first asset and realize you can buy and sell websites for higher multiples making $100s of thousands per year (Hint, hint, hint on the road we took!)
4) 7% returns are extremely low. People complain about saving money in a bank account which doesn't make any sense at all. If you're young you should have enough to cover your living costs for a few months and throw the rest into investments. 7% is still doable even if you have $10-20M. Getting 7% at lower net worth estimates is even easier… more opportunities to pursue!
5) You're on track to become a deca-millionaire in your 40s, ***unquestionably*** rich

Age	Annual Income	Post Tax Income	401K	Savings	Saving + 401K	Investment Return 7%
21	$120,000	$66,300	$18,000	$33,150	$51,150	$54,731
22	$132,000	$74,100	$18,000	$37,050	$55,050	$117,465
23	$145,200	$82,680	$18,000	$41,340	$59,340	$189,181
24	$159,720	$92,118	$18,000	$46,059	$64,059	$270,967
25	$175,692	$102,500	$18,000	$51,250	$69,250	$364,032
26	$250,000	$150,800	$18,000	$99,528	$117,528	$515,270
27	$275,000	$167,050	$18,000	$110,253	$128,253	$688,569
28	$302,500	$184,925	$18,000	$122,051	$140,051	$886,623
29	$332,750	$204,588	$18,000	$135,028	$153,028	$1,112,426
30	$366,025	$226,216	$18,000	$149,303	$167,303	$1,369,310
31	$500,000	$313,300	$18,000	$250,640	$268,640	$1,752,607
32	$550,000	$345,800	$18,000	$276,640	$294,640	$2,190,554
33	$605,000	$381,550	$18,000	$305,240	$323,240	$2,689,760
34	$665,500	$420,875	$18,000	$336,700	$354,700	$3,257,572
35	**$732,050**	**$464,133**	**$18,000**	**$371,306**	**$389,306**	**$3,902,159**

How to Create Events

In case the hint above wasn't enough, the clear answer is *selling assets for high multiples or increasing the cash flow.* That is the cleanest way to see jumps. Also known as "Accelerating Earnings". Your career, while it may feel comfortable, is not safe given that you could be fired any second. You're just a line item in an excel sheet no matter how much your Boss/Superior says he loves you. When push comes to shove, people will protect themselves at all costs. You're smarter than that and know that it's an emergency to rely on someone else for your livelihood.

What Did We Do: As noted in Efficiency we did exactly as stated above. But… We jumped off the Career portion much earlier due to higher opportunities. We will never give out what we are working on but you can already gather we buy and sell online assets (internet websites). The math works like this.

Step 1: You start with a Career. While working in your Career, you have a lot of "down time" so we took the route of learning online sales. As covered in Efficiency. This means you can build the business in your air conditioned office/cubicle.

Step 2: You get good at it. Once you're good at it you start to realize… wow **some** of these other companies are run horribly (EmpireFlippers has examples of websites – some are run well, some need to be fixed).

Step 3: You find your own personal edge. You realize you're better at creating a brand/image, or better at marketing, or better at supply chain management… anything. The key is you know exactly how to compete. You're not looking at "revenue and earnings" you're seeing how the business is run. If you're amazing with ads and the Company doesn't even run ads…. Well you know what to do. Buy it. Scale it. Make the earnings double or triple.

Step 4: Exit multiples. The key is knowing you'll fix the business. If you bought a website for 3x earnings or $300,000… and you can fix this asset and have the property generate $150,000… the asset is now worth $450,000. This is a 50% return. That's a nice event in just one year.

Step 5: Keep or sell. Now that you have a model that works, you're simply repeating this process and deciding to keep or sell. Either keep the cash flow or sell it. Wash rinse repeat.

Now You Are Ready to Invest: While we gave away our "guide to life" with Efficiency. These two simple pages prove that it is possible to achieve our numbers without killing your personality. This is a good introduction to investing because we've now beaten the horse to death and *before you even bother investing you're going to build a second source of income*. Once you have multiple streams of income which could easily cover your living costs, you're going to have ***too much*** extra money.

It's time to invest this money.

Three Strategies: Risk Neutral, Risk On and Risk Averse

Strategy #1 - Risk Neutral

We think liquidity should be given a premium for a risk-neutral portfolio. The first asset class to invest in is stocks. If you're 22-23 years old when you start to invest, going with stocks will work since you have a solid 40-50 years to see the benefits of compounding. In addition, you're not locked into a single city. If you decided to go with Real Estate as a full time profession (that is a different story). But. Choosing a home as your first investment locks you in geographically (terrible). As the world continues to evolve you'll want to maintain the ability to move geographies on a whim.

Before Buying Assets… You'll need ~6 months of living expenses. This is self-explanatory for worst case scenarios. The **first thing** you need is a buffer.

First Asset Class to Buy: As of this writing, we think you'll need to build two different portfolios. The first one is your standard ETF portfolio: the S&P 500 and Dividend ETFs. The second piece is a "long-term growth" portfolio. If the long-term portfolio does not outperform the S&P 500 portfolio over a 10 year time frame, you're stuck dollar cost averaging for your stock exposure… In short, the first *passive* investment stream you'll build is a stock portfolio. One section will be basic ETFs and the second section will be "actively" managed where you place your bets on where the money is going.

The Second Asset Class (a Tie): This is a tie between Crypto Currencies and Real Estate. To draw a line in the sand, if you're over the age of 35… you're going with Real Estate. If you're under 30 you're going with crypto currencies. If you're in-between, then make your own call.

The second asset class is going to provide either cash flow or higher risk returns. If you're doing this correctly, by the time you've finished building your stock portfolio, you'll now have ~3 forms of living income. You'll have Career + Business + Stocks. Or you'll have two separate businesses + stocks… so on and so forth. *Note: "living income" means it covers all your expenses in a calendar year.*

While many people may take a more diversified approach and try to build positions in multiple asset classes, it's easier to lay out what we believe makes the most sense. Stocks offer decent dividends/appreciation and it's 100% portable. Real Estate offers higher cash flow but is location dependent. Finally, Crypto Currencies offer much higher potential returns (and risk) while offering portability and lower liquidity.

The Third Asset Class: If you build up a living income stream with low-risk bonds and CDs… you are definitely rich. At 3% returns (being generous) you'd need $4M+ in this asset class to generate just $120K a year in ***pre-tax*** earnings. Unless you're over the age of 45 or so, it doesn't make any logical sense to build a large position here which is why it comes in last. The one benefit of these low risk items is they are good "place holders" to buy assets on dips. Unless you've already hit deca-millionaire status, there is no reason to keep a large amount of money in cash/low interest rate bonds.

Strategy #2 - Risk On

Here you're going to take a riskier long-term position. If you go down this route you may *exceed* the expected ~$3-5M by 35 years of age and you may miss it ($1-2M or so). This portfolio is for people who have more aggressive views of the future and are much higher on the risk tolerance scale than the average person. If you're happy with a million or two, then you'll probably like this one as it offers much higher net worth potential. If it works you'll be an 8 digit individual very fast… and if it fails… you're still worth a couple million and won't worry about it.

Before Buying Assets… You'll need ~6 months of living expenses. This is self-explanatory for worst case scenarios. The **first thing** you need is a buffer. This shows up on all three strategies.

First Asset Class – Crypto Currencies: If you're a technology expert or you have the willingness to learn the complexities of a new and emerging space, your first asset class will be crypto currencies. Sounds crazy we know… that is also why it is in the *Risk On* section. Average people will likely fall into the risk neutral or risk off categories. But. We have to include something for everyone since we're taking the time to explain each asset class in this book. By investing in this space you have potential for much more than the standard 7-10% return profile that stocks offer (at a cost of potentially losing it all).

Second Asset Class – High Beta Stocks: Instead of buying the S&P 500, you're going to dollar cost average into small cap indexes and higher beta stocks on pullbacks. You'll get *dismantled* during recessions, however… when risk turns back on… you'll outperform the S&P 500. Instead of riding the volatility of the S&P 500, you're riding the volatility of indexes with betas in excess of 1.0.

Third Asset Class: After building positions in the first two, assuming all goes well, you'll go for real estate. This comes with the same caveat of assuming you're not using real estate as your primary form of income. This will then create a cash flow machine for you as you are already locked into multiple stocks that don't pay dividends and crypto currencies which can be both illiquid & volatile.

Fourth Asset Class: If all is well? Now you'll go into the standard S&P 500 and dividend ETFs. This is called the risk on portfolio after all so we're not going to bother with CDs and bonds for quite some time. After you've amassed a large dividend portfolio you'll finally switch to the last asset class.

Fifth Asset Class (Bonds): Not even going to bother with CDs… since you have such a large net worth across four different asset categories you can stick with bonds. Build this up and every time you flip an asset (sell a business, decide to sell a home, decide to sell some crypto/stocks) you'll throw it into cash flow bonds. If you've made it this far, you're probably living a dual life… Smiling and nodding at everyone giving you advice and never telling them how much you are really worth.

Strategy #3 - Risk Averse

With our demographic we doubt anyone even reads this page. That said we will include it. The least risky way to invest is by investing in things that are easier to control and you can "improve yourself". You can guess where we're going with this… real estate investing is actually a less risky way to earn money if you are looking to become a millionaire. While this flies directly against conventional advice, if you look at the statistics it is more likely that someone builds their wealth to $1M+ with real estate than any other asset class! We're not saying it is easy we're just pointing out the reality.

Before Buying Assets… You'll need ~6 months of living expenses. This is self-explanatory for worst case scenarios. The **first thing** you need is a buffer. This shows up on all three strategies.

First Asset Class – Real Estate: If you're dead set on becoming well off and don't want to give up *any* control then real estate is a good way to go. While this sounds unconventional, we view "risk" as things that you place into the hands of other people. By investing in stocks or crypto currencies you're putting your faith into a specific CEO and market or a large number of programmers. This is not taking full control of your future. Real estate is probably the only asset class that can be improved through brute force. If you learn how to fix properties and can run the process from start to finish… you are now able to control your cash flows a lot better.

Second Asset Class: Since this is a risk off portfolio you're going to buy a mix of stocks and bonds. Stick with basic index funds such as an S&P 500 tracker or a dividend based ETF. The other half will be a mix of high quality bonds that grow at low to mid-single digits. Your returns will be a lot more stable at the expense of big gains over a 5-10 year time frame. The important piece of this strategy? You won't have a lot of managing to do. You simply set the purchase up and close your browser. You don't want to do significant research since you're spending more time monitoring a real estate portfolio.

Third Asset Class: If both of those fill up then you're looking at portfolio management with stocks. If you're successful in any business you should have niche knowledge that other people do not have access to. This should lead to a basic secondary stock/bond portfolio invested into a sector you understand extremely well. Since you're using real estate and some form of career income, it will likely be ancillary to one of those two items.

Fourth Asset Class: Now that you're essentially done, you can jump into crypto currencies or simply hoard a lot of cash/low interest rate bonds. Since we're risk off, this is a small portion of the portfolio and comes towards the tail end. In fact, if you're extremely risk off, you can just stick to the safer items listed above with fixed income and some stocks.

Now before the complaints come in, real estate can certainly be much more risky if one takes on a lot of leverage. So we're emphasizing a second time for this one page print out that risk involves uncertainty and *putting control in the hands of other people*. If you have a different view of risk, then no worries! Feel free to adjust your investment strategy appropriately.

Investing in Stocks – Multiple Ideas

At age 22-23 you already have your emergency cash so it's time to invest **excess** cash flow. This means, all of your current cash is going into building your other businesses… But. You will still have excess cash. Since we know that ages 23-26 are terrible for work life balance. *You don't have time to sit and think about securities analysis*. With that we start with the most basic of all recommendations.

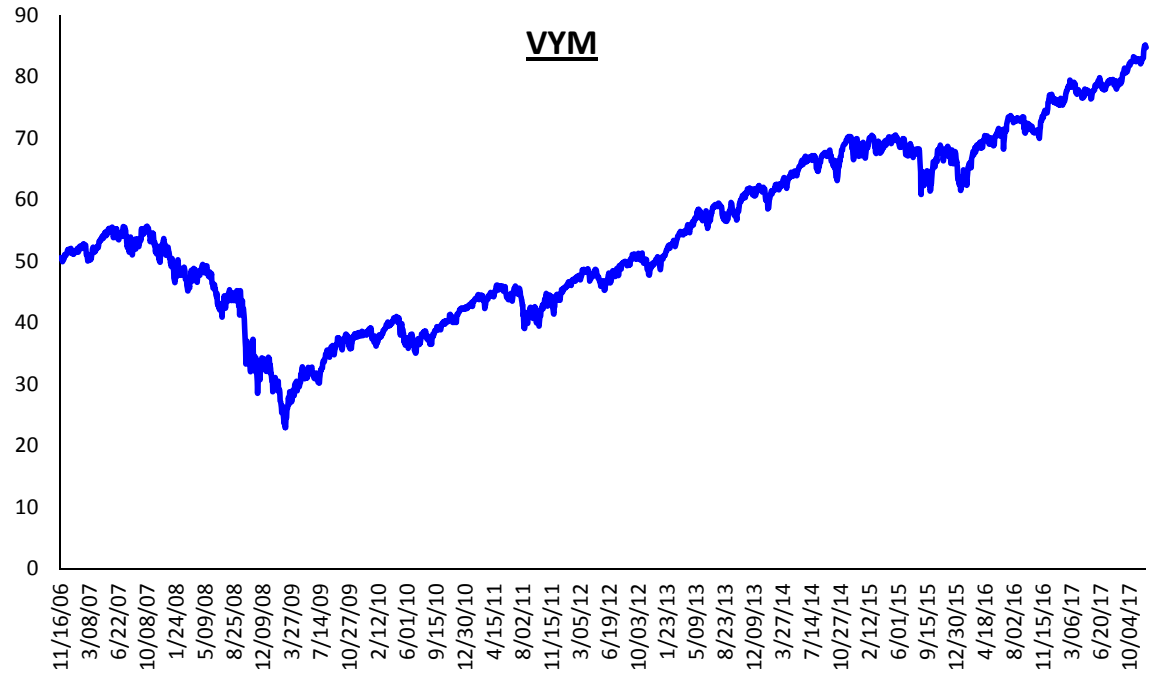
Basic Set Up

What is the solution? You invest in ETFs… Therefore the first two ETFs we *would* buy if starting over again would be VYM and VOO. This is about as exciting as watching grass grow and worse than watching paint dry. They are: 1) Vanguard High Dividend Yield ETF (Ticker: VYM) and 2) Vanguard 500 Index Fund (Ticker: VOO).

It doesn't get more boring than those two ETFs. They have extremely low fees and track the S&P 500 along with boring high dividend paying stocks. You're doing this to create some cash flow and generate returns in-line with the market. This is perfectly fine since you don't have time to think about future flows of money. You'll ignore all press and all negative/positive headlines since you're simply buying them for the next 40 years. If the stock market is down 50% you shouldn't notice and if the stock market is up 50% you shouldn't notice. That is the level of emotional detachment you need since you'll be focusing 1,000% of your energy on more important matters (building the equity value of your own business).

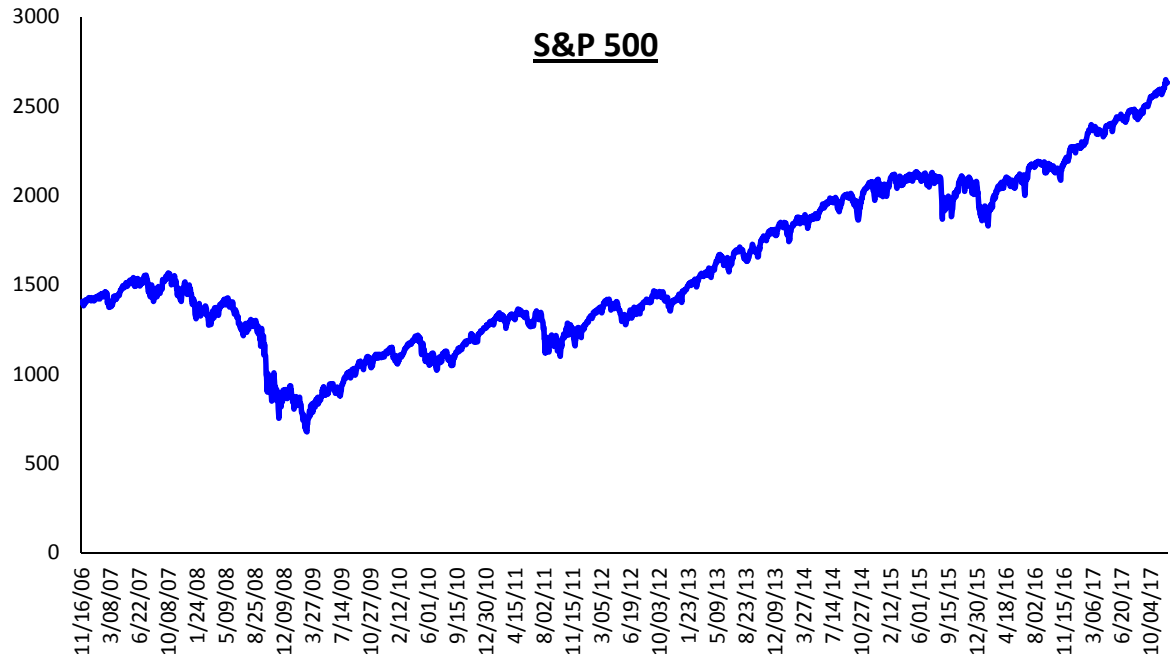
What is VYM? This is a Vanguard ETF that invests in high dividend yield stocks (typically large cap). The reason for this is they are typically much more stable (less volatile) and offer cash dividend payouts in the low to mid-single digit range. This is not exciting. Not at all.

The good news? It offers a consistent dividend that will help pad your cash flow. Since you're tied to large companies and "bell-weather" stocks, there is no need to constantly trade around them and try to stay "on top of news". Companies such as Coca-Cola are not going out of business any time soon and people are not going to stop buying sodas in the near-future. At the end of the day, people need to consume food and drinks along with other basic necessities such as a cell phone which will tie you to overall consumer spending.



From the chart above we can see that stocks in general get hit hard during recessions. The 2008 financial crisis was no exception and now we're well above the prior highs. This does not mean you should try to time the market. Since this is part of your "boring and safe" portfolio, you're throwing extra cash in here and forgetting about it for at least 10-20 years. When you look back, you'll have some shares priced at bottom barrel prices and some closer to the highs. At the end of the day you'll likely be up and the cash flow kicked off from the dividends is an added bonus.

What is VOO? This is another Vanguard ETF, however, this ETF tracks the overall S&P 500 index. As you can imagine, this is yet another *boring index fund*. The S&P 500 includes the top 500 companies based on market capitalization that trade on either the NYSE or the NASDAQ.



As you can see from the above chart (this is a chart of the S&P 500 instead of the tracker to make it simple) the dip from peak to trough comes in at around 50% (more or less, in the case of the 2008 recession it was actually a bit worse). Similarly, we're looking at the same strategy paying off. You buy and forget about it on a monthly or quarterly basis.

Example of Buying the S&P 500 Monthly: For this example we'll use the 2007 to 2013 time frame (roughly six years – 5.833 years to be exact). To make the example difficult, we are going to assume that you started purchasing shares at the peak of the last bull market. On June 1, 2007 the market was at 1,536, in addition we will assume that you survived until the market roughly broke even on March 1, 2013 at 1,518. This is terrible market timing, you began investing at the peak of the market. Remember, this assumes your timing was terrible and you bought at the peak.

Set up: 1) You buy $1,000 of S&P 500 on June 1, 2007 (use ticker SPY as a tracker that was made before VOO, *VOO would result in the same amount of profits*); 2) You buy $1,000 worth of S&P 500 the first trading day of each month after you receive your paycheck; 3) You never sell; 4) You never reinvest dividends.

Result: 1) You spent $70K; 2) You obtain 583.5 shares of SPY over the course of 7 months; 3) 583.5 Shares * 151.82 = $88,585; 4) you have accumulated ~$4,250 from dividend payments and we will go ahead and assume that you have not reinvested this money; 5) in return if you decided to quit investing when the market was near break even you would have $92,837.. *5% annualized return.* Now remember. We assume you started buying at the peak in June of 2007. Even with this horrible timing you're still profitable and gained 5% per year annualized without doing any actual work.

You would think that it is a lot more complicated than this but that is really everything.

Now as you can imagine… this isn't what we do anymore. While we do have a section of money that simply buys the boring indexes, we've seen too much pricing discrepancy to justify current valuations. The world is changing rapidly and we manage our own portfolios as well.

If you have no niche knowledge, have no time to learn about demographic and technology changes… *just stick to the boring indexes*. If you're interested in more complex ideas and how we invest outside of the indexes… it's going to get fun now.

Understand How an Index Fund Works… To Take Advantage of It

An index fund is a purchase action of the entire market (S&P 500) or a group of stocks. With this in mind, many stocks are in multiple indexes. Coca-Cola for example is in the S&P 500 and the dividend paying ETFs. This creates an interesting problem because any selling pressure would cause additional forced selling pressure… which causes more forced selling pressure… which causes a circuit breaker. We've actually seen more flash crashes and we have no doubt that index funds will contribute to the problem in the future.

The easiest way to explain it is in steps. We think anyone with a basic understanding of finance will get through this. If not… we would recommend going back to dollar cost averaging and buying every month as stated in the "Basic Recommendation".

Step 1: By buying the index you're essentially owning the same asset as everyone else. Since more and more money is going into passive you're following the same herd of people who are buying the same group of stocks *regardless* of how well the stock is performing.

Step 2: Since you own the same basket of stocks as "everyone else", when the selling begins the index fund will get hit hard as everyone panic sells triggering multiple ETFs to decline "falling house of cards". This then results in not just the S&P 500 index getting hit but all of the indexes that are directly linked to it (other ETFs that own companies already represented in the S&P 500).

Step 3: In an up market, what we have seen over the past 10 years, you'll find that the performance should actually be a tad *higher* than the past. This is because more money is flooding into the same group of stocks and if we look at the last 8 years or so we find a CAGR of 11.1% which seems "normal" but appears to be slightly ahead of normal (normal is closer to 7-8%).

Step 4: Now this is where the rubber meets the road. Once we find a secular down draft, the correction should be *worse*. Forget about 40-50% correction you could be looking at **60%+**. While it is quite difficult to predict the severity of the decline, the important idea is that more panic selling will occur than the past. Since money is held in passive funds, someone on the other end is going to click sell which goes to step 2 "the falling house of cards". In general this means a sell-off that should normally result in a -20% or -40% correction will be more severe.

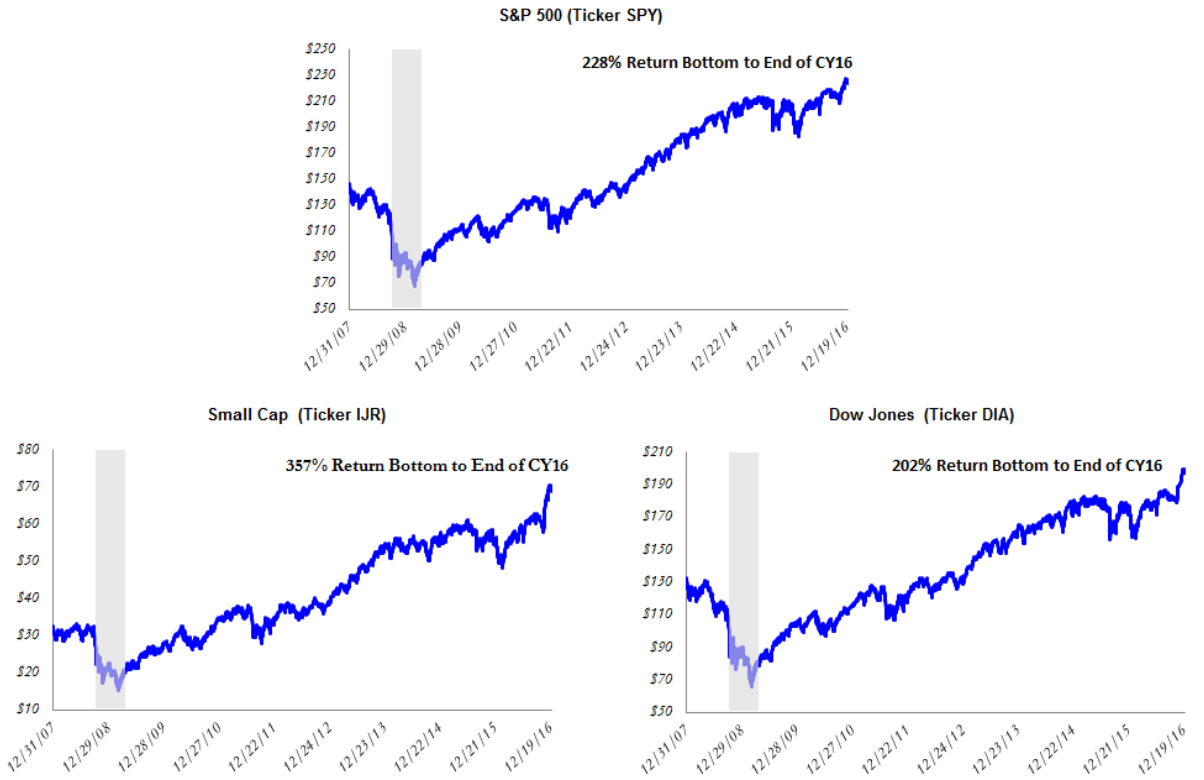
Step 5: Knowing this, the strategy suggests you should have *cash ready*. By having cash ready you can scoop up significantly more shares of undervalued stocks when the correction occurs. You're better off owning the higher growth, higher beta ones since they will get hit even harder than the past.

Step 6: Now that you understand why index funds will take a hit, it is clear that there is a strategy here. The strategy is to aggressively buy during the next major dip if you have the emotional control to stomach the volatility. Try and "roughly" time the bottom where you will have a ~6 month window.

You get aggressive during downturns with small cap indexes assuming you've built a cash portfolio. This means you're willing to lock your money away and buy when everyone is panicking. This is the most critical part of buying baskets of small caps.

You have to buy them when everyone is selling. We don't mean you "time the market" on a yearly basis, instead you're going to buy as soon as we're officially in a recession (build a cash position and acquire small caps like no other). Once the economy is *factually* in a recession and the market in general has puked you unload all of your excess cash into small cap investments. Aggressive? Yes. Is that the point? Yes. We want to take advantage of the move to passive investing and the blind buying and selling of funds.

Below is a clear example of this strategy. We used three simple tickers to show it (SPY which is the S&P 500, DIA which is a Dow Jones Tracker and IJR which is a S&P 600 small cap tracker). We entered into a recession in the 2008-2009 time frame (roughly), if you started buying when things started to go negative (grey bars) you'd make a ton of money. To emphasize this, if you bought small caps you'd make *more* money. Since small caps take a bigger beating during recessions that's the group you buy. In short, the small cap index went up about 357% vs. the S&P at 228% vs. the Dow Jones at 202%. Those are big differences.



Now the Good Stuff… Individual Ideas

At this point, you have a clear and to the point understanding of how ETFs work and one extremely basic way to take advantage of it. Since assets are being bought in "groups" this forces both guaranteed bids (bull market) and guaranteed sells (bear market) without any fundamental change to the businesses. This means good assets are not being bid up enough and some bad assets are bid up despite having a deteriorating business model. Remember… since this is group buying, by stroke of luck many of the assets will actually be priced appropriately (they are bid up in-line with their underlying performance).

Since we know that more and more money is flowing into passive investing, we know that less and less work is being done on the underlying security. This is much more pronounced for smaller to mid-sized companies compared to large caps. Large caps still have a large following since trillions of dollars follow the changes in the asset (making the prices much more likely to reflect current performance).

As you can imagine our first suggestion is to do work on small to mid-sized companies. This area has significantly less competition and you can leverage your competitive knowledge base to gain a small edge. If you are an expert in say consumer products, you may know of a small consumer company that is growing like a weed. Maybe you're in the know and believe they will sign a large partnership soon. While you can't trade on Inside Information, you can certainly trade on the future value of the company. If you have high confidence in new deals coming in, it is perfectly legal to buy. There will be a lot of signs with the Company becoming more popular at trade shows, conventions and other major conferences.

Unsurprisingly, we don't know where your competitive edge is so we can't give an opinion on your sector. The good news, is that we've identified many trends below where you can then surmise where we are invested. Instead of giving out the ticker, we'll give out the sector in most cases since it's a lot easier to find the 5-10 companies that are within that group.

Idea #1 – Profiting off of Population Shifts

Unsurprisingly, people are having less and less kids. Look no further than the large amount of social media interaction that surrounds cats and dogs. The younger generation simply cannot afford to have kids anymore (becoming a luxury). Instead, they are turning to pets! This is one of our less risky ideas since you don't need to know much… simply buy pet food companies.

Pet Industry: Roughly speaking, the overall Pet Industry is expected to generate $69 billion in total revenue which is up about 4% from 2016 ($67 billion). If you want to get more specific you can try to look at each sub-segment within the Pet Industry. We choose pet food because it is the most consistent. Investing in pet grooming or vets is a lot more volatile. Sure people will spend a ton to make sure their dogs and cats live (vets), but the industry is not as stable as pet food. It is much more likely that people will consistently pay for food than pay for a $10,000+ surgery.

The good news? The largest market is the Pet food segment. If we look at the break down of the $69B market, it goes as follows: 1) Pet food at 42%, 2) Supplies at 22%, 3) Vet Services at 24%, 4) Animal purchases at 3% and 5) Grooming services at 9%.

For those involved in online sales, this is yet another reason to always invest in the re-billing industry. While the cost of buying the pets is only 3% of the market, the "re-bill" of pet food is 42% or *14 times bigger.* If you decide to build a business around animals, pets etc… You're best off selling the food. It's consumable and much more recurring in nature than the first purchase of a dog/cat in the first place.

If we can agree that people will unlikely have as many kids (becoming less affordable) and there appears to be a movement towards animals (at minimum as part of the household as well!) then we'd say this is a *secular growth* segment. In the future, there will be more dogs and cats and people will look to treat them *better*. Look no further than social media with all of the emotions surrounding any animal photo/video. They laugh, they cry and they treat the animals as if they are their own kids! This is great as it is an extremely emotional topic with a re-bill attached to it (recurring cost of dog food).

Industry Points: Since we're suggesting an investment in the future of dogs and cats, we're going to use bullets for the outline. It's easier to remember and will help you narrow down your search for the right companies to invest in. If you decide to start your own food company we wouldn't be shocked to see that it succeeds

- Generally speaking, cat food sees more sales on the wet food product side while dog food sees more sales on dry food side. This is less relevant for most people. But. If you want to be more invested in dogs… You want to buy companies that produce high quality dry food products. We would buy both since it is unclear to us if people will have more dogs or cats in the future
- While birds, fish etc. are also animals that people have as pets… Cats and dogs are the vast majority. You could take additional risk off by investing in food companies that make products for all animals… But. We think this is overkill. Stick with investing in dry & wet food for both cats and dogs
- Right now North America is the largest market, but it is unclear if this trend will continue long-term. The important part is getting exposure to the main markets (think of First/Second world countries). The third world will unlikely see as much growth due to economic constraints and as more and more food products come out, "high quality" brands will be purchased in the Western World
- Speaking of high quality, since pets are being treated like people at this point, there is a growing movement to "Healthy/Organic" pet food and treats. There are products that resemble human food (such as yogurt) that are displacing various types of typical pet treats. The standard foods will be in demand. And. Make sure the companies you invest in are constantly coming out with new products. Creating innovative pet food is no different than various types of soda that Coca-Cola produces. To emphasize a point, we weren't joking about the evolution of food since organic and natural food sales are expected to outpace the growth of standard pet food
- In a similar line as organic food, we're even seeing products that resemble "pet vitamins". Since there is a market for high quality food and treats, the next step to taking care of a pet is vitamins. Making sure the dog/cat receives the ideal balance of nutrients is a growing sector for pet enthusiasts
- E-commerce is already a large part of the game at this point and you can bet your last dollar that getting recurring customers is critical for each Company. While the vast majority already

have solid ecommerce presences, if you go into smaller more "unique" pet food companies be sure to evaluate their websites. This is what you would do if you were evaluating internet properties in the first place so you may as well do it for this as well

- China growth is another major trend to be aware of (it is a trend everywhere!). More and more sales are directed to this market so it's important to invest in companies that have a presence in China unless they have a specific reason to remain entirely domestic
- If you want to go higher risk, higher return then look no further than vets and pet insurance. This is another space that is becoming popular but is no-where near as stable as food. People will pay 5 figures for surgery on their dog and many pet enthusiasts will certainly pay for insurance. We don't want to pay a lot of attention to this area (not a core competency) but if you're involved in the pet industry this may be a good place to start

To get all of you started, if you believe in our expectations, the top companies for pet food are: Colgate Palmolive Co.; Del Monte Foods Co.; Mars Inc. and Nestle SA in alphabetical order. If you don't want to invest in these companies, you can always invest in a niche dog/cat food company.

Idea #2: Profiting Off of the New Entertainment Vehicle - Video Games

With the most conservative idea out of the way we're moving into a bigger growth sector: video games. Even if you hate the industry, the amount of money being poured into the space is mind-boggling. The industry (depending on what you look at) should generate somewhere around $110 billion in revenue this year. That is right, if we include all types of games from your basic casual gamer to the higher end MMORPG and Pub G games… we're looking at an enormous market! It gets better. The market is seeing margin expansion as professional gamers are beginning to see advertising revenue (eSports), more games are downloaded versus purchased at stores (higher profit margins) and the average age of the gamer seems to be increasing which means the "recurring revenue" is getting extended on a per customer basis.

Sounds great doesn't it? Sure this isn't a "cool" space as many people still view gamers as nerds living in their mom's basement. But. This is changing. Gaming is becoming more and more mainstream with the growth of Twitch, eSports and continuous adoption. Say what you will about it, but buying a video game for ~$30 typically leads to a lot more entertainment value than going to a movie theatre or amusement park. The long-tail value is significantly higher particularly for the millennial generation.

Video Game Overview: The industry can be summarized very quickly, it is a $100B market (growing) with a population that is actually getting older. More importantly, the average age of the gamer is increasing which shows that it is able to retain the customer base. Perhaps they don't play the exact same games, but they certainly play a variety of games from their teens until they are well past 30. Key points: 1) about half of US households have at least one console video game device; 2) the average age of a gamer is approximately 36 years old, 3) the industry has a gender ratio of 40% female and 60% male, 4) just under half of gamers will purchase a game without playing it first, this is likely due to new editions – think Grand Theft Auto or Call of Duty as two examples; 5) more games are being downloaded from websites instead of being purchased at stores, 6) PC games are the most common at over half of the market, 7) new maps and "pay for objects" are occurring in game – think buying new weapons, clothing etc, 8) advertising has just started in

terms of monetizing the number of people viewing the games, 9) eSports is a new and growing market where gamers compete in popular games such as League of Legends and 10) Twitch and other streaming services are becoming popular as people interact with one another to learn about a game, see a person advance through a game or compete live online.

Industry Points: With the main ten items up top, we can now go into more interesting items that will hopefully steer you into your own investment decisions. Not all games are created equal and we have a wide range from basic games like Candy Crush to high-end games such as an MMORPG and the latest fad with Pub G.

- We would focus much more on the high-end. At the end of the day, the higher end market typically has more "hype" generates higher profit margins and creates games that are more addicting. We have no doubt you've heard of many of these games such as League of Legends, Starcraft, Warcraft, World of Warcraft, Pub G and more. If we focus on the more interactive games you're exposing yourself much more to the high-end of the market. Something we would recommend
- Why bias towards the high end you may ask? In game purchases. People spend millions of dollars to buy new weapons, new clothing and new levels for their players. This is not easy to do if your game is not set up to be an ever evolving product that can be upgraded with new maps and features (like a typical casual game). Every map and digital item has near 100% margins which leads to long-term earnings growth that outpaces the growth of the revenue line. The additional kicker is digital downloads of high-end games. There is no need to drive to your local gaming store as you can buy and download them to your personal computer
- If possible, zero in on games that will likely become related to eSports. League of Legends is a well-known eSports game but… Overwatch is a new up and coming game that may or may not become a major eSports game. You never know when a game could become a eSports hit but you can filter out games that "definitely won't". The classic RPG game (role playing game) where you go from start to finish making a character stronger and following a story line isn't going to become an interactive hit (it's not set up that way)
- Once you have solid exposure to these types of games, we would then look at the casual game market where hot games such as Candy Crush or Minecraft come to mind. The less complex games can get popular (look at flappy bird and angry birds as examples), which results in more in-game purchases. The one problem with this is mobile games are typically shorter in duration "one-hit wonders" that generate a lot of revenue and then die off due to in-game advertising (users eventually leave hitting the revenue line). There is always a positive side… the margins are fantastic! So think about the mobile hit potential and ability to develop mobile games when you consider diversifying within the video game industry
- With the gaming side covered at a high level… We're no where near done yet. Another major development is Twitch and people paying to watch gamers. Look no further than Speed Running (beating a game as fast as possible) to MMORPGs to first person shooting games. Long-story short, people are paying to watch gamers play games. This means an opportunity for advertising has opened up. While we doubt games will be over-run with ads, some basic ad placements to get a new "life" for your hero could occur. An example: a player dies at the end of 20 minutes, in order to play again he can either pay 25 cents or watch an Ad. *(Note: Amazon bought Twitch so it is not a public company, we used it as an example).*

- Demographics are also critical in this market since over 60% of people who watch eSports are millennials. This means the sticky games with high quality content that create "gaming enthusiasts" will have a long revenue run-way (League of Legends, Dota, Counter-Strike and more)
- We're still not done! The eSports market is still extremely small. The big tournaments sell out within an hour and they have not been monetized appropriately. In the future, there is a good chance that there will be eSports leagues with professional teams and players. This sounds crazy to the older generation. But. The numbers do not lie. You see a growing market where the prize purses are a small fraction (1/100) when compared to your standard sports leagues (NBA/NFL etc.). The opportunity is large and investing in companies with a clear eSports strategy could be a big revenue and stock price driver.

Similar to our pet food recommendation, with multiple gaming companies being created every single day, the logical move is to buy them all. Why? As usual, you have better things to do with your time! You should be building your own businesses and grinding it out on more important matters. You don't have time to research which game is going to be a big hit. Instead by owning all the big ones, they either 1) come up with the hit game or 2) they end up buying the Company that came out with the break through game. For evidence of this just look at Candy Crush… acquired by Activision.

Unlike the dog food companies we can give you the major players very quickly with: Activision, Take Two, Tencent, Nintendo and EA. With our industry backdrop you can guess where we would focus based on a quick Google search of the games being offered by each major company.

Idea #3: Virtual Reality (Augmented Reality) and Artificial Intelligence

Virtual Reality and Augmented reality (we throw them together here) will have profound implications on our everyday lives. In the future, people will be trained using Augmented and Virtual Reality for things as serious as surgery to entertainment (meeting your friends in a digital game). Since this environment will have qualities equal to real life, we can then proceed to see Artificial Intelligence entering the space as well. VR, AR and Artificial Intelligence essentially merge over time as robots learn to do tasks that range from basic manufacturing to life saving activities such as surgery.

First Place to Look: The first thing we would focus on is *the owner of the information*. Think about it like this. As artificial intelligence learns, it needs to be fed as much information as possible. We all know who this is: Facebook, Amazon, Netflix, Google or the "FANG" stocks. While many of these companies are arguably trading at high valuations, the stocks need to be held in a diversified portfolio.

Think about the competitive advantage of AI. If you have the best information and can then train the best robot… the robot will then be fed even more information since it is a virtuous cycle. Once your software learns how to interpret the vast amount of information, that information needs to be monetized and the person with the best data wins. The biggest companies with the best information are therefore the most likely to win. Besides, does anyone really believe that Amazon is not storing all of your information from Alexa? Of course they are! They are likely running in the background even after you've turned it off.

Second Place to Look: Since all of these companies will require a lot of computing power, you'll want to be involved with companies focused on high-end computing. This means graphics processing and data center growth. The computers sitting at a desktop are going to represent practically 0% market share when it comes to artificial intelligence since the amount of computing power necessary will continue to go up exponentially. As computing power gets better, the items we consume will just get bigger and more complex. Back in the 90s it was impossible to send photos with an email. Now it's possible to send HD video. In the future, you'll send Virtual Reality products via email as well!

After making sure you're exposed to high end computing you can then look at specific plays on Virtual Reality and Augmented reality. It gets more and more complex but we're sure you're all aware of Oculus (owned by Facebook now) and Nvidia who offers graphic processing units used for VR. As always do your own research on the topic and find a few concentrated plays on this long-term trend (make sure you have some exposure to them)

Third Place to Look: Now that you're exposed to the information and the compute, think about who will benefit the most from the Artificial Intelligence and who will adopt it the fastest. You guessed it, self-driving vehicles. Now when you think of self-driving vehicles don't jump onto Ford and assume they are going to win. You want to jump into the first adopter and first *mass producer* of the cars.

Instead of buying just one stock like Tesla (leading the charge here), think a bit more broadly to companies who will mass produce it once the technology works. We have no doubt that Tesla will be one of the first out with a full autonomous self-driving vehicle, but this does not mean they will be the only ones in the future with a self-driving car. In fact, we would bet that there will be many companies who benefit as they release the self-driving technology.

Fourth Place to Look: At this point you're pretty exposed but we would go ahead and take it one step further. Contrary to popular belief, the first item to get impacted by AI is likely the online advertising industry when compared to "manufacturing". Think about it. The data coming in is primary through internet information and AI will now tailor ads and campaigns that change based on who clicks on the article! Sounds insane? *Well it is already happening* (hint hint on why we know it is happening).

Find the companies utilizing AI to improve their ad inventory and when you've got that part figured out you'll then expose yourself to basic manufacturing plays (Amazon, Alibaba for example). Just remember. It is much more likely that the middle gets squeezed before investing in manufacturing displacement. If you can get rid of an Advertising person who makes $100K a year or get rid of an assembly line worker making $50K a year… the choice is clear.

Fifth and Final Place to Look: This is unlikely going to impact a lot of our readers but for the sake of completion, we would also look at private and smaller cap start-ups that are focusing on niche segments of artificial intelligence. For example, self-driving is largely done, but we're not a point where there is a clear leader in speech, medical, robotics and more.

Look around for smaller companies that are making big strides in a sub-sector of artificial intelligence. In theory, artificial intelligence should eat software over time and the value of the AI continues to go up as new code is created by the machine itself! The time that it takes to get to these levels will accelerate. We will be growing at *exponential* rates not linear rates. So if your business allows you to peek into an AI sub-sector jump on the train! Just do your research and make sure you're correct.

Idea #4: Communication Layers and Name Brands

Communication Layers: While we talked about the computing side of data centers, you also want to have a heavy exposure to stuff that will grow consistently. Will people use their smartphones in the future? Yes. If something replaces smartphones will it still need to connect to the Internet? Yes. If the future leads to everyone using the onion router and Tor will they need the Internet? Yes!

Love them or hate them. But. The players charging everyone for internet access will unlikely die in the future. AT&T, Verizon and so forth are great boring stocks that should be owned. We've given a ton of higher risk items away in this book (as you'll see in the crypto arena and mentioned already in this chapter) and you need some safer stuff to own as well.

Big Brands: No surprise, if you want to put money into something less risky, shoot for big brands with minimal impact from the trends we've mentioned above. Clear ones are boring stocks like Coca-Cola and Nike. You don't want to own a ton of this stuff if you're young, but as you get older you'll probably put some more money into companies like Coca-Cola because people are going to eat and drink in the future.

Not only will people be forced to eat and drink, these companies will also benefit from automation and manufacturing trends. They can produce more products cheaper and become more creative by leveraging information being fed into their proprietary AI. After all, who has better information on beverage consumption than Coca-Cola?

Idea #5: Medical and Bio Technology

We are not experts here. Not at all. In fact this is one area where we have very little knowledge except for one basic fact: people are getting older. As the baby boomer generation retires and their offspring get older, the demand for medical procedures and medical technology will go up!

This is not complicated at all. The part that is complicated? Which one to buy. Here are a few basic ideas. Just remember, we own baskets of these since we don't know much about the difference. Better to own the big players.

Industry Bullets:

- We start with healthcare equipment devices which have many subheadings in bold below. Some major tickers are: SYK, JNJ, ISRG.
- **Reconstructive Surgery (Joint Replacements, Trauma):** While difficult to pin down, for the surgery market you're going to look at the market in terms of overall replacements and

market share within this space. As a simple example, you can expect a million hip/knee replacements per year (cost per surgery can exceed $10K)

- Estimates for each type of surgery or procedure: ~4+ million hernia repair procedures, ~2M appendix removals a year, partial removal/reconstruction of a colon at ~2.5M per year. But. The point is to estimate the number of procedures by market and build from there. Each surgery company you work with will have a different market it is addressing. Total costs of each surgery also have wide bands that range from as low as a few thousand dollars to tens of thousands.
- **Medical Devices (Instruments, Endoscopy):** This sub-segment focuses on products to help examine the human body (particularly inside organs as you are all well aware). Roughly speaking, the endoscopy equipment market is estimated to be $28.2 billion in size as of 2013 and is expected to grow at 5-7% CAGR.
- This is a bit easier to understand at a high level as most are more familiar with these products. You can splice the $28.2B market into smaller sub-segments as well: cameras, processors, displays/monitors and other accessories (brushes, fluid devices).
- **NeuroTechnology (neurosurgical devices and spine related issues):** Finally, we reach the neurotechnology/spinal market. While the neurotechnology market is difficult to size, if you are looking for spinal implants it is a ~$5-6B market (low single digit growth). In addition, if you want to split the spinal arena into spinal devices as well, you find that the market is growing at ~4-6% annually (2013 market is roughly $10-12B).
- **Bio-Technology (GILD, AMGN):** This is one of the hottest spaces within the Health Care industry. This sector is best explained with an example, starting with a Bio-tech Giant ($160B+) Gilead. The Company develops and commercializes medicine which can include hepatitis vaccines, work on HIV/AIDs related products and cardiovascular/respiratory issues
- Sofosbuvir (Sovaldi) was created by Gilead to treat Hepatitis C. The product costs between ~$84K for 12 weeks of treatment to $168K for 24 weeks of treatment. Here's the kicker… The cure works 90% of the time. Needless to say this created a large opportunity for the firm as the Company generated revenue of ~$3.48B in Q2 of 2014 from Sovaldi sales due to the high $1,000/pill price tag
- **Pharmaceutical Companies (JNJ, PFE, BMY)** We have no doubt the typical reader is well versed in this segment so here we're outlining the basic markets within the sub-segment.
- **Immunology:** This is estimated to be a ~$10B industry growing at mid-single digits. As the name implies, this refers to diseases caused by disorders within the immune system: Immunodeficiency (where immune systems fails to give a proper response), autoimmunity (immune system attacks its own host body). We can split the Immunology market into several pieces but we're going to keep it simple. An example product would be Stelara – used to treat psoriasis a skin disease (do not Google image that – you've been warned)
- **Oncology:** This is a $4-5B market depending on who you ask growing at a faster clip of roughly double digits. Oncology is the study of tumors/cancer. To keep with the format, a sample product here would be Zytiga (prostate cancer treatment)
- **Diabetes:** Another self explanatory market for you guys, here we're looking at a ~$40 billion market growing at 6-10% annually. A good example of a diabetes drug would be INVOKANA (canagliflozin) a type II diabetes treatment
- **Neuro/Mood Products:** This market directly treats patients with mood disorders such as ADHD and schizophrenia. This market is roughly $40-50B in size and a sample product in this space would be esketamine

While we've outlined numerous ways to get exposure to the Medical sector, we think the "safer" ideas would relate to diabetes/weight loss (this market isn't going away any time soon!) and secondly Bio-Technology (buy a basket).

Avoid: Media, Payment Services, Bulk Offerings and Brick & Mortar

Unsurprisingly, with our prior recommendations focusing away from legacy products… The Media, Payment services and Bulk Offering companies are unlikely going to benefit from our view of the future.

In a world where we can now obtain information directly, we will unlikely be watching cable television. In a world where we can now send value (money) to someone regardless of geography, companies like Western Union and Money Gram will die a painful death. In a world where speed of delivery and transportation (drones) will become seamless, the need for bulk orders should decrease (Costco for example).

Media: The new media is essentially produced directly by people. This ranges from Periscopes to Twitter to Facebook feeds. The days of sitting in front of a TV and watching the same guy report on something that happened over 20 hours ago are over. Why would you watch a recap of something that happened 20 hours ago when you can get the news immediately and know the information has not been altered. This is a big problem for mainstream media as their only differentiation is to resort to wholesale opinions. The facts of the event will be live on Social Media. When you saw the media switch from reporting on original content to talking about issues on Twitter and Facebook… That was the end of the road.

With standard media covered in a single death-knell paragraph, the rest of media is also in trouble. The original content appears to be switching slowly but surely to things like Netflix and the aforementioned video games. Why would someone pay $40 to go to the movies when they could have it live streamed to their home for $10 a month and have the option of watching 1,000 different titles in a row? It doesn't make a lot of logical sense. Sure, there is value in seeing a movie with your friends and family by going outside… But. The relative value proposition clearly favors companies like Netflix and Amazon Prime.

Knowing this, cable companies will likely suffer during the next recession. Instead of keeping a cable subscription they are much more likely to click the off button and never return. They can receive the same content (arguably better content) for a cheaper price point… Saving money in the process.

To put the final touches on "media" we can also look at the overall entertainment industry from a central position. While activities such as miniature golf and bowling will exist as basic fun sports for family/friends… We wouldn't anticipate seeing big growth in ticket sales for amusement parks and arcade games. Sure there is still some demand. But. As the in-home games evolve to potentially eclipse the games offered at these central areas, people will spend where the most value is (VR headsets, online games, phone games and more).

If we are correct and families become smaller in the future, the number of ticket purchases will certainly decrease (at best remain flat). Charging $100-200 per ticket will become harder and harder

as the price points become unaffordable. The major brands will likely survive due to a large following, but the long-term trend shouldn't be up and to the right by any means.

Payment Services: Skip straight to the crypto currency section. The End.

Jokes aside, the crypto currency market is disintermediating payment services at this time. If we can send $100 to someone in China for a 1 hour consultation via Skype, why would the receiver choose to take payment via Western Union and receive only $90 or less! It doesn't make any logical sense.

The receiver has two options: They can 1) choose one that gives them less money and takes 48 hours to clear or 2) they can choose the option that gives them more money and takes seconds to clear. This will drive adoption in a big way as international payments begin to flip towards crypto currencies (covered in depth later in this book).

Companies like Western Union and Money Gram who charge fees to send money to countries will have a tough time competing against the new paradigm. In the new paradigm, the poorest countries in the world will have access to the same technology with the purchase of a cheap smartphone (no it doesn't have to be an iPhone!). This would then act as the receiver for payments and the store of money as well. Companies that profit off of family members trying to help their relatives at home will be dis-intermediated.

Credit Card Companies are also in for difficult competition. If you are a business owner and you can get paid with crypto currencies instead of a credit card that charges YOU a 1-3% fee… Which transaction will you take? You will take the one that has no transaction fees. 1-3% does not sound like much but if you're a major company or a grocery store for example… You are likely pulling in millions of dollars in revenue per year. Millions of dollars at 1-3% begins to look like real money when it turns into $300-400K or more per year.

Foreign currency exchange is also a major issue as people begin to take a form of crypto currency globally. Since the currency can be used anywhere with a couple of clicks, the reserve currency becomes the world currency (the crypto that has the largest network is essentially where currencies are pegged). Companies that charge large fees to convert fiat into a different type of fiat will see significant pressure, the business is dis-intermediated.

Bulk Offerings: Companies that target larger families are likely going to see a revenue drop off as well. This builds off of our presumption of less kids and more overall inequality in the future due to student debt, diminishing middle wage jobs and automation. When we refer to bulk offerings we're referring to companies like Costco. This could also include offerings that target people with large and expansive homes. As you can see, while we believe there will still be rich people who buy large homes, in general, we think the average size will be smaller. Just look at the typical home being built today with back yards becoming smaller and smaller (landscaping companies targeted at homes will see minimal growth longer-term).

As usual, we're not saying to own zero shares of companies like a Home Depot, what we're saying is that the type of spending likely shifts. More money is spent on home improvement done inside versus outside (after all everyone needs a place to live). If this is true, then spending would move

towards items that focus on internal home improvement like plumbing, new carpets/floors, paint and newer entertainment systems. Less will be spent on larger sprinkler systems, landscaping projects and gardening.

Brick and Mortar: The final item should be clear based on all of the other comments… Shopping Malls. Why would you want to invest in something that has a limited number of customers and high operating expenses? That is essentially what a mall is at this point. With a click of a button you can get guaranteed traffic to an E-commerce site with good conversion rates if your sales skills are solid.

Brick and mortar stores will likely exist, they just don't capture a growing amount of the market. With faster and faster services in the future, you can buy items online that range from food to clothing with a click of a button. The product will arrive quickly and you don't even have to leave your home. Oh. And. The likelihood of being "out of your size" or "out of stock" diminishes dramatically.

Bonus: Marijuana and Drones

We have not done a lot of research into either of these two sub-segments. That said many high risk yet intelligent people believe in these two industries. As usual, you can do your own research and sell the picks and shovels (lease land to Marijuana farmers) or you could invest in specific companies that are "leaders" in this space. Unfortunately, we cannot give strong opinions on any specific company since we haven't looked into it. Also. You can see there are many many growing spaces in 2018 and beyond!

Summary

We've given you numerous ways to invest in the stock market at this point. The safest way is the boring ETF model stomaching the inevitable volatility during the next downturn. The second safest way is to buy on dips during recessions and the riskiest way is to create your own portfolio.

We said we would disclose what we own so we have no problem doing so. We've already recommended them here! We own a lot of chip stocks (Nvidia, Analog Companies, FPGA company Xilinx) we own the FANG, we own the large communication companies (T, VZ etc.), we own the large medical companies (JNJ, GILD etc.), we own the video game stocks (all of them), we own the major brands (primarily NKE and KO). For the pet food exposure we'll let you take a guess how we're involved there and don't own any specific stocks!

So there is no confusion, we have two portfolios. One that just buys boring old ETFs every month and a second one that is weighted into the paragraph above. This way we're always exposed to the market and we get to make our own small long-term bets on the next 20 years. For what it is worth, you can probably surmise that we're less interested in the stock market right now and as of this writing (January 2018) we're doing a lot more work in Real Estate and Crypto Currencies instead.

Overview of Real Estate

As outlined at the front of this book, we did not choose a Career in Real Estate and instead decided to invest in the sector (money was made from online businesses/Wall Street). This is why our overview is tailored to real estate investing from a cash flow perspective (more hands off and long-term). Real estate is a great way to receive consistent cash flows without working long hours and is a separate category from stocks, bonds, crypto currencies and other assets.

Benefits: The main benefits of real estate are: 1) leverage, 2) ability to use niche information, 3) flexibility in contracts, 4) ability to increase value with your own effort and 5) consistency. Of the five listed we'd say leverage, niche information and consistency are the most valuable. If you've run an online business, then you know each month can fluctuate wildly. When you invest in real estate you get to use other people's money to make you richer with a pretty solid idea of how the cash flows will look.

1. **Leverage:** This is self-explanatory, if you can borrow money at a lower rate than your returns it means you're generating money off of other people's money! If you can borrow at 4% but see a return on that money equal to 10%, you should make this trade every single day and lever up as much as possible
2. **Niche Information:** By visiting each location and learning about the developments you can capitalize on future improvements in the area. If you know that a major company is opening another headquarters in that city you can leverage that information knowing that wages will likely be stable or rising in the near-future.
3. **Flexibile Contracts:** While we stick with basic 30-year loans, there are a lot of ways to obtain leverage and adjust the lease agreements to fit your investment criteria.
4. **Effort:** Unlike other assets you can put in your own time and effort if things really need to be improved. You can physically fix the asset. You can physically maintain and manage the asset. You can personally change the advertising and marketing of the asset. Unlike investing in a stock where you have limited power (unless you own a large amount of shares), real estate can be improved through "brute force" or "forced appreciation". Also, you can refinance and do other types of financial engineering if needed.
5. **Consistency:** The returns are largely consistent after a couple of years. If you do not include a large increase in property value or a sudden recession, over the course of 10-years you'll find the cash flow statement to be extremely stable. It is essentially a "monthly paycheck" that comes in if your property is run efficiently.

Negatives: As an investor you'll need to develop a set of skills that are not easy to acquire: 1) negotiations, 2) ability to read people, 3) relationships with a wide range of personalities - contractors to real estate agents to tax accountants, 4) emotional disconnection as your tenants are not your friends and 5) the biggest negative of all - time at the beginning. The first three skills can be acquired over a 5 year period to a point of "functional knowledge". This is one of the main reasons we list real estate as "second" next to stocks. *Why? You will unlikely have time to learn the real estate game and grow an online business (and work in a career!) all at the same time.* The good news? If you went into sales and built an online business, the first three skills are needed as well. After that, the last hurdle is building up a decent real estate position to become hands off (decreasing the last negative which is time spent looking for properties and the right managers).

1. **Negotiations:** If you are a good negotiator, you'll find many deals that exceed your ROI targets by a wide margin. Learning what a seller's *real* motivation is gives you an upper hand. We've found negotiation skills work better when dealing with individual owners since properties owned by businesses are much more logical. The biggest disadvantage with businesses or other investors is their dogged profit maximization along with deeper pockets and a lack of pressing need (or strong desire) to sell, while homeowners want a payday for a vacation/car/to make it rain at the strip club etc. That said, the negotiations with a business are less volatile since they are making logical decisions and can calculate if you're getting a fair deal or not, even if "fair" to them means playing a specific strategy such as buying, rehabbing and selling at the very top of the market.
2. **Ability to Read People:** Reading people refers to tenants, if you can use a hard mathematical screen and you have two equal candidates… the secret sauce is making the right spot judgement. As we emphasize later, discrimination is illegal and *you should never get into that type of predicament*, we are simply highlighting that there will many occasions where you choose between two equal candidates on paper and must decide which personality will pay the bills and take good care of your property. Paying attention to soft indicators, like if someone opts in to be an organ donor in an opt in state, how they act in terms of politeness/timeliness or whether they get frustrated easily when they hear things they don't like. If things go wrong in the future, the prior clues tell you how they will react.
3. **Lots of Contacts:** You will need to develop relationships with a good number of people: contractors, real estate agents, inspectors, tenants and tax accountants. That alone is a lot of work. The good news is the right contacts can be re-used for decades in the future! Just like everything else in life, if you put the big blocks up early it will pay dividends for you in the future.
4. **Emotional Control:** Run your assets like a business. While you may appreciate people who let you bend the rules from time to time… the vast majority are not like that. They will see you as weak and take advantage of you for as long as they can. By keeping a "fair but firm" attitude you'll hit the sweet spot in terms of emotional control. And. You can always start from a strict and highly advantageous position in your lease and management policies, then scale them back to a position more generous to them but not unfair to you while being the "good guy".
5. **Time:** It does take time to ramp from being a beginner to a "well versed" real estate investor. At the end of the day, we don't even consider ourselves to be at the top since it is not our primary form of investing/earning money (*many experts clip 20% returns consistently!*). The time up front is a sunk cost that you'll deal with… But… anything worth doing requires some upfront time and effort.

Our Ten Step Recommendation: Investing in Multi-Tenants

High Level Overview: *In short, we'd recommend a two step path: 1) investing in "Multi-tenants" and 2) hands off through private equity/crowd funding.* Now here is the catch… If you want to be good at the second option (100% hands off) you probably need some experience doing this on your own. Why? Well how else would you know if a new private equity project or crowd sourced project was a good idea in the first place. The answer lies in experience.

The main recommendation we are making is to buy duplexes, triplexes or quad-plexes. The reason is quite simple, it is easier to manage geographically, the cash flow numbers should be better and

if you scale… it's a lot easier to find a property manager down the line. From what we've seen, you get discounts on property management at around 10 units, and if you have three triplexes and a duplex (8 units), you can typically get the discount since there is less work to be done geographically speaking (that or it's just lucky negotiation, perhaps you'll get the discount sooner!).

Note: One thing to be aware of though, sometimes multi-families are treated differently than single families in areas of zoning, taxation etc. and you may find that there is a direct cost to go from single family to duplex, which is then offset by increasing the units to triplexes or quads (Side note, both anything over 4 units, or anything with a commercial space, typically a storefront on the first floor, is considered commercial).

If you've read the above paragraph and now say *"great all I have to do is buy a duplex, triplex or quadplex"* the real estate world will welcome you to a world of pain. Instead, we've given the main item we suggest which is to invest in "multi-tenants" since they *typically* give higher cash flow. Since you're likely a smart reader you can read between the lines, but to be safe our recommendation in a sentence is as follows:

Invest in "multi-tenants" with extremely high cash flow and no expected natural appreciation baked into your return calculations.

The reasoning is quite simple, since real estate is not going to be your primary form of business, you want a more hands off approach (in the future) where you can receive monthly consistent cash flows. If you're in the green (by a large margin) it makes it significantly more difficult for you to lose any money on your investment. You're essentially using other people's money to give you more money! Many real estate experts flip houses and do much more complicated transactions. We will focus on yield to decrease your invested time and decrease a type of risk in the asset (even if it means giving up some juicer returns).

Now that we have covered the basics, we'd note that it is not uncommon to see rental yields of 15%+ on a multi-tenant property. In fact, it could be higher. This certainly isn't always the case, but you can see the key benefits of a multi-tenant are 1) scale, 2) yields and 3) the ability to obtain a single mortgage for the property. The negatives include: 1) higher turnover, 2) stiffer competition and 3) more effort in the form of vetting new tenants and fixing small issues that occur.

The Positives:

1. **Scale:** This is pretty simple, since you're buying multiple units in the same area and under the same roof, *everything you're doing is leveraged across a wider moat*. If you fix the roof that is leveraged across 2-4 properties instead of one. If you want to operate based on a "cash flow per door" calculation, you have 2-4 doors out of the gate. They are also in the same spot!
2. **Yields:** At the expense of lower valuation on a square foot/unit basis, your rental yields should be higher for the entire property when compared to a single home. As a rule of thumb, multi-tenant properties offer the best cash flow when compared to your other primary options which are single family homes and condos.
3. **Single Mortgage:** Who doesn't like less paperwork! As of today you can obtain a quad-plex with a single mortgage (one loan, one bank!). You're allowed to have four outstanding mortgages before you're forced into different types of borrowing but if you have 16 units (four quad-plexes) we have no doubt you're in great shape.

The Negatives:

1. **Occupancy:** As a rule of thumb, multi-tenant properties typically attract people with short-term views in mind. This means they are there for a couple of years (saving money) before leaving to live in a new location. Occupancy rates (percent of months in a year the asset is utilized) is therefore lower on a 10-year time frame when compared to a single family home. This means you'll either have to accept some losses or take on a job during rental season and have a very good system which you are on top of i.e. sending out renewal notices three or four months in advance to look at tenants. And. If any of them decide not to renew… You need to show the places right away and have a well-executed plan to get your maintenance guy in and turn the unit for the new occupant in a short period of time (a few days, sometimes just 24-48 hours). Placing a move out time for your old tenant in the morning and not allowing your new tenant to move in until the afternoon of their move in date (the next day), gives you a window of two full working days with no loss but you have to be ready and available to make it happen.
2. **Competition:** The multi-tenant property is more likely to be sold to an investor since no one needs to live in four units at the same time. Since multi-tenants are viewed as investments, the competition is tougher and the owners are typically more logical as well (less emotion).
3. **More Careful Vetting:** Since you're dealing with people who are more likely to leave within a few years, you have to remain strict and confident in your lease agreements. If you bring in a few bad tenants who do a lot of damage to the property, this can cause a lot of headaches and impact your return profile by a material amount. Bad tenants as a rule harass and drive out the good!

Seems easy enough! Simply buy any multi-tenant property with a high yield! (we are joking of course). The process of looking for a property is complex however, you can see we are recommending multi-tenant properties.

Step 1) The Math Filter: Since our goal is to create recurring monthly passive income, we're going to use a *"sales funnel"* (funny how everything comes down to sales). When you look at each property, you'll quickly throw the bad homes into one bucket and throw the good ones into another bucket. This is done by using broad filters up top to decrease the number of options to a handful.

Rent: Take the area in which you're going to invest and use the 1.7-2.2% "rule". This is typically known as the "2%" rule but we're including a slight range depending on what geographic location you're focused on. This means one month of rental income should result in ~1.7-2.2% of the total property value. The most important item here is *location*. If you're trying to find a condominium in Manhattan that hits this target, you'll be out of luck. This will be **filter number on**e since we're looking for high cash flow, high income properties (we're not interested in chasing price appreciation)

Mortgage Payment: *For the second filter, we're looking for a mortgage payment that equals 25% of the total rental income.* The aggressive real estate investors will laugh at this filter since their goal is to use a ton of leverage (5-10% down payment or less since it increases cash on cash return). Instead, since real estate is really a third or fourth form of income for you, you're going to use a little bit less leverage, generate a lower cash on cash return… And. You'll sleep easy at night. Somewhere

around 25% down payments result in attractive interest rates and if you work with one provider you'll get even better rates down the line. Long-story short, we're going to take less leverage and slightly lower cash on cash returns to avoid the creation of another career/job. Remember. We're not going to use "weaker filters", we'll use the same filters as an experienced real estate professional… we're just using less leverage.

Cash on Cash Return: Our goal is to generate cash on cash returns of **10% or better.** Remember, this is with less leverage and if you're doing it the "normal way" you should generate cash on cash returns of well over 10%. By doing this quick math you're now looking at properties that would be attractive to many seasoned real estate investors. If 10% seems aggressive, then you're likely investing in safer and safer locations (higher end areas with minimal headaches). In that case you're taking on less risk and your returns approach mid-high single digits. Still a good deal relative to the risk you are taking. That said, you see our hurdle listed in the first sentence.

Step 2) Track Down the Broad Areas: The Multiple Listing Service (MLS) is the most common starting place for property searches. The main websites you're likely aware of (Redfin, Trulia, Zillow etc.) offer filters for multi-tenant properties in a specific area. Since we're unsure of where you live, the search is still quite simple. Look for an area near you (easy to commute to if needed) that offers yields at your required return hurdle (minimum of double digits). This will then lead you into a few select neighborhoods.

At this point you may find a handful of neighborhoods that fit your criteria. You're now going to do the real work (clicking on the Internet is typically not enough) by reaching out to the real estate agents in the area.

You will set up automatic alerts for multi-tenant properties in the area. You will jump on any and all real estate forums related to the area. You will create posts that lay out what you're looking for. The key item here (to help the deals come to you) is to prove your interest by showing the real estate agent how easy it will be for you to close. Remember, since we assume you've accumulated some money by the time you're getting into this game… money is going to be your "edge". Having cash and being able to close quickly will naturally cause the agents to be more interested in working with you.

The last item to be aware of here is eviction records. We've never bought anything that was caught through eviction records but they can offer a lot of value if you're willing to find the public records of each neighborhood you're interested in. While many people assume "eviction automatically means terrible neighborhood" this isn't always the case. Just remember the 2008 recession when many evictions occurred. You never know and a lot of good assets can be found in distressed situations.

Step 3) I Wouldn't Mind Living There - Test: The typical real estate slogan is *"Location, Location, Location"*, with that slogan many would assume jumping to the poshest area in town is the best bet. While the nicest area in town likely offers the least amount of problems (low-turnover, high demand and low property damage risk), it typically offers a lower yield (not something we are after). As you can see already, the investment game is no different than real life where a lot of the skills are more art than science.

Our test is pretty basic, assume you are living in that particular city and find a neighborhood where you say to yourself "I wouldn't mind living there". And. Make sure you're not saying "I would never live there" or "I would love to live there". This basic test alone will set up a neighborhood screen that results in the ideal *location* for property purchases.

Once you have these neighborhoods locked and loaded, you'll use basic screens from companies like Trulia to figure out if the area is getting better or worse. The key metrics are: 1) jobs, 2) crime and 3) vacancy rates. These three items are good enough since we are less concerned with renting to families who have multiple children to send to school. The multi-tenant renter is typically a working professional (or blue collar) with a decent income that is saving up money to move somewhere else in the near future. If we wanted to purchase single family homes we would then change our screen since schools are of high importance to families.

Once you've filtered down your locations, you should then do some "boots on the ground" research to see if there are any other issues in the neighborhood. By chatting with people and asking about the local economy you can also learn either positive or negative things about the demographics. The easiest "eyeball test" is a proliferation of coffee shops compared to a proliferation of "pay day loan" shops. If the economy is getting better, middle class focused businesses will certainly pop up and fill in the demand.

Step 4) The Problems: Now you're rocking and rolling (in theory). You have a funnel that is spitting out properties pretty consistently and you're getting into the weeds of actually visiting each establishment at this point. Looking at the properties is now the next big step. We're not interested in making friends, we're interested in making money so we'll focus on ROI and nothing else.

The general idea is the following items are "fine". If you find any of these issues, you can go ahead and purchase the asset while negotiating the cost of fixing each problem.

An Older Roof: An older roof that needs to be replaced isn't actually a major problem. While you should certainly make sure there is no structural damage to the property, replacing a roof is not as bad as it sounds. It will allow you to bring the purchase price down and a roof is typically replaced after **15 years at minimum** (commonly over 20 years). This means your initial improvement will be a one-time cost (negotiation leverage) that is then going to be a problem you don't have to worry about for over a decade.

But it gets better!

Remember, we're buying a multi-tenant property so the roof replacement is actually leveraged over more than one asset. Typically a roof replacement only applies to one cash flowing asset (such as a single family home) but in this case, that single roof replacement removes a major issue for 2, 3 or even 4 properties at the same time. Leverage = money.

Poor Smells: "It smells like money" is another common saying in the real estate industry because bad smells are typically easy to remove. Perhaps a carpet simply needs to be replaced or walls need to be cleaned to remove the smell of smoke. These issues are extremely easy to fix (cost practically nothing) and they scare away a lot of would be buyers. This is certainly music to your ears. The downside? If you go down the multi-tenant property route the smart investors also know this!

They will realize the asset is undervalued as well. On the plus side, at least you'll know that it is a non-issue 95%+ of the time.

You won't be scared away by the smell of smoke or some old carpet.

Appliances and Basic Interior: Depending on how you run your rental agreements, the age of all the appliances will also impact your water & electrical bills. It doesn't sound like a major issue in a single family home, however, we're buying a multi-tenant property. If you spot an old furnace or older plumbing, think about how this could be fixed/improved to help reduce the electrical bill and the water bill. On a 4-unit property that same issue is 4x as important since the issue likely persists throughout the complex (depending on how many are out dated or if there is a single source). You could pass the cost on to the renter… The problem? Middle class families will figure this out (their bills come in high on a consistent basis). As you'd expect, we would play the long-game here and avoid damaging your reputation with tenants.

While we've touched on flooring/paint as being "ok". We'd add other items such as counters and stoves as well. These issues are more cosmetic 9/10 times and can just be added to the repair calculation within a few thousand dollars. If you're making major changes (5 figures of repairs for a single area) you're probably stretching it. The summation of all the issues can be in the 5-figure range, but a single issue in the 5-figure range is not good unless it's a roof/basic flooring.

In short, if you can't calculate it easily? *Avoid.*

With the "ok" section out of the way, here are the items we would not deal with.

Structural Issues: If there is a notable structural issue to the property we're out of there. Calculating the cost of a furnace, a roof or a carpet replacement is easy. You can break the cost down into a pretty right range with a "standard deviation" as the statistics majors would call it… That range won't break the bank. Even if it costs a few dollars more than you expected, it likely falls into your acceptable range.

Something with true structural damage to the property can severely impact your calculations. If you have a background in heavy duty construction then this could be music to your ears. We have not developed that skill set and simply pass on anything where the cost cannot be calculated with a reasonable spread.

Bad Sub-Environment: Remember, we said it needs to pass the "I wouldn't mind living here" test. This test includes the type of people you're going to see on a daily basis. We have no doubt that living next to a building that is running a meth lab is not on the list of places you'd jump into. Even though the property may be functionally correct, the sub-environment needs to be amicable as well. If you find out that the neighbors are pack rats, cat lovers or anal retentive about noise… that's not a deal breaker. If the neighbor is loud, clearly involved in illegal activity or constantly clogging up the general area with visitors due to parties… now you've got a problem. The test for this being a deal breaker is if you'd personally move out on a repeated offense basis. If you'd say to yourself *"eh the neighbors are strange but it's not a big deal"* then you're fine. If their activities impact your life consistently (loss of sleep or otherwise) then you're better off avoiding the headache in

the first place. It is next to impossible to change the sub-environment because this requires control of other people.

Structural Change to Employment: Look no further than Detroit as an example of how a city tied to one economy can cause a downward spiral (the automotive industry). When you go through the process of narrowing down your locations, you'll learn a lot about how most of the residents earn their income. If everyone is working in a single industry (that's typically not a good thing) unless there is next to no way that the industry suffers a set-back. If you see a structural change in the industry coming in the next couple of years? Avoid it. Go to the next city/location.

We realize this could have been placed in the "I wouldn't mind living there test" but it is better served here since the property quality typically doesn't say much about the economy. Since we are focused on cash flow and yield, we care about income, safety and occupancy rates. Schools and education are less important when you're renting to people who are likely going to move out in a few short years.

Step 5) Unconventional Way to Lever Up: Now we're full head of steam into the fun part. You've checked all three boxes above and now it is time to gain an edge. *Your edge will be your bank account.* If you don't have the money to do this strategy, simply flip steps 5 and 6. Doing the opposite is always fun as it creates more controversy!

By having a larger amount of money you can offer all cash for your first property. This sounds unachievable if you're using Real Estate as your primary source of income (most would go down a high leverage model with low down payments). In the case of an all cash offer you can reverse engineer the leverage on the asset. By being able to offer all cash you can then sit down with your bank and explain that you'll be 1) financing shortly after putting tenants into the property and 2) explain that you'll place the property under an LLC (the LLC limits your liabilities in a lawsuit situation from tenants).

This gives you a lot more wiggle room than everyone else in the game. Cash offers are more attractive to the seller (faster closing time), it gives you negotiation leverage (improves your returns) and your interest rate will likely be better if you pay all cash, then take out a 50-75% loan once the property is cash flow positive (within a few short months – typically 4-6)! You have now reverse engineered a low interest rate, a cheaper purchase price and a higher IRR when compared to a standard bid with a 20% down-payment.

The big time real estate players would now talk about the different types of financing: portfolio lending, private lending, hard money lending etc. The good news is you won't have to deal with any of this since you're not going into the real estate game for your primary source of income. You're creating a cash flow property with a single conventional loan at a time. The great news? You can have up to four of these outstanding (buy cash, refinance down to 50% etc.) and lock in an extremely low rate. This would lead to 16 units… If you're at 16 units in almost any part of the United States you have a large portfolio.

To tie up the lending section, if you go beyond the standard mortgages, you're typically paying a higher interest rate. That is the easiest way to think about it. If you decide to borrow money from friends/family at a rate between the mortgage and what you can get from the other forms of

lending… Just remember that they will believe they did you a "favor" even if you pay them according to the contract.

Step 6) Getting the Loan: The more common approach is shopping for a loan, obtaining pre-approval and then bringing a property in. This is certainly a perfectly fine way to do it just remember that there is risk involved here. If you bring a property in that has an issue (say the roof needs to be fixed) you could actually receive a delay. They could say "problem X" needs to be solved then we will fund the deal.

Now you see why cash can be ideal. If you're close but don't have the money, try to do something fast such as a friends/family short-term loan to cover part of the purchase price. Buy the property, fix the issue and go to the bank to secure the loan. When they see you have 100% of the property paid off and it is cash flow positive, you can then return the borrowed money back to your friends/family.

If this is unaffordable, the standard process is shopping for a loan and then obtaining pre-approval.

Here is what they are looking for: a residential property in a good location, no major structural issues and clear proof of your income with a solid credit score to back you up!

The rest of the approval process is essentially math where they see if you're levered or not. The back of the envelope cut offs are as follows:

1. Front end Debt to Income needs to be ~25%, this is monthly house payment/gross monthly income. As an example a monthly payment of $2,000 should show a clean income statement that generates $8,000 in gross income (your career & internet business, banks prefer careers but we are keeping it simple).
2. Back end DTI is your total debt payments on a monthly basis/gross monthly income. This is naturally more important and this ratio needs to be around ~33%.
3. The fun part… the exact figures are closer to 28% for front end and 36% for back end, you'll find the exact numbers when you look for your loan! We use 25% and 33% since they are more conservative and it is a lot easier to do the math in your head (4x leverage and 3x leverage).
4. The last mathematical formula they look at is Loan to Value which is simply 1-the percentage loaned out. As an example if you put in a 20% down payment, your loan to value is 80%. Since you'll be dealing with rental properties this means you're looking at LTV of 70-80% to get approved. Or another way to think about it, if you found a way to pay all cash… you can then take out 75% of the value in the form of a loan (cash back into your account) to take advantage of leveraged returns going forward.

Since this is an important step, let's review the process now that you know the math. You'll talk to seasoned professionals to get a pulse on the best places to find a loan (and if possible have them vouch for you. As an investor and not a homeowner you're seen as higher risk, so in this or other forms of financing (such as cash out, and especially with a fixer) having someone with a history of success with a bank telling them you'll make good may tip the scales), you'll obtain pre-approval, send in the property information and finally the loan is underwritten and closes. If there is a caveat to obtaining the loan (roof must be fixed for example) this is another great opportunity to pay

cash and fix it. It means other buyers will likely have an issue obtaining financing but we doubt this will be the case in the vast majority of situations.

Step 7) Inspection: The last item on the checklist now that you have the property locked in and your financing is in order... is the inspection. Most people are exhausted by the time they reach this last step and don't go over every single detail with careful reading. You know what that means... **a bad deal**. Even if you are having a terrible day and feel awful, hit the after burners because it is the last step before you start to earn a meaningful amount of money (and put a large amount of money at risk).

Paper Inspection: The first part is typically not an issue but needs to be highlighted which is title inspection. Essentially you will check the "chain of titles" (funny that this is essentially a manual paper Blockchain recorded on public record!) which shows that the person selling the property is the official owner (the attorney you work with will inspect all items). Now to be clear, if you live in areas outside of the East Coast states you may use a title company or escrow company instead. But. The process is essentially the same. A separate person/entity will check the title and obtain title insurance on your behalf (protection against a lien being missed and found later in time). Since there isn't much to say here we're only including it so the title insurance piece of the closing costs is understood (do not try to save costs by putting yourself at risk, always go through with this process. Not to mention the potential of a lien being recorded sometime after first being checked and before closing, some title companies even have someone waiting at the courthouse right at settlement checking to prevent this).

The more important piece is the second part... disclosures, taxes, bills and contracts/leases if any.

1. **Disclosures:** The first document you receive will show all the issues with the property that the current owner (the seller) knew about. Practically no property is perfect so expect to see a list of issues or potential issues with the property. While it is an important document to read… when people have money on the line they typically don't do a good job of showing *all* the issues. They will disclose the obvious issues with the property however, the big problem with the disclosures is that they only need to explain the issues that they are *"aware of at the time"*
2. **Taxes:** This is pretty straight forward but can impact your ROI: tax returns and this year's tax bill. This is straight forward but needs to be checked. See how well the property has been performing (high likelihood of renting due to our recommendation of purchasing Multi-tenants!). Then see how much you'll owe in property taxes going forward. Also, be aware of initiatives to "re-asses" taxes city-wide or in your area; somehow the gov't never decides it needs less money in these reassessments, who knew?!
3. **Renter Information:** You'll now check all of the rental information starting with the current agreements on all the leases for the people in the building (obtain estoppel certificates). You're going to confirm the terms on all the leases, the rental rates and the security deposit amounts. Seems easy enough but make sure you read every single word on each agreement to make sure all the cash flow numbers add up correctly. And. Don't forget to get the security back in settlement! That's money you are responsible for that the seller is holding on to, so you should get a refund.
4. **Utilities:** The last item could technically be dumped into the renter information but we'll separate it out. Check to see who pays for electricity, gas, water, garbage, etc. Make sure you understand who pays for what utilities and remember to adjust the amount if you plan to make

updates (or make none) that would move the needle here. If something looks strange (too high or too low) ask about it and triple check the bills. And. The individual water bills are definitely ones you'll want to see, as leaks are common and can become very expensive very fast, especially if the landlord has been a bit neglectful.

As a small addition, we doubt this will be the case, but check the math on the laundry machines as well if one is in the complex (unlikely but could happen)

Physical Inspection: This section is also well known. Before you officially close, a physical inspection of the property is done by a third party. Since we're dealing with multi-tenant properties the cost will likely be in the $1,000+ range and *it will save you a lot of headaches down the line*. There is no reason to do this yourself as a professional is specifically trained to spot every single flaw and explain how the issue was caused in the first place (with high accuracy). Remember, this third party should not be a contractor you intend to hire to fix issues as they will have a huge conflict of interest to tell you things will cost more (so they can make more money).

Common issues are included below:

1. **Cracks/Age Issues:** A common issue is cracks and age related deterioration on a property. While a structural issue with the property should be avoided as we highlighted before, some wear and tear that needs a patch is typically not a deal breaker. This could be in a wall, a piece of the flooring that needs updated or a door that needs to be replaced. In short, these issues should be non-structural and more *cosmetic* in nature. Be aware of cracks in the foundation though, those could be more serious. And. If you walk into a room and can see it has a noticeable slope, probably best to pass.
2. **Plumbing/Electrical:** Similar to the utilities section, we're looking at any water related issues and electrical issues. Unless the property is in poor condition, some wiring/plumbing that needs updating is unlikely causing real structural challenges. If there are issues here, make an executive decision on the total costs (do not break the math!). If you can't estimate the damages within a tight range (standard deviation), we would avoid.
3. **Pest Control:** This is unlikely going to be a deal breaker and likely causes very minimal damage to the property. While there are cases where termites could be a real silent killer, typically the damage/issues fall under the "cosmetic" section where it costs a few bucks to fix and is no longer an issue. We are including it since all home inspections should include this check. If you are very concerned about this, like with bedbugs in some cities, you may want to get an exterminator to check it out, which is more of an issue with vacant units/properties. There is still the conflict of interest part, but 1) you should be developing a relationship with one anyway since it's a common issue in properties, 2) no reputable exterminator would plant bedbugs in a building for business and 3) they even have specific services where they bring a dog in and just screen for bedbugs for a nominal fee.
4. **Asbestos and Paint:** The last two item here are asbestos and lead paint. Asbestos is essentially a poisonous product that can be inhaled and damaging to humans. A normal part of the physical inspection is searching for this hazardous material (typically found in insulation) and having it removed. The second item is lead paint. We haven't had this issue, however, old homes may need a paint job if the current paint has lead in it (another hazard for humans). We doubt you'll run into this but it could happen if you're buying older properties. Take note, some areas require all properties built before 1978, the year lead paint was outlawed, to be

treated "as-if" all the paint in it has lead in it, even if it had a full gut and rehab etc. unless it received a "lead-free" certificate which is expensive to get. Most are simply declared "lead-safe" meaning there is no lead at present but could be later when the current layer of paint peels away. Basically it can be a hassle and check local laws for enforcement.

Step 8) Using 1031 Exchanges: One of the common tricks to building real estate wealth is the 1031 exchange. Most are aware of the common ways to earn money in real estate (selling the property, holding the property forever and seller financing – acting as the bank). The less talked about strategy in the public domain (well known for seasoned RE investors) is a 1031 exchange.

Below is the Overview:

1. If you have a large gain on a property you can then sell the property and acquire a "like-kind" asset without paying *any* tax assuming that the property you are purchasing is of equal or greater value compared to the current asset. Example: a $100K house appreciates to $120K, you then use a 1031 exchange and buy a $120K property. In this case you pay no tax. If you were to buy a $110K property, you'd end up paying tax on $10K
2. "Like Kind" stipulation is pretty simple, your rental property needs to be sold in order to purchase another income based real estate asset. It could be another multi-tenant, a handful of single family homes or even an apartment building. We recommend double checking the rules but you'll find that any real estate asset essentially falls into this category
3. The one downside here is timing. *When you sell your property you have 45 days to identify the properties you will be acquiring.* Naturally, if you plan on doing a 1031 exchange you should look for all the assets you intend on buying (and have a few back up plans!). Do not sell anything until you are certain of the assets you're going to buy, then go ahead and sell the property.
4. The last item reemphasizes bullet 3. In addition to the 45 day window to "identify" the properties, when you hit the sell button you have 180 days to **close.** This means you are done with your 1031 exchange
5. It doesn't take a lot of time to figure out the last benefit but we'll highlight it. If you intend on having kids, you can *now gift them the property tax free when you are no longer alive.* If you started with a $200K real estate portfolio and it grows to $1 million… You can collect rents forever, pass the property to your kids and pay no tax! Congratulations, you've made an enormous gain with no tax consequences (except property tax and income tax on rental income).

Step 9) Handing Over the Keys: Now we're at the final real step. If you've made it this far, you've got at least one multi-tenant property running and you're well aware of how to utilize a 1031 exchange. The standard move we recommend is buying *safer* properties and handing them to a management company. This means you accept a slightly lower return but your properties are in high quality areas and cause next to no headaches.

The second item… If you're done with the real estate game and no longer want to build, you can now look at crowd sourced real estate. This means you will invest in private equity firms that buy out apartment complexes, multi-tenant properties and other residential projects. By going through the headache listed above, you should have some standard real estate exposure through your rental(s) and you now have the tools to sit back and be an investor. When you see properties being crowd funded that don't meet the return criteria listed in a shiny presentation... you'll know! (you will avoid the bullet).

Step 10) Avoiding Excuses: Now that we've gone through all of the major steps, we're going to close with "excuse making". If someone is not interested in real estate (that is not a problem), if someone says the numbers in here are "impossible" then that is simply an excuse. In fact, we've seen some incredible deals which include 20%+ yields on properties that only cost ~$300K. These properties are certainly not located in Manhattan but that is why they created frequent flyer miles and cheap trains!

The second excuse is financing. While it is true that many people won't be able to do the *"buy in cash and then take out the loan"* set up, this is not a necessary part of success. There are many millionaires who buy with less than 20% down that eventually become filthy rich. The reality? If the cash flow works, it means you have a good chance at making large sums of money.

The third and final excuse is time. We'd say this is a valid excuse only if you're receiving a higher return elsewhere. We'll wager that you'll likely exit the real estate game (if it's not your primary source of income) after 5 years or so. Learning the real estate game allows you to become an investor (hands off)

The One Page Overview

Ten Step Process to Your Multi-tenant Property	
STEP 1	**Math Filter:** 1) Your return hurdle is as follows: Monthly Rent / Property Value = 1.7-2.2% 2) Your mortgage payment should be approximately 25% of the total rental income 3) We want cash on cash return of at least 10%
STEP 2	**Track Down the Broad Areas:** 1) Scour the following: the MLS, Trulia, Zillow, Redfin and physically visit the area 2) Set up automatic alerts for multi-tenant properties in all the areas that meet returns 3) Network with real estate agents and you may even want to look at eviction records
STEP 3	**The Art of Risk:** 1) "I wouldn't mind living there" is the threshold. No dumps and no prestige locations. 2) Jobs, Crime and Vacancy rates are critical for you as families rarely live in multi-tenants 3) Visit the area before purchasing and decide if there is an upward/downward trend
STEP 4	**The Problems:** 1) If you can estimate it easily it is an "ok" problem: roof, smells, appliances, paint, floors 2) You won't deal with structural issues, economic issues or sub-environment issues 3) Remember that you can unlikely change the location so that is the make or break straw
STEP 5	**Cash is a Weapon:** 1) If you can pay with cash, do so to bring the price down and take a loan once rented 2) Place the property under an LLC and make sure the Bank will be okay with this 3) Stick with the basic 30-year loan and if you make a lot you can expand to riskier loans
STEP 6	**Getting the Loan:** 1) Make sure you hit the front-end and back-end DTI ratios to be safe for approval 2) You will need: solid credit, proof of income and no structural issues on the home 3) If the bank comes back with a caveat for the loan you must fix it before approval
STEP 7	**Inspection:** 1) Your inspector and your Contractor will not be the same people 2) Always obtain title insurance and check all paperwork for all leases, taxes & utilities 3) Never skip the physical inspection and add the minor additional costs that spring up
STEP 8	**Avoid Tax:** 1) Use a 1031 Exchange to "trade up" and avoid capital gains tax on appreciation 2) Remember to follow the 45 day and 180 day rules when doing an exchange, play it safe 3) Gift to family when you pass, or sell everything just remember you have to pay tax
STEP 9	**Handing Over the Keys:** 1) Ideally you buy safer properties over time and then hire a property manager 2) Use your background to always keep tabs on your property manager 3) Use your knowledge to invest in Private Equity/Crowd Sourced deals
STEP 10	**Avoid Excuses:** 1) If you live in an expensive area you likely need to commute due to return profiles 2) You don't need to do cash deals and can use various types of financing 3) Put in the time and you get rewarded otherwise don't go into it in the first place!

How to Do All the Calculations

The standard calculation when people talk about real estate investing is something like this: Rental Income - Mortgage Payment – Taxes = Cash Flow. This is simply not correct. If you're only encapsulating taxes and monthly mortgage payments, you're missing out on 1) property management fees, 2) repairs, 3) insurance, 4) legal & financial costs when acquiring a new loan or changing tenants and of course 5) time. Each property you own needs to have a solid return on investment associated with it since you're trying to *leverage your time* and you should have more profitable ventures to look at (in theory at least!)

Since we're running a rental business (not giving away housing for free) we have to look at every single line item in the income statement before pulling the purchase lever.

Income Statement: Since you already have the general locations to buy your properties, the first calculation you need to make is the top-line. The top-line or rental income is driven by the number of units you have, the number of bedrooms, the number of bathrooms, the location, the quality and square footage. The best way to get your bearings on the area is to "act like a renter".

Acting like a renter means you should visit similar properties and pretend you're looking at renting one of the units. Do exactly what you would do if you were moving to the city. You'll go on craigslist, online (such as Trulia), look for "rent" signs outside of buildings in the area, attend showings at the properties and *contact every single friend you know to see if they have a person living in that city already (this results in the best information).* After that you'll know what type of properties are seen as "better" and you can remember this if you find a property that could be easily upgraded to fit what the demographics demand. Also, you'll want to pay attention to kitchens and bathrooms, big factors on how women will value the property, and since most men are dominated by their girlfriends/wives, you can be fairly certain upgrading those two will give bigger bang for your buck.

Expenses and Deductions: This is where the magic happens. If you're in a decent area and you have done your research on a specific area, hitting the rental income within a reasonable range is pretty easy. The expense line is where things get messy and you can either turn a large profit or lose money on the transaction.

The first two items before getting into the "big stuff" is 1) closing costs and 2) holding costs.

Closing Costs: This means you're paying about 1.5% for closing costs and another 1% for obtaining a loan. Our numbers may be low (or high) but if you use a range of 2.5-3.0% for total closing costs + obtaining a loan you should be in the ball park. Remember these costs are *upfront* you do not need to pay for another closing cost or loan once you're up and running. *Holding Period:* this is generally the time it takes to get the property rented. If you close on the property on January 1, 2018, it will unlikely be rented until around March 1 of 2018 (2 months or so). Also, be aware of "rental season" in the area, many areas still operate with the holdover from the farm system where school is all year except summer. The result is a prime rental period when kids are out of school and when new graduates enter the market, and a depressed rental market in the winter (slower to rent / lower rents). Before renting you will need to obtain insurance, do some basic repairs and of course advertise the property as available for rent (Side note, you will have an "insurable interest"

in the property as soon you have some financial stake in it i.e. putting the down money on the purchase contract, that is a good time to buy your policy).

While there is upfront costs in obtaining your loan (mortgage) this is the least of your worries (opportunity!). Below is a list of items to be aware of, these line items will show up when you file your taxes:

1. **Mortgage Payment:** This is the clearest expense that people will think of. Every month you will pay your mortgage. The good news is that you will receive a Form 1098 each year that explains how much you spent on interest throughout the year. *This interest is deductible*
2. **Advertising:** This is unlikely going to be a big cost for you. Since posting on Craigslist and other similar websites are free or cheap, big advertising expenses are unlikely going to be in the equation. If they are, well they are expensed
3. **Travel:** If your travel is related to your real estate business you can deduct costs in this area. Gas mileage is a common item that can be expensed and is also one that is scrutinized as many people attempt to embellish the number
4. **Cleaning and Maintenance:** This is self-explanatory, save all your receipts that can be considered as cleaning/maintenance of the property. This is separated out from repairs which have multiple items to be aware of
5. **Commissions:** Self-explanatory. If you obtain a mortgage, the commissions and appraisals can be amortized over the life of your mortgage
6. **Insurance:** This is a catch all bucket for all of the insurance you obtain for your property, flood insurance (mandated in flood areas, otherwise don't bother), earth movement/foundation issues (a general insurance policy won't cover for "settlement" but will cover for "collapse"), etc. (there is a long list of insurance types). Skipping on insurance is certainly not in the cards especially if you'll be renting the property. If you go the rehab route you'd get a "builder's risk" which is a higher price due to the property being vacant and other additional hazards from building. Not disclosing substantive issues about the state of the property will invalidate coverage in the event of a claim. For a normally functioning policy getting either a fire policy (DP-1) or going all out and getting an "all risk policy" (DP-3) is the way to go. If you want to save money, decide how much of a minor claim you are willing to deal with and play with the deductible.
7. **Legal/Professional Fees:** Hopefully this will be minimal for you. Ideally it is related to Estate tax planning fees related to income-producing property. That said, this can also include court costs and other legal issues that could occur in the future
8. **Repairs:** This is a BIG one and deserves more attention. Remember all of your repairs should be calculated into your return profile and if you can make the price of the home come down because of a specific repair and rent for a higher value after that… *it is an opportunity for you.* Most will view it as a headache but it is really an opportunity. Since we're focused on rental income, here are the main items that are considered expenses that should be music to your ears: 1) replaced roof as mentioned which typically lasts 20 years, 2) appliances which last about 10 years and cost a few thousand dollars, 3) Heating and Air Conditioning – also called HVAC, replaced every 10-15 years or so, 4) flooring replaced every 5-10 years, 5) paint every 5-10 years and finally 6) cabinets/counters which are replaced every 15 years or so. *These are essentially the 6 key items to look for.* When you find properties with any of these issues (nonstructural) you should be able to monetize the problems. In short, those are the 6 items we look for and there are many other ways to do this

If you buy a single family home you, would look at yard work and the garage as two clear examples. Maybe you can convert the garage or a room into a new bedroom. These are other clear "repairs" and adjustments. Unfortunately, they don't fit into our criteria since we are laser focused on multi-tenant properties in this product!

9. **Supplies:** This is likely going to be basic. If you're willing to put in the work, you'll learn how to make basic repairs when doing your first purchase (not major overhauls) and you can deduct supplies related to your work on the property (just remember that on some level you're doing a job that you could pay someone else to do for $10-$20 and hour. It may be better to supervise, show up and observe, ask questions, make the run to home depot etc. so you have some hands on experience, and then leave to do whatever else it is you can do to make more money).
10. **Utilities:** We'll go ahead and include everything in here: Water, Sewer, Garbage, Gas and Electricity. All of these items will be expensed if they are paid by you, they will be adjusted if the tenant pays for the costs
11. **Depreciation:** This will help your cash flow statement long-term as you can deduct the depreciation expense based on the value of the property. If the value of the property is $275,000 then you would see depreciation expense each year of $10,000 (27.5 years is the IRS useful life at this time). Remember, you'll pay tax on the depreciation when you sell (*depreciation recapture*), income tax is paid on the piece related to depreciation at a 25% rate instead of the standard 15% capital gains rate (*yes consult with your accountant when you get this far*). For more information, you can search this topic before selling your property (unrecaptured section 1250 gain)
12. **Other:** We never got this far in the real estate game (and don't plan on it) but if you end up hiring employees and building a larger and larger enterprise there will be a large list of "other" items that could be included in here. Since we're not tax experts, we would say "keep all your receipts" if it could be tied to your real estate business. This means every penny. Including lunch and dinner meals you have related to your real estate activity.

Now we realize the above list looks like quite a lot of work, so we'll give you the quick math. If you're looking to estimate total expenses you should assume ~45-55% of the total top-line will go to expenses. If you're generating $2,000 a month this would mean $1,000 would be allocated towards expenses. This is also known as the "50% rule" which is another common rule of thumb similar to the "2% rule" used for good properties (2% of property value in monthly rent).

Occupancy Rates: This is the last major swing factor. If you see a *"25%+ return rental property"*… typically this is a dump that has huge turnover. You'd be dealing with high risk renters and evictions on a consistent basis. That said, diamonds in the rough are also not unheard of. The best way to keep your occupancy rates up is by 1) having an incredibly good screening process and 2) by being strict with your rental agreement and security deposit (Never accept a partial security deposit or them paying security over the first couple of months, a security deposit is your security, not theirs). Our comment about the "I wouldn't mind living there test" is a good test to screen for the type of people you will attract. If you're buying a property you would live in yourself (just starting out in life) then you're in a good enough neighborhood.

Example Calculation: With all of the qualitative details up front we're going to now show an example of a property that would fit the bill pretty well (by line-item).We'll assume you found a solid $300,000 multi-tenant property that needs some work.

Initial Costs:

1. *Purchase Price:* This is self-explanatory and is the price you pay for the asset in this case it will be $300,000
2. *Closing Costs:* As described before, the closing costs include all of the fees associated with closing the transaction and the cost of obtaining a loan. To make the math easier to remember we go up to 3% for this and you'll find a closing cost amount of $10,000
3. *Holding Period:* We use a standard 2 month holding period where you lose money by not having a person in the property. Remember, this is unlikely going to be the case for you as many multi-tenants already have people in the building! If you have half of the units filled in a quadplex for example then you're looking at $4,800 instead of $9,600.
4. *Repairs:* We put away a large number for repairs at $45,000. This represents cosmetic and replacement issues that will not break the bank. This can be much lower or it could be much higher. It really depends on what type of issues you're "buying into". Using 15% of the purchase price is a good starting point and should encapsulate issues that are not structural in nature (there are always exceptions)
5. *Cash Needed:* Now that we have the numbers lined up, you can calculate how much cash you need. You'll need the down payment, repair costs and the closing/holding costs. This gets you to $139,600.
6. *Mortgage Payment:* There are millions of mortgage calculators online, you can use Zillow, Bankrate and many other calculators to get to the same number. At today's rates with a good credit score and solid earnings you can obtain a rate in the 4-5% range for a 30-year fixed mortgage. The important part is the backdoor math cut you can make. *Assume 6% for the total payment.* So if you're taking out $225,000 in debt for this example that would result in $13,500. This would be a mortgage payment of $1,125 per month.

Initial Costs		Back of Envelope Things to Remember
Purchase Price	$300,000	Negotiated Price of Multi-tenant
Closing Costs	10,000	Assume 3% to be safe (loan + fees)
Holding Period	9,600	Assume 2 months of income is lost
Repairs	45,000	Assume 15% of property value
Total Costs	**$364,600**	**Total Cost of Acquisition**
Cash Needed		
25% Down	$75,000	We use a 25% Down Payment
Repairs	$45,000	Cash is used to pay all repairs
Closing & Holding	19,600	Closing costs are paid with cash as well
Total Cash Used	**$139,600**	**Total Cash Used**
Loan Amount	$225,000	75% of Purchase funded with Debt
Monthly Payment	$1,125	Use the 6% rule which implies 0.5% of loan
Annual Payment	**$13,500**	**Total Annual Mortgage Payment**

Monthly Income Statement:

1. *Revenue:* This property is actually below the 1.7-2.2% range that we recommend. We used a conservative example to really illustrate the possibilities by coming in at 1.6%. The $4,800 of rental income is your monthly revenue and we peg it at 1.6% of the purchase price

2. *Mortgage Payment:* The mortgage payment is $1,125 per month which is assuming you have a 30-year fixed loan in the mid 4% range. The mortgage payment will move based on your credit score, income, debt load etc. Since this is your first purchase we use a standard mid 4% range number
3. *Repairs:* This number may seem high, but we assume 15% of rent going to repair costs. This would result in $720/month forever. You'll create a separate checking account which will act as a reserve fund for ongoing repairs in the future
4. *Insurance:* This can also swing around depending on your area. A good rule of thumb is to use 7% of monthly income (you can also use 1.2-1.4% of the total property value for an annual range). We do not know where you live so this number will move based on your location, as always do the homework!
5. *Vacancies:* Since you're going to be buying multi-tenants, there is typically a bit more turnover. So we use 8% as the metric. Some areas can be as low as 4%, but we remain conservative since higher turnover is a fundamental piece of multi-tenant properties
6. *Taxes:* This is primarily dependent on your state, to keep the math simple we assume 2%. That is a standard estimate that is "location agnostic". That said, it could be higher or lower so check the rules in your area
7. *Total Expenses (excluding Mortgage):* With a large number of repairs up front ($45,000 in this example) we find that ongoing expenses are $1,940 (or about 40% of rental income). The reason for the expenses being below 50% is due to the repairs. In theory, the property should be worth more after repairs but by keeping it flat we can focus on cash flow (the goal!)
8. *Total Income:* The total income comes in at $4,800 (rent) - $1,125 (mortgage) - $1,940 (expenses & taxes) = $1,735/ month or $20,820 / year.

Monthly Income & Expense		**Back of Envelope Things to Remember**
Monthly Income	**$4,800**	**Goal range of 1.7-2.2%**
Expenses		
Mortgage Payment	1,125	0.5% of the loan taken out
Repairs	720	Assume 15% of rent
Insurance	336	Assume 7% of rent (or 1.2-1.4% of value)
Vacancies	384	Assume 8% of rent
Taxes	500	2% as standard (*Depends on State*)
Total	**$3,065**	**Always stay cash flow positive!**
Monthly Net Income	**$1,735**	**Net Income After Property Tax Per Month**
Annual Net Income	**$20,820**	**Keep Annual yield in Doublt Digits**

Calculating Returns

1. *Cash on Cash Return:* This calculation is quite simple, you take the annual net income and divide it by the total amount you invested in the project. In this case you invested a total of $139,600 ($75,000 cash, $45,000 repairs, $19,600 closing and holding costs). The exact number in this case is $20,820/$139,600 = 15%. This is well into the double digits which may be good enough for us and may not be good enough for you.

Calculation: Net Income <u>including</u> Mortgage payment /Total Cash Used

2. *Unlevered Returns:* This calculation assumes that you paid for everything in cash, it is another good spot check to see if the deal makes sense to you. In this case the annual income is slightly higher, you take $20,820 and add $13,500 to get to $34,320 (since you have no mortgage). Now your returns are $34,320/$364,600 = 9%. This is a spot check to make sure the property is solid as you're still getting high-single digit returns even if you didn't lever up to buy the property.

   Calculation: Net Income <u>without</u> Mortgage Payment / Total cash used assuming <u>no loan</u>

3. *Repairs Ratio:* This calculation tells you how much headache you are taking on. The calculation is made up (meaning we do it ourselves) to see how much work it is going to take and how big the costs could be. If you're simply replacing a carpet and a furnace you'll know the cost within a few hundred dollars. As you go up in headache (flooring, carpet, walls and roof) the dollars go up and the range *widens*. We try to keep the range tight meaning that the repairs as a percentage of the property value should be between 12-18% (somewhere around there). There are many people who make an absolute killing by fixing up houses where the repair costs are north of 25%. The problem is it's a big headache and we would recommend staying at the lower end of that range for your first deal. For this example it is $45,000/$300,000 or 15% right in the middle.

   Calculation: Total amount to be used on repairs / Purchase price

   One interesting and glaring omission here is "Did the repairs increase the value of the property". The reality is that the repairs should increase the value of the property <u>and</u> increase your rental income (And, any repair you do should increase the value of the property more than the cost of the repair, otherwise you're wasting your money). We assume that you'll be using 1031 exchanges and grossing up consistently since this is not your primary source of income.

   While you could include property appreciation into your return, we think that takes away from our recommendation of focusing on cash flow. It also makes the deal look "better" if we pretend the value goes up instantly. If you can get the math to work with no appreciation then it's certainly a good deal. It gives you wiggle room to have higher repair costs than expected and more wiggle room to make mistakes on your first purchase.

   Besides, appreciation for homes over the long-term haven't been amazing in America as a whole. Assuming 1-2% long-term shouldn't be exciting anyway, that number essentially keeps up with inflation (at best).

Basic Taxes: We'll add one small section here to make sure we have everything in this chapter. Your maximum mortgage interest deduction is a loan up to $1,000,000 as of today's writing. Depending on approvals, this could be reduced to $500,000. This means the tax benefits fade at $1 million dollars today and the tax benefits could be lowered to the $500,000 range if new

approvals are passed. The second item to be aware of (continue monitoring tax reform) is that local property tax deductions could be reduced to $10,000 as well. While these deductions are important, we think the 1031 exchange is the most important item to be aware of.

Note: this bill passed. $10,000 cap on property tax reduction and $500,000 mortgage interest deduction.

As always, consult with a CPA as your taxes get more complex! Learning the tax code inside and out in your state could turn a bad deal into a good one or a good deal into a *great* deal!

Reviewing the Math: At this point, the use of leverage and tax savings should be the two most eye popping items when it comes to real estate investing. By using leverage your annual returns can be notably higher since you're using *other* people's money to get rich. The same money has some tax advantages as you can deduct the interest on the loan.

For simplicity, with leverage, your returns could be 15% in the example we provided. Without leverage the returns would come in at 9%. At a glance these numbers look relatively similar but use a calculator and you'll find some startling results:

1. Choosing the leveraged returns, in 10 years if we compound at 15% that would turn $100K into $404K
2. Choosing the Un-levered returns, in 10 years at 9% it would be $237K
3. *In a decade, the difference is $167K.*
4. We did not even include the tax benefits which could be large depending on your tax bracket

Now we're not saying that all of your transactions should be done with leverage, we are simply pointing out that leverage can be used for a good cause. If you're risk averse and get a rental property generating 8-9% per year (no leverage all cash), then you can always take out some of the value in the form of a mortgage once you are certain you can hit the payments! Leverage and taxes are two key benefits of Real Estate and they shouldn't be ignored.

Negotiations and Making an Offer

The negotiation for your property is a key part to becoming a successful real estate investor. That is why there is a phrase as follows: *"the money is made on the purchase not on the sale"*.

Negotiations are interesting because there is no way to find a seller's motive based on a listing. After talking to the seller you can then obtain a lot of information. Maybe they are selling to buy up (into a new complex), maybe they are selling because of an inheritance and maybe they are selling because they failed at running the property. The good news is that multi-tenant properties typically have less emotion. This means it's more of a business transaction since it is unlikely that a family raised their kids over the course of 20 years in a single unit within the multi-tenant property.

Our recommendation will be obvious, before buying anything, be *certain* the math works. That is the reason why we put the calculations and examples before the negotiations section. Even if you like the area and the property... if the math doesn't work you must move on.

Key Example Situations

Fair Priced Assets: This is a common situation. The property is priced right around where it should be sold. If the property doesn't meet your investment return criteria... don't give up! Since it is fairly priced, many bargain hunters won't bother putting in a bid.

Instead of giving up you should put in an offer below your expected close amount. This means if a property is selling for $300K and you would only pay $280K for it, your first offer should be below $280K. Depending on how it plays out, you will typically receive a counter offer. You can go straight to your max bid or negotiate and try to stay below $280K. We have no doubt that some people just put in max bid offers ($280K) but having some back and forth typically makes the seller feel like he got something out of you. This is a good thing as he won't talk negatively about the transaction if you end up buying the property.

The second important item that needs to be addressed is a willingness to walk. If your first deal ends up being a negotiation, you have to walk if the number breaks your max bid. Emotions begin to fly once the negotiations begin so remain laser focused on the numbers in the spreadsheet.

Undervalued Assets: While investors like yourself will unlikely be caught in this situation many times, if it happens... move fast. Seasoned real estate professionals carry a cash balance for situations like this. If there is a property up for sale that is mis-priced you'll jump on it as soon as you can. This means driving over to immediately check out the property and offering all cash (if possible) on the same day.

This seems extreme, however, it does happen. It is quite common for this to occur on single family homes where property is inherited. It's more of a fire sale and the person doesn't want to put in any effort.

There is no reason for negotiation in times like this since other intelligent investors will jump all over it as well. Markets are not 100% efficient but they are rarely foolish (maybe you'll get lucky!). If a property is undervalued and is a *"steal"* just put in a bid for what they are asking for and snatch it up. Time and not losing the deal is more important than being a penny pincher in this case.

Overvalued Assets: Here you're looking at a seller who is trying to get max value for the property and will unlikely find a foolish buyer. The good news is that you can still track how long the property has been on the market. Typically, you want to track the properties that are newer to the market but older ones have been bleeding cash (in theory) making them more willing sellers.

In short, for the properties that have been on the market for a long time, you can try to throw in a low-ball offer after about 6-8 months (on market for a long time). If they still don't come back with a counter, they likely gave up on selling the property in general.

What is the Formula?! We purposely used this annoying heading because you'll see this happen all the time. As you get better at sales, negotiations, sniffing out why a person is selling and getting good deals... people will ask for a "Formula". This is no different than desperate guys asking for a step by step surgical procedure to get a girlfriend. They'll never understand that a lot of life is *art*

and instincts. If it was all about facts and numbers there would be no way to gain an edge in the first place.

So instead of giving exact figures (impossible) we'll give some broad guidelines and rough numbers to help you develop a good instinct.

Low-Ball Offer: The low-ball offer really means "less than you would be willing to pay". Our general rule is that you should say to yourself "yeah that's pretty low" instead of saying "wow I would be mad if I saw this offer". The key to a low-ball offer is to signal that you're serious and that you're not willing to pay the list price. This helps you find out how serious the seller is as well.

If your area typically has homes sell for 5% below list price, then your offer could come in as low as 10%! Remember this is just an eyeball test and you'll find the correct ranges as you gain comfort in your location. Perhaps the area sells for 2% below and anything that is 5% or lower is seen as "offensive". When you receive counter offers *consistently* you're now in the right ball park.

Another good item to keep in the back of your mind is the "meet in the middle" assumption. For one reason or another, when you place your bids the seller will assume he can get you somewhere in the middle. So if you put in a bid for $280K on a property that costs $300K... he'll mentally think of $290K. This is just due to human nature. It is not a guarantee that the person will think like this but there is a reason why the saying "meet in the middle" is frequently used in negotiations. Keep this in mind and make sure the mid-point is below what you would pay. If your maximum price is $290K for that $300K property you'll probably want to start around $275-276K to give yourself some wiggle room.

Working with Deposits and Contingencies: Now that you have all the big items ready. It is time to fine tune the offer with the deposit and contingencies. Essentially, your official offer will have specific rules attached to it such as an inspection contingency and expected time to close (time to obtain your financing). Here are the important details:

Deposit: The deposit is also called “earnest money”. We use the word deposit because it is easier to remember and it is essentially the same thing. When you make an offer in writing you typically include a deposit equal to 1-2% of the property value. A $300K property would typically come with a deposit of $3-6K. Now… The key here is this money can be lost if you back out of an offer. The seller gets to keep it. The other key item here… is you can have a larger earnest money deposit depending on the type of contingencies you put into your offer (inspection and otherwise). A high deposit signals that you’re serious, a normal deposit signals essentially nothing to the seller.

Inspection Contingency: As we noted previously, we wouldn’t do this in any scenario. Waving the inspection contingency opens you up for an incredible amount of risk. We know some real estate professionals who are willing to wave this but they have been in the game for over a decade. In short we’d say you keep this in the offer. The last thing you want to do is lose out on a high deposit because the inspection comes back negatively and you can’t back out (pot committed).

To wrap it up, when you get an inspector, find someone you trust to act as a reference. If this is not an option, you’ll go through your real estate agent. One of the main reasons we recommend Real Estate investing *after* your online income is the networking issue. By giving yourself a year

or so to learn the ropes before you invest, you'll have an ***inspector and a contractor*** in mind for your first project (they won't be the same person)!

Financing Contingency: This essentially says you can back out if you can't get the loan. We don't do deals with a lot of leverage, (yes we know many seasoned RE professionals are laughing at that!) it just isn't our style since it is not a primary source of income. That said, you can certainly put in a financing contingency saying that if you can't get the loan you can back out. Generally, if you're confident in getting the loan (you should be since it's your second or third source of income!), removing the contingency can move the needle for you. Another way to send this message (that you will be able to get the money) is by attaching your loan approval when you submit your offer so they know the money is there.

Closing Time: If you are financing your deal, the typical closing time is anywhere from 30-60 days. This won't raise any red flags but it is also a lever for you in the future. If you have the cash for the property you can either offer a debt transaction first or you can move the closing date in.

Closing time is not the same as the deposit as you can offer say a 10% deposit but make the closing date shorter suggesting you'll be paying all cash. Or… You can do the standard 45 day close and say the deal will be financed with debt only to change this later if you find that they will sell at a lower price for cash.

Match Contingencies: When you put in your offer you can include an item that says *"I will match any offer up to $X"*. The benefit of this type of offer is that it make it impossible for you to break your math rules! By placing this offer you'll never pay more than you were willing to offer. The bad news? He knows how much you're willing to go up to. This strategy is interesting and is valuable to newer investors because you can learn a bit about the negotiation process and you guarantee you don't break your max bid. Maybe you get lucky and no one bids up to your max!

Nickels and Dimes: The last group is essentially the fine details: closing costs, cleaning costs and pointing out an item you want to keep. This is going to move you across the finish line. If you're close and are talking about details, you can either include a strange detail in the offer (maybe you want to keep part of the furniture) or you can say that you want the seller to clean out one of the units or... You can offer to pay part of his closing costs (typically 2-4% or so). We have no doubt there are many other small details but these are the most common. Anything that requires time, giving something up (items in the complex) or money (closing costs) are going to be seen as a *"small win"* in the eyes of the seller (or buyer!).

If you're getting close to the finish line, contingencies can push you across and show the seller you're serious. If you feel like you have the deal locked in, you can then remove some paperwork such as financing contingencies (another huge advantage of paying cash). This tells the seller that you are certainly serious about your offer. By removing the contingency he gets to keep your cash deposit if you can't close on the deal. Typically, most deals have financing contingencies because it is not clear if the bank will approve the property (see the prior section on how banks approve loans).

When you start squabbling about the details, you have the property locked in (unlikely falls through). Just don't give up any major contingency such as a property inspection. Since you're an

investor and not a seasoned professional with years of experience... removing inspection contingencies can lead to a bad deal and many years of pain. As you can see, if your finances are in order, you can use speed and security as your two levers during the final parts of negotiation.

Making the Offer and Working with Contingencies: We'll now walk through the offer and close so you can see the value in closing faster and offering cash (or removing a contingency). Remember, always put yourself in the seller's shoes and if he is trying to get rid of an asset the last thing he wants to do is waste his time. We find examples to be the best so we'll go with that.

Step 1: You calculate the value of a multi-tenant property currently listed at $300K. You run all of the math perfectly and calculate that you are willing to pay up to $295K, a tad below list price. Generally speaking, the area has a discount to the list price creating a nice opportunity. After doing your research and deciding with the counter offer strategy you decide to put in a bid for $280K (even if you get no response you could always try again with say $285K).

Step 2: You have selected your real estate agent to put an offer in on the property. You need to include who you are offering the money to, for the amount (in this case $280K), how you are obtaining the money, when you intend to close and what contingencies you are going to put into the offer (back out clauses such as a negative property inspection).

Now within step 2 is an important part, the deposit (called earnest money). A deposit is exactly as it sounds, it means your offer is real and if you were to "pull" the offer the seller gets to keep all of the money! The standard earnest money deposit amount is 1-2% of property value. No doubt you see the trick here! To make the seller realize you're serious you can always increase this amount all the way up to 100% essentially saying "if the property is in good condition after inspection the deal is done in cash. Immediately."

There is no need to go to that extreme but moving the number on the deposit can show the seller you're serious, so we go ahead and put in a 10% deposit. A much bigger number that essentially says "a traditional 30 year mortgage is no problem for me so you know I am serious".

To emphasize, if you're uncomfortable potentially losing your money (getting cold feet) there is no reason to use this as a tool. We are simply highlighting it as a strategy.

Now in the first offer you're going to put in the standard contingencies which include: 1) inspection, 2) financing – not needed if you are doing all cash, 3) standard 60 day close since you will need financing and 4) we're going to throw in a twist and put in a "match clause" up to $290K, this means you'll go above any other offer that comes in up to $290K (the seller knows you're serious the bad news is he knows you'll pay more)

You now submit this offer. (As a final note you can also give them the pre-approval loan letter so they know you will have the money).

Step 3: Negotiations begin and you find out that the seller is more interested in closing sooner! He comes back and gives a message to your agent that he does not like the 60 day close and wants at least $290K for the property (since he saw the escalation clause). Now that you know he wants the money fast we have no doubt we can bring the price down if we offer *cash*

Step 4: You adjust your offer to $284K and you offer all cash. Now the seller sees the closing time move down tremendously. He responds quickly and says he'll accept if you cover the seller closing costs. Since you have him largely locked in and know the selling closing costs will be ~$6K, you offer to pay half of it for him essentially moving to $287K… He accepts. Now in this situation he feels like he has gotten something (sellers cost partially paid and an all cash offer since he needed the money fast). This type of back and forth also helps you since you saved $7K or ~3%, a good deal for you as it helps your ROI.

Step 5: Get to work immediately! This is no different from any other business. If you bought an online website you wouldn't wait for a single second to remove the issues from the website. This is the same for real estate. If you can clean out the property on day one? Do it. If you can immediately get an ad up for one of the vacant units? The ad should have been made before you even sent the money! Get to work as soon as possible since every single day adds to your holding period loss and impacts your cash flow.

Some Final Notes on Negotiations: This is another one of those clichés where we say *"no one is an expert in negotiations"*. This is because it is no different than sales where you're getting better and learning more every single day. We'll put them into quick bullets and you're free to add your own tricks to them later on:

- Never break the math. This sounds simple and we have beaten it to death but it's the most common failure in Real Estate investing. If the math doesn't work and you love the look of the property (or more likely location) you have to leave
- Don't make anyone angry or take a counter offer as an insult. Everyone is trying to maximize their returns. If you had $10,000 or $1,000,000 in a property you'd take it very seriously. The ideal situation is you get what you want and the seller doesn't feel "cheated"
- A good rule of thumb is to *ask for something every single time they ask for something*. Many people think you have to get the "last say" but really you want the math to work and if the "last say" is a thousand dollars that doesn't move the needle… Go ahead and take it if you're well below your maximum bid in the first place! The key here is to never be a push-over. If someone wants to squeeze an extra $500-1,000 out of you at the end and you're $10,000+ below what you would pay for it… Better to get the deal done and get the property running
- Reading between the tea-leaves is a skill you likely developed during your Career. Use it wisely. If you know what the person values then you can point that out if the negotiations stall. If they want to close faster, highlight you're paying cash. If they are profit maximizing and more logical (likely owned by a company) use data from previously sold assets in the area to make your case. The better you know the person the better off you'll be when it comes to adjusting your offer
- If push comes to shove and you get the feeling that the seller will dislike you after it's done… go ahead and close it. While this will unlikely happen in 95% of situations, this is a business after all and some people won't like you. If the math works and the guy says *"oh that buyer was a jerk"* for some reason… just live with it. This is especially true for someone looking to build a modest portfolio instead of a massive one. To emphasize, if you follow the general framework, you're likely going to get a positive reaction from the seller since you worked with them to close the deal. It just doesn't happen 100% of the time.

Renting Your Property

If cash flow calculations and expenses are the first big hurdle, renting the property and managing it properly is probably the second biggest hurdle. Many people who enter the real estate market end up doing a poor job as they are lenient on leases (missed payments), don't run their assets like businesses (they should) and don't screen candidates closely on the first go around. They burn out lose money and end up in the red for a long period of time.

Our basic recommendation is as follows: 1) do it yourself first for a couple of years and then 2) get a property manager. The reason for doing it yourself is quite simple. You'll learn all of the necessary tools. You'll know if the property manager is doing a terrible job (getting high price quotes for basic repairs). You'll know if the property manager is charging the correct amount (for rent). You'll know if the manager is not being strict based on the timing of payments... so on and so forth.

In short, by doing it yourself first you'll have the tools to *tell* if the person is doing a good job. Besides, no one is going to be as intense as you are since it is YOUR money and investment property. This is the case for investing, real estate, your online business, your career etc. Put the responsibility on yourself and scale from there. Since you'll run it like a well-oiled machine, giving up the keys should give you free time and a high cash flow in the future.

Get All Units Ready: This is obvious but many people try to squeak out as many pennies as possible only to create big headaches in the future. Your best course of action is to make all the units "rental ready" before you begin advertising or looking for tenants. This does not mean that each unit needs to be redone. Perhaps two units in the quadplex are rental ready and the other two need some changes (flooring, the walls need to be painted, a leak needs to be fixed etc.). This means the advertisements for the first two units go up immediately and the other two go up later. Now you'll have to make a judgement call in terms of how much work is being done (if it will be disruptive to the tenants) but if you're simply replacing flooring and some paint work, it likely won't be disruptive for a long period of time.

Advertising: Get ready to steal! We thought using the word steal would be great because it is much more eye catching. The reality is that you'll be "stealing" a lot of advertisements you found attractive when you did your research in the first place! If you find a good advertisement, write down why you liked it and model your advertisement in the same fashion. For all of you affiliate marketers and online sales masters… you know exactly what we're talking about and it will take you less than a single hour to come up with a good advertisement template. Who knows, maybe someone will say *"This One Bedroom Property in (City) Will SHOCK You!"* (Yes we are joking, don't do that).

If you have a background in online income this will be an easy transition. You'll use the exact same skillset and target a different demographic: *young adults with stable jobs*. Now if you end up finding other candidates who are good that's a bonus. Just remember that multi-tenant properties typically attract adults that are transitioning. They live in the apartment for a couple of years and move on.

Now when we say advertising we mean *online*. This shouldn't come as a shock but if you have skills in online businesses then you're going to have no problems with online advertising platforms! In

addition, you're targeting young adults 20s/30s who will search using… you guessed it… the Internet! While people may laugh, we've found that Craigslist is the easiest place to advertise.

Beyond that you'd look to places such as Trulia (and any other online placements in your city) to expand your online sales effort. You could do basic stuff like hang up a sign or buy newspaper ads (Note: newspaper ads bring in a "lower quality" tenant)… But the ROI isn't great. The one additional way to find tenants is when you were "fake searching" for an apartment. You should get an idea for the demographic that is looking for housing and ask people in the area if they are looking to rent in the building (or in an area near the building). As usual referrals are a great way to close and online ads will be your "bread and butter" for attracting new tenants.

Open House or Sell Day: You should treat the open house like a sell day. As you gather interested applicants, create a time frame for everyone to show up. Unless it is a studio (extremely small) you can typically bring in a set of people within a 1-2 hour time frame to view the whole apartment. During this time frame you can set up a small table with the applications along with some basic snacks and water (stick with water in case they spill in the apartment).

The key here is to try and get as many people to view the property at once. The last thing you want to do is have individual showings every third hour for 15 minutes every Tuesday, Thursday and Sunday (we couldn't have possibly been foolish enough to do this in the past! Or we absolutely were!). The long-story short is you want to be efficient with your time which means organizing showings. You can do one off showings if you have a lull in your schedule and it fits with the potential tenant. The more group showings you can do the easier your life becomes.

As an alternative to an "open house" you can have staggered showings at 15-20 min intervals, which if you schedule them out a few days in advance, and do them in prime showing times such as after work on weekdays and mid-day weekends, you will likely be able to get at least 2-3 in a row. Also, this lets you give possible tenants individual attention (as well as letting you size them up), this is much more important for "keeping an eye on" perspective tenants if you are showing an occupied unit.

Getting the Right Tenant: The first few steps are extremely straight forward. The pitfalls are easy to avoid and now we're moving into the dangerous section of renting your property: Getting the Right Tenant. At the end of the day, if you have high quality tenants and they are paying near market rates, you're going to be better off than the guy who is charging market or above market rates with high turnover. You certainly shouldn't price your property below just because you believe it will attract better people (generally it doesn't), *the point is that occupancy rates and churn will impact your returns.*

Before our five steps, we'd say the "art" section is as follows: *If too many people are interested in renting, you're not charging enough. If no one shows up you're charging way too much!*

Our five step process is as follows: 1) you will collect an application fee since you will bring in multiple interested candidates who need to be evaluated (make sure to charge both for the screening and your time to run the check and evaluate the application. Think, if you were paying a property manager to do this job, how much would it cost you? This has the added benefit of being ready to be outsourced), 2) you won't "look past" personality flaws such as a previous

eviction or felonies – we sure hope the property does not attract candidates of this quality! (but even in a nice property, these people will still travel around looking for inexperienced or weak landlords like wolves preying on sheep. They want someone who won't do the screening, or who they can trick with an alias, or who will buy their sob story), 3) you will be 100% alert when you meet every single applicant, this means you're evaluating each candidate based on first impressions as if you were interviewing your future spouse (this does not mean a barrage of questions it means take it seriously and pay attention to all their mannerisms to see what type of person they are), 4) the qualitative items are the most important however, you should also make sure they have a high enough income which means *"don't bend the rules"* when it comes to their income eligibility (around 25-33% of gross income should equal rent, or less!) and 5) our last item, you want to create ***two year leases*** with a standard security deposit of 1.5 months (or the max security deposit your state allows, whichever you choose).

While we have outlined our items above, be sure to check with the laws in your area to see if there are any issues with our five step process (two year leases, income requirements etc.), we doubt anything listed above will be rule breakers, we're just making sure the homework is done.

Now with the overview out of the way the best way to start is to find a template from someone else. No different than your first ad, you're going to take one that works and build off of that with the adjustments we recommended above: 1) making sure you get an application fee, 2) lease requirements and 3) income hurdles. As a tool, you can always pick up applications (pretend to be a renter) when you are doing your due diligence. This way you can see what other people in the area are doing. The rest of the items are largely irrelevant such as their name and employment history. The key part is when you check and confirm the items in the application.

Income First: Before bothering with the tenants history, go with income verification first. Since you want to play it safe, have each applicant sign a release of information to give out their income (you can now call their employer). This is a standard procedure and if you're less intense you can ask for W-2s and other forms of verification (bank statement print outs, pay stubs etc.). We prefer the harder route, calling the Company, since it will make it impossible for the applicant to lie. At the end of the day, paperwork can be forged and a quick phone call to make sure their income is in-tact isn't a big deal (not to mention they could have been fired last week!).

Rental History: This is where it gets more difficult. Since we prefer multi-tenant properties, you likely have individuals with short to no rental history! This isn't a deal breaker and it is why we emphasized trying to make spot judgements when you meet each applicant. ***Remember you cannot discriminate: race, nationality, disability, family composition... etc. Do not break any of the rules for your state.*** This will lead to a lot of problems and is not worth it, keep all your decisions to rational information that can be backed up by your effort. Instead you're going to use rental history, credit scores and their income to determine the riskiness of the tenant. We've had no issues with this since the harder screen based on 1) income, 2) positive rental history and 3) credit history – a score of 640 or higher, is enough.

When you call to ask about the tenant the key items to remember are: 1) how they treated the property – security deposit, 2) if the landlord would re-rent to the same person again – they typically say yes because if it's a good candidate they say yes and if it's a bad one they say yes since they want to get rid of them! (which is why it's always good to have the last two landlords, call the

one they are no longer with, they are more likely to give an honest answer) and 3) how much they were paying in rent before. These items should give you a good enough holistic view of the candidate, if they are paying slightly more in rent and they are now making more money, the upgrade in lifestyle would add up. Remember, if you're following the clean step by step here, you'll end up choosing the most qualified people based on *cold hard math and traceable conversations.* By proving the person is the most qualified you've also insulated yourself from any type of discrimination case in the future.

Signing the Agreement: Now that you have your tenant in-line, you're going to go through the agreement by line-item. You may have small adjustments to your own agreement but the major ones to point out are: 1) security deposit, 2) the two-year lease, 3) monthly rent amount, 4) utilities – who pays for what, 5) pets – we prefer going with no pets, 6) late fees and the exact day rent is due and 7) walk through condition report. The first six items are easy and you'll make your own adjustments based on your area. The last one is important since it will determine how much damage was done when the tenant leaves. While we hope you get nothing but angels for tenants, damages do happen requiring work (paint, flooring etc.). By having a signed piece of paper that describes the condition you can now lay claim to part of the security deposit if there are issues with the property (even better if you take pictures and have them sign them!). Essentially this is no different than the walk through you do when you rent a car, pointing out any and all issues before taking the keys.

Now we're going into the last item of the day, managing the units once they are in. We left one small item out of the above which is: *Repairs*. Remember, we are encapsulating this cost into the math so it isn't an additional cost to re-calculate. Instead you should lay out exactly when the tenant should expect a response from you on an issue with the apartment. This prevents you from being on call at 2am but also shows the tenant you'd be willing to field a call in the evening during the week or even weekend!

So now let's put the clamps down on the last items to be aware of… *water and bug related problems.* Those two items alone will likely be the bulk of your issues. If you've done a good job checking all the appliances, the furnace and water heating should be fine (unless you've rented the units for a long time) leaving you with standard plumbing and bug related issues.

You Can Either: 1) learn the basics of plumbing yourself or 2) search for a good plumber in your area and develop a relationship with this person. If you're really interested in the details the most common items are: 1) water related issues such as the garbage disposal, faucet and leak under the sink, 2) leaks related to the ceiling or a window solved by basic patching and 3) a dishwasher leak or a toilet leak.

In our experience, you're actually better off leaving a few items that solve the majority of the issues in the apartment itself. *We would recommend leaving a high quality plunger in each unit along with some liquid drain cleaner under each sink.* This doesn't sound like much but it can help save time and you will be happy to have less phone calls even if they use all of the fluid. Better to lose a few dollars and decrease the number of phone calls even if the issue isn't your personal responsibility.

For the bug related issues? The easiest solution is to have the units sprayed every few months. This typically keeps the bug issues to a minimum. Similar to our recommendation on leaving some

basic items in each unit, you can do the same with some bug spray as well. We realize both of those items are more unconventional, but if you've got young adults as tenants we've found they have no problem using it and fixing it since they want it done immediately! By having all the necessary tools in the unit they usually solve it themselves.

If you run into a major issue such as replacing a furnace, a broken garbage disposal or a hot water heater that you cannot solve within a day, this will be done by someone else (unless you have the skills, we wouldn't embark on bigger projects).

As you can see, by reading between the lines, we think taking care of the basic items is helpful for the first couple of years. You'll get a good idea of the typical problems that spring up and how much it will cost to fix them. If bigger items come up over the first 3-5 years of renting your properties, you'll also have time to develop a relationship with plumbers/contractors in your area.

In short, take the small issues into your own hands and don't bother with the big ones.

Enforcing the Rules: You're essentially all set at this point, collecting rents and putting everything into auto-pilot. Even if you've done a good job with screening we have no doubt you'll have people say "the check got lost in the mail" or "I was on vacation" a few times (or "my mother's cousin's boyfriend's dog's best friend died and I was too depressed to work!"). This means you have to be tough and enforce the lease. If for some reason you have a tenant who has been in the apartment for over 5 years and actually forgot, you can be lenient on that by a few days since the key word there is "over 5 years" without being late on a single payment. That's essentially our line. The first 5 years you enforce everything to the letter of the contract and if they are great tenants you can then allow them one error per year or so. This sounds harsh but it is the reality of real estate. Instead of saying "oh he was nice he let me pay later I'll take good care of his property" they will think "oh he let me pay late *he is a pushover time to do it again!"* And be assured, if they are missing payments for anything they have a hierarchy of payments which you want to be at the top of, i.e. they aren't letting their cable bill lapse first, can't miss NFL Sundays! … and that phone bill better be paid on time, those memes aren't going to send themselves!!

Another way to make sure checks are not missed is to open multiple avenues to pay. You can accept anything from a payment network (Dwolla), a standard check and you can even accept Bitcoin if you want! By opening up a lot of payment avenues the number of excuses will decline. If some of the payment avenues cost a few bucks per transaction it is better to keep the cash flow numbers in-line than consistently deal with missed payments.

The last item under the rules section is breaking a lease. Remember, we prefer 2 year leases because it decreases turnover and if someone wants to leave they now have to pay a fee for doing so. Stick to your guns and have them pay the lease break fee if the time comes. They will absolutely make up a sob story about why they are leaving (vast majority of the time it isn't true) so simply take the lease payment and move on. This sounds cut-throat but it is how the world works. We have no doubt that the vast majority of successful real estate investors will agree with being smart about enforcing the contracts.

Also as an alternative, it can be a good idea to have them get involved with finding the new tenant to take over the property, as they will be motivated to get the new person in fast as that will

minimize the amount you will hold them responsible for (by law, can't double collect rent). So other than an actual "lease break fee" they wouldn't have additional costs (and if you're running your business ethically, and have zero vacancy and the repairs or lack thereof go smoothly and are paid for by the previous tenant, there is little reason to charge a cooperative tenant).

When Things Go Bad: The reason why you're strict with the rules? Well things can go bad in a hurry! We have no doubt different issues will arise such as an eviction, drug abuse or illegal pets. These headaches are rare if you're following our outline but one of them will likely happen over the course of a few years. The three strategies for problem tenants are as follows: 1) ask them to leave, 2) pay them to leave and 3) evict them.

Strategy one rarely works where you simply ask them to leave. We've found that this only works when there is some conflict with a neighbor (essentially a personal issue). In those rare cases asking one of them to leave and giving them a time-line typically works out for the best.

Strategy two works the best. Surprise, surprise when you mention *money* people suddenly become interested! Who would have thought? The reason why you would offer money for someone to leave? Time. Evictions cost money as you have to go and obtain a lawyer to make sure each step is processed correctly. If you try to do everything yourself you could misstep and end up in hot water (always get a lawyer). Strategy two works primarily for people who have come under financial duress. It is much more likely that they will take the money and run.

Strategy three is the standard eviction. As a note, we have not had to do this as we've only had one situation where we've asked someone to leave (neighbor conflict). If things escalate and you have to evict a tenant make sure you follow the rules to a T. You hand them the eviction notice and/or tape the notice to the door. Then work with your attorney and go through every step one by one *correctly*. This will take a lot of time and hurt your cash flow but it is better than taking on additional risk by doing it alone.

As you can see, we only have three solutions to tenant issues. The standard response is *"why don't you have a heart to heart with this person"*. We can't help but laugh at these ideas because you're running a business not a playground. Conflict resolution with emotional appeal rarely works when there is money at stake. *The best strategy by far is strategy #2.* If the person is creating a lot of issues, you're better off eating the cost and essentially encapsulating that outflow into your "occupancy rate". Much better to lose a month of income than deal with an on-going headache for the next 3-6 months.

Congrats You Are Done! You're free to read more detailed books on Real Estate investing, overall you'll see the overview is essentially the same! We're just taking a multi-tenant property approach. For quick bullets here is the summary:

1. Stick with Multi-tenant properties where you'd say "I wouldn't mind living there" but don't hate it or love it
2. Go with standard financing since they offer the best risk to reward ratio for a beginner (you can obtain up to four different quad-plexes with leverage). And. If you have a lot of cash, buy with cash. Get the property rented and take out a loan on the higher annual income you're generating.

3. Do not break the math on any property as it is a recipe for disaster
4. Learn to negotiate and remember: knowing the seller and putting yourself in his shoes will lead to the *correct* negotiation tactic
5. Get used to hearing a lot of "No's" because if you are offering too much that's bad and if you're offering in the negotiation range you're going to have some back and forth before closing
6. Be strict with your leases and remember that "paying someone to leave" is typically the best option for a bad tenant
7. Learn how to fix basic issues so you get a better sense of how much things cost
8. Do everything you can to protect your long-term reputation both as a buyer of properties and as a landlord. Being fair but firm is an art. Never be offended when people counter offer any of your bids
9. Never break the law and keep up to date on any new changes to taxes related to real estate. This won't take a large amount of time. After being involved in the space, you'll be up to date on the major changes
10. Remember that Real Estate is a long-term game. Lots of work up front but after that it becomes smooth. So get in the game long-term and we recommend 1031 exchanges so you can pass the property on to your kids or… you can avoid capital gains taxes forever!

One More Thing… This doesn't need a full explanation since we've given you a long and detailed explanation of how to do Real Estate investing successfully. Once you learn how to manage a couple of multi-tenant properties these skills transfer directly into crowd sourced real estate investing. If you get to a point where you're no longer interested in dealing with property managers you can turn to crowd funding. This requires the exact same skills, you'll look at each property, do the high level due diligence (all the steps here) and instead of having to go through everything you stop at the math and location section. If everything adds up you invest.

If it doesn't, you laugh at the poor souls who buy into a bad deal! (Yes that was a joke but it is true if they don't know what they are buying). We prefer picking each deal specifically instead of the shotgun approach.

Additional Details

To make sure you have everything in one section, we're going to address some other strategies that work. While we don't recommend them since we assume this will be your third source of income, we will provide the overview for the sake of completion.

Different Types of Homes

Standard Single Family: The advantage of a single family home: Less turnover, more options and more price appreciation. The downside: more expensive on a per unit basis, each purchase counts as one of your four mortgages and it is much more difficult to scale a single family home business (you're pushed out of standard mortgages and into different loan types).

A Fixer: We'll use this as another example since it can be applied to both multi-tenants and single family homes. The advantage: significant property appreciation, less money needed to purchase the asset and less competition since it requires a lot of work. The disadvantage: your cash flow

calculations could be thrown off entirely by higher than expected expenses to fix the property, material loss in time due to fixing the property and of course securing the loan is much more difficult as the bank will be less likely to give you the loan in the first place!

Turn Key: This is essentially the last common way to build wealth. It is certainly a good alternative to multi-tenant properties since it is hands off and you can obtain leverage. The problem is that you're putting all of your trust into the managing company hence the phrase 'Turn Key". If you end up going down the multi-tenant property and want something a bit more hands off, scaling this way can work. Just remember, the turn key property is not their *best* property. If they found a real gem they would manage it themselves! We sound like a broken record but, this is yet another reason to do your first few years alone. You can accurately estimate the return profiles of each property.

Condominiums: Generally, most real estate investors focus on: apartment complexes, multi-tenants, single family homes, fixers and turn-key properties. For simplicity, you can see we consider a quad-plex and small apartment complexes as the same. If you're getting to that level you've already made the right choices… so no need to explain those transactions to someone who already knows what they are doing!

Condominiums can be cash flow positive, the problem is that you deal with many more headaches. The mortgage rates are higher, the HOA fees can be egregious and the property could be run poorly creating additional charges for you in the future (charges added to your HOA).

The good news? If you decided to purchase an apartment as your first real estate investment (for yourself) you can always rent the unit out after you move. Condominiums are good for upgrading your life to a new apartment without selling the old one. We just don't recommend buying a ton of apartments to build wealth, you're better off with multi-tenants, apartment complexes and even single family homes.

Below is a quick overview of the differences. Every real estate investor has a different view and this is meant to be more of a broad overview that summarizes the prior paragraphs and our opinion on Multi-tenant properties.

The Quick Comparison: The Best and Worst

	Multi-Tenant Property	Single Family	Turn Key	Fixer	Condominiums
Best for…	Cash Flow	Supply	Saving Time	Appreciation Upside	Upgrading Lifestyle
Worst For…	Appreciation per Unit	Scaling Fast	Having Control	Risk Tolerance	Big Long-term Gains

1-10 Ranking: The Higher the Number the Better.

	Multi-Tenant Property	Single Family	Turn Key	Fixer	Condominiums
Cash Flow	10	8	7	8	6
Repairs for Appreciation	7	8	6	10	6
Natural Appreciation	6	7	6	9	6
Ease of Management	7	8	10	5	7
Control	8	10	5	7	7
Scale	10	7	7	8	7
Re-sale	8	9	8	9	7
Occupancy Rates	7	8	9	8	7
Unforeseen Costs	7	6	7	4	6
Ability to Get Management	9	8	10	7	6
Total	**79**	**79**	**75**	**75**	**65**

We tried to make the comparison less biased. Many people prefer to do single family homes and make quite a good living with this strategy. That said, we think it is fair to say that people who do multi-tenant properties also do extremely well for cash flows versus appreciation. The turn-key is essentially lower risk lower reward and the fixer is higher risk higher reward with a similar overall "total". To cap it all off, we don't recommend condominiums as you're adding additional headaches with HOA boards and other rules for renting apartments (it can still be done but is typically a lot slower).

LLC Not Always Necessary

Why an LLC? We are recommending an LLC since we assume you'll be doing this as a third form of income to continue diversifying your income streams. The main reason we suggest this? Legal issues. First it limits your liability (hence limited liability company). If the renters know you own the asset outright it is much more likely they sue and the lawyers salivate at going after someone with a high net worth. The second reason is it makes your taxes a lot easier with the benefit of having less liability since you can simply add it to your schedule C (single-member LLC). Naturally this gets more complicated if you scale. *Overall, an LLC makes sense if you already have a high net-worth.* If you want to know one downside about being rich? If other people know you're rich they will do anything to squeeze money out of you.

Why No LLC? To keep everything clean in this section the reverse is also true… If you don't have much money and you're buying your first property with leverage, there is no real need for an LLC since you're not protecting much. Also, if the lawyers look at your property and find there is a large lien on the house (do this as a protection strategy, it is called "equity stripping"), they will know you don't have much money anyway and are less likely to sue. Using an LLC is essentially used to protect you from future issues such as lawsuits. If you don't have anything to lose, it's not worth the time and effort to set up for now. Everyone has their own risk tolerance and once you feel that you've accumulated a decent financial stash of money, you will likely flip to an LLC (or another type of corporation, talk to a professional as always!)

Buying Your Own Home

While this is an investment product we do want to touch on your own property (very briefly). The basic rules that we'd follow are: 1) make sure you're 100% certain that you will live in the same city for at least 5-10 years; 2) going overboard usually leads to properties that are not easily sold making them poor long-term investments and 3) ideally buy one you can make small upgrades to.

The first one is likely the most important. If you're young, staying liquid and mobile is of immense value. Therefore, we think of Real Estate as a "later stage investment" if you don't intend on pursuing it as a long-term business (your primary company/career is not in Real Estate). Once you find a city that you'd love to live in long-term, the math begins to work in your favor since your monthly payments will slowly go away. Once you're paying property tax and basic maintenance costs, the total cost of owning versus renting becomes vastly different. *The issue is time.* If you're able to stay in the same city for at least 10 years then it is unlikely going to be a poor long-term decision both as an investment and for your own standard of living.

The second item is simply a common mistake. Many people get their first pot of gold and suddenly spend a large amount of money on a luxury home/apartment. While there is nothing wrong with doing this, the re-sale value must be taken into account. There is always a line between the impossible to sell mansion and a nice high end apartment/home in a good area. This is going to be your own line to draw and for fun around 4x the median apartment/house value is when you begin knocking on "difficult to sell territory". If the average apartment in New York sells for say $1 million, if you're buying a $4 million dollar place it's getting out of reach. This applies as a good general rule, but you're free to break it since it's your home! Just remember, resale value and ease of renting matters if you ever want to leave the apartment/house.

The third item helps hedge your own bets. You're likely going to spend a little bit more since it is your home. You may as well choose one that needs some upgrades. You have 10 years to make improvements and you also decrease the risk of paying a bit too much for your first personal apartment/home. If the apartment/house was in perfect condition when you bought it, we can all but guarantee you overpaid for it! Emotions are hard to control when you know you'll be living there for 10+ years, so give yourself some wiggle room.

Putting the pieces together, if you're staying in a city for at least 10 years, feel free to pick up a nicer than normal place that may need a few repairs/upgrades. If you go overboard remember that real estate is *displayed* wealth which will attract a lot of unwanted attention once word gets around. On a positive note, it can be a solid long-term investment and improve your overall standard of living without attracting too much of the wrong type of attention (if done correctly!)

Overview of Crypto Currencies

Welcome to the fun part of the book! Saving the best for last: Crypto Currencies. Up front you'll find the important parts: why you should care and how to invest. In the back we'll touch on how the technology works and leave it up to the reader to decide how much time they will invest into keeping up with the rapidly growing space.

To be crystal clear here the first three sections are "overview in nature". Part 1 is why you should care. Part 2 is a basic explanation of several coins. Part 3 is our *opinion* on how to invest if you don't want to learn anything about the space. Part 4 is a high level understanding of how things work now and where we are going in the future. Part 5 is high level opinions and ways to make money without even investing in crypto currencies.

As a bonus, we came up with a way to keep everyone updated that also prevents us from charging for another crypto related product (winning situation for our readers!).

Part 1 - Why You Should Care

This is quite simple and is still mis-understood by the media. 1) crypto currencies allow individuals to establish trust regardless of boundaries, 2) it is a dis-intermediation technology for the *vast majority* of middlemen which ranges from a bank to casinos due to *decentralization*, 3) speed and security are two of the largest items of value in technology and long-term, crypto currencies will offer both (speed is currently slow but will be improved), 4) if it works, this would cause a major generational wealth transfer as fiat is abandoned, 5) governments in theory would now be forced to compete for the best and brightest talent to live in their country.

1) Establishing Trust: This is probably the most important piece of the equation. Before crypto currencies, we leveraged the trust of intermediaries to place transactions with strangers. Banks are the most obvious intermediaries as we trust them to send and receive "value" in the form of fiat currency. If you were looking to purchase goods in a foreign country the value was confirmed by the bank and converted into the fiat currency of the receiver.

You → send money to Bank A → Bank B receives the money in a foreign country → converted and now in bank account of the receiver in converted value.

In the new world You → send Crypto (small mining fee) → receiver obtains the coins.

In the new world, there is no need to use an intermediary as both the sender (you) and the receiver know the transaction occurred. It is displayed on a public ledger (blockchain) that shows both the sender and the receiver that the exact funds were sent. *In this new environment you are acting as your own bank*. Your "wallet" is essentially a bank account that goes up and down in value as you send the crypto currency. There is no need at all for the bank so it is disintermediated. The word disintermediation is critical here since there is no "value add" for the bank to provide in this environment (we're sending value directly to one another). Prior to the creation of crypto currencies we had to use an intermediary to establish trust. If we do not use crypto currencies, we're *forced to pay* an intermediary to convert our fiat into another form of fiat consistently.

This is essentially the first "application" of crypto currencies because it was the most obvious. If we can trust each other since both participants receive a copy of the transaction, money is the clearest immediate use case.

Using "digital gold" and "currency" is actually a weak way to explain the value here since these analogies show no real value. We already have physical gold and we already have currencies. The value is in the ability to *remove the middle layer*. That middle layer is valued at trillions of dollars per year because we have to include: 1) international remittances, 2) all supply chain payments – how many goods are created overseas now? and 3) security, as your bank spends a large amount of money making sure their databases cannot get hacked. To emphasize a point here, these three benefits are just the tip of the iceberg as we've only touched on the opportunity as it relates to sending and receiving "value" directly.

2) Disintermediation of Middle Men: This section will be quite difficult to understand if someone is new to Bitcoin alone (ideally the typical reader of our blog already has a working understanding of Bitcoin or else the section will need to be re-read at a later date). The current and most common middle man being removed is a bank. And. We can now remove many more middle men who hold a lot of power. These middle men include: prediction markets and even applications like Uber and AirbnB. Now we don't think we're anywhere near this phase of the development (where every day people will be shifting to blockchain related ecosystems). That said… There are many ways decentralization can remove more middle men.

Pausing for a second to make sure we are clear. Decentralization means there is no *central* control. This could range from Uber to Airbnb where an employee could easily get access to your information (where you live, where you are staying on vacation etc.). To a record/music company who "chooses" which musicians are better and take a cut of their profits. We are expanding from banks "central control of money" to other middle men who have "central control of information or data".

To hammer this example home you can think of anyone who has your information. Hello Google! Every single time you use the Google search tool or make a purchase with your credit card, the information is then fed into a central entity. This information is then sold or even stolen. Imagine if we could use the internet privately without having all of our information sold resulting in annoying credit card offers we never signed up for in the first place. That is the power of decentralization.

3) Faster and More Secure: The speed part is under development and will be solved shortly (lightning network to be covered later for the techies). Even without the current speed issues being solved, sending $1,000 to China takes a few minutes using crypto currencies *vs. a couple of weeks* using the current banking system.

Imagine you're the provider of the goods and services (seller) and you had to wait ~14 days to receive your money. You'd be outraged. This essentially forces you to wait for long periods of time to receive payment for something you completed several weeks ago. Not only did you wait 14 days but you also received less money due to middle-men fees such as wire transfers and foreign exchange fees.

The security part comes from the blockchain. Each party is able to confirm that funds were received within a couple of clicks and the transaction is done right before your eyes in a matter of minutes (soon to be seconds).

4) Generational Wealth Transfer: Here we should be able to convert wealthy individuals that are on the fence (and young individuals who want upside potential!). In the case that crypto currencies become the de-facto medium of exchange, those with *all* of their wealth in fiat currencies will see consistent devaluation as people shift into crypto currencies. The supply for many of these coins are capped and the usefulness is only going up as of today (which would drive the value up as more people adopt – network effects).

One of the most important aspects of a crypto currency is that it requires *no* permissions. *This means it is a medium of exchange that cannot be shut down without shutting down the internet.* Visa, a Bank Account etc. can all be shut down with the click of a button by the intermediary. This is exactly why the growth of crypto currencies would drive up in value. Why use a form of money that can be seized at any moment? Hopefully, that sentence alone has converted many people to at least own a small fraction of their net-worth in crypto currencies.

Another way to think about this wealth is the amount of money that is held in offshore accounts such as the Cayman Islands (Trillions of Dollars – Ari Paul has a good interview explaining this concept). Crypto currencies actually offer a better solution because it is *permission-less*. Since you own the keys to the wallet, you don't even need to store your money in a tax haven such as the Cayman Islands. Instead, by memorizing 12 words, you can now have access to millions of dollars so long as there is an Internet connection. Why allow an intermediary to have control of your money? That is a significant value proposition.

5) Government Competition: The final point is quite extreme and interesting. If we no longer need central banks (banks in general) to send value… How will a government operate? The question has no real answer.

Since this is opening a wide array of issues, our take is that the government will be forced to compete with other governments for the best and the brightest. By definition this also means that countries who adopt crypto currencies first will become wealthy. If we find a medium of exchange that does not require permissions, the tax revenues begin to decline as it is incredibly difficult to track (the same way that Bit Torrent impacted file sharing).

For those that worry about a "Fed Coin" this misses the point as we would return back to point number four. If you had to choose between two types of money: 1) that cannot be stopped and you can send and receive at will and 2) another type that is tracked and can be stopped… which one would you choose? Any person, including millions of law abiding citizens, will choose the free currency since it has less risk built into it.

How to Invest and Secure Your Crypto

Now that you understand some of the biggest reasons to at least be involved in the industry, it's time to explain how to invest. Investing in crypto currencies is more complex than a buy and sell ticket on a brokerage account since you are personally responsible for your money. After all, you're

the bank so the responsibility is on you to keep your money safe. Trusting a third party (exchange) would defeat the purpose of owning crypto currencies in the first place.

Step 1: Ideal Acquisition of Currencies: Once you have identified the currencies you wish to purchase the first course of action is to sell something to acquire them! That's right. Ideally you acquire your crypto currencies by 1) selling a product in exchange for them or 2) you purchase them in a peer to peer fashion (Local Bitcoins for example). By doing this you're putting less of your information "out there" and help the ecosystem by creating another avenue for spending (the products you sell). Remember, if you decide to simply purchase them from an owner of coins, the network effect is less pronounced but it is still better than purchasing them from an exchange.

Step 2: If You Can't Find Sellers: Assuming you cannot find a clean way to acquire the currencies, we would then turn to an exchange. An exchange such as GDAX or Bittrex will allow you to exchange fiat currency for crypto currencies. The downside is that your information is uploaded so the government will absolutely know that you purchased crypto currencies in the past. If you're a long-term holder this doesn't make a big difference but as stated in step 1, if you can do it right… always do it right.

Step 3: Securing Your Coins: This is probably one of the most important sections you'll read. If you leave your money in an exchange you could lose *everything*. Look at Mt. Gox which resulted in the loss of 850,000 Bitcoins (don't bother doing the math it is a *lot* of money!). This can be avoided by storing your money offline in a hardware or a paper wallet.

The two easiest ways to store your coins are with a hardware wallet: **Trezor or Ledger S**. These two storage devices are essentially "banks". You'll receive a long password and also type in a pin into your new device. Once you're set up, you send all of your funds into this device and unplug it so that it is offline in cold storage.

For those that intend on obtaining a large amount of crypto currency, you'll go ahead and memorize the private key password. This can be done on paper (unfortunately easily destroyed), or through engraving which we recommend. By engraving the password onto a piece of metal (or on a ring for example) you would engrave the entire password excluding 1-2 words which you then memorize. By doing this you can now enter any country with an internet connection and obtain access to your funds. While the Trezor or Ledger S will make it a lot easier to use, the most secure method is by memorizing this private key password and putting it on something that is difficult to physically destroy.

Note: some currencies cannot be stored on a Trezor or Ledger S. If you have to store on your desktop/laptop you will want to disconnect it from the Internet. An extreme safety precaution (for those with a lot of coins) would require you to get the addresses and disconnect the WiFi capabilities.

Step 4: "HODL": This is a phrase used by long-term Bitcoin investors. We're sure you've figured out that we used the same strategy (acquire a while back and talk about it once it goes mainstream such as now). HODL means "Hold On for Dear Life". The price will fluctuate dramatically over the coming year due to the influx of institutional money, limited supply and potential for more "HODLers" which restricts the supply by an even larger amount.

As you can imagine, this is also the strategy we recommend. Unless there is a severe change in how the technology functions, we would recommend buying and holding the currencies you believe in. Unless you are making significantly more than you earn in a year by trading the coins, you're better off with the HODL approach. By buying and holding you spend all of your free time accumulating more fiat + crypto by accepting it as payment.

Step 5: Never Reveal Your Holdings: Saying you own some crypto currency will be obvious if you accept it as payment. The key is to avoid a big "reveal". Never reveal how many coins you own. This opens you up to a lot more risk as it makes it possible for people to figure out which wallet is yours. Ideally, you'll rotate the address in which you receive funds by constantly rotating (a simple click on a hardware wallet such as a Trezor or Ledger S allows you to rotate your addresses). If you follow these precautions you'll be largely insulated.

For additional protection, if your holdings become large, you should then obtain multiple wallets. Wallets have no identity (no need for any of your information) so holding a few wallets with a large amount of money makes a lot more sense than owning one wallet with all of your holdings. Why? In the rare case you lose your private keys, you would lose every single Satoshi in that wallet. Any hacker who obtains the keys to a wallet is going to drain every cent, they will click send max and remove all funds.

Part 2 – Explanation of Several Coins

With the main points done you should be extremely interested in owning at least a little bit of crypto currencies. Why? The future is quite bright since we've only talked about the most basic use case "store of value" and sending. Now… What if we could secure an entire network and disintermediate middlemen across the entire Internet? Now what if this already exists. Now what if it already works! Well guess what, you're in the right place. It does exist and it already works.

In the past, we were unable to really invest in the protocol. To be more specific for the non-tech savvy people, you can't really invest in "the internet". This means you can own Facebook stock but you're still investing in something that was built on top of the internet (a middle man monetizing a community). Now, with new protocols that are secure and (becoming) scalable, you can actually invest in the entire internet. No we're not talking about TCP/IP but the flexible Blockchain that will secure the entire network. If you could invest in everything being built on the internet in 1994 wouldn't you? You sure would!

With the fun and exciting paragraphs out of the way we can jump into each "sub-segment" in the space and how they are different. Each crypto currency offers a different value proposition and some will certainly fail. But. Having a framework to group each one should help you decipher which coins are of most interest. The section below is a high level overview of several coins.

Store of Value and Payments

Bitcoin: Bitcoin is the most "famous" crypto currency. With Bitcoin, a new asset class was created that is entirely digital. As mentioned earlier key characteristics include: decentralization (disintermediation of banks), immutability (cannot be faked), and digital scarcity (21 million limited supply). The achievement of these characteristics are important because it allows money, which

serves as a medium of exchange, a store of value and a unit of account, to be redesigned and reengineered to fit better for a "world" currency, accepted anywhere with an internet connection.

Satoshi Nakamoto: This is the anonymous creator of the Bitcoin network. For fun, we believe the creator is more likely a group than a single person due to complexity of the code. That said, the person/people is irrelevant. Why? *It cannot be "hacked" or changed by a single person due to the source code being public*. Many people are used to a "CEO" or a person being in charge and that would be a key risk. In this case, you're looking at a digital asset that is backed by mathematics.

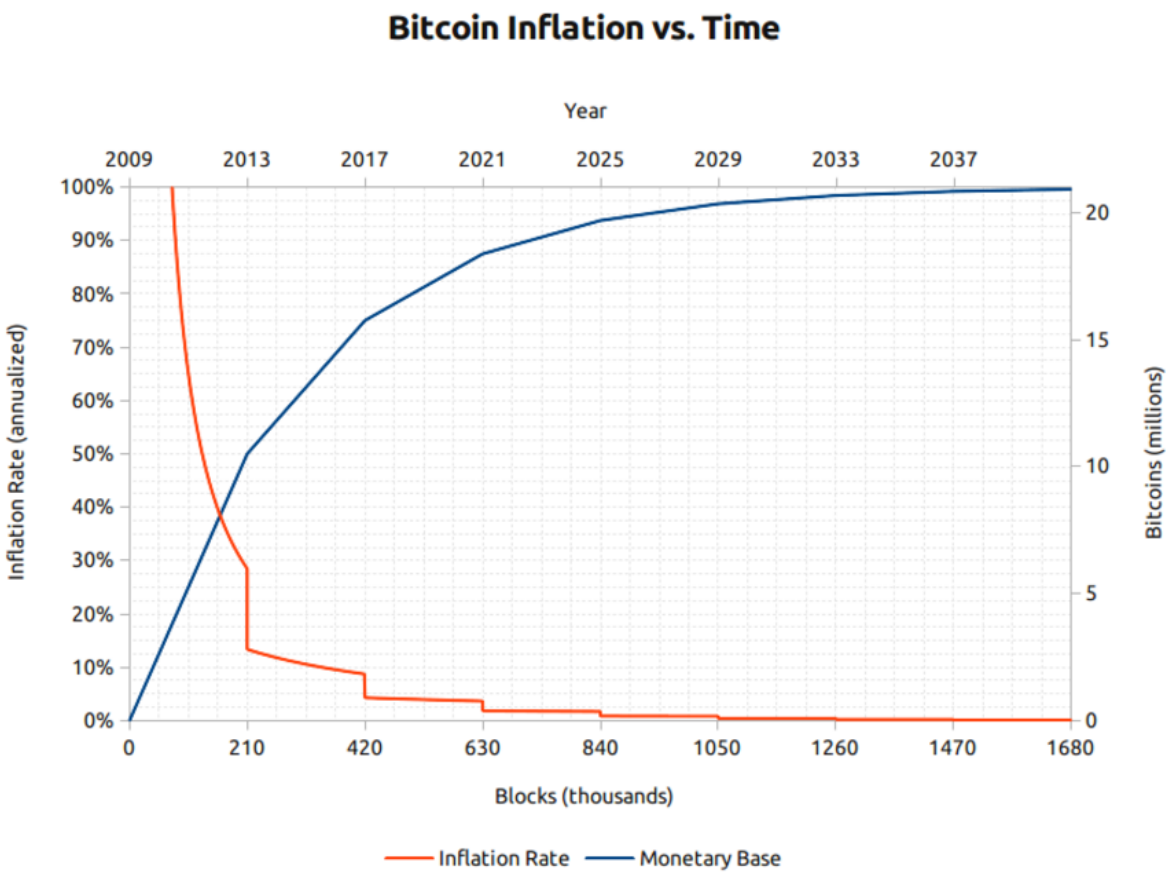
Blockchain: The Blockchain is a digital and distributed ledger that requires no trust from a single central entity or authority (backed by math). The collection of debits and credits of the underlying "Bitcoin" that are made are not kept within a closed system. Any computer in the world can attain a copy of the Blockchain. It is a database that is secured by all that partake in the ecosystem. The ledger is secured through a process called Proof of Work.

Proof of Work: This is how the Bitcoin protocol ensures that all of the computers have the same and most updated copy of the ledger. Also, the computers agree on the groups of transactions that will be added to the most updated copy of it. These groups of transactions are put into a block, which once verified, will be added to the Blockchain. There is only one accurate Blockchain displayed to all users. While we hate analogies, the best way to describe it is a "reply all" to everyone BCC'd in a massive email system. This way when the email is sent everyone receives the exact same message so they know it happened and have digital proof (along with the time stamp). You cannot send the email without every single computer receiving this BCC.

Cryptography: In Bitcoin's case, this is commonly referred to as the SHA256 algorithm. The computers that solve these cryptographic computations are called miners. The miners are rewarded for updating the blockchain for everyone to view: *rewarded with block reward and mining fee.*

The first incentive to verify these transactions that make up the block, come in the form of transaction fees. Each credit or debit transaction that takes place in the system has a transaction fee. Miners compete to solve and verify these transactions as fast as possible. You can pay a higher fee if you would like to have the transaction confirmed in a shorter amount of time.

The second incentive is the built in monetary policy of Bitcoin. With the confirmation of each block, new Bitcoins are introduced into the system. This is called the "Coinbase transaction" (now you know why one of the main exchanges is named "Coinbase"). When Bitcoin was first introduced, every block had a Coinbase transaction of 50 coins. Every 210,000 blocks, or approximately 4 years, this is halved. By 2140, all bitcoins will have been released and the vast majority will be mined by ~2025 (over 90%). Below is a supply schedule and inflation rate graph that reflects this trend built into the Bitcoin Network



Source: Bitcointalk.org

These two economic incentives with the combination of cryptography promote security in the protocol, along with making sure that all the nodes (computers that store the most updated version of the blockchain) are accurate. With a hard limit of 21 million Bitcoins, through the decreased size in the Coinbase transaction, Satoshi introduced scarcity, which make the miners continue to strive to attain the first two economic incentives. And. Having a hard cap (Computer code that will not allow the increase of supply above 21 million), poses a whole new set of problems outside the scope of this paper.

Some apparent problems introduced by Bitcoin is whether it has the ability to scale for global adoption. Given the size of the blocks, which is hard coded to being only 1MB, there is a limit to how many transactions can be processed every 10 minutes. The rough range is ~2400 - 2800 transactions per block.

Importantly, this debate created a contentious hard fork which caused a split into Bitcoin and Bitcoin Cash. In short, Bitcoin is going to be scaled off chain through the lightning network (essentially creating a channel offchain to allow for micro transactions) while Bitcoin cash suggested that the block size was the major issue and by increasing the block size, everything can now remain "on chain". The key items for Bitcoin Cash are: 1) larger block size, 2) replay attack protection and 3) changing rate of block reward which is why there are more BCH than BTC in circulation today. As you can see scaling Bitcoin (improving transaction costs) is not an easy solution and the debate ended up splitting the Bitcoin community.

Based on the paragraph above you can see that *we're partial to Bitcoin vs. Bitcoin Cash*. If Bitcoin Cash gets bigger, the block then needs to get bigger. So you'd be looking at a larger and larger block size. As the block size gets larger it gets harder and harder for a computer to participate in the network. As this continues to occur, you'd end up with a small number of massive data centers running the transactions essentially creating a central entity (defeating the purpose of the crypto currency). The flip side? Many people believe horizontal scaling will eventually be solved so the vertical solution (lightning network) will become less valuable. That said, you see our opinion in this paragraph in the underlined area. By betting against the lighting network you're essentially betting against the top tier engineers struggling to find a solution to privately placed network hops (using TOR).

As a final note, if you received a lot of BCH during the fork, we'd simply keep the coins. This is essentially an insurance policy if for some unknown reason BCH works and BTC does not (highly unlikely). If you don't have much (a few coins) then just convert to Bitcoin.

Litecoin

Litecoin is another cryptocurrency. It is almost an exact copy of the Bitcoin code, with some modified features. The goal of these modified features is to promote greater merchant/vendor adoption of cryptocurrency in general. While it is being marketed at "Silver" to Bitcoin's "Gold", the basic premise is for transaction for lower cost goods. Essentially, Litecoin would be used to buy coffees and clothing, while Bitcoin would be used to purchase homes and cars.

Feature Differences: The first feature is decreasing the block time to 2.5 minutes. With blocks happening four times as fast, Litecoin's supply is also 4 times the amount of Bitcoin, to the tune of 84 million. The halving schedule occurs every 840,000 blocks, which is 4 times as big as Bitcoin's. More transactions can be processed faster due to the decreased Blocktime.

Another modified feature is the cryptographic algorithm that the creator, Charlie Lee, chose to verify transactions and secure the blocks. Instead of the SHA256 algorithm implemented in the Bitcoin protocol, Litecoin uses a different algorithm called Scrypt. Charlie Lee chose this because he foresaw that if he chose the SHA256 algorithm, he would be competing for hashing power with Bitcoin. In other words, he would be fighting for the computer processing power that keeps the Bitcoin network up. He also believed in a more egalitarian distribution of Litecoin, and this is best achieved by choosing an algorithm that didn't incentivize people to create special computers (ASICs) in order to prop up the network. As a value of a coin increases, more and more people join the network in hopes of winning the Coinbase transaction.

Given how the algorithm is set up if anything malicious were to happen to Bitcoin's protocol, the entire ecosystem of businesses, applications that accept Bitcoin, can shift over to Litecoin relatively seamlessly.

As of this writing, it seems more and more apparent that Bitcoin has presented the first use case for cryptocurrencies, becoming an entirely digital store of value. Litecoin in theory can serve the role as a peer-to-peer Cash system.

To conclude this section, another interesting element to Litecoin is that it is typically ahead of Bitcoin in terms of technology development. The items that are added to the Bitcoin network are typically tested first on Litecoin. This is another interesting value proposition and we can look no further than Segregated Witness and the Lightning Network as two key examples of this occurring.

Monero

Monero is one of the first "privacy" coins. They aim to be the first cryptocurrency that is untraceable. From the beginning, Bitcoin was thought to be an anonymous cryptocurrency, which has since been dispelled. The Blockchain is a distributed ledger and through block analysis it is somewhat possible to figure out which coins have traveled to where. As an example if we know Bob has address ABC and he sends it to address XYZ… We know that Bob was the originator giving you the ability to begin tracking the progress of the coins.

Monero introduces the concept of ring signatures into all the transactions that take place in the network by the deployment of the hashing algorithm called CryptoNight. Through the implementation of ring signatures, the transaction details that take place on the Blockchain are concealed from the public. No one will be able to see which wallet was paid. No one will be able to see which wallet received. And. No one will be able to see the amount. This is implemented by default, which cannot be said for a lot of other coins. This algorithm also prevents special computer chips from being manufactured which would lead to huge centralization of mining equipment.

Monero also differs from most major cryptocurrencies as its supply schedule introduces a small degree of inflation for its entire life beginning in May 2022: 0.3 Monero will be released every minute, for a total of 157,680 additional Monero every year. Total outstanding by May 2022 will be 18.1 million units of Monero, so the inflation will represent approximately 0.87% for the first year.

One major con of Monero is its utility. The complexity of the mining algorithm has led to many complications in allowing the end users to safely secure their coins. This problem is not present in many other cryptocurrencies. There is still no hardware wallet that has the ability to store Monero properly. This is a disadvantage in the utility of Monero since you're required to use a computer. On the positive side, technology developments could solve this issue in the future making it more portable and user friendly to your average person.

Decred

Decred is a cryptocurrency that spawned as a fork from Bitcoin. The big difference is the governance model of the currency. Decred is a hybrid cryptocurrency that introduced and implements a concept called Proof-of-Stake where it gives power to the actual holders of the coin to influence the direction of where the coin wants to go. Not only can Decred be mined, but this also allows holders of the cryptocurrency to have a direct say in what new properties should or shouldn't be applied to the currency. With a stake in the currency, they believe this will align the incentives a bit more correctly, and more Efficiently.

In Decred, 60% of newly generated tokens go to Proof-of-Work (PoW) miners, 30% to Proof-of-Stake voters, and 10% towards a development subsidy. Bitcoin, by contrast has a 100% reward system to the PoW miners. With this "treasury" model, Decred allows developers to get paid for their work on proposals in the community approves the payout.

Decred also has a total supply of 21 million coins. 8% was pre-mined, before it was released to the public.

Zcash

Zcash is an important cryptocurrency because it was the first to introduce what's know as zero knowledge proofs. Bitcoin is open and permissionless, but because it is a public ledger, these transactions are not anonymous. A history of every bitcoin transaction is displayed for the world to see, and metadata can be generated and analyzed to see what transactions were used for or who it might belong to.

Zcash (ZEC) uses a new technology involving zero-knowledge proofs which allow one to prove something (e.g. prover owns greater than 10 ZEC) without requiring the prover to reveal any sensitive information (e.g. the total number of ZEC owned by prover). It gets its name from the fact that zero knowledge is revealed to the verifier in the process. The anonymous transactions produced from this technology are referred to as shielded transactions in Zcash. This technology is commonly known as zk-SNARKs (zero knowledge succinct non-interactive arguments of knowledge)

Zcash provides the option for transaction to be either public or private, as well as allowing the users to selectively disclose information about their transactions. The transparency is optional because there might be situations where things can be audited. The big difference between Zcash and Monero is the Monero transactions are by default, private.

There are two big downsides to Zcash that are often mentioned. One is the requirement of a trusted setup. People who use this currency have to rely on the Zcash team and their ability to set up the system properly. zk-Snarks is a new idea and has not been peer reviewed much with cryptography experts (this process makes it difficult – perhaps impossible to create a trustless mechanism). That said, many top programmers believe the value is not getting the attention it deserves.

Decentralized Compute, World Computers and Smart Contracts

Ethereum

Ethereum is a cryptocurrency with a public Blockchain that contains a powerful use case: *Smart Contracts*. Smart contracts are programs/accounts on the Ethereum Blockchain. The account/smart contract can have code stored on it that will execute a set of functions for an action to be performed. Since we have a good understanding of Bitcoin (so we hope after this chapter was read!) you can now create fill functions.

With Bitcoin all you can do is essentially send coins to a new address. With Ethereum, we can now create a fill function that is programmed (*"programmable money"*). The fill function can be as complex as you would like. A basic one would be: "If contract A is fulfilled release 5 ether to You". We have no doubt you can already see how this would apply to insurance. Fill an order based on something happening.

We can see there is tremendous value here as you can now program transactions without a middle man. Instead of someone holding the money for you, the funds are simply released based on the result of an event.

Now we get into the complicated piece, scaling up this programmable concept. Since we can create a secure layer for "contracts" what prevents a company from fund raising on the Blockchain? *The answer is nothing*. We can now create contracts that allow companies to raise money globally with an initial coin offering since the terms are written in.

This can create what turns out to be a massive token economy where companies can raise funds by creating a smart contract on the Ethereum Blockchain (or competing Blockchain). It allows for the monetization of many different concepts including vacant computing power on your laptop (ie. Golem, a token on the Ethereum network).

We realize the last two paragraphs are extremely difficult to grasp and explaining this in text is even harder. That said we'll use a few bullets to describe the process and will hopefully drive in the point after that:

- Ethereum is the Blockchain that runs decentralized applications and smart contracts. This is just a fancy term for "Building on Top of the Blockchain". When you build on top of the Blockchain, you're essentially safer because it cannot be hacked unless the connection point between the decentralized application and the Blockchain is built incorrectly (the DAO incident).
- Now you have an idea – Golem. You want to create an application that allows people to lend their computing power. You're going to utilize the decentralized internet protocol (Ethereum) to build this application. Remember, Ethereum is essentially the smartphone and Golem would be an application that you're clicking on.
- In order to fund your idea, you're going to do an Initial Coin Offering (ICO). You accept Bitcoins and Ethers to fund your idea.
- Now the complicated part is that the value of your company (Decentralized application built on the network) *will be driven by the number of people who use your application (network effects).*
- As more people use the Golem application, the value of the Golem token goes up

We have no doubt that better and better explanations will be made in the future. That said, the bullets above give a good view of how the world is evolving. *You're creating a community that uses your application that goes up in value as the application is used*. If your idea of leasing and renting computer power works **and** is scalable, the chances are high that people will join creating immense value for your coin and the baseline protocol layer as well.

The Negatives: There are a few downsides to Ethereum. It is based off their own developed coding language called Solidity. Developers who want to make smart contracts must be well versed in this new language in order to build a smart contract that is secure. Poor code has led to the hacking of many smart contracts including the DAO and the creators of the Parity Wallet.

Scalability is a huge issue that Ethereum is dealing with right now, in terms of transactions per second. Two heavily mentioned aspects of the blockchain are sharding (partitioning of a database) and "pruneable" blockchains. Casper is another major update that should move the entire system from Proof-of-Work to Proof-of-Stake algorithms.

Ethereum Classic

Cutting to the chase, Ethereum Classic was created due to the DAO hack. As mentioned in the previous section, the DAO was essentially an application built on top of the Ethereum Blockchain that was hacked. Poor code led to a large amount of theft. We won't go into much detail here since that is the most relevant item for this section. An application built on top of the network was done improperly leading to a theft and eventual fork.

The strongest point for Ethereum Classic is it's adherence for immutability. After the hack there was a group of people who argued against a fork to solve the issue. As a result, the original Ethereum forked into two different coins, the present Ethereum and Ethereum Classic. Ethereum Classic believes that even with the hack, the value of not voiding the transactions is crucial for the roadmap of what a cryptocurrency should be.

Ethereum Classic is essentially a hedge if the transition from PoW to PoS goes awry because Ethereum Classic plans to remain as a PoW coin (as of the date of this writing).

NEO

There are several other base layer protocols that cater to developers differently. The founders of all these have realized that the true value of a cryptocurrency are the developer ecosystems behind them. Ethereum presents many in-depth challenges despite having the most developers behind it. There seems to be some type of incentive to stay in the Ethereum ecosystem due to the mere fact that its network effect is the biggest, despite there being other projects out there that have already improved on some of Ethereum's shortcomings.

One of the newer cryptocurrencies that utilize the blockchain is NEO. Originally Antshares, the team rebranded to NEO in June 2017. NEO is most similar to Ethereum because it is a direct competitor. It is a currency that employs the dBft (short for Delegated Byzantine Fault Tolerance) consensus mechanism which is different from both PoW and PoS consensus mechanisms.

One of the main strengths of NEO is that the platform contains a compiler (a translator of code) for common coding languages. This is a significant improvement from Ethereum because it will contain a better developer ecosystem. Developers won't have to adjust and learn a new language like Solidity.

Another strength of NEO is that it is already Proof of Stake and does not require a transition from difficult transition from Proof of Work to Proof of Stake.

NEO is an iteration of cryptocurrency with government regulation in mind. The founder Da Hongfei believes that in order for the real world to thrive and transition into mainstream adoption is to keep regulators in mind and comply. They place particular emphasis on staying regulatory compliant. They are positioned to be a compliant Blockchain subject to ICO regulations, enterprise use and potential government integration.

Unlike most cryptocurrencies, NEO is a cryptocurrency that is not divisible. The supply is 100,000,000.

Ardor

Ardor is declared to be the first scalable blockchain platform. Ardor solves the Blockchain bloat problem by dividing Nxt into a forging chain and prunable child chains. Since it is built with Nxt technology, the features of Nxt, like Asset Exchange, Dividend Payment, Messaging, Voting, Shuffling and the Monetary System will be available on the child chains.

Lisk

Lisk is a platform for developing decentralized applications (dApps) that run on side chains anchored to the Lisk mainchain. It uses a delegated proof-of-stake (DPOS) consensus mechanism to secure the mainchain, while side chains are each responsible for their own security (basic explanation not 100% accurate from a technology perspective). The protocol uses a set of pre-defined transactions as opposed to a low-level scripting language like Bitcoin or Ethereum.

NEM

Although NEM's core developers abandoned their initial plan to start NEM as a fork of Nxt, choosing instead to start the project from scratch, NEM and Nxt are still fairly similar. Like Nxt, the NEM platform provides a pre-defined set of allowed transactions which applications can use as building blocks to create more complex features, as opposed to using a low-level scripting language to construct transactions, like Bitcoin or Ethereum.

Both platforms support a variety of "blockchain 2.0" features, like sending messages, creating and transferring assets, and sending transactions requiring the approval of multiple accounts (m-of-n multisig). And both platforms expose their functionality through HTTP-based APIs, so developers can use virtually any language to write applications for them.

The big price spike late this year was due to a WeChat app being installed.

IOTA

The first cryptocurrency that introduces a concept that does not use the Blockchain, but rather, a directed acyclic graph (DAG), aka the Tangle. Essentially a node wants to submit a new transaction,

it must validate two previous transactions, which it references in the new transaction it submits. This makes each transaction "free" since you're validating two transactions to get yours in.

While IOTA has seen a massive rise in value, we think it is largely due to hype. The long story short is there was an announcement in late November suggesting major tech companies had partnered with IOTA. Since the rumor/announcement there were many corrections and CNBC even removed some big name players from their articles. Price rises due to potential errors is never a good sign.

As you can see we're partial to the engineering team and with a rapid rise in price (IOTA) relative to its current team… We're just not that interested right now. If you've done your own research and think it's a great project then please feel free to ignore this!

Stratis

The goal of the Stratis project is to enable businesses to create their own customizable Blockchains, choosing from a set of pre-packaged features. Additionally, the Stratis Group, which guides the development of Stratis, will offer consulting services to help businesses find ways to use blockchain technology effectively, and presumably will also help them configure and deploy custom blockchains on the Stratis platform.

Part 3: How to Invest if You Don't Want to Learn Anything?

As you can see, the average person probably struggles to understand the last several pages. Even with a basic overview, it is almost impossible to avoid talking about complicated items such as: the lightning network, atomic swaps, zk-SNARKS, forks etc.

If you're uninterested in learning a lot about the space we would say *"Take an amount you're willing to lose and invest in two groups: payments and protocols*. Since you're taking a passive approach it is better to bet on the payment systems and the protocols since you can ignore the 1,000+ applications being built on the different protocol layers. Since you know our style of writing we'll break it down into groups and that is exactly why we positioned it first as "payments" and then the "protocol layer".

Payments

At this point, we are long BTC (*BCH & BTG as well but we assume they are zeros in the future*) / Litecoin / Monero. The reasoning is quite simple. All of them offer a different use case for payments and store of value.

Bitcoin

- Bitcoin has to be owned given that it is the *largest network*. The value of each currency is essentially driven by network effects. This means Bitcoin has the highest chance of being the defacto store of value. With the largest network it could essentially become the displacement for gold & off shore banking. To put some numbers around that, if you assumed that Bitcoin's value equals Gold that would put the price at ~$380,000 per coin
- Just keep the forks. While we have strong conviction that both Bitcoin Cash and Bitcoin Gold won't work long-term, just keep the stuff since it's a meaningless amount of money anyway.

Bitcoin cash is essentially kicking the can down the road by offering no long-term scalability solutions. We're happy betting on the lightning network which will likely become more privatized through the use of confidential transactions in the future

- *As a note: if you understand the technology we're saying to sell them for more Bitcoins. If you do not understand the technology we're saying to keep them. Why? Well your strategy is to simply buy, hold and forget. Doing tons of research would defeat the purpose*
- If you are entirely new to crypto currencies and own zero of each coin (BTC/BCH/BTG) then we're saying to pick up some BTC. Betting against the top engineers versus the most passionate people with minimal engineering experience generally doesn't work. Passion doesn't make money, technology and skills make money
- **To summarize:** If you have no interest in the space just keep what you have (including the forks). If you understand it, acquire more Bitcoin, Litecoin and Monero with Bitcoin cash and Bitcoin Gold. Betting against Bitcoin is difficult since you're betting against the network effect.

Litecoin

- We have a good laugh when people say Litecoin has no value and then the person admits that the Litecoin network is practically *always* ahead in technology development relative to Bitcoin (Segwit, Lightning network, and much more in the future). Litecoin should remain at a lower valuation than Bitcoin (due to a smaller network). That said, Litecoin will likely be used to purchase small goods and services in the future
- *Note: with atomic swaps, Litecoin would piggyback on the Bitcoin network in the future*
- Litecoin's advancements will help Bitcoin because the developments get a "test run" on Litecoin and are then deployed on the **massive** Bitcoin network. At the end of the day, the Bitcoin network is the dinosaur in the room relative to a large number of lizards. Risking an error on the Bitcoin network is simply not worth it. In basic technology terms, it is a "test network" similar to how you would run a new hardware device through a test before producing it in mass and releasing it to the public
- The last real advantage here is a clear team that is aggressively working to improve the code base (Charlie Lee et. al.). Unlike the Bitcoin network where there is no real figure head to explain what changes are coming, the Litecoin network has a clean individual leader.
- Recently, the founder Charlie Lee sold all of his coins. We think this is a **big** negative as he should at least own some of them. If you're going to be the quasi *"CEO"* of any network you should be financially tied to it in some way. That said, he is probably so rich at this point it is irrelevant and if he continues to work aggressively on the project it's not that big of a deal. Also, he may be concerned that he is able to influence the price (tweets) which is becoming a blurry line since it could be considered "pumping and dumping" an illegal securities practice in the future
- For those unclear, the definition of a pump and dump is as follows: "The fraudulent practice of encouraging investors to *buy shares in a company* in order to inflate the price artificially, and then selling one's own shares while the price is high". As you can see that would be a blurry line long-term and we would avoid buying any coins based on the recommendations of "influencers". It could very well be a pump and dump scheme
- Final note, after he sold we reduced dramatically and own a small amount.

Monero

- While Zcash is considered a privacy coin in some sense… Monero is the truly anonymous privacy coin. Zcash is not really private given that it requires a set up and the transactions are not necessarily shielded (there are two transactions a T and a Z, only one is private so if someone makes a mistake it is no longer private for that person)
- Monero on the other hand (Exhibit below) is entirely anonymous. It cannot be traced and has a small degree of inflation for its entire life beginning in May 2022

	Bitcoin	Bitcoin Cash	Litecoin	Monero	zCash
Use Case	Money & Store of Value	Money and Store of Value	Money and Store of Value	Untraceable Money	Private Money
Transaction	Publicly Available	Publicly Available	Publicly Available	Concealed from Public	Largely Concealed
Example	Address -> Address	Address -> Address	Address -> Address	??? -> ???	address -> T or Z address
Mining	ASIC	ASIC	ASIC	GPU	GPU
Algorithm	SHA256	SHA256	Scrypt	CryptoNight	Equihash
Block Reward	12.5	-	25	5.6	10
Max Supply	21,000,000	21,000,000	84,000,000	Not Applicable	21,000,000

- We're sure you've figure it out! But for additional clarity. What industry wants 100% privacy? Yes you guessed it, the illegal drug market. In addition to the illegal drug market we have no doubt that countries and corrupt politicians would love to hide their transactions as well. Who knows what is going on behind closed doors
- The illegal drug market is already a $2T+ market and this does not include other uses for a completely anonymous and untraceable money

Now, we are not saying to take our word for it. The space changes every five minutes. We wish that was an exaggeration but it isn't. Instead we're highlighting the critical elements that are needed for each coin used for payments to work: 1) scalability, 2) network effects, 3) supply/reward system, 4) security, 5) anonymity and 6) the engineering teams.

If there is no actual use case for the coin, then there is no reason to speculate on the future price. This will help you avoid a gambling addiction. A good exhibit of this is "Dogecoin". Dogecoin is quite literally a "joke currency" (honestly look it up on Wikipedia). And. The price of the coin does go up and down wildly. It has an infinite supply and is valued at under a penny (those are not typos).

Now that we've probably scared off the more conservative readers… They should really think about this seriously. If people are willing to create fake coins to confuse the general public, how serious is the community about disintermediating middlemen? ***We would argue extremely serious***. By making it difficult to understand the different currencies and technologies being developed, a vast opportunity opens up. As always, chaos is another word for opportunity.

Protocols

At this point we are also long Ethereum, Ethereum Classic, NEO and EOS. While Cardano is an interesting one, essentially the "Japanese Ethereum", we haven't done enough work to get involved in it. The reality is if someone wants to be extra safe they can add it to the list but as we've stated, we just don't know it well enough. The reality is we will probably buy a very small amount some time in February just to hedge our bets.

Ethereum & Ethereum Classic

- Ethereum is essentially the largest protocol for decentralized applications at this time. To avoid a lot of debate, we used the phrase "at this time" since we're still extremely early in the development of crypto currencies. We don't want to make an assumption and say it succeeds and also don't want to bet against the incredibly intelligent team working on the project.
- Ethereum has a significant team that is trying to scale and grow the network. The naysayers believe they can't scale but it wouldn't be wise to bet entirely against the largest network (eg. Bitcoin example). If your network gets congested it means it works and simply needs updating.
- As of this writing an outrageous amount of decentralized applications have been ICO'd on the Ethereum network. Remember, as more ICOs are added to a network the protocol should become more valuable *if* the ICO works. At this time somewhere around 90%+ of the ICOs we've seen have been done on… you guessed it… Ethereum. As the fraudulent ones collapse (many will be zeros) we'll then see which protocol had the best decentralized applications. The collapse of many of these ICOs will damage the network, while the success of the legitimate ones will drive material adoption
- Ethereum classic was the result of a fork when the DAO was hacked (the first attempt at building on top of the Ethereum network). The reason we avoid selling it is the same as the Bitcoin Forks. It's insurance against the failure of Ethereum

NEO

- NEO is a competitor to Ethereum and is different given that it uses "Delegated Byzantine Fault Tolerance" consensus mechanism to secure the blockchain versus the current Proof-of-Work mechanism being used on Ethereum (note Ethereum will switch to Casper in the future which is Proof-of-Stake)
- Essentially, the main engineers are Chinese which is why it is called the "Chinese Ethereum". An important distinction is the code base. While Ethereum uses Solidity, the NEO platform uses a compiler which allows you to use multiple different types of code (not forced to learn solidity)
- While we've pointed out the benefits relative to Ethereum, remember that network effects matter. We can't assume that Ethereum will fail just because of a few advantages of NEO and we can't assume that NEO will suddenly win due to a few bells and whistles. If this was the case, Litecoin would already be valued much higher than Bitcoin given that the technology is significantly better

EOS

- EOS is yet another OS where applications are built on top of the system. EOS tokens are then used to transfer value within the ecosystem
- EOS is interoperable with other chains and is built to be able to handle enormous amounts of transactions. Essentially, it simplifies the process of creating applications and performs communication between applications and a computer
- Dan Larimer is one of the main reasons many people got involved in the project as well. The creator had two successful projects with SteemIt (Blockchain based social media platform) and Bitshares (mostly known as an exchange, bank and currency). In short, he has had several

successful projects and many people are betting on his ability to succeed with EOS to create a better solution than Ethereum, NEO and Cardano
- EOS uses Proof-of-Stake to scale the system, voting for specific producers to make the major changes to the system (and mine the blocks). On the negative side of this system, block producers could freeze accounts and propose hard forks that damage the ecosystem

Cardano

- This is yet another "Ethereum Killer" (as you can see, everyone is trying to eat at Ethereum's current capitalization). Charles Hoskinson was originally part of the Ethereum team
- Since the number of transactions per second are clogging the Ethereum network at this point in time, it is difficult to solve the issues on a moving machine (Ethereum is already running)
- Cardano offers a couple of interesting solutions primarily: 1) starting with a proof-of-stake program and 2) deriving consensus over multiple blockchains. Essentially, if we use Bitcoin as an example where Bitcoin Cash and Bitcoin forked over vertical and horizontal scaling, Cardano offers both at this time.
- To wrap up the basics here, it is called the "Ethereum of Japan" since a lot of the developers for the layer are based in Japan

Conclusion: While there are a couple of other competing currencies and protocols that should be researched you can see we're partial to: *Payments:* Bitcoin, Ethereum and Monero and *Protocols:* Ethereum, NEO, EOS and Cardano. To make things extremely clear, we cannot guarantee any sort of success. The reality is that many of the items listed in this paragraph could be zeros. On the positive side, we think these have the highest chance of standing "the test of time". By looking specifically at the *engineering teams* we've narrowed down the choices. If you're going to place small bets on these currencies, focusing on the actual engineers is a solid strategy.

Now if you're interested in getting video overviews, we've come up with a novel solution. We've created a separate hidden page on the blog that will remain public. This allows us to constantly update this section of the book without being forced to do another iteration. We will dynamically update this page as we see fit with YouTube videos and other links explaining each technology.

The link is here: http://wallstreetplayboys.com/ccpf/

This way you can now get a brief video overview and we can reward the YouTubers with traffic since they created the content. It also makes the length of this product a moving target!

Part 4: High Level Understanding of How it Works

Welcome to the heavy part of the Crypto Currency section. We will try (*and fail*) to explain: 1) what has happened in the past, 2) how the technology works and 3) where we're going in the future. As usual, these are opinions are our own and we're starting from the bottom assuming someone knows nothing about the space.

Disclaimer: While this section will likely help you catch up… similar to every single crypto currency product created before it… *the content goes stale quickly*. Even the first technical book on

Bitcoin *"Mastering Bitcoin" by Andreas Antonopoulos* is out of date. That is a statement he alludes to in many of his YouTube videos. This is yet another reason why we created a separate hidden page on the blog to slowly add video content as new information presents itself.

How Does This Stuff Work?

Since we do not know where the reader is in terms of understanding, the first piece to grasp is decentralization. We'll use Bitcoin to start since it is the easiest to understand and three are many YouTube videos to watch that explain the process as well. This means that payments are being sent using the internet without an intermediary. When you use something like Venmo or Ripple, you're using an intermediary to fulfill the transaction. In the case of Venmo, not only are you using an intermediary (PayPal owns Venmo), but that intermediary interacts with yet another middleman (your bank). This is centralized and explains why scaling a central system is easy (you're building on-top of a centralized ecosystem).

We'll pause for a second. The two key items to understand are 1) no central authority and 2) difficult to change because there is no central authority. If we look at something like Microsoft Office, when there is an update, the Company just sends the packet to you. You click on the update link and it is done. You're now on the latest version. In the new decentralized environment, this is not possible. In order to make any update every single person on the network must "agree" to the change. Now you know why the changes are so slow. Even though we have solutions to a lot of the current problems, getting 100% agreement and implementing the change is not a seamless push function where a data packet is sent to all computers with the operating system.

How Does Bitcoin Work

- You create a wallet. This does not require any sort of identification. A wallet has files that give you numerous addresses that you can change consistently. You now have a wallet where you can use one address or hundreds of addresses.
- Each address does not have a name, associated with it. So we'll assume you just opened a wallet using any provider (not an exchange) so you'd see a balance of zero. Your wallet will have 0.00000 bitcoins but you have access to many addresses at this time.
- Each address is unique it comes with a string of numbers and letters. An example of a bitcoin address is 3D2oetdNuZUqQHPJmcMDDHYoqkyNVsFk9r. We used this as an example because it is the Bitfinex-coldwallet.
- Remember, you can have one address or 100 addresses on a single wallet. Each address is unique so if you find out a person has 1 address that has 1 bitcoin in it… it does not tell you how many bitcoins the person has. All you know is he has at least 1 coin.
- Instead of buying the coins you decide you're going to accept Bitcoin for an hour of your consulting services. In this exchange someone else will be sending you some bitcoins to your address.
- Here is where the cryptography comes in, in laymans terms each of you will have a special private key. When you created your wallet in the first place you're given a string of letters to memorize which is only visible to you. This is how you can "sign" and send transactions.
- After completing your consulting services you send the person your bitcoin address (not your private keys of course!), they then send you 0.1 bitcoins for your efforts.

- At this point you're waiting for the transaction to clear. On the blockchain you'll see a pending transaction for 0.1 bitcoins and 0 confirmations. Assuming the person paid the small mining fee ~111 satoshis (going to 1 satoshi in the future as we'll explain later), the transaction will eventually be confirmed.
- The transaction is confirmed by miners. A set of computers located around the world work to confirm the 0.1 bitcoin transaction. They see two addresses trying to communicate and a "reward" of essentially 111 satoshis is available to confirm each unique transaction.
- In more technical terms, the miners are creating cryptographic "hash" functions to create a specific hash value. Each transaction has a specific "nonce" that is needed, this results in extreme changes to the hash value
- Each calculation is specific to that transaction so there is no way to "guess" which nonce will produce the correct hash. This means they are simply guessing at random with computing power to figure out which combination of hash + nonce will work
- In addition to all of this guessing, there is also a "Coinbase" transaction that pays out bitcoins to winning miners. This slow supply increase is displayed earlier in this report. This reward will expire in the year 2140

Scaling Debate Overview and Our Opinion

With the basic process out of the way, while this may sound "perfect" the reality is that scaling is a material issue. In fact, the scaling debate resulted in a fork into Bitcoin and Bitcoin Cash. One camp believed that by increasing the block size we could scale "on-chain". The other camp decided to build an "off-chain" scaling solution with Lightning Network.

Imagine a highway with a bridge toll. If we have a million people on the bridge, it becomes harder and harder to drive. In addition, the Bitcoin system allows you to "cut the line" and pay a higher toll which gave us the 111 satoshi example as of this writing (bullets above). If you want to get to through the toll booth faster you pay 222 satoshis… 444 satoshis… so on and so forth. This is only an issue because so many people want to use the freeway! Now one solution is to increase the number of lanes on the freeway (Bitcoin cash) and another solution is to build vertically such that we have infinite room (for a second just imagine small planes or flying cars exist). By building vertical (layer two) you now have zero worries about the number of lanes and you can charge them a very small fee for "flying" through the check point/toll booth.

In short, when the system gets clogged should you build more lanes (horizontal scaling) or come up with something new and innovative that allows you to scale vertically where there is no upper bound limit? Now you see why we believe in the lightning network.

From our previous comments you can see that from a technical perspective we think off-chain scaling will work the best. By increasing the block size, you may be able to fit more transactions into the block (more lanes on the freeway) but… What happens when more and more people jump on the system? The answer is the file gets too big (bridge gets too wide) and you have a central entity since only a super computer can act as a node (only 1-2 freeways could ever support so many cars on the bridge).

While we recognize that the current solution, Lightning Network, has some central control issues since you're trusting specific nodes. We're betting on the A+ engineering team to develop more and more privacy features. Once the ability to scale to billions of transactions per second is solved, moving into privacy is the next logical step (example: making TOR networks the standard for sending – default).

Scaling With Smart Contracts

Now that you have a good high level understanding of how Bitcoin works, you can probably see the enormous amount of problems if we try to create a flexible Blockchain. You're increasing the number of transactions by many multiples and if there is any error in the code base you can lose everything (see the DAO hack on the Ethereum network). So here is the high level overview:

- The difference between Ethereum and Bitcoin is that Ethereum is essentially "oil" for Internet 3.0. It does not have a supply cap because the network requires the coder to burn a small fraction of Ethereum to run the code base
- This is a significant difference when compared to Bitcoin which is meant to be a store of value and peer-to-peer electronic cash system (intentional supply cap)
- With this system we can now build Decentralized Applications which get rid of middle-men. In the future (far future), Facebook, Airbnb and even Uber could be dis-intermediated. By creating a basic line of code all of this removes the need for a middle man in every aspect of our lives. Essentially you're creating a global market place and a global investment bank since you can fund raise with a few clicks
- Since we can now fund raise and interact without middle-men, we see that the addressable market is now vastly bigger than just a store of value
- In the future a person in Africa with just an internet connection could pay for large scale computing power if needed since he/she will have access to the latest and greatest data center technology with a basic smart contract

Sounds great! Big problems. We're extremely early in the development of these applications and right now the Ethereum network can get congested by a single popular decentralized application.

No joke, an application called "crypto kitties" clogged the network because it got too popular. The same freeway analogy applies as people were essentially trying to get access to one specific lane within the decentralized application ecosystem. For fun, the original "crypto kitty" was sold for ~$133,000 (the genesis cat). No we did not buy it and no we do not recommend investing in these gag ideas.

Since the Ethereum Virtual Machine (Decentralized Computer System) is already up and running, making updates to it is not easy. Here is the same example again: Since everyone on the network must agree to the code (it is not a push function like an update to iOS or Microsoft office) this requires a lot of work and perfectly written code. Now imagine doing this on a moving machine that is running 24/7/365! Not easy.

With the scaling problem becoming an issue for Ethereum, there is now an idea called "Plasma" which is essentially creating a separate Blockchain within the original Blockchain making the technology largely in-line with Cardano.

Pausing for a Second: Recall the comparison with Bitcoin and Litecoin. Just because Litecoin is actually more technologically advanced does not mean that it will be the most valuable. At this time, Litecoin is ahead of Bitcoin. And. Bitcoin has a much bigger network and user base (network effect in Internet terms). Similarly, there are more advanced Ethereum competitors as we mentioned earlier in this book. The problem is if these competitors can actually gain market share. If they cannot gain market share quickly, Vitalik Buterin and team will simply make the updates (making their platform equal to the competitors). Now you know why we recommend owning all the major protocol layers and the major payment players if you don't want to track all of these incredibly complicated changes!

Where Are We going

In the future, all of these blockchains will need to communicate with one another seamlessly. Atomic swaps have already been proven to work where one can exchange Bitcoin for Litecoin for example (this means Litecoin could then "piggy back" on Bitcoins massive network). This would be a big breakthrough as we move closer and closer to a world where communication between multiple Blockchains is both secure and essentially free.

As you can see, we think this will work over the next 15-20 years. Kids who are born today will unlikely know what a bank is and will not know a world where it costs 5% to send $100 from Europe to the United States. Decentralized Applications will eventually work, although 90%+ of the decentralized applications being built today will likely be worth nothing.

With this set up, the easiest way to get involved is to own the payment systems and the protocols. If you're a sophisticated investor with a strong technology background, feel free to research the Decentralized Applications (this is where we are spending our time today).

Part 5: Long-term Expectations and Miscellaneous Items

As you can see from the first four parts, there is an immense amount of material to cover. If you're interested in this space it will be a full time job (require at least 20 hours a week to keep up). That said we did gather a lot of high level questions and will provide more *opinions* on what happens both near-term and over the next 10-20 years.

Trading – Most Common

As you can imagine we don't recommend trying to trade the currencies (see the psychology section for our *one* caveat). You should have a full time business running (maybe even multiple businesses) so sitting in front of a screen to trade coins is not a good use of your time. There is one very interesting caveat though… Arbitrage.

Step 1: Go onto any website that displays the price. As of this writing one website is called "coin market cap" and if you click on the price of any coin you'll see that it is trading at different rates

depending on which exchange you're using! You know you're dealing with a brand new technology when you can find different rates for the exact same product. That would be equivalent to seeing a ticker price of $45.58 for Coca-Cola on one exchange and $42.10 on another exchange (it just doesn't happen).

Step 2: If you create alerts for specific coins, you can actually make money. That's right, we're suggesting you "trade" for the first time in the history of the blog. The difference is that we're specifically talking about the arbitrage opportunity only. We're not going to try and trade a bunch of lines on a chart since algorithms and more complex technologies will eat everyone alive (what happened on Wall Street). So if you create alerts that monitor the exchanges you can then make free money. In short, you're going to make easy money without losing your valuable time staring at a screen all day.

Step 3: As an example: if you see Bitcoin trading at $14,000 on one exchange and $16,000 on another exchange… that is probably a good arbitrage opportunity. What you do is you then buy the bitcoin on one exchange and sell it on the other exchange netting a $2,000 gain. This arbitrage happens quite a bit (you'd be surprised) and it is certainly worth it to trade if you are locking in a profit from it. If you plan on buying and holding forever, you either 1) get more coins or 2) you've made a few dollars in fiat. It is up to you. While this may sound small to the wealthier readers, this opportunity is a big deal for younger readers. Having an extra $1,000-$2,000 a month is significant if you just graduated college.

Step 4: Get on every exchange you can. We got many questions about the "best exchanges" and the reality is all of them have problems. They crash, they improve, the rates move… etc. Our solution is to get access to as many exchanges as you can. For those that read Efficiency… You already know what we're doing. You get on a VPN and set up a connection point in every single place you can. With this set up, you can play the arbitrage when possible.

Step 5: Now that you know how to do the arbitrage (quite easy), you should decide how much money to "float" for this opportunity. This is also quite easy… simply take the amount you have sitting in a checking account (your emergency money) and use that for the opportunity. If you have 12 months saved, you can use this money for the arbitrage. Since the arbitrage is a one-time profit opportunity and you don't want any risk. Remember, if you can't guarantee a profit on the trade… it isn't worth it. Make sure the spread is wide enough for you to earn money.

That is the high level overview of trading. We don't recommend trading charts but if you can see clear arbitrage opportunities then it would be foolish to leave the money on the table (coins or fiat). The rest of the money should be used to "HODL" and avoid the noise in the media.

Long-term Investing

We certainly cannot have a crypto currency section without predictions for the future. We have no doubt that many of these predictions will be wrong, but, many of them will likely occur as well. As you know this is a risk on Blog so it's explains our overall "life view" along with why we're so involved in the space.

Allocation: For full disclosure as of this writing (January 1, 2018) our current crypto currency exposure averages out to ~30% of net worth (as low as 10% the high is 50%). That is right. If crypto currencies go to zero the average contributor here will be worth 30% less! A pretty big exposure but not something we would worry about since the remaining 70% would cover more than living costs for the foreseeable future.

We are not sure how much you should specifically invest and as usual, none of the words in here can be considered investment advice. Our opinion is that you should risk as much as you're willing to see go to zero. If you're willing to see your net-worth go down by 10% then your maximum exposure is 10%. If you're willing to see it go down by 60% since you're worth tens of millions… then your maximum exposure is 50%. So on and so forth. Our view is a bit controversial since we're suggesting that your exposure can be higher if you're rich. If you're already rich, then a large drop is meaningless. If you're rich = take more risks.

***Ideally* No Need to Rebalance:** Here is the kicker. If you're only risking the amount you're willing to lose, you shouldn't have a need to rebalance. The only case we see for a rebalance is if there is a 10-20x move or so. If this happens go ahead and rebalance a little bit. If it doesn't happen… then you're going to simply put all of your money into other investments (essentially reducing your exposure over time through forced diversification). Instead of staring at charts all day, you're spending your time with a business or career as outlined in Efficiency.

Multiple Winners: While we've given out the top ~8 coins we're heavily involved in, we have no doubt that there will be other winners as well (we excluded the high risk coins we own). If you have conviction in one we didn't mention or one we don't like… no problem! We have no problems agreeing to disagree.

Crypto Twitter is probably the most emotional place we have ever seen and we don't want to offend anyone who owns a different coin we've never done research on. Besides, if you were smart enough to get on the train already (we're still extremely early) then we can at least agree that crypto currencies will impact the future in a significant way.

The one significant downside is that the winner of the *"money use case"* will be worth the most (amongst the different currencies). What we mean by this is the crypto currency used for payments will take the majority of the market share. At this time it is Bitcoin. Maybe it is called Bitcoin in the future and maybe it isn't. For that specific use case (money exchange) there will be one major network that is used as the de-facto crypto currency.

And... We think there will also be a second currency used for "illicit activities". At the end of the day, attempting to shut down illegal activity for drugs is just not feasible in our lifetime (opinion). This will represent a second use case for money (Privacy currency). For those that have read the Sovereign Individual, it states that the currency would need to be anonymous… at this point Bitcoin is not really 100% anonymous.

The most controversial section is the currency used for Decentralized Applications. For this use case we're probably a good 5-10 years away from seeing who the real winner is. There is a lot of hype in the space and at this time we don't see a clear winner for the protocol layer. Hopefully

that sentence reduces the amount of noise since we can all agree there is no "standard" protocol for all decentralized applications at this time.

The good news? The currency that becomes the standard for decentralized applications will be worth *even more* than the store of value and money currency. That is right. Since the winning protocol will receive more value as applications are built on it, the value will increase as the user base expands on a daily basis. Essentially it will become a global investment bank that fund raises and builds the latest and greatest technology.

Implications: With the overview listed above, you can see that the big money is in trying to figure out which protocol will win. If you can do this you'll be fabulously wealthy. The problem? It sure isn't easy. The best way to evaluate a coin is to decide the following: 1) does it already have a network effect, 2) how good is the team developing the code, 3) are the marketers tech engineers or are they simply "crypto bulls" who got in early and don't know how to write code, 4) does the blockchain scale and 5) does it need to be on a blockchain at all (if investing in Dapps).

While those five questions sound easy, we've essentially asked five questions that will take many hours of research to figure out.

Valuation: This is yet another opinion, and we think there are only two real ways to value the currency (yes we're sure everyone will disagree). The two answers are 1) network effect and 2) the engineering team. The network effect means the value of the coin is derived by the number of people who use the coin. This is exactly how many internet companies are valued today: Monthly Active Users (MAUs) and Daily Active Users (DAUs). The second piece is the engineering team.

We'd wager that 99.99% of people won't bother doing research here. Go on GitHub and ignore the people who *"market the coins"*. Meet the people who are working on the software code. Betting against the best engineering team hasn't worked in the past 35 years and we don't know why it would work today!

For fun if you are looking for a *"downside"* case, you can look at the amount of costs incurred to essentially obtain one coin via mining. This can be calculated by the amount of computing power needed to contribute to the network to get one coin. At the time of this writing if we include the cost of electricity, the mining equipment, the personnel to make sure everything is running properly, you get to around $2,000 per Bitcoin. You can run the same analysis for the alternative currencies that are being used as payments.

Business Ideas

We think millions of jobs/careers and business opportunities will be created due to this new and growing market. Look no further than exchanges, engineering positions, crypto currency hedge funds, smartphone engineers (wallets), consulting (YouTube channels) and much more. In fact, you can probably take your current skills and apply them to this space in a million different ways.

Name a career? There will be an opening.

Many of you work in sales which is going to be transportable yet again into this space. You can go into sales for exchanges, sales for accessories (cryptocurrency wallets, T-shirts, ties, pants, etc.). There are so many ideas our heads are honestly spinning. You don't even need to hold the crypto currencies to make money off the space. You could create a coinmarketcap competitor and make money off ads, you could start a consulting practice, you could make new crypto currency ATMs and you could get paid to educate people on crypto currencies.

Overall, there is no clear "winner" as we think every single one of those ideas will work. Since many of you may not want to own a single coin (ever) below is a list of "pick and shovel" strategies where you get paid and don't have to physically own a single coin.

- **New Wallet:** There are only two popular hardware wallets: *Trezor and Ledger S*. There is certainly room for another competitor and you can compete on marketing. Since both of the hardware wallets are similar, there is a hole particularly if they are selling out like hotcakes. A simple differentiator would be various types of coins, not just the major ones. As an example, Monero has significant technical issues when it comes to wallets and if someone could figure out a way to put that onto a hardware wallet they would have a good business
- **ATMs:** Bitcoin ATMs are still relatively rare. Have you seen an Ethereum ATM? Neither have we. Maybe they exist but they are not really common. Apply the same logic as the wallet idea here and you could have yet another pick and shovel play on this space (get rich without owning a single coin!)
- **An Exchange:** There is still opportunity here. Even though Coinbase is the de-facto starting point for "newbies", the offerings are limited to just Bitcoin, Bitcoin Cash, Litecoin and Ethereum at this point in time. If you have technical expertise, creating an exchange and being in the "flow" of money could lead to a material financial payout.
- **Merchandise:** Yet another clear way to make money is by selling the merchandise related to crypto currencies. Look no further than crypto currency related clothing, jewelry and other trinkets. They are becoming popular gifts for small occasions and the cost of creating these items are next to zero! (okay, 50% margins)
- **Consulting:** You can become an expert in the space and brand yourself as an expert in a specific area. This could range from explaining the technology to helping startups related to crypto currencies (*hint: helping companies is more profitable*). At this time, the protocol side has the biggest upside since it is the least well known. Bitcoin is extremely well known with many "faces" associated with it from Roger Ver to Andreas Antonopoulos.
- **Money Management:** There are more and more crypto currency related hedge funds popping up. If you have the contacts, then you could earn money by simply investing in the space with limited risk. If someone is willing to give you $100 million dollars on a 2%/20% model… Even if you are flat, you're still making $2,000,000 for holding the funds for them. Yes we realize that would likely lead to a loss and draw down but the point remains the same. If for some reason you can raise a large amount of money, you could make a lot if you see material price appreciation and see limited downside with 2% management fees.
- **Education:** Everyone believes they can learn complex technology because "they are smart". Sell them this fantasy and give them a course on how to learn the technology by themselves in "just a few months". This will lead to a large number of sign-ups and you don't have to give any recommendations or buy a single coin. They will sign up to learn how things work and go off on their own to invest in the space. (Now you know why education is so profitable!)

- **Payment Systems:** Create a company that helps people accept crypto currencies. BitPay is the largest company that we're aware of in this field. They allow you to pay with Bitcoin and charge a 1% fee. In this field, you're essentially competing with credit card companies which then makes you a "quasi" middle man. As the technology evolves you'll want to offer a solution that accepts many different types of currencies. As many of you are aware, Atomic Swaps for example will allow Litecoin to be accepted in places where Bitcoin is accepted in the future. (Litecoin piggy backs off the existing Bitcoin network). Long-term, decentralized exchanges will be more common. But. We are still extremely early… Most people just buy on Coinbase in the USA.
- **Crypto Currency Mining:** A complex endeavor but a profitable one for the technically savvy. You can mine the coins and instantly sell them without actually purchasing any of the coins. By running the rigs you get a steady flow of coins that you can then sell to the public for fiat. This takes out the volatility (price movements) however your competition increases (competing for specific coins or tokens). *Note: some coins only require you to own the tokens to mine. Other coins require you to contribute computing power.*
- **Sell the Space:** Similar to the Marijuana movement in many states, instead of creating the mining infrastructure you can simply lease the facility. To take it a step further, if you're good with software, you can offer space in a facility to host the miners and automatically mine the "correct coin". This means you're getting paid to simply have people put their miners in your warehouse. The software you develop then automatically shifts the miners to the most profitable coin in terms of fiat. You don't receive any coins at all and are paid a monthly recurring payment in fiat/cash

Psychology

You're watching the biggest gambling addiction take place right in front of the computer screen. At this point we have a ~$800 billion dollar industry that fluctuates by 10% on a daily basis (okay we are not sure of the exact math but you get the idea). Whenever there is a lot of volatility you'll typically see gamblers/speculators enter first. This is exactly why the gambling industry was one of the first adopters of this technology. While we do not know where you sit on a psychological basis, we'll give out a few handy tips.

No Emotion: If you are truly invested for the long-term you shouldn't care about price drops of 80%. That is not a typo, if the value of the currency you hold goes down 80% you shouldn't have a single emotional breakdown. When there are near-term corrections of 20-40% it will be a good psychological test for you. If you're not panicking and are wondering if you should buy more… You own the right amount still. If you consider selling, even for a split second, you probably own too much and should stop investing additional money into this space (notice we did not say to sell it).

Technology Over Hype: There are a lot of fantastic salesmen out there selling garbage. It could be a 100% scam ICO that steals money with no way of retrieving a single cent. It could even be a relatively large coin (capitalization) that is built on nothing but aggressive marketing to push acceptance. The best way to see if it is more hype/marketing versus technology is to look out 5-10 years in advance. Ask two clear questions: 1) is this technology actually different and 2) is it different enough that a current coin cannot simply upgrade its system. These questions are not easy to answer and should take at least a few weeks of research to figure out.

Remember, just because a new coin has a new feature does not mean the same feature *cannot* be added to an existing coin. This is exactly why Litecoin continues to trade below the valuation of Bitcoin despite being a better technology. The people in the know understand that the Litecoin advancements will be added to the Bitcoin network over time so it is *temporarily* ahead of Bitcoin.

Sadly, many people will fall into the trap of being sold. We can't decide if this is a good thing or a bad thing. The good news is that it creates more opportunity for smart people to get richer. The bad news is that many people will lose thousands and thousands of dollars investing in technology that had no chance of working in the first place.

Track Wallets for Hype: A good way to see if there is too much hype in the market is to see if you can buy a Trezor or Ledger S. The last few times we saw a correction ($19,000 to $11,000, $8,000 to $5,000 move and $5,000 to $3,000 move) the devices were out of stock. Unsurprisingly, the two devices are out of stock again and the market took a dip from $19,000 to somewhere around $11,000. We don't recommend trading (except for arbitrages). But. If you see a massive sell out of wallets, you know what's going to happen next… A Big cut down.

We're not saying you should bother shorting any of these currencies (too much time and effort as outlined several times in this book). But. If you track the wallet usage you can mentally prepare for the next big drop or delay your purchase for the next big pull back.

Trading: If you are a trader you already realize that trading in this market will reflect human emotion. We'll repeat ourselves. We don't recommend trading for anyone who hasn't been a trader for several years. The fastest and lowest risk way to get rich is largely the same: 1) start a real business, 2) if you have a career - work on a side business and 3) make long-term investments.

If for some reason your background is in trading and you've been successful for several years, this space is for you. We assume that you can deal with the constant up and down times of weak exchanges. The market is largely filled with human traders at this time and the opportunity/window will almost certainly close when algorithms and strong exchanges are built.

Irrationality: With prices going up, people will likely move to coins with "lower dollar values". Even though this makes no logical sense as a person can buy 0.1 bitcoins or 1.0 bitcoins or even 0.05 bitcoins… People will begin to view Bitcoin as "too expensive". As you know this is completely irrational but this is how humans work. They'll see a lower priced stock and say it is "cheaper" even though the price doesn't say anything about the asset. Look no further than Berkshire Hathaway as a good example of this psychological game. The good news is that the higher price typically attracts longer term investors (this is one of the reasons why Berkshire is structured the way it is).

This means there will be more "retail float" in the alternative coins. This is both good and bad. The good news is there are less sophisticated investors speculating in this space. In addition, there is a high likelihood for more volatility/speculation due to marketing (not technology)

In short, if you see something added to a major exchange you can probably just buy it since it will go "up" for no reason (short term). We don't recommend it and prefer real investing but denying psychology is foolish.

Long-term Predictions

Since the vast majority of our readers are longer term investors searching for a net-worth north of $10M+, we're putting this up front. Long-term investing is the safest and cleanest way to get rich since you're able to build a real business and potentially a Career (something that's ideally temporary) at the same time.

Adoption Rate: The next major item we see is a crypto currency ETF (likely Bitcoin). Goldman Sachs (according to Bloomberg) is already creating a crypto currency trading desk. Since we have futures already, the ETF is the next big step. Assuming we have an ETF, then the noise surrounding Bitcoin should increase.

More importantly, the network growth is what influences the price. In an ideal world the bigger adoption changes will be: major companies accepting it and companies like BitPay signing up thousands and thousands of people.

Privacy Currency: This is going to be the most controversial piece. We think that the most valuable currency (currency not protocol for Dapps) will need to have 100% privacy features. At this time, Bitcoin is not 100% private. This means we have strong belief in a privacy coin.

To be clear here, there is still a chance that Bitcoin could improve its privacy features. It is unclear if this will happen long-term. All we are stating is that the winning currency will need to be anonymous. If it is anonymous the sky is the limit since it will be an ideal payment and store of value currency.

Fiat Death? This is highly unlikely near-term. Why? Well we still need a currency to use in each Country. We think there is a very long road to the "Sovereign Individual". In our life-time, it is unlikely (of course we'd be thrilled to be wrong here!)

Instead, the more likely evolution is seeing crypto currencies used to purchase items that were typically bought on the Internet. Still an enormous market. After that we see adoption in basic day to day goods (coffee, lunch, dinners etc.).

If we reach a point where crypto currencies are used to buy homes *and cannot be taxed* then the government would no longer exist! In our lifetimes, we think governments will still receive tax revenue in this way. It is extremely easy to keep track of major items like real estate since there is a public record and the individual would need to explain "how they paid for it".

Massive Government Attack: At some point there will be an immense attack on the crypto currency space. Governments will try to ban the currencies, they will try to make it difficult to stop (perhaps making wallets inaccessible) so on and so forth. At the end of the day, we think crypto currencies will survive this big drop down in price (we see continued volatility with 50% down days in the future) and the technology will continue to evolve.

Sovereign Individual Succeeds: Surprisingly, seeing how advanced the technology has become we wouldn't be surprised to see this concept play out long-term. This is an extremely long-term call and may not even happen in our lifetimes. Since we can exchange value globally and compute power can be used globally… the need for governments dissipates. It is a scary thought and could be both good and bad. That said who knows if we see such a dramatic change over the next 30-40 years. Going out on a limb, we think it doesn't happen over the next 100 years but who knows!

Shorter-term Predictions

A ton here so we outline it in bullets. There is simply too much to cover in detail.

- We'll see at least one severe crash of 50% or even more. This is because of many big issues: 1) a wallet hack – smartphones, 2) government intervention on ICOs and 3) potential for governments to make some crypto currencies entirely illegal
- Decentralized exchanges become common, centralized exchanges like Coinbase only serve the "whales" while average people can buy small amounts without a central exchange
- Micro-payments become possible, as you can see we think atomic swaps and lightning network will succeed. This would allow for micro-payments in the future
- More and more people try to arbitrage the price with exchanges creating smaller spreads. This will take a few years but it will likely happen
- Many people begin quitting their jobs to manage funds, we're seeing this with hedge funds popping up, but we think this will be a big trend for the rest of 2018
- We see significant money being made in the ICO market in 2018. As you can see from our overview this is where lots of money is to be made but you'd have to dedicate significant amount of time to avoid the scams (essentially the market is a casino right now). The positive side is if you've been around since ~2014 or so, you'll have the expertise to know which ones are worth pursuing (hopefully!)
- Tons of money being made on conferences. Since there are very few people who bothered to learn the technology, we'll see an increase in conferences that surround Blockchain, Bitcoin, Ethereum and many other topics (ICOs etc.). People need to get up to speed and being an educator will be popular in 2018
- New hardware wallets are created. We cannot believe that there are only two providers. Anyone with a technical background should jump on this opportunity. There is no marketing being done for the wallets (basically zero) because they are so popular. Even if someone made one "just as good" they could steal market share with ads alone. No brainer
- Coinmarketcap competitor. This is the defacto standard and new websites that offer additional services will likely be created
- Significant loss in value of at least 5 of the top 10 coins. As you can see from reading between the lines, we don't see any value in Bitcoin Cash and Bitcoin Gold (examples). Don't even get us started on Ripple

Overview of Cash and Bonds

Welcome to the short and boring section! If you want to live a life that is dull, bland and slow feel free to dump all of your money into low yield bonds and CDs that generate ~1-4% annual returns (inflation is likely at 2-3% by the way!).

That said, the real key to this segment is building up a stable base. This means you need to have a cash and bond fund for multiple purposes. The first was mentioned many times up front: *Emergency*. The second is for Internet business owners: *Opportunity.* The third is for one time wind falls: *Temporary Holding.* The fourth is for time: *Aging.* The fifth and final is built up over time: *Working Capital.*

#1 Emergency

This is basic personal finance. If you're in a position where you don't have at least *Six months of living expenses* in the bank (or under your mattress) you're going to be stressed out. Some people feel fine with three months but we prefer the six month level. At six months it is highly unlikely that you're earning zero income for half a year and it prevents you from selling off any investments that you have made.

The quick math is that we would ideally see a person increase their cash on hand to about 12 months of living expenses. This would be calculated by adding just one month of cash on hand every single year. Very small increases. After that you can stop or you can continue with this strategy. *Critical Note:* After getting to 6 months in cash on hand (checking or savings account) you then shift to CDs so you can earn a slightly better return on your money which we calculate at 1% (better than nothing!). *Also…* we assume that it costs you about ~$5,000 to live. This is just so the numbers are easier to track, the reality is if you're young and just out of college it could be lower since your 20s are for getting ahead in life… not drinking Bud Light at the local dive bar.

WALL STREET PLAYBOYS

CD Purchase

	1	2	3	4	5	6	7
Cash (on hand)	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000
Certificate of Deposit 1		$5,000	$5,050	$5,101	$5,152	$5,203	$5,255
Certificate of Deposit 2			$5,000	$5,050	$5,101	$5,152	$5,203
Certificate of Deposit 3				$5,000	$5,050	$5,101	$5,152
Certificate of Deposit 4					$5,000	$5,050	$5,101
Certificate of Deposit 5						$5,000	$5,050
Certificate of Deposit 6							$5,000
Total Cash	**$30,000**	**$35,000**	**$40,050**	**$45,151**	**$50,302**	**$55,505**	**$60,760**
Months of Living Expense	**6.0**	**7.0**	**8.0**	**9.0**	**10.1**	**11.1**	**12.2**

We think the above is pretty conservative and sets you up nicely for the future. If you are able to follow this rough trajectory, by the time you're 30 you have a full year of living expenses sitting in cash/CDs and you don't have to worry about it anymore. This opens you up for much more risk taking since there is less to lose with your future income. As you can see we do the opposite, once rich take on more risks (it no longer matters to be conservative if you always have the ability to cover cost of living).

For the more aggressive people who think 3 months is enough, this would result in slightly more money long-term in exchange for the added risk of having lower cash balances at first. You would ramp up to just three months and CD stagger from there on out. This is much more risky since 3 months is cutting it close in terms of getting a new career. The counterpoint is that you could assume you're going to collect unemployment making the transition smoother than normal.

CD Purchase

	1	2	3	4	5	6	7	8	9	10
Cash (on hand)	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000
Certificate of Deposit 1		$5,000	$5,050	$5,101	$5,152	$5,203	$5,255	$5,308	$5,361	$5,414
Certificate of Deposit 2			$5,000	$5,050	$5,101	$5,152	$5,203	$5,255	$5,308	$5,361
Certificate of Deposit 3				$5,000	$5,050	$5,101	$5,152	$5,203	$5,255	$5,308
Certificate of Deposit 4					$5,000	$5,050	$5,101	$5,152	$5,203	$5,255
Certificate of Deposit 5						$5,000	$5,050	$5,101	$5,152	$5,203
Certificate of Deposit 6							$5,000	$5,050	$5,101	$5,152
Certificate of Deposit 7								$5,000	$5,050	$5,101
Certificate of Deposit 8									$5,000	$5,050
Certificate of Deposit 9										$5,000
Total Cash	**$15,000**	**$20,000**	**$25,050**	**$30,151**	**$35,302**	**$40,505**	**$45,760**	**$51,068**	**$56,428**	**$61,843**
Months of Living Expense	**3.0**	**4.0**	**5.0**	**6.0**	**7.1**	**8.1**	**9.2**	**10.2**	**11.3**	**12.4**

Given the background of many of our readers, we wouldn't be surprised to see more people pick up the second option. If you can simply save your signing bonus when you get your career position (M&A, Tech, Enterprise sales) you're almost there out of the gate! The fact that you were able to secure a high paying position also makes it significantly more likely that you won't be unemployed for a meaningful amount of time. Oddly enough, while we're still choosing the 6 month option as the safer idea, it would have been more beneficial to go with the riskier option.

Hindsight is 20/20 though!

#2 Opportunity

For those in the internet business, it costs about $50K to start your own product (white label or general consumable consumer item). That's our own rule for keeping cash in a checking account at all times. We're not sure what industry you're looking to crack into, but… We've found around $50K is enough to go into a new direction. Under no circumstances do you put yourself into a position where $50K is not readily available in liquid cold hard cash (no revolver no nothing) when your net-worth is over $750K. Notice, we are being a lot more careful here using $750K instead of an age because this is when you're looking for bigger one time opportunities. If you can buy something that will generate 100-400% returns… you want to be able to shore up the money

quickly. This is also similar to the Real Estate section if that is how you decide to invest in the future.

Now all of that said, this is an investing product and not focused on business building. So you still need money to invest in one time opportunities. The good news? This one is probably a bit lower at around $25K versus $50K for a real business. The bad news? *Staggering everything and planning is not easy and is more art than science (again!)*

To try and frame up a strategy, take a look at how the fund flows work. You don't need a ton of money you just need to plan it out appropriately to adjust for cash flows

- $60,000 in the bank due to 6 month living expenses + the staggered CDs
- $50,000 is needed for business opportunities
- $25,000 is needed for investments
- This does **not** mean you need to have $135K sitting around, since it is unlikely that you will do an investment + a business at the same time. So you calculate the cash flow backwards. We estimate you'll need the cash amount + the investment amount which will give you enough "wiggle room" to do both in an unlikely scenario. This is a max cash on hand number of $85K (where you better be close to investing) and a minimum number of $10K if you are confident in the cash flows coming back in rapidly.
- If the business idea will take 2-3 months to set up and cash flows come in at $2-3K a month, you can count backward and fill the gap with what you need (if you're saving $10K a month, you'd only need around $60K in the bank). Why? Well you'd fill the $60K number back to full within 4-6 months anyway.
- The second item, the investment piece, requires more careful planning as they unlikely generate immediate returns. If it's an investment you cannot include any future cash flows and simply count backwards to see how long it takes to re-fill the $25K.
- Long story short, ~$60-85K is more than enough. If you have $85K and do **both** an investment and a business buy, you're sitting on $10K. You're light but you should be able to fill that up within 6-9 months (otherwise you shouldn't do both!)
- **Our rule of thumb:** When you make a big investment, make sure you can fill the coffers back up within 6-9 months (9 months is the longest time frame). This makes it easy to plan for annual investments and business purchases. You can't time the buys but you can prepare to do one on an annual or bi-annual basis (ideally monthly if you start to rake it in!)

Now we've given away a basic structure to how to think about your cash flows, the reality is that your situation is going to vary *wildly* from ours. If you're doing 1031 exchanges on real estate you're planning ahead there. If you're liquidating or selling your first company, you have to start the investment search case before you even decide to sell! If you're investing in stocks/bonds/crypto currencies you're okay because you're largely liquid making your future investments easier to plan (of course the offset is typically lower yields/returns)

Another interesting strategy we came up with is starting the "search process" three months in advance. This allows you to calculate how much money you'll need on hand. If you find out that there is nothing interesting and are 2 months into your search, you can pull down a bit and invest in the same pillars (Real Estate, Crypto, Stocks/Bonds). If you find something that's interesting

then you can ramp up the savings by living a tad cheaper to make sure you get in on the opportunity. In short, you're planning in chunks so you don't waste all of your time researching (hurting your underlying business).

#3 Temporary Holding

This is a small section but shouldn't be overlooked. After all… ADP (the payments company) makes an absolute killing by holding onto money and generating interest before payments are released. There is no reason for you to miss this opportunity on a lower scale. In an ideal world you'll get to a point where floating money becomes a big issue and you're forced to come up with structured plans to generate interest! We can always dream.

In a situation where you're receiving a windfall and need to burn some time before jumping into a new investment you'll generate interest while you're making a decision. It's impossible (almost) to predict when a good sale opportunity could hit and that could lead to 6-figures (or more!) in a single day. It does not make sense to immediately invest it (or spend it) since the massive dopamine rush will mess with your head a bit.

Ideas for Temporary Holding are wide but here are some ideas:

1) **Basic Certificate of Deposit:** This could be anywhere from 3-6 months or so. Find the best rate and chuck it into the bank
2) **Basic Money Market Account:** If you have a money market account holding your funds and it is similar in rate, set up an auto-send to that account for the returns
3) **High Quality Bonds:** You can also park it into AA/AAA bond funds that holds a variety of assets and collect the small interest payments kicked off every month
4) **Corporate Bonds:** We're expanding this to low As and maybe even the B+ range. If you're willing to take on more risk you can pick up some lower quality bonds that pay higher yields and hope you collect a few more dollars before re-investing
5) **Peer to Peer Lending:** We think this is unlikely, but if you think you'll need longer durations with a bit more risk you can go this route. With many people flooding this idea and market we don't like it much but everyone has their own risk tolerance levels
6) **Dividend Stock:** This is also a high risk idea but we've seen people get away with it. You'll buy an extremely steady stock that barely moves such as Coca-Cola or an AT&T. This will lead to catching a dividend and ideally making some profit on it before cashing out

Of all the ideas above for one reason or another, we ended up doing Money Market accounts and on the other end Corporate Bonds. For a beginner we'd guess that money market account sand CDs are the simplest and safest ideas.

Now to be clear, we think it is unlikely that this will be a big issue until you're a multi-millionaire at minimum, but we figured there is a chance that someone is getting close to dealing with this issue. Also. We can practically guarantee that many people reading this will run into this problem at least once. Just remember this short section because losing a percent or two on six-figures does matter. You should pick up the gains to maximize the results of your effort.

#4 Aging

While all of our postings have leaned towards high energy lifestyle building, we acknowledge that age will become a bigger and bigger factor to your cash balance. While we are pretty aggressive and rarely hold more than 12-14 months of living expenses on hand, you may want to adjust this upward. In fact, most people hold a lot more cash as they increase their net worth (and income).

It's an interesting dilemma and we'll explain why we hold less. The main reason is we don't see any imminent health concerns (knocking on wood as we write this). If something negative came up, liquidating some stocks/bonds/real estate wouldn't be a problem and 48 hours later the money would be in your account as well. The other reason is we have a different view on quality of life.

If you had a million dollars to spend at age 30 it would be a lot more fun than trying to burn through a million dollars at age 90 (nano-technology aside).

The one thread we have noticed is most people who hoard more cash typically hold it for "emergencies" outside of their own lives. If you have a big family and would like to cover their costs then it makes a ton of sense to hold more cash and say nothing about it. The last thing you want to do is see a family member suffer from a major issue and sit on the sidelines as everything unravels. So. That is a good item to think about.

On the same topic of aging and family, we also have a "different" belief. If you simply hand a kid a million dollars for doing nothing, he'll probably end up with severe psychological issues. You see this a lot with Instagram rich kids. If a kid grows up spoiled he ends up becoming weak and causing his own downfall later down the line.

There is a lot of truth to the "three generation" story, where a hard life makes strong men… which then leads to weaker men and then a collapse. So. If you're going to hoard some money for your family later we'd actually hold it in a way that they are *unaware*. This way you can invest in them (if they come up with a business for example) without them knowing their family is always a "back drop". Trust fund kids can easily blow through all of your hard work since they won't know how much time you spent building up their empire!

As you'd expect we won't let you down. Our exact number is $500,000. That means for each kid we think around $500K is more than enough. From what we've seen giving someone $1,000,000 usually triggers the "don't need to work belief" and the $500K mark usually requires the person to work for at least 7-10 years as their money grows to a million. As mentioned before, we would never actually tell them the money was available.

To complete this idea and concept, assume you have two kids. This would be $1,000,000 set up for them "later". If they both succeed thinking their dad is "just an above average guy" and they become millionaires… you can then hand them the money. Why? Well they already learned the value of money, killed themselves to get there and have shown real responsibility for their actions.

The final item on the list of course is your parents. That's a no brainer where ideally you've already made sure they are comfortable. The reality, is your parents are likely not in need of your help but it's good to know you can help them.

The good news? All of these items are likely funded by you. Slow… But growing bond exposure in terms of total dollar value.

#5 Working Capital

This is the final section and acts as more of a warning. Your money that is meant to be used for working capital does not count as your cash savings. We'll repeat that. *Your money that is meant to be used for working capital does not count as your cash savings.* Erase every single cent from your mind since the bank accounts meant to be used for repairs, working capital and other business related items are not part of your "net worth".

This seems obvious but it is a clear trap that many people stumble over (this includes us!) if you stumble over this you'll be stuck "digging out of a hole" for a few months. The best way to avoid working capital mistakes is by having separate accounts. This means an account will not be touched once money goes into it… Unless it is related to the business expenses. By creating a separate account you don't have to calculate the exact amount that is allocated to future expenses. This gets harder and harder to do as the numbers get bigger and bigger. Remembering that you have to shell out $10,000 for a roof or $x,xxx for an inventory/account payment is not easily calculated in an account that holds all of your transactions.

Here are some basic "tips" to make sure you are prepared

1. Each business account has a separate bank. The only exception is an account that has working capital expenses of under $1,000. If you have an Adsense based website that only has hosting costs, you can probably link this up with another business. If it gets big (relative to what you consider big) open up a new account
2. Have a percentage allocated to expected repairs. For real estate this is calculated as a point or two based on your own assumptions from the real estate section. For online businesses this is typically monthly/quarterly shipments (inventory restocking)
3. For the items that are "long-term" repairs and one-time events. You'll transfer the amount into a money market account or savings account. This prevents confusion. When the one-time payment comes in, you simply click send to checking and push it out
4. Have a reminder set up for all of your annual payments. This could be hosting costs to email costs (mail chimp for example). By setting up alerts a solid month in advance you'll never be caught off guard by the payment. Ideally you will put *all* of your payments onto the same day and same month. This makes it easier to prepare, remember and remain organized. The worst thing is varying payment dates which make the cash flows harder to track
5. Ideally, you should fund any advertising expenses a good month in advance. If you find a good niche, you want to be able to flood the market with your ads. This means you need about a month of wiggle room. While you could draw down from the associated savings account, it's always easier to have it ready with a click. This way when you start converting… the money hose doesn't stop

Portfolio Overview by Age

We've given you the tools to come up with your own portfolio over time. Higher risk would result in crypto exposure while lower risk would start with cash and low leverage real estate exposure. Here is what we would do given the current economic climate

Framework Overtime

Early 20s - Cash then Crypto: Unsurprisingly you're looking at a high risk website/blog/book! We don't have any interest in being worth "a couple of million", so your best bet is to build up the high risk high reward asset class first. We would build up the basic living expense fund (bare minimum for ~3-6 months) and then aggressively invest in crypto currencies. If you want to grow your net-worth rapidly, you have to take on risks and this market offers the highest risk to reward ratio. It also helps you become desensitized to 50% moves in the wrong direction. Buying a Bitcoin for $16,000 and seeing $8,000 does not feel good. But. Being able to stomach volatility is good for long-term investing. It is also a lot easier to handle when it is a small amount (your income should be able to keep up with the swings in the value of the currency).

Mid 20s – Move to Stocks Or… Assuming you've followed the rules in Efficiency, you're going to have two forms of income. Since cash flow isn't a big issue for you, you'll buy stocks instead of Real Estate. Stocks allow you to remain mobile and you're not exposed to a single region. You can either build a basic dollar cost average portfolio or you can build a sector specific portfolio which we gave out earlier in this book.

Now the main assumption here is that you have two projects running. If this is the case you just don't have time to manage a property and do all of the other steps needed for a multi-tenant structure.

If for some reason you still haven't figured out the online game, it may be time to go ahead and do the real estate game. The real estate game can leverage your excess time since you can "force" the returns higher (repairs, doing your own management etc.). The downside is that it is much more time and location intensive when compared to laid back investing.

Late 20s – Fill the Gap: Pretty simple if you don't have one of the three items in the triangle: Crypto, Stocks or Real Estate… it is time to fill the gap! By expanding into a third category you'll use the cash flow generated by your income streams to build this up over the course of a couple of years.

30s – Swing Hard: Based on our rough calculations you should have a couple of million dollars (or more!) by this time frame. Either way, you should be "financially free" at this point. If you're a late bloomer then replace 30s with the day you're officially independent.

The key here is there is no reason to *"grow your wealth slowly"* anymore. This goes directly against mainstream advice and that is why you're reading this book in the first place. Our basic idea is as follows: if you're already set for life and would be happy with your lifestyle, *moving it by 10-15% won' matter*.

If you are worth $4 million and grow that to $5 million… does your life change much? Probably not. If you are 35 and get to 40 with an extra million dollars, nothing really changes. If your net worth was actually flat at $4 million… you'd probably do the exact same stuff!

Now if we add a zero to any of those numbers then the game definitely changes. Being 40 and being worth $30-50 million is a lot different than $3-5 million. It's a different part of the shrinking triangle up top.

Now the key here is to avoid levering up to get to your high risk investment ideas. If you are fine financially with $3 million (insert any number comfortable for *you*), it means this money is never touched ever again. The rest of your ***active*** income: career, online, etc. will be dropped directly into higher risk investment vehicles.

Swinging for Fences & Cash: There are many ways to swing hard and we'll give you the ones we've used. Some of them fail (90% loss) some of them end up being home runs (10x return). That is the name of the game anyway, try to get big gains or go home!

Concentrated Crypto: This is an obvious one for 2018 and beyond. Some of the smaller less known decentralized applications and protocols will succeed. The vast majority will fail. But. If you get a couple right you'll make a large amount of money in a short period of time. We've dropped several in this book (along with hints on how to find other legitimate ones) which will open up the flood gates for both huge risk and huge opportunity.

Private Equity: This is somewhat aggressive but could be classified as medium risk. The way you can create an aggressive swing is by concentrating a large amount of money into a single investment. Say you take an entire year (or two) of savings from your active income and throw every single cent into one big private equity transaction. If the transaction works and you double, the doubling would be on a big number versus the smaller sized concentrated investment idea.

Private Companies: As you receive your "Accredited Investor" status, you can then venture off into higher risk investments in the private realm. This is essentially an operation similar to being a venture capitalist. You're taking a risk on an unproven start up run by people you believe in. The issue with these investments is the duration. It will take many years to hit the exit button in most cases (up to 10 years).

Small Cap Options: When we mentioned leverage it was in the actual debt sense. If you've done a lot of research and believe a small cap stock will outperform by a wide margin, you can leverage this bet with options. As a quick calculation (never exact) assume that a 10% move would net you 100% move if you're correct on the time frame. Gross that up a bit to 20-30% and you'll see the power of options extremely quickly (2-3x returns). This is not part of your regular portfolio and is a high risk bet on the price movement (up or down).

High Risk Business Buyout: The last one is less of an investment and is more of a "Tweener". You buy a high risk, high reward business that typically loses money (but has potential!). Look no further than something like Twitter for a public company example. You'll find a lot of these companies in the same private company section. Look for companies that are failing and need an

"out" at a discounted price. We doubt the vast majority will do this (we haven't) but it's certainly an option if you become extremely wealthy.

Cash: The one way to make sure you're not spending 100% of all your active income while swinging for the fences is throwing a small amount into low risk bonds and cash. Assume that you'll put a measly 5-10% into this segment. (*Hint: 5% is probably the right number because the money doesn't matter anymore*)

40s – All Up to You: Now you can change this to a later decade if you're not following the path we outlined. Many people get on track in their late 20s/early 30s and we're just doing this for consistency. By the time you're 40 there should be no reason to have "major" questions. You've already established yourself, you're financially set and you have a family or you don't. These bigger life decisions will determine what you're going to do with your money.

Our only comment is that you should never have to work ever again (if you don't want to). This makes all of your investment decisions largely irrelevant. Feel free to go more into low risk investments like cash and feel free to continue swinging for bigger numbers. At the end of the day the life you intend on living will drive your decisions, not the opinions of other people.

In short, congratulations you're set for life and it was all just a fun game anyway!

Conclusion and Financial Independence

Independence Math

With the broad strokes out of the way, you would then need to adjust your overall portfolio to align with the goal of never working again. Remember. Our definition of independent is enough cash flow to cover all your expenses in a calendar year while being *happy*. This means your financial independence number does not assume you live in a dormitory eating beans and rice seven days a week.

Since we have given our "order of operations" as follows: 1) crypto, 2) stocks, 3) real estate, 4) bonds/CDs based on your age, the reality is that only three of those items will allow you to be independent. So we've made a basic calculation for you!

Monthly Income Needed to Be Happy = (0.85 * dividend payments) + (0.5 * rental income) + (0.35 * bond & CD income).

As of this writing, dividends are taxed at 15%, we assume a 35% tax on bond/CDs and we take a cautious approach to real estate at 50% to reflect potential downturns in rent and occupancy rates.

While we could include dividends from crypto currencies that offer proof-of-stake mining programs… we think it is far too new to include at this point. The amount of coins that allow for this type of mining are minimal.

Allocation: The funny thing about the equation is that it does not have any specific percentages because they cannot be calculated. If you need $10K a month to live and own 100 homes… we have next to no doubt you'll be fine even if you own practically no stocks and bonds. Similarly, if you have $10 million in dividend paying stocks, there is no doubt you're fine as well! The point is that each asset that spits off cash offers *a different risk profile* that must be tax adjusted. In theory, our math is aggressive since we should discount the cash flows a bit more in the case that a recession hits tomorrow.

Instead we think the formula is about right since the chances of retiring and doing nothing at age 30 are practically zero. You'd get bored and lose your mind in less than 3-6 months!

Concluding Remarks

This product ended up being significantly longer than we expected! Surprisingly, we've cut through the non-sense for multiple asset classes even though many products drown on and on to cover one segment in 150 pages (*Note: many real estate books take 200 pages just to explain the basics… nonsense!*)

More good news for you guys. First thank you for reading and second you now know how to find additional information on crypto currencies. The vast majority are lazy and won't even reach page 5 let alone the last chapter!

We look forward to hosting free Q&As. It has been a crazy year and we'll give it about a month before announcing them more consistently.

Good luck and 2018 will be a better year than 2017. It always is!

Appendix
Consumer – January 2015

Overview: The oil market is seeing significant pressure from the declining value of crude oil. The price of crude has dropped from ~$105 in June of 2014 to ~$55 as of late December (West Texas Intermediate – WTI). In addition, the price of Brent has fallen from ~$105 to ~$60 in the same time period. For those that are interested the difference between Brent Crude and WTI crude, here it is:

Brent Crude: Extracted from the North Sea and comprises of Brent Blend, Forties Blend, Oseberg and Ekofisk crudes (also known as the BFOE Quotation)
WTI Crude: This is the underlying commodity of the Chicago Mercantile Exchange's oil futures contracts. WTI is lighter and sweeter than Brent, and considerably lighter and sweeter than Dubai or Oman.

Why the Price Difference: Pretty basic here, the price differential is due to the increased transportation cost from Oklahoma to Louisiana. There is limited pipeline capacity. While this is likely extremely basic for those that work in the space, if you're new to the space, the price differential of ~$4-5 is confusing on a glance.

While we could dive into the other baskets (Dubai, Oman etc.) we will keep it simple and refer to crude as WTI Crude since it is the underlying commodity in the Chicago Exchange. Without getting into a lot of the details here, the main question most are wondering is what caused the price drop? Simplistically, oversupply of oil. Or an "oil glut". If you want to look at recent catalysts that occurred… on November 27, 2014 OPEC elected to maintain its 30 million barrel per day output level which caused the market to decline. Why? It suggests that oversupply will remain (near-term) as they are not electing to decrease output levels that caused the glut in the first place.

To wrap up the overview, here are some high level numbers on an annual basis to be aware of:
– *Demand:* You're looking at ~90-98 million barrels per day on a global basis, ~17-20 million barrels in the USA, ~12-16 million barrels in Europe and ~8-12 million barrels for china.
– *Supply:* Naturally, given the "oil glut" you're looking at supply that is currently outstripping global demand at a rate of ~1-2 million barrels per day. Simply put, it is estimated that the current output is supplying 1-2 million barrels more per day than is needed, causing prices to drop. To be crystal clear here, in the supply case we are not breaking it out by region as many regions are net importers of oil. For example, even if the USA demands 19 million barrels a day, the amount generated in the USA is less than 13 million barrels a day. The rest is imported from other countries.

– *Future Oil Demand: T*he next question you are likely asking: "Is demand going to increase? If it does we have nothing to worry about". This is a good question and for your back pocket using GDP minus 0.5% would get you to overall demand growth of crude oil.

There you have it. You now have a basic overview of what is occurring in the oil space. There is an over supply of ~1-2 million barrels a day. Demand for crude has historically increased just

below GDP growth (this is a global GDP centric comment) and OPEC recently announced that it is not cutting production which led to additional pressure on Crude oil.

Natural Gas: Everyone is aware of what natural gas is: a fossil fuel that is created when plants, gases and animals are exposed to intense heat. Primarily, natural gas is used for heating, cooking and electricity.

Units to Measure: The conventional unit of measure is "million British thermal units" also seen as MMbtu. For this post we will refer to it as "million btu". In addition, when looking at global numbers the convention is to refer to 1 billion cubic feet, this is equivalent to ~1 trillion Btu = 1 Bcf. For this post we will use the same convention and use Bcf.
Before moving forward, in case the paragraph is confusing, when people refer to the price of natural gas it usually refers to $/million btu and when you are looking at large scale supply and demand it is usually in measure of Bcf.
Given that the vast majority of you would work in the USA, here are the metrics for natural gas on an annual basis that you should be cognizant of:

US Demand: You're looking at ~70-75Bcf in total demand. This is broken down as follows: ~20-25 Bcf Residential and Commercial, ~19-23 Bcf Industrial, 20-25 Bcf electric and 5-9 Bcf in other use.

US Supply: Onshore supply is roughly 30-33Bcf, Shale providers ~ 40-45 Bcf, Mexico wraps it up with ~3Bcf

Canadian Demand: While we are not going to go into this geography, it deserves a mention due to all the press it has received. The Canadian oil sands are responsible for roughly 13-17 Bcf per year and is primarily generated in Alberta and British Columbia.
The overview is now wrapped up with the high level numbers on natural gas out of the way as well. With that said lets move onto the sub-sector takeaways.
Note: There will be some redundant themes similar to our other overviews as many items must be tracked across all sub-segments in the O&G space, we repeat them in case a reader is only interested in one section

Global Oil and Gas (Chevron, Exxon and others)
Here we are looking at the large caps. As you've seen in the past when you look at larger scale companies you're looking for Free Cash flow as your primary valuation metric. Given this dynamic and the size and scale of oil and gas companies (setting up new rigs, drilling sites etc.) monitoring and modeling out a CAPEX schedule is also of utmost importance.
In addition to these two highlights, the risks for large caps such as Exxon and others would include… commodity costs. Naturally, the recent oil price declines have caused stock price pressure across the board. Beyond this metric which is impacting the entire space, larger companies are also at risk to tax law changes, environmental and political risks as well.

Oil and Nat Gas Prices: As you can imagine this is a material driver of business viability and growth. Tracking the macro changes in Oil prices (movements of+/- $5 are quite material) and tracking the changes in Nat Gas prices (movements of more than 10-20 cents on a $/MMBtu are material).

OPEC: The next major meeting is on June 5, 2015. If demand and supply levels remain where they are we would hope for a decrease in daily barrel production. If you're hoping that oil prices remain dirt cheap, then you're looking for continued over supply. Keep it simple!

Wells and Drilling: For the major bellwethers, you are going to focus heavily on the future CAPEX and drilling sites as they will determine future cash flow. For example, the Company will give specific metrics on a location and drilling expectations and give % of complete metrics over time. In an ideal world you'll see that project in location X has started on time and will be 100% complete within or before the allotted time frame with all wells firing at timeline Y. We realize the paragraph is a bit vague but if you read through the filings of major oil company you'll find these percentages in the 10-Ks/10-Qs and analyst day presentations and earnings calls.

– Simple example from Q3 they talk about the LNG project in the press release: http://investor.chevron.com/phoenix.zhtml?c=130102&p=irol-EventDetails&EventId=5170148 (click on Q3 press release). This would represent an important talking point for investors/bankers.

Revenue Mix: As expected with the major companies you have larger line items to look at and are going to track margin profiles by region and sub sector. If you want to dig into the weeds again, refer to the Q3 earnings and look through the supplemental comments. This is where the "goodies" are. You can see breakouts by refining, actual volume, liquids, natural gas and the BOE (Barrel of Oil Equivalent). In an ideal world, all of these lines would see improving revenue and margin profiles. This is practically never the case so it is up to you to find the key metrics driving each P&L.

FX: This is a bit obvious and is only worth a quick bullet. Given the size and scope of these companies FX rates and changes can materially move the top and bottom line.

Assets Sales: Again, since we are looking at major oil corporations you're looking to see if interest in specific production facilities are being sold (if unprofitable or at break even). You'll be tracking these asset sales to assess the risk of the overall entity (For example: over exposure to a specific geography).

Valuation Metrics: The main items you're going to look at if you wanted to check a quick comp sheet would be the following: the simplistic P/E ratio, P/FCF, EV/DACF and the dividend yield as many investors are looking for high yield securities. The only item on this list that may raise an eyebrow is DACF which is Debt Adjusted Cash Flow.
DACF = CFO + after tax financing costs + before tax exploration expenses +/- working capital adjustments
The reason this metric is used is due to the after-tax calculation, which makes the valuation independent of financing decisions made by the firm.

Refinery (Major players all here again, Marathon, ConocoPhillips, Valero and others)

We don't need much description here as everyone is aware of what an oil refinery is: processing of crude oil into items such as petroleum, gasoline, kerosene etc. This is probably the piece of the oil industry that most think of when they hear "oil company".
A Bit More Defensive: Since these companies need to refine crude oil, they are a bit less impacted by the severe drop in crude. Simply put, the crude oil needs to be converted so it won't see a falling knife type stock chart if oil goes down $10 (reverse is of course true for an E&P company – more on that later). In fact the decline in the price of crude oil can help this segment since the cost of the main supply (crude oil) has dropped. Again it still needs to be converted to gasoline/kerosene or otherwise to fill the demand void.

Oil and Nat Gas Prices: While it should be tracked, as mentioned above, the changes are going to impact this space a bit less.

Large Capital Projects: The business model is more capital intensive. You're looking for large projects that can help make or break companies as they refine large amounts of crude oil. Location is also key in this case as having access to large and cheap amounts of oil is beneficial.

Cash Returns: Not to the same extent as an MLP of course, but cash returns to shareholders are monitored closely. Given the size and scale of large refinery companies investors deserve solid capital allocation programs.

Exports and Macro: Given the large scale, these companies are a bit more lenient on the macro and US export laws/regulations. If you can't sell the refined oil (export it) then… you're simply losing that $$$.
Valuation: Keeping it simple again the main items you're looking at are: 1) EV/EBITDA, 2) EV/Cash flow, 3) Tangible book value, 3) Dividend yield and total return to shareholders – including the share repurchase program and 4) annual EBITDA/Cash Flow Growth rates.

Master Limited Partnerships – MLPs (Dominion Midstream Partners, American

Midstream Partners and others)
MLPs primarily pertain to the use of natural resources, such as petroleum and natural gas extraction and transportation. An MLP is a limited partnership that is publicly traded. The Company takes advantage of the tax benefits of being a limited partner, is liquid by being a traded security and pays its investors through a quarterly dividend (this is similar to a REIT).

Oil and Nat Gas Prices: As you can imagine this is a material driver of business viability and growth. Tracking the macro changes in Oil prices (movements of +/-$5 are quite material) and tracking the changes in Nat Gas prices (movements of more than 10-20 cents on a $/MMBtu are material).

Pipeline Business: If you want to boil down the business to a simple nugget, you're obtaining a stable income from the transportation of oil/gas. With this in mind it is key to have a robust pipeline of cash flow positive business in the future to continue paying out dividends to your investor base. As you can imagine right-of-first-offer contracts become important to track so the companies you're looking at can have a positive future run-rate of cash flow.

All Contracts are Not Equal: Since we are lining up large pipelines of deals, the type of contract will matter… a lot. You can simplify this point by thinking of getting a loan. A variable loan or a variable contract on a specific pipeline is not going to be as good as a guaranteed fixed line that you are certain will generate positive free cash flow. It is up to you to dig through the weeds.

Customers are Not Equal as Well: Since you are building a pipeline here, you want to have import customers that are solid (think companies like BP plc). This allows you to be much more certain about your order size and scale.

Less Mobile CAPEX: Since we are looking at longer term items some companies may or may not have large *committed* CAPEX spending in the future. Unlike E&P where it is a bit easier to shut down or ramp up CAPEX. This will impact valuation. This is particularly true if you have a lot of committed CAPEX spending into a declining oil price environment.

OPEC: The next major meeting is on June 5, 2015. If demand and supply levels remain where they are we would hope for a decrease in daily barrel production. If you're hoping that oil prices remain dirt cheap, then you're hoping for continues over supply production levels. Keep it simple!

Valuation Metrics: We'll keep this a bit more basic as the main drivers are clearer and straight forward: 1) dividend yield and growth, 2) Discounted cash flow – we're dealing with longer-term contracts to it makes more sense, 3) Net Asset Value, 4) EV/EBITDA or EV/FCF.

Exploration and Production – E&P (Pioneer Natural Resources, Devon Energy and others)

Also referred to as E&P for short, this sector has been impacted materially over the last 6 months as the title is self explanatory. These oil and gas companies specifically work in the exploration and production of oil, meaning that the significant price drop in oil has caused a lot of the business to become unprofitable. On a positive note, when the price of oil was in the $85-100 range, this segment naturally blossomed at outperformed the S&P since profitability was quite high.

Macro Trackers:

Oil and Nat Gas Prices: As you can imagine this is a material driver of business viability and growth. Tracking the macro changes in Oil prices (movements of $10 are quite material) and tracking the changes in Nat Gas prices (movements of more than 10-15c on a $/MMBtu are material).

Weather: One small overlap with the Consumer sector, tracking weather patterns is key. If temperatures drop materially, this can lead to higher usage of natural gas for heating. The reverse is also true if a winter season is unusually warm.

Capital Expense: If companies intend to increase drilling in the future and are taking out debt to do so, you can see how this will be a spiral downward or upward depending on the demand function. In a positive scenario, capex spend is high to continue finding more oil/gas and the

price of oil and gas is high. In a negative scenario, companies are taking debt to search for oil that is not profitable.

OPEC: The next major meeting is on June 5, 2015. If demand and supply levels remain where they are we would hope for a decrease in daily barrel production. If you're hoping that oil prices remain dirt cheap, then you're looking for continued over supply. Keep it simple!

Location, Location, Location: No this is not a real estate speech. However. The location of where the oil is being primarily produced (this is on a company by company basis) can drive valuation in the future. Some locations are simply more profitable than others. For simplicity take a look at this Wall Street Journal chart: (Link: http://oilprice.com/Energy/Crude-Oil/The-US-Shale-Breakeven-Price-Debate.html)
You see that having a higher exposure to the Eagle Ford area for a company is significantly better than high exposure to Tuscaloosa Marine.

Hedging Contracts: Get your hands dirty and look through Company specific filings for hedging contracts. See if the company has specific oil/gas price hedges over the next year or so which protects them on the downside given the material move downward in oil prices. Smart companies will hedge a sizable portion of the headwind.

Net Debt: Finally the key balance sheet metric to monitor is net debt. Naturally if your leverage becomes to high and you're trading at a large multiple relative to your EBITDA or FCF… This is going to trigger serious investor fears as debt default becomes likely.
Valuation Metrics: The items you're going to look at if you want to create a solid yet simple comp sheet are as follows: 1) Net Asset Value (NAV), 2) Price to Net Asset Value, 3) P/E or Cash flow per share, 4) DACF (as seen in the global oil overview above) 5) EV/EBITDA and cash flow, 6) Debt/EBITDA and cash flow and 7) the same valuation metrics including/excluding hedges

Oil Services (Forbes Energy Services and others)
Now we're getting to the final frontier, some more obscure oil companies. This is a bit of a catch all bucket where you're looking for companies that assist in the oil production/drilling process. An example of a product would be machinery that assists in choosing the best position for an Oil & Gas Rig/Well.

Oil and Nat Gas Prices: As you can imagine this is a material driver of business viability and growth. If people are not drilling people are not going to need oil services. Lower gas prices do not help this sub-sector.

Cheap Assets to Buy? We are tossing this in here simply because the size of these companies are generally smaller. If their market caps/valuation come under extreme pressure there should be interest in buying the best of breed and tucking them into major oil companies. We are not here to speculate just pointing out the material difference in size of a smaller oil services company compared to a behemoth like Chevron.

Increases in Oil Efficiency: If the services companies are able to decrease the cost of drilling the business model will improve. In short, the technology/services they deploy need to improve

the oil production process and your business will improve. This should be obvious but that is the real saving grace if oil prices remain low for the services sub-sector.

Valuation: Since this is a small sector the valuation metrics are pretty generic. Focus on 1) EV/EBITDA, 2) EBITDA Growth, 3) FCF metrics and 4) Dividend yield. Again, due to the pricing pressure from oil, it is imperative to find the companies with the best technology/services edge as they will eventually help the larger players turn a higher profit margin off of the drilling.

Basic O&G Specific Trade: For those that read the entire post you will likely understand the following trade. Lets *assume* you believe that oil prices are going to continue declining. Lets assume you are bearish and believe it will go to say $30 a barrel.
A portfolio manager asks you what to do in this scenario. You must make a play solely in the oil and gas field.
With your belief in mind, the move is to short the E&P sector and buy the refinery sector. This is because E&P businesses will have their business models dry up while refineries will be relatively agnostic to the oil price change.
If you believe oil prices are going to rocket back up to $100 soon. Then the reverse trade is the move to make.

Concluding Remarks
That does it for the O&G overview. In short you're looking for the following:
1) Oil price and Nat gas prices and their impact on O&G Companies. Generally those more levered to the sourcing of oil will be hit harder where as those who use the oil for other products will be protected
2) OPEC always the overhanging macro piece of the picture
3) Free Cash flow and EBITDA is king given the size and scope of these companies
4) Follow the chain of events. IE: customers and contracts are never equal
5) Check the balance sheet: less debt in a low oil price environment is better and lower rates on the debt would add to that cushion
6) CAPEX is key. Many of these companies have large plans that may or *may not* be cancelled at any time.
7) Location! If you're drilling in highly profitable areas you can wait out the storm as your break even levels for profitability will keep you afloat for a longer period of time.
8) Taxes – the entire reason for the MLP space, no one like taxes. Particularly people in Texas.
9) Hedges – commodity driven companies have a high interest in keeping hedges to protect the bottom line. Read the filings.
10) Weather – Generally, the colder it is, the more gas is consumed.

Consumer – December 2014

Apparel Companies (ANF, GPS, GES, URBN)
For this sector we'll talk broadly. The metrics are easy to understand for most people and it should make for a quick read.

Same Store Sales/Comparable Store Sales: For apparel companies (and a plethora of other consumer companies as you'll see) you'll be tracking monthly sales metrics by store across all

geographies. This data is available on a monthly basis. **Note same store sales figures are on a monthly basis so if you work in consumer IBD get ready for those early morning releases

Sales Floor Performance Metrics: This is another easy one to understand, you're looking for outperformance relative to peers on the following metrics: Sales per square foot, average sale/customer, costs/sq foot. The metrics are exactly as they sound, you're looking for sales and cost efficiency on a per store basis and by geography as well. The most common of the three mentioned above is of course Sales/Sq foot. Finally, if you want to get into the nitty gritty of each product line you can ask specific stock to sales ratios of key product launches at the company (stock to sales simply being how many items of the new product were sold are in stock and were sold over the last quarter/month/year)

Online Metrics: This is even easier to understand! Any website (including a retail online store) is simply looking to monetize its online customer base by tracking the following: Average sale per customer, conversion rates – number of page views to sell product X or number of products sold after clicking on XYZ advertisement and of course the mix of items being sold split by gender/age range and product line.

Production Efficiency: Assuming the company you're looking at does the manufacturing of all the items (shirts/sweaters/shoes etc.) you can get into more detail by tracking manufacturing efficiency. If you order say 10,000 pairs of shoes and you have to create 11,000 of them your efficiency is 91% (this 9% adjustment reflects manufacturing errors/quality control issues).

Geographic Roll Outs: For larger companies, particularly international expansion, we want to track store growth rates, margin profile by geo and open to close ratios (number of stores opened in geo X versus number that were forced to close). Without digging too much into the details here, many consumer companies use debt to continue rolling out new stores in a particular geo. Easiest way to think about the process is as follows: Open store 1 with debt, wait for cash flow to turn positive, use remaining cash flow to fund opening of store 2… repeat process assuming stores turn cash flow positive within a reasonable time frame. Some stores will not hit the metrics, shut them down, go back to square one and roll out in a new geo or the same geo but different location.

Valuation: From a valuation range perspective you're looking at roughly 5-15x EV/EBITDA, 10-30x P/E and PEG's of 0.9-1.9 or so.

Summary: This is a great space to understand since it is older and easy to pick up if you're younger. In short the ideal apparel company is outperforming on all of the key retail metrics mentioned above and doesn't have any competitive issues (example NIKE recently competing aggressively with Lululemon Athletica). The ideal company would look something like this: 1) High sales growth relative to comps, 2) revenue/sq foot increasing, 3) OPEX/Sq foot decreasing, 4) Average sales per customer increasing, 5) manufacturing efficiency improving towards 100% (will never reach 100% of course), 6) online metrics improving purchase/pageviews and conversion rate on advertising.

<u>Grocery Stores (KR, WFM, SWY)</u>

Whole Foods Market Example:

Everyone reading this is likely familiar with Whole Foods, the Organic health focused supermarket. While a few items such as positioning within the supermarket chains (focusing primarily on organics, higher-end and health conscious shoppers) are a bit different, the metrics to track can be used broadly as well.

WFM Metrics to Know: Roughly speaking: $14B in sales, 35% gross margins, 9% EBITDA margins, 400 stores, 15M square feet, square footage growth of high singles to 10%, comparable stores growth mid singles (better than more mature at low singles)

Same Store Sales: Again! Same metric will be tracked and is a staple metric across consumer as we mentioned. You want to see improving sales/sq foot growth and decreasing OPEX per sq foot in an ideal environment.

Employment Tracker: This is an important metric to track and is arguably more important for higher end grocers as consumers will purchase less if unemployed. Generally speaking when there are job losses (08 recession) then grocery sales decline materially as well. This is a bit more specific to a company such as whole foods as lower end cheaper goods would not be hit as hard during a recession (pasta/grains/bread as a simple example of a food that would be hit less in a recession).

Revenue Mix: All revenue is not created equal and you can see the expansion of four different streams within a grocery store. Bakery, branded, Hot/prepared food, and regular produce. Generally speaking we would want to see all of these lines growing, however an emphasis will be placed on branded items (think of grocery specific brand of produce, you see this at most major grocery chains) as they would command higher margins. Simplistically, if you own the entire process/chain you can usually generate higher margins over the long-term. Finally, prepared foods generally command higher margins as well (so focus in on prepared and branded/private label!)

Branding and Positioning: Most younger readers will skip this piece since it is unrelated to financials but it is hands down the most important part of evaluating the future. The ability to charge a premium price and command higher margins will be tied to the business perception of Whole Foods. You want to track (surveys can be a good measure) how the brand's perception is holding up. If people begin to believe the products sold at whole foods are no longer healthy or no longer "high end" the business model can suffer tremendously. Sales decline, pricing comes under pressure as people are unwilling to pay a premium causing margin pressure as well.

Valuation: From a valuation range grocery stores are about 1 turn higher on a EV/EBITDA basis versus apparels and a few turns higher on P/E metrics as well. You're looking at roughly 7-16x EV/EBITDA, 15-30x P/E and PEG's of 1.5-3.5.

Summary: A lot of the metrics are similar, however for grocers you can zero in on some other key metrics. We chose Whole Foods in particular as it is a bit more interesting due to the growth of "specialty" grocery stores versus simple blanket super markets. Looking for 1) same store sales growth as always 2) Branding/positioning to protect margins, 3) ideally expansion of branded product sales, 4) opex reductions per square foot and 5) private label/prepared food growth.

Automotive Parts (AAP, AZO, KMX)

Advance Auto Parts Example:
For those that are unfamiliar AAP is a ~$10B company and operates at ~10-11% EBIT margins. Given the mature nature of the business investors focus in on Stores Comps (exactly as it sounds comparable growth for sales at their set of stores) and operating margins.
To make this sector a bit more interesting AAP recently acquired a large aftermarket parts provider (General Parts International, $2.9B in revenue and $173M in EBIT). Given the size of the acquisition (taking AAP from a $6.5B company to a ~$10B Company) allows investors and analysts to take sides on the name determining if the acquisition will be a net positive or net negative.

Cost Consolidation: While the Company outlines a $160M cost cutting program in order to estimate if this is viable you're going to pour though locations and sales numbers to find if the transaction would be accretive or not. In simple terms, if there is an AAP facility sitting next to a General Parts facility, if one can be shut down but sales are retained the leverage from the model improves. (Note: AAP pre acquisition was a 4000 store group primarily on the east coast and GPI has a broader reach Canada + entire USA but with 1,250 stores)

Commercial and Retail Customers: Second in this analysis after running simple consolidation numbers on each geography is to split the customers by corporate and retail clients to determine how many will leave post consolidation. Simplistically, if you assume the material sales reps and executives remain onboard, you would have a lower attrition on the commercial side given the change is simply a swapping of logos. From a retail standpoint, it could cause issues as stores may suffer from over crowding or lower price competition – decreasing sales. (Note: AAP pre acquisition was roughly 40% commercial, 60% retail and GPI was 90% commercial and 10% retail)

Distribution Centers: This is similar to store overlap. If distribution centers can be consolidated cost savings can be seen over the NTM period as well. (Note: AAP had 12 distribution centers while GPUI had 38 at the time of the transaction)

Headcount: As many of you already know, head count reductions will of course occur. Overlapping jobs are eliminated and those that are high value are offered stock/competitive sales compensation to stay onboard. (Note: AAP had 54K employees pre acquisition and GPI had 17K)

Valuation: From a valuation perspective multiples are in the following ranges 8-13x EV/EBITDA, 13-30x P/E and PEG's of 0.6-1.6.

Summary: More likely than not, this space is rather boring to most of you given that 1) the industry is mature, 2) the metrics are easy to understand 10% margins with 12% as a goal and 3) Simple single digit y/y growth… It is still a solid place to start if you want to look through basic financial statements.

Quick Service or "Fast Food" (MCD, BKW, PZZA, CMG)

Mc Donalds Example:
Sticking with examples, it is best to start with the quickest metric for fast food chains (Same Store Sales growth or SSS for short – it is back again!). Generally you're looking at ~2% same store sales

growth on a global basis, ideally MCD grows at ~4-5% and you obtain ~6-12% EPS growth off of operational improvements and capital allocation (share repurchases).
While ROIC is also a valuable metric in the space (and for Mc Donalds), to simplify the view we'll focus on revenue and EPS drivers.

Inflation: With larger consumer companies inflation can be a tailwind or a headwind as people decide to purchase food at home or away. In short if the cost of food at home is increasing more than the food away from home, this would be a tailwind. If they are in-line would be neutral and if decreasing would be a headwind. Tracking inflation in this manner helps an investor paint a picture of where dollars spent are going and where price inflation is likely to occur.

Store Unit Growth: Assuming inflation assumptions are in check we can move down from the macro a bit and begin tracking total store unit growth. Of course the stores need to be profitable and we're looking for y/y growth in total units that is *higher* than its peers. In a positive situation, you're looking for unit growth to increase low mid single digits (call it 3-5%) and see these units turn into revenue growth meaning long-term growth of up to 5% (a solid number for a major corporation such as MCD). **Note this also explains the valuation/multiple discrepancy between a MCD (lower growth) and a CMG (high growth).

Geographic Growth: For major companies, not start up or growth quick service firms, you're going to splice revenue growth into geographies as well to determine if market share is being gained or lost and if each geo is increasing the operating margin line. This means splitting our same store sales numbers (SSS) by geography as well.

Food vs Beverage: After building a good high level view, you can then splice the market into food and beverage by looking at market share (on-premise and off-premise eating) and beverage sales (Coffee, hot/cold, smoothies). Generally the margins on drinks are higher relative to food so it may be a good idea to start in this segment to determine the underlying beverage growth and competitive landscape (Starbucks, Potbelly, BK etc.). Specifically, you would ideally map out the revenue by beverage (Mc Café as an example) but this will be difficult for MCD and more useful when looking at smaller consumer fast food companies.

Company vs. Franchise: Next, instead of splitting by beverage and food you will split the company based on franchise and restaurant income. For Mc Donalds you're looking at a ~$20B Company sales line and a ~$10B franchise line. Franchised income will command higher margins as they are calculated by taking revenue minus rent and depreciation. Net net, you're looking at~30% on the operating margin line for the firm.

Valuation: From a valuation perspective multiples for quick service companies are in the following range: 9-18x EV/EBITDA, 13-33x P/E and PEG's of 1.1-2.6.

Summary: Even with larger firms such as McDonalds there are a lot of moving pieces as you have different margin profiles and growth trajectories depending on the type of quick service Company you are working with. Just remember the main differentiators: 1) Same Store Sales Growth, 2) Growth by franchise/Company, 3) Margins and growth by beverage/food and 4) Geographic expansion.

Consumer Staples (KO, PEP, XLP)

Coca-Cola Example

No we are not going to use the classic Warren Buffet investment in Coca-Cola example which you can read in 20 different variations with a google search. Instead this is the last sector we'll cover as a lot of the items are redundant as you've seen from above. The main idea for the consumer staple space is the metrics become much more macro focused and in the case of Coca-Cola… Geographically macro specific as well.

Coke is a $50B top-line company (low single digit revenue growth) with mid twenties EBIT margins and EPS growth in the mid to high single digits.

Profit Growth: As you can imagine the revenue story is less compelling. Coca-cola is a massive consumer staples company and the law of large numbers weighs on the top-line growth rate… For those that are interested in the sheer numbers, Coca-cola sells ~28-30 billion unit cases in a single year.

The positive side? Profit growth can be quite compelling. Assuming volume continues to improve (concentrate sales and unit/case sales) leverage can be seen from the operating model assuming solid execution. Simplistically, continue to see stable to slightly improving volume growth/revenue stabilization and cost efficiencies in theory should drive mid single digit y/y EBIT growth.

The Weather: This is a serious metric to track for major companies such as Coca-cola. Inches of precipitation can cause material headwinds for the company as precipitation leads to lower consumer sales in general. If you don't believe this, look up the weather issues in February of 2014 and you can find many companies citing this as a headwind. It matters.
While it is difficult to predict global weather trends in the future, it is important to track the metrics across geographies so y/y growth rates can be appropriately adjusted. Using the February 2014 example, y/y growth rates should be materially better in Q1 of Calendar 2015 as the y/y comparisons will be easier to beat.

Competitive Dynamics: Everyone on here knows Coke's main competitor. Pepsi. Tracking their advertising spend is a material driver to Coca-cola. When you speak to the general public Coke is generally a better heralded "brand name", however aggressive marketing tactics from its closest direct peer can negatively impact earnings.

For those interested in the market share for carbonated drinks it is roughly as follows: Coca-cola at 40%, Pepsi at 30%, Dr. Pepper at 20%, remaining at 10% (primarily private label). On the Juice side of the market: Pepsi at 20%, Coke at 10%, Ocean Spray at 8%, Kraft at 8%, Campbell at 8%, Dr. Pepper at 7%, remaining is other.

International Branding, Taxes and GDP: Going to attempt to lump all of this into a single paragraph as well. You will want to track GDP growth by country (in Coca-cola's case the primary regions are USA ~40%, Japan ~10%, Mexico & Brazil at 6% each and China at 6%). After tracking revenue growth by region we then move on to analyzing operational issues (taxes and government regulation). You would analyze the performance here by tracking EBIT margins by Geo and

keeping up to date with changing government laws (for example some unhealthy items are beginning to see increased taxation).

Valuation: From a valuation perspective multiples are in the following ranges ~14-22x P/E , EBITDA of ~11-16x and in this case the DCF valuation metric is much more meaningful (you could safely assume a low single digit terminal growth rate linked to revenue and a discount rate in the high singles).

Summary: As we stated above, the large staple players become macro centric names given sheer size. However, it is interesting to watch if you want a broad understanding of macro: 1) geo political issues, 2) high level competitive dynamics and 3) government intervention.
Notably, we primarily used Coca-cola due to this tear-sheet which gives a high level view of the "Coca-Cola 2020 Vision" (focus on the right side of the pdf).

Concluding Remarks: That about does it. Similar to previous overviews feel free to add points in the comments or ask any questions you may have. There is no way to hit on every sector (example splitting into tobacco, poultry, specialty hardlines/softlines, high growth premium brands, big lots vs. general super markets, discount and drugs etc.).
With that said the below top 10 bullets will work if you want to know the basics of the space and didn't want to read the above:

1) Same Store sales (monthly) – track the growth of each store by geo
2) Sales / square foot – see if the company is doing a good job of optimizing its foot print
3) OPEX / square foot – see if the firm is doing a good job curbing costs
4) Competitive landscape – track exactly where in the consumer sector they are branding, who they compete with and advertising dollars do matter
5) Inflation and CPI numbers
6) Growth by segment: can be as simple as beverage vs. food and online versus retail. Track growth and margins by segment
7) Franchise vs. Company growth
8) Weather can drive consumer spending
9) Cash flow is imperative as we mentioned many consumer companies use debt and roll out to cash flow positive and open new stores with subsequent cash flow. Hence emphasis on EBITDA in the valuation sections
10) Valuation use P/Es, EBITDA and PEG (generally). If smaller use sales metrics. If a large consumer staple company (XLP) then a DCF can certainly work.

Technology – July 2014

Introduction

Technology Media and Telecom (TMT) is an interesting space particularly for those that enjoy seeing valuations that can range from "WTF was that" (internet) to a classic DCF model (older technology companies). With that in mind, it is best to break the sector into smaller sub-segments to understand how and why certain companies obtain higher multiples than others…. While there are hundreds of ways to break down the sector, we'll go with the following subsectors: 1) Semiconductors, 2) Telecom, 3) Hardware, 4) Internet, 5) Networking, 6) Software and 7) other components.

Before we dive into each subsector, we should note that technology focuses less on various equations (which FIG relies on heavily as you can see from our previous post) so don't be surprised if you don't see a lot of calculations. With that said… what are the key points to understanding tech?

1) Total Addressable Market (TAM): For each company you need to understand how big the opportunity is. It can be as simple as knowing how many Laptops and Desktops are shipped world wide to as large as "how many internet users are there on the planet". Using this same example, the PC market (desktops and notebooks only) could be a ~$200 billion revenue opportunity with total PC shipments of roughly 320 million… In comparison? If you look for the Internet, you can get to a TAM of $14 trillion… We don't have to explain why everyone fights about a firm's Total Addressable Market, it matters… a LOT. Now you understand why bankers fight tooth and nail over positioning a company within a specific sector/comparable group in Technology.

2) Growth rates: In lock step with the above point, you also want to know if the TAMis growing or shrinking. Piggy backing on the same example above you would quickly understand that it would be better to have exposure to Internet for growth because users continue to increase while the number of desktops and notebooks are flat to down as people move to their mobile phones and tablets. If the PC market suddenly sees innovation and the TAM is expected to grow to $300+ billion, you can bet anything that multiples will expand for companies with PC exposure (HPQ as an example). Similarly, if the number of internet users suddenly doubles for a specific company, say Facebook doubles its user base, get ready to see the stock move up as well.

3) A Real Technology Lead: This is where the engineers and techies step in.Lets say everything checks out so far, you have a product in a sector that is growing and has a large TAM… Now the rubber meets the road. **Is this product differentiated?** You should pound that question into your head after you've done a great job looking at parts 1 and 2. If you have a product that can be easily copied by a larger competitor because you have no Intellectual Property well… you are screwed (half-joke tone).

Side Note for Tech Nerds: Differentiation is vague. We're using Intellectual Property as the example since it is the easiest to relate to but it can mean a lot of things. It can also mean they have an extremely large install base and were a great first mover (think WhatsApp /SnapChat/ Uber).
We're not going to use this post as a time to debate the valuation of any of these since they do have specific technologies associated with them, but to give you an idea WhatsApp was able to process 27 BILLION messages in a single day with JUST 55 employees. You'd have to be a tech nerd to understand how crazy this is because the stick rate on low-end international phones has to be sky high.

Tangent – remember that differentiation/technology lead matters a lot and just because you see a high price tag doesn't mean it was always a bad deal (remember Google acquiring YouTube?). In addition, we strongly doubt anyone reading this is smarter than Mark Zuck in terms of understanding tech, that **includes** the authors of this post, so if you see an expensive acquisition try to understand the technology before jumping to any conclusions.

Valuation: We'll go into specific valuations for each subsector but the main ones you should know if someone asked you inside an elevator are as follows: 1) EV/Sales for companies with high growth and no profits yet – think companies you would take public, 2) P/E – main benchmark valuation methodology for medium to larger more establish companies, 3) FCF multiples, for large cap tech, think IBM/MSFT/AAPL/ORCL etc of the world 4) EV/EBITDA usually for internet based companies once they are relatively well established and 5) DCF: for the large cap high cash flow names.
With the introduction out of the way go ahead and jump to your sector of interest and take a glace.

Semiconductors (INTC, AMD, NVDA, ARMH, BRCM, TXN)
Semiconductors can be explained in many different ways, however, to boil it all down semis are the integrated circuits which act as the critical electronic components needed in system designs. Semis can serve in various functions from microprocessors, to memory, to analog, to logic to discretes and sensors. In general, semis account for ~30-35% of the BOM in electronic systems (think servers, smartphones, computers) etc. The total market was just over $300bil in 2013 with growth generally pegged to WW GDP growth.
What Matters in the space? i) Inventory Cycles – the space has traditionally been traded off of inventory cycles, mimicking ~6:2 ratio of builds to subsequent correction. Investors want to own through the early build quarters (6) and sell through the late build-early correcting quarters (2). ii) Return of FCF: The growth phase is transitioning into a more mature era, and slower unit demand is leading to excess capacity and broader industry underutilization, which we expect to persist through 2016. Given this backdrop, lower capital investments are needed as today's capacity is sufficient to meet demand. Consequently, we are likely to see greater FCF generation in the industry with companies endorsing shareholder-friendly capital-allocation strategies.
iii) Newer technologies: Rising technical standards (i.e. LTE) are demanding greater complexities out of solutions where system design is increasingly challenged. Semi companies that are solving these problems are poised to benefit from both a rising unit and ASP perspective – a trend (upwards unit and ASP slope) that is most appealing to semi investors looking for revenue growth.

Main Industries to understand from a high level.
Computing: In 2014 the market is estimated at $100 billion, -9% Y/Y accounting for 32% of total semiconductor revenues. Impacted companies: Intel, Marvell, Micron, SanDisk, Texas Instruments, NVIDIA and Broadcom.
Consumer: In 2014 market will be ~$55 billion, +5% Y/Y, accounting for 17.5% of total semiconductor revenues. In general, the Consumer market benefited from rising content trends, including more wireless connectivity ("the internet of things", TVs, household appliances), higher penetration of general consumer electronics in emerging markets, mix-shift to faster internal processing (embedded SoCs) and rising touch-enabled devices across multiple platforms. Impacted companies: Broadcom, Marvell, Cypress, Freescale, Texas Instruments, Analog Devices.
Semiconductor Wireless: In 2014 the market is ~$75 billion, +9% Y/Y accounting for 25% of total semiconductor revenues. While the growth in handsets and tablets are slowing at the high end, the market is seeing considerable uptake in the mid-range and lower end, which have become increasingly feature-rich.
Semiconductor Wired: In 2014 the market will be ~$15 billion, +2% Y/Y accounting for 4.5% of total semiconductor revenues. Within the data center, 100GE adoption is beginning to materially ramp as Ethernet content also benefitted from growth trends. Other components that are slated to benefit are network and multi-core processors.

*Auto:*In 2014 the market is $25+ billion, +31% Y/Y, accounting for 9.0% of total semiconductor revenues. The Automotive market stands to benefit from higher units (industry expectations +4% Y/Y) as well as semiconductor content. In 2014, total unit growth is expected to be ~4% growing to 85 million driven by increasing wealth in emerging markets. The content increases are largely due to 'infotainment' and safety systems which are benefitting analog ICs and MCUs.

Top Themes:
Theme #1: Enterprise Data: NAND Use to Broaden into Higher Value Applications
Theme #2: The Rise of Sector FCF
Theme #3: RF Integration

Valuation: Traditionally, the semiconductor industry has valued the space off price-to-earnings (P/E) multiples and EV/EBITDA multiples, as operating profits were always paramount in evaluating the effectiveness of on-going operations. This valuation method was prudent given the growth nature of the industry. However, the growth phase is transitioning into a more mature era, and slower unit demand (particularly in trailing edge) is leading to excess capacity and broader industry underutilization, which should persist through 2016. Given this backdrop, lower capital investments are needed as today's capacity is sufficient to meet demand. Consequently, we are likely to see greater FCF generation in the industry with companies endorsing shareholder-friendly capital-allocation strategies. Through this dynamic we should see five main characteristics unfold: i) lower capex as a % of sales; ii) rising industry FCF/share; iii) semiconductor leadership in FCF growth within the S&P500 sectors; iv) increasing emphasis to drive FCF vs. EPS; and v) rising P/FCF multiples across the industry, where the sector is trading at about six turns below the S&P500.

Financial Statement Dynamics: For semiconductor companies, the three most important criteria to follow are those impacting revenues, gross margins and CapEx cycles.
Revenues: As previously stated, industry revenue is generally pegged with GDP, and perhaps up to 5% on a forward basis. Revenues are impacted by ASPs (on average ~$0.45/component), units shipped (which may include distribution sell-through), mix-shift impacts (which affects ASPs) and product cycles. Mix shifts could be impacted by a move to higher technology standards (think 3G to LTE), increasing integration (think an integrated baseband + applications processors in mobile) or increasing software functionality (think GPU processing into big-data and cloud applications). Regarding product cycles, it is important to take into account seasonality which could lead to greater than expected volatility in the revenue line (think AAPL iPhone and Samsung Galaxy s4 ramps).

Gross Margins: Industry gross margins are ~45-50% range. In addition to revenues (see above), the moving parts of the gross margins are wafer costs, depreciation costs (GAAP basis), and cost efficiencies (think integration). In addition, foreign exchange may play a role if costs are overseas.
CapEx: Semi companies are either operate their own fabs (think Intel, Texas Instruments, and Samsung) or fab-less (majority of industry). A fab is where a semi company will design and fabricate its own integrated circuits. The cost of new fabs range from $2-$10bil (where costs are recognized using SL depreciation, usually over 10years). Thus CapEx cycles are important in assessing FCFs. The major foundries in the industry are TSMC, Global Foundries, UMC and IBM.

<u>Telecom (T, VZ, AMX)</u>

This space is on the borderline of technology as well but we'll include a short summary of the space for high level educational purposes. Everyone on these boards is familiar with the major telecom companies who make up the space IE: AT&T, Sprint, America Movil etc. The reason we consider it on the "border" is when most people think of tech they think of IBM/AAPL/MSFT etc, not major CAPEX intensive companies like T/VZ. We did not want to bucket this space under networking (CSCO, JNPR etc.) as it would be confusing and incorrect.

Main Items to Understand: The answer here is quite clear. You want to know how many post paid and prepaid adds a company is acquiring. Naturally, post paid adds are more important. What you would like to see is – AT&T for example – adding multiple post paid subscribers (recurring monthly revenue) and to a lesser extent seeing the Company sell a few of the cheaper junk prepaid phones to help with cash flows a tad.

Quick Sub Segment: Keeping it simple here again, there are two main segments to look at Wireless/Wireline. You can pull up a recent filing by T to pull the majority of the information necessary to understand the two sectors. In short wireless is going to be your phone plan (could include tablet plan – if you're talking about gigs of data purchased instead of WiFi only) and wireline is going to be your TV/Internet subscription.

Top Numbers to Know:
*Smartphones:*Roughly 1 billion smartphones in 2013/2014 This is expected to grow in the at ~20%
*Tablets:*Looking at 200M+ units (annual) as tablets replace PCs in the corporate/consumer world ("cannibalize" is the term they use) arguably. Arguably growth in the 20%+ range
Internet Users: About 2.5-3.0 billion

Financial Statement Dynamics: For the first time we're going to lead with a DCF/dividend valuation method and not have it as a joke comment. In general a DCF/dividend model can be used as part of the valuation because we are talking about enormous carriers that will unlikely go bankrupt and have been established for a multitude of years. Assuming user/subscription growth is solid, looking for 1) DCF on FCF, 2) EBITDA multiples, and 3) P/E Mutiples

<u>Hardware</u>
Many of you will be familiar with the hardware names (HPQ, AAPL, IBM etc.). In this space your larger players are essentially selling a hardware product such as an iPhone, Server or PC and layering on software/services to keep you coming back for more and generating recurring revenue (emphasis on operating systems such as iOS/Android etc.). Notice we are already mixing software with hardware causing a bit of confusion… but lets focus on the hardware side of the business and what you should know.

What Matters in the space? As noted, at the top of the post the focus is going to be on growth and a technology lead. In this case you can start with 1) growth which will be related to how many units or "volume" of the product you can sell [simplistically this would be iPhone units for a company like AAPL], 2) TAM expansion [another simplistic example would be how the smartphone market will grow in the future] and 3) hardware focuses a lot on margins, because higher margins will be a proof point that their technology is leading edge.
Before moving on, to expand on the last point, think of it like this. If Company A has 10% operating margins but Company B has 40% operating margins and they sell the exact same product

and the exact same unit volume… There must be some sort of technological/operational edge because they are charging a much higher price than Company A. So in short, margins are eyed keenly in the hardware space, hence all the news articles speculating on gross margins at IBM, AAPL's iPhone/iPad and all of the Build Of Materials or "BOM" break downs you see on technology blogs.

Main Industries to understand from a high level, with example companies in brackets

*PCs [HPQ, Lenovo]:*As stated above, you're looking at a ~320M unit shipment industry with revenue of $200B (annual). As a rule of thumb the space is expected to be flat to slightly down as tablets become more and more widely deployed

Servers [IBM/HPQ]: You're looking at ~9-10M units with total revenue in the $50B+ range (annual). This space is also seeing contraction/flat unit expectations as it has matured. A signal? IBM's exit of its x86 business.

*Smartphones [AAPL/BBRY/Samsung]:*Lots of growth here. Depending on how you slice the market (again remember TAM slicing is important) you are looking at 1+ billion units and revenue of $250B+ (annual). More importantly? This is expected to grow in the future with expectations for annual unit growth in the 20%+ range

*Tablets [AAPL/MSFT/Samsung]:*Again growth here. You guys are familiar with the major players, to give the jist $50B+ revs, looking at 200M+ units (annual). As tablets replace PCs in the corporate/consumer world ("cannibalize" is the term they use) arguably Tablets will be the biggest growth item within the "PC space". Notably, we have only included desktops and notebooks in the first bullet as PCs to highlight the difference. Arguably growth in the 20%+ range

*Storage [EMC/ORCL/Hitachi – Private]:*Here is where we get more tech focused and don't want to explain the difference between Network Attached Storage (NAS) and Storage Area Networks (SAN)… Have we confused you yet? Essentially all the stuff you create, all the words on this screen, the nudes you send on SnapChat are all eventually screen "shotted" and saved somewhere. IE – Storage. This is put into a data center and industry analysts try to analyze both 1) how much data is stored in terms of Terabytes and 2) how much revenue will be generated from the purchase of storage items. These numbers are honestly mind boggling, you're looking at ~40+ Zettabytes of storage by 2020 in a ~$25 billion market. Again don't want to get into the technicals because this space is highly confusing for a beginner but improvements to storage "efficiency" ie how much can be stored on a single device offsets a lot of the growth, so call it low to mid single digit long term growth.

Notably, we could include more subsectors here, for example… by splitting the phone market into smart phones and low end cheaper phones without internet access. We could also begin breaking up each segment, such as business only PC sales (ie: how you're reading this post) versus consumer PC sales (ie: how you watch stuff that is blocked on your computer at work) to show growth rates in an enterprise versus the regular consumer/retail market. For an overview of hardware, the above units should be just fine.

Valuation: For the hardware sector you're looking at the same metrics we outlined for tech in general, however you should be more familiar with 1) P/E metrics both on a GAAP and non-GAAP basis, 2) DCF for Large Cap hardware, 3) Sum of the Parts and 4) EV/Sales for growth hardware.

P/E: This is self explanatory, however the point is earnings growth is eyed a bit more in the space as companies are expected to grow EPS faster than sales (assuming we're talking about larger companies)

DCF: Again focused on large cap tech, as your EPS becomes larger, companies look for quality earnings. As a rule of thumb GAAP net income growth should begin to mirror FCF growth, so a DCF becomes more viable at this point.
Sum of the Parts: As you can see, many of these hardware companies will inevitably have software and services as line items. Sticking with Apple again, their iTunes would be an example of non-hardware related sales which should be valued differently from the sale of the actual hardware item (ie: it can be considered more of a software or services line item). Here you're valuing each piece with a different multiple, add them up and see if it reflects the Company as a whole.
EV/Sales: When you have no profits and you're operating at a loss… You better grow like a weed. This is where EV/sales becomes crucial. The idea is that if your company is growing at 50 or even 100%+ that you have a major technology lead, a major company could then become fearful of you and buy your entire company. This is where you see the "wtf multiples" come into play and sales multiples are much more common for companies that are going public (TWTR as a clear example).

Financial Statement Dynamics: For hardware, as noted above you'll usually see revenue breakouts by segment. This is called a "bottoms up analysis" where you look at each segment and give a detailed look at how it is going to grow in the future. Sticking with AAPL since it is going to be easy for readers to understand, you would model out revenue for iPhones and iPads differently and you would also have specific unit volume estimates for iPhones and iPads as well, since they will unlikely grow at the same growth rate over the next 12-24 months.
In addition, if you think of a Company like IBM, you would have to look at the margin structure by business line as well. Considering that the server sales (hardware) would have lower margins due to cost associated with it, but their software product line would naturally have significantly higher margins. So an alternative way to model would be Revenue and Margins by segment, to build up to a consolidated corporate gross/operating margin line item.
Finally, from a balance sheet and cash flow perspective. Since it takes a lot of cash to manage inventories of all of these products and new machinery needs to be made to test and develop new products, CAPEX (cash flow) and Inventory (balance sheet) changes are eyed.

Internet
This is far and away the easiest sector to understand in terms of what a company does and what the value proposition is. Negatively? It is also quite difficult to value as growth rates can climb or sink at a moments notice. This is the Ferrari of Tech, high risk high reward. If you want to take a look at some disasters look no further than GRPN or ZNGA… A turnaround? FB… Wild success? OPEN, recently acquired.
Since the space is growing at rapid rates lets go ahead and look at the high level trends that people need to be aware of:

More Users, More Money: Roughly 2.5-3.0B internet users on a global basis. This is going to benefit the space as more users means more revenue. This is relatively simple to understand and industry analysts attempt to size the total internet business which leads to numbers in the trillions of dollars ($4T+)

Move to Mobile: Simply put, people are interacting more with their mobile devices than they are with legacy desktops and notebooks. This moves in lock step with the above sector analysis on hardware, the growth is in tablets and smartphones. Therefore? Investors/bankers are looking at

what percentage of revenue companies generate from mobile sales versus desktop/notebook. So if you're looking to sell your company, or take it public, you should have a clear explanation of a mobile strategy to help monetize your company. This will help you understand how a company like Facebook sees its valuation move up as mobile is a higher % of revenue and help you understand why Uber receives such a high multiple (all mobile revenue).

E-Commerce: Here is a space that can mix a bit with consumer bankers/investors as well. If your company sells products both online and in retail stores, the different businesses may need slightly different valuations. A good example of a clear internet e-commerce business? Gilt. We all remember Zappos as well (acquired by Amazon). This is incredibly simple, but as sizing preferences are established people will shop more online instead of at retail stores (doesn't take a genius to figure out how that will help margins!).

Social: More and more people are purchasing based on the preferences of their friends. IE: if your two best friends all buy XYZ product you're much more likely to buy it on their recommendation. Enter… Facebook, twitter, etc. This space is also seeing a lot of the issues talked about above come into play (move to mobile, people looking for increases in users etc.).

High Level Numbers: Since this space is growing rapidly, the numbers are more difficult to pin down when you compare it to the other technology sectors (hardware, semis, components, etc.) but lets go ahead and write down some back of the envelope numbers: **Internet Users:** about 2.5-3.0 billion; **Internet Value:** $4-8 trillion (obscure high level, McKinsey values the internet at ~$8 trillion – 2011 data); **Total Internet Advertising Market:** ~$50B+ annual; **Mobile Payment Market:** $70B+ annual; **Online Gaming Market**: $30B+ annual

Valuation: Here is where the fun begins… Valuing internet stocks. Since a lot of these hyper growth companies are going to be driven by users and many don't turn a profit you can look at 1) Sales growth, 2) User Growth, 3) EBITDA metrics, 4) P/Es and 5) FCF. As you move to larger and larger companies you would go to valuation metrics 3-5 (google as an example) but many of these companies do not have high (or negative) earnings so sales becomes the primary metrics along with user growth. No need to take a deeper look here since we'll be debating for days on the most important metric for each stock.

Financial Statement Dynamics: The long story short here is Growth. You're tracking more metrics that will impact the top line such as MAUs (Monthly Average Users) and use the user growth rate as a leading indicator for future revenue growth.

Conclusion so far? If you want to have a solid career in tech, of the four items listed above you're likely best off in internet as it stands today. Yes there is going to be debate about what sector to join but essentially you want to join a sector where there is a lot of growth. Internet and Software would be the two biggest ones.

Networking

Networking is valued in a similar fashion to hardware. When you think of networking the biggest player that should jump out for your average person is Cisco Systems – the $130B networking giant.

As you can imagine there are a lot of mature product categories in this space and when you hear the word mature it usually means slower growth, less deals and more maintenance work and tuck-in acquisitions.

Positively, there are still some bright spots in networking and this post would not be doing the space justice without mentioning some of the hotter pieces of networking IE: Palo Alto Networks for example. So lets go ahead and break down, in simple bullets, what networking comprises of starting with CSCO since it has the vast majority of the product lines.

Switching – Essentially fixed, modular and storage expected to be flat to slightly up on a y/y basis in the future. Think closer to IT spend
Routing Products – you're all familiar with routers both on corporate environments and in your home for internet/TV connections – similar growth expectations at IT spend flat to slightly up
Service Provider Video –cable access, connected devices, essentially as video becomes the medium of choice this space will grow. Expected to be up mid singles annually
Collaboration – unified communications
Data Center – Growth. As expected by the name, anything related to additional sales into the growing data center space – expect 10-20% here (debatable)
Security – Self explanatory, helping keep enemies out of the network, flattish last year in 2013 but should grow at least mid single digits
Wireless –older legacy products call it IT spend growth

What should you move toward? With this backdrop it is clear the space does have some similarities to hardware in that a lot of the areas are mature but… there are some bright spots. The growth rates alone should point you to the bright spots Security, Data Center and Service Provider Video

Security (PANW): "According to IDC, the worldwide enterprise network security market, defined as IDC's Network Security market and Web Security market, is estimated to be $10.0 billion in 2012 and is projected to grow to $13.4 billion by 2016." – pulled directly from PANW IPO filing.
*Data Center (ANET): "*Nearly all consumer applications today are delivered as cloud services. Enterprise applications are rapidly moving to the cloud as well, since cloud services are easier and more cost effective to deploy, scale and operate than traditional applications. Internet leaders like Amazon, eBay, Facebook, Google, Microsoft and Yahoo! pioneered the development of large-scale cloud data centers in order to meet the growing demands of their users, including business customers. These U.S.-based Internet leaders increased their capital spending from $8.9 billion in 2010 to $19.4 billion in 2013, representing a 29.6% compound annual growth rate." – pulled directly from IPO filing

Video Services (CSCO): Keeping it simple and referring back to CSCO since there is nothing public that we would refer to for a specific sizing number (feel free to chime in if you know of a pure play here). Service provider video: 4%-6% y/y growth in the future.

Valuation: For the networking sector you're looking at the same metrics we outlined for hardware, this is a copy paste job below but good for reference if you're interviewing for a networking slot and want to print this out. You should be more familiar with 1) P/E metrics both on a GAAP

and non-GAAP basis, 2) DCF for Large Cap hardware, 3) Sum of the Parts and 4) EV/Sales for growth hardware.
P/E: This is self explanatory, however the point is earnings growth is eyed a bit more in the space as companies are expected to grow EPS faster than sales (assuming we're talking about larger companies)
DCF: Again focused on large cap tech, as your EPS becomes larger, companies look for quality earnings. As a rule of thumb GAAP net income growth should begin to mirror FCF growth, so a DCF becomes more viable at this point.
Sum of the Parts: As you can see, many of these networking companies will inevitably have multiple business lines. Ideally you will value each sub-segment separately to come up with a fair valuation. Growth rates and margin profile will determine the appropriate multiple.
EV/Sales: When you have no profits and you're operating at a loss… You better grow like a weed. This is where EV/sales becomes crucial. The idea is that if your company is growing at 50 or even 100%+ that you have a major technology lead, a major company could then become fearful of you and buy your entire company.

Software
This is going to take the bulk of part two, because similar to internet, it is the "hot space" in the Tech industry. Before jumping in it's probably a good idea to explain in layman's terms why the space is coveted. The best example we can use is a subscription based model.

Basic Software Business Model: Everyone knows Netflix and Hulu (internet not software). These business models are attractive because individual *consumers* purchase a subscription or access to content that has a fixed/flat cost base. What this means is there are limited costs of good sold so you have higher gross margins and this flow through the financial model. The more users you get, the better since the content you're selling doesn't change in price and you simply need to scale.

How does this relate to Software? Well to put it simplistically a successful software company has this on an **Enterprise** level. Meaning your recurring revenue is coming from companies not consumers.

Using a simple example, you buy software from Microsoft for your company… Now this software has recurring annual license / subscription revenue and your software company now makes a huge margin as they sign up more and more enterprise companies on your software. Again the gross margins here are high because the software is a code and this flows through and your main overhead is essentially R&D (ie: the guys you hire to make the new codes)

Now we can go ahead and take this a step further and explain that enterprise users for major software companies also pay for services (be it maintenance or essentially trouble shooting) but the crux of the matter is that extremely valuable software can be scaled quickly, deliver value to an enterprise immediately and give the software company a "long tail" of future revenue assuming they sign an enterprise up for a 2-3+ year agreement.

What Type of Companies Fall into this Space?

You can find hundreds of ways to splice the space "Platform as a Service" (PaaS), "Software as a Service" (SaaS), "Big Data Analytics" (BDA), "Virtualization" (Desktops/Servers), "Cloud Based Companies" (don't get us started on anything that falls under the cloud).
Instead of going through and trying to bucket exactly where all these companies and segments fall we'll look at the big level trends and name a few players who touch on each space.

Virtualization (VMW/CTXS/MSFT): This was a bit hotter back in the 2009-2010 time frame when server virtualization was ramping up to speed. For those that are unaware of what virtualization means, in layman's terms, it essentially *allows a server to perform multiple tasks.* Previously a single server would be dedicated to just *one* application or task, but now with **Server Virtualization** you can install software and divide the physical server into multiple *virtual* environments.
Moving forward, the next phase is the move to desktop virtualization. Again to put this in layman's terms what this means is your desktop will now be more secure as it is linked up to a bunch of storage/servers inside a data center. The best form of explanation is as follows:

Non-Virtualized Situation
1) Joe has his laptop stolen
2) Joe reports the laptop stolen to his IT administrator
3) Joe has to explain all items on his desktop/accessible in order to make sure no confidential information is breached
4) Thief tries to steal information in the mean time

Virtualized Situation
1) Joe has his laptop stolen
2) Joe reports the laptop stolen to his IT administrator
3) Due to desktop virtualization and working off servers + storage all the IT guy does is cut off 100% of all access and shut down the computer for life
4) Thief gets nothing because zero information is on the drive, he simply picks up the cheap hardware product that no longer has information on it

There is much more to this, but with the two examples of server and desktop virtualization it should give good reason to see the value.

Business Model: Now in this space you're looking at around 10-12% long-term revenue growth, gross margins of 85%+ and operating margins in the 30% range. To avoid getting into the weeds too much, the big debates in this space are as follows: 1) what happens when all servers are virtualized and we have finally converted all physical servers to virtual servers?, 2) how much will it really cost to convert all desktops/notebooks to a virtualized environment? 3) Which company will have the best overall solution for the enterprise.

Big Data Analytics (SPLK, DATA and Pivotal a division of EMC)
This space is currently *hot* ie: many are talking about it and the valuations here are getting quite rich as people are looking for the best of breed in Big Data Analytics.
What is big Data Analytics? In short, it is essentially the ability to take a slew of information about a topic and make a decision as to what the information means in real time… And to do this in seconds not minutes hours or days. From a college student perspective think about it like this, big

data analytics is trying to come up with a thesis paper… full and complete in less than 3-4 seconds! Okay that was a bit extreme… But that really is the idea.

As a real time example, lets say you *Joe Target School* walk into a local clothing store. With all the information you have given out in the past 1) your previous purchases, 2) your facebook posts, 3) your emails – which Google is free to read and 4) your history with the store…. They will immediately try to sell you the product you're looking for. Now… Take this a step further… They are looking to do this on a geographic basis as well. If you own the same clothing store in Austin Texas versus Spokane Washington, the clothing store will reorganize the entire store to match the buying preferences of the community as a whole.

Business Model: In this space you're looking at hyper growth of up to 50%+!!! In addition you're looking at gross margins of 85%+. Notably, operating margins are generally negative, IE: these companies are *losing money* because they are reinvesting in R&D to make sure they have the best analytics software and in addition are searching for ways to obtain more sales (marketing and sales expenses). Most of our tech savvy readers already know this is how high growth new software companies work, negative operating margins as you build a book of recurring revenue then you should scale appropriately and see the profits flow in at a later date.

Cloud Based Companies (CRM, WDAY)

Now we're getting into the cross over and broad topics in software. Cloud based companies can be literally any software company that primarily functions on applications for the Cloud or "Platform Three". A company that uses internet based computing to give a service/product is going to be considered cloud. As you can see this opens up a large large large can of worms in terms of what can be considered a cloud based company. Certainly a software company that has all of its revenue derived from the cloud would count… but deciding if you include a security company as cloud is difficult (looking at you FireEye).

If you wanted to look at one company and say this is a large "cloud" based play, then a good place to start would certainly be salesforce.com (CRM). Even on a $1.2B+ quarterly revenue run rate, the company is growing at 30%+. This is a tall task for any company. The Company operates in 4 segments sales cloud, service cloud, marketing cloud, salesforce1 platform.

Again putting this into simple terms, think of CRM's business model as access to proprietary software/applications through the internet. Simple as that. Using CRM as the leading example a *service cloud* would be creating and tracking calls and the ability to prioritize importance (through internet medium), *sales cloud* would allow collaboration in tracking and helping close a client/business lead and again escalating to different members as they near purchasing, *marketing cloud* allows customers to bring in outside data and integrate into their customer profile to help analyze and later sell more products in the future.

Business Model: Would like to reiterate that many companies can be considered cloud, but if we're speaking towards large scale growth (like a CRM) you're looking at ~30%+ growth this year and 20%+ over the medium term (call it 3-5 years). The Gross margin profile in this space is slightly lower than a pure software company but you're looking at 75%+. In addition, sales and marketing expenses are higher given the larger support and services piece of the business model, but you're looking at 10%+ op margins.

Software as a Service… For those that work in technology investment banking… you'll know why this was listed last… It is simply because you can technically call CRM/MKTO/Netsuite/Workday and other companies mentioned within this write up as… "Software as a Service" companies.
Since we don't want to go over every single company that is considered SaaS which would take a post in itself, we would recommend this short article that simply talks about high level valuation of SaaS Companies:
http://www.scalevp.com/a-valuation-framework-for-saas-companies

Valuation: Here's the basics for Software Companies, if you're talking about larger firms such as a CRM a Free Cash Flow multiple may work along with a DCF. When you're talking about high growth companies (see losing money) then you're forced up the income statement and you're looking at Sales multiples. If you're not using any of those four metrics then you're likely moving to a P/E metric and lastly a EBITDA metric…. Software is a huge space, we missed out on a lot here and didn't even scratch the surface (examples RHT/LOGM/LPSN etc etc.) and the fact that there are so many large companies lets you know that there will be a lot of IPOs/consolidation in the future. That's always music to a banker's ear.
Want to reiterate here, unlike Internet which can be more or less understood when looking at the business model at a glance, Software has a lot of overlaps and can be difficult to "position" particularly for a pitch or comp sheet. When push comes to shove you're going to have to understand how your banker thinks about splicing up the space and how to spin your company into the right "buzz word" areas such as cloud and big data analytics. As a quick note, a smart way to justify your comps/valuations is to stack up like for like growth rates and margin profiles regardless of it being a XYZ software play instead of a ZYX software play. Long story short software can have a full 10+ pager in seconds

Other *Tech*
Here we are going to attempt to tie in all the loose ends that could be considered technology. As an example you can use 1) manufacturing, 2) distributors and what we'll deem 3) electromagnetic devices as "Technology"
For those that work in industrials you see how we begin to blur the lines between "technology" and "industrials". As an example if a company creates the components within the technology device (think the nuts and bolts connecting everything inside a server or a laptop) is this considered "technology" or is this considered "Industrials". Without debating how to splice the group we can name a few types of industries that could be considered tech but could also fall into the lap of a few different industries person.
Main Industries that can qualify as *Tech*

Media/Gaming (CBS, GA, SINA, FOXA): Okay… fair we should have another section on this, since it is calledTechnology **Media** and Telecom… However the issue is the space is generally fragmented (gaming) or quite consolidated (media).

Looking at gaming, upstart gaming companies are quickly scooped up by one of the larger companies such as GA. In this case, when interviewing for a media/gaming based position you should expect to work on a LOT of 1) small sell-side M&A transactions or 2) advising a large gaming company on a lot of small M&A transactions.

Now if your focus is more on media you're going to be referring to CBS and we would refer back to telecom based valuations for simplicity: focus in on 1) entertainment vs cable revenue growth, 2) subscriber growth 3) Contract renewals with operators such as DirectTV, Cable Vision etc., 4) capital allocation policy – dividend changes and 5) Free Cash Flow. In short, refer back to valuations for "mature technology" since the big names are unlikely to trade on sales multiples gives the growth rates.

Distributors/Value Added Resellers (VARs) – [TECD, AVT]: These companies essentially buy products, warehouse them and resell them. Lets say you're a small company and can't afford a massive sales team like the big technology companies. You reach out to distributors/VARs to help sell your product. They generally provide some technical support as well.
[Note: *technically* distributors and VARs should be slightly separate as a VAR is supposed to provide additional features or services at all times before reselling, but we're just making this easier to clump together]

Manufacturing [Hon Hai, FLEX, Catcher]: All these severs, computers and phones being made someone has to put this stuff together right? Simply put, the job of technology manufacturing is to find ways to efficiently pump out those billions and billions of SmartPhones, laptops, printers, Servers etc. You see this in the news quite a bit with China wage laws and all the other associated manufacturing issues brought up by main stream media.

Electromagnetic Devices [GLW, TEL, BDC]: Lumping a LOT of categories in here, but think about it like this… all of the "stuff" inside. The antennas, the batteries, the sensor for your fingerprint scanner, the control that notices you have turned your iPad up and then back to the side to view a movie etc. All of this "stuff" is going to be technology in some cases. You could also call it "industrials" simply put the guts of the technology product.

Valuation: For this space we're really looking for P/E and FCF. For the extremely large companies that create the guts of the products you can have a sum of the parts for the different businesses (since they command different margins) but we're going to avoid extreme detail and stick with P/Es and FCF.
The bigger idea when thinking about valuation for these types of companies is this… They are heavily influenced by the macroeconomic climate. This makes sense. They are trying to sell anything and everything to everyone, or trying to create anything and everything. So if the macro economy suddenly improves their revenue numbers jump and if the macro were to suddenly decline, they would quickly fire all of their employees making all of these products.

Financial Statement Dynamics: Since these companies are creating large volumes it would be clear that inventories need to be monitored. Here is where you can look at working capital swings as proper management of capital is going to impact your FCF.
Finally, this group of "other" tech companies are generally prone to charge offs or one time restructuring as they resize their businesses on a relatively frequent basis to adjust for the macro climate. This should be taken into account when one looks at their performance over a specific time period, IE: a full bull and bear market should give a much more reasonable idea for how the company operates (positive or negative). Can they manage a down turn? Can they take advantage of an upswing? Etc.

Financial Institutions Group – June 2014

We are testing a detailed look at sectors within Wall Street. Today the focus is on FIG. If you have no interest in the working of FIG or investing in FIG, we suggest you run for the door. However… If this is of interest to you, take a seat, read and take notes! You'll be able to get an edge on your competition by knowing all of the key metrics to look for and going in with a handful of skills on day one… Just remember you're going to do investment banking for period of time as you transition to creating your own online business.

Introduction: We're doing a test run on detailed articles by sector to introduce and explain certain industry silos in more detail. First up is the Financial Institutions Group, or "FIG", which includes: Banks, Insurance Companies, Asset Managers, Diversified Financial Companies (Credit card companies and the like), Intermediaries / Securities Firms / Other Financial Companies (Custodial Banks, Exchanges, Brokers, Financial Technology, etc.)

This post will lay out a framework for understand FIG companies, starting with banks. It will do so by exploring the business model and typical operating and valuation metrics important for each major FIG subsector, in particular how they are different from other companies. Like Energy and Real Estate, FIG is a slightly different beast from your typical EBITDA / cash flow driven companies ("Widget" companies) because the balance sheet drives the income statement, and not the other way around. The assets of FIG companies (loans, investments, cash and securities, etc.) are what generates revenue for them, in the form of interest and investment income.

Basically, FIG companies "borrow money" (i.e., source capital) cheaply and then "lend money" (invest that capital) expensively. Much (though not all) of their income is generated by the spread between those two rates of return. Additionally, because of the sources of some of their capital (largely individual consumers), there is strict regulation surrounding what kind of assets FIG companies can and cannot hold on their balance sheet, and in what quantities.
There are a multitude of additional complexities involved with FIG companies which will not be covered here, but this should help to provide a basic understanding of how FIG companies operate and function and how people think about them. Lets go ahead and start with banks

Banks

How Do Banks Make Money? *Net Interest Income (50-75% of revenues).* The interest they receive on their interest-earning assets (loans), less the cost of: The interest they pay on their interest-bearing liabilities (deposits) The cost of bad loans (mortgages they foreclose on)… Banks hold deposits, for which they pay little interest, and use them to make loans, for which they earn as much interest as they can. They also have to eat the cost of loans that default, how much of which is dependent on the quality of said loans and what collateral (if any) is associated with them.
Besides just deposits, banks can also fund their lending activities using wholesale funding from other financial institutions, the government (i.e., the Fed), and the capital markets. Together, these comprise a bank's **interest-bearing liabilities**. Equity contributions are also a source of capital, though it is usually fairly limited because of how banks deliver value to shareholders and the capital requirements associated with how they maintain their balance sheets.

The investments banks "**interest-earning assets**" are primarily composed of loans (mortgages, commercial financings, construction loans, etc.), but can also include investments in other sources (securities, proprietary PE-type investments, stocks and bonds, etc.) depending on a bank's capital position.

The reason that interest expense is included "above" the top line (in net revenues) is because interest expense for a bank is analogous to COGS for a widget company. The uses of the liabilities drive bank interest expenses are fungible between being operational and being a traditional source of financing since again, their assets are their capital.

Non-interest income (25-50% of revenues): Mostly composed of fees, but can include other fun stuff as well. Banks charge fees for pretty much anything they can get away with – likely the best know examples are investment banks charging advisory fees and commercial banks charging lending and deposit fees (think ATM fees and the like).

Besides fees, other common sources of non-interest income include: **Principal Transactions**– for certain sources of their capital, banks are not limited solely to fixed income able to make principal investments which are slightly more risky – merchant banking, for example.; **Asset**

Management – Detailed further below, but also a fee – on the assets being managed; **Credit cards** – Besides the loans associated with the card, banks also use them to generate interchange fees (essentially a transaction fee – the reason so many delis in the city don't take AmEx is because their interchange fees are much higher than other issuers); Some investment income not included in interest income (typically from principal transactions); Anything else that doesn't involve interest income.

Income Statement and Profitability Ratios

Income Statement: Now, taking the above and walking through the rest of the Income Statement, we have the following (explanations below):

Interest Income
Less: Interest Expense
= Net Interest Income
Add: Non-interest Income
= Total Revenues

Less: **Non-interestExpense**
= Pre-Tax, Pre-Provision Earnings
Less: **Credit Loss Provisions**
= EBT
Less: Taxes
= Net Income

Definitions:

Non-interest Expense – Essentially SG&A. Includes compensation expense, technology and equipment, marketing and sales, etc.

Credit Loss Provisions – Banks have to assume that some portion of their loans are going to default. In anticipation of that, they set aside a certain amount of capital each period to match what they estimate the losses will be for the loans they originated.
This is charged against the I/S in the period during which the loan is originated – i.e., not when the loans actually default (if they default).
The capital they set aside and charge against their revenues goes to a reserve fund (a contra asset) on the B/S called **Loan Loss Reserves** – discussed below.

Key Profitability Ratios:
Net Interest Margin (NIM) – Net Interest Income / Average Earning Assets
– Higher is better
– How effectively bank is using assets to generate income
Efficiency Ratio = Non-Interest Expense / Net Revenues
– Lower is better
– Measure of operational efficiency
Return on Average Assets (ROAA) = Net Income / Avg. Assets
– Higher is better
– How effectively bank is using assets to generate income
Return on Average Common Equity (ROAE) = Net Income / Avg. Common Equity
– Higher is better
– Ability to generate returns to investors in its common stock

Loan Loss Reserves and Asset Quality

Loan Loss Reserves
As mentioned above, banks set aside a provision each period based on the loans they originated in that period. This goes to a contra asset called Loan Loss Reserves, which is basically an "emergency fund" for when loans go bad and the bank has to cover the cost of default.
Where it gets tricky is that a loan can be behind on payments and not be considered a default. The process of disposing of bad loans therefore involves the following steps: 1) Loan is made; 2) Borrower stops repaying loan; 3) Up until 90 days past due, the bank accrues the interest on the loan as if it will eventually be paid back.; 4) After 90 days past due, the loan goes to nonaccrual (they stop assuming they will get paid back any interest) and is considered a **Non-performing Loan (NPL); 5)** The NPL is appraised (based on the value of the collateral and any money the borrower can repay) and the expected loss from the loan is charged against the reserves (the **Net Charge-offs, or NCO**); 6) After the loan is foreclosed, any collateral is sold, and any recaptured principal is added back to the reserve as **Recoveries**. In the case of mortgages or real-estate loans, the collateral is called **Other Real Estate Owned (OREO)** – basically all the houses the bank has repossessed that they haven't been able to sell yet.

Each period, the reserve calculation is as follows:
Loan Loss Reserve, BOP
– NCO
+ Recoveries

+ Credit Loss Provision Expense (from I/S)
= Loan Loss Reserves, EOP
Asset Quality Ratios

A banks asset quality is determined by what portion of their earning assets are not performing – i.e., not paying up. A bank with a lower portion of NPLs and **Non-performing Assets (NPAs)** (any earning asset that isn't earning, whether due to default or non-payment) is going to perform better, so banks want to minimize these kinds of loans while also making sure they have enough reserves to cover the loss potentially associate with them.
NPLs / Loans and NPAs / (Loans + OREO)
– Lower is better
– Reflect the portion of assets not earning money
NCOs / Avg. Loans
– Lower is Better
– Amount of loan losses caused by customers default and lack of collateral
Loan Loss Reserves / Total Loans
– Higher is better, but too high means a bank could have money used for reserves that could be put to better use
– Indicates adequacy of size of reserves

Capital Adequacy and Regulation: To reiterate, a bank wants as many interest earning assets as possible… and it wants to earn as much interest on those assets as possible…. The problem is that, generally, loans with higher interest rates are also loans with higher risk profiles. Since the deposit base utilized by banks is one of the foundations of the financial system, there are all sorts of capital requirements regarding what a bank can and cannot use different types of capital for. Taken to an extreme, if a bank took everyone's deposits and lost them all betting on red, then a lot of people would be SOL (the FDIC only covers up to $250k). Regulators don't want that to happen, so they put in rules saying "You can't bet people's money on red, because that's too risky, but you can invest this money in treasuries or something we think is safe".

To determine if a bank has enough capital to handle a "worst-case scenario" (think stress tests), banks use a variety of capital ratios to determine how solvent they really are and how big the risk that they lose everybody's money is. The numerator of these ratios is some definition of what a bank's "safe" capital (sources of funding) is, which is divided into tiers of decreasing safety thusly:

Tier I (Tangible Common Equity (TCE) – Equity less goodwill and intangibles; Preferred Stock; Trust Preferred Securities (TRUPS) – A hybrid security primarily used by banks)

Tier II (Loan Loss Reserves; Subordinated Debt)
While the denominator is some representation of a banks total assets (i.e., loans and other investments):

Tangible Assets (TA) – Total assets less goodwill and intangibles (i.e., assets that could be reasonably recovered in bankruptcy)

Average Tangible Assets (ATA) – Average TA over a given period

Risk-Weighted Assets (RWA) – Total assets, where each asset class is weighted based on it's level of risk. The risk-weightings for cash, for example, is 0%, since cash is "risk free". Most government securities are weighted at 20% ,since they are "kind of safe", while commercial loans and ABS / MBS are weighted 100% of their value, and can be rated higher than 100% if they are below investment grade (BB).

Capital Adequacy Ratios

Tangible Capital – Simple, conservative approach to evaluating bank solvency
Tangible Equity Ratio = (a+b) / TA
Tangible Common Equity Ratio (TCE) = a / TA, essentially tells you the amount of losses a bank can take before shareholders equity goes to zero

Regulatory Ratios – Used by bank regulators to capture the difference in risk between asset classes
Tier 1 Common Capital = a / RWA
Tier 1 Risk-Based Capital = (a + b + c) / RWA
Tier 1 Leverage = (a + b + c) / ATA
Total Risk-Based Capital = (a + b + c + d + e) / RWA

Valuation: As opposed to industrial companies and due to the nature of their business, banks are valued based on cash flows. to shareholders only (in contrast to cash flows to shareholders and debt holders), as debt funding is directly correlated to the bank's assets and its profitability. Banks tend to trade primarily based on Tangible Book Value (book value that would be available to shareholders in bankruptcy) and Earnings (P/TBV and P/E). **1) P/E** – Because of the capital adequacy concerns mentioned above, banks are only able to dividend a limited amount of their earnings each period to equity holders, since they may have to retain some portion of their earnings in order to improve and/or maintain their capital position. Higher multiples are driven by higher quality (i.e., consistent) earnings; **2) P/TBV** – A representation of how many income producing assets a bank has. Higher multiples are driven by higher ROTCE ratios. **3) DCFs –** While DCFs are rarely used to value banks, they can be applied to an estimation of future dividends (assuming a constant capital ratio) though this method is heavily dependent on cash flow and growth assumptions.

Insurance Companies

How Insurers Make Money? This can be broken down into two ways again:

Underwriting Income
The premium payments they receive, less:
The claims payouts they make
The operational costs associated with generating the policies that pay those claims
Investment Income
Money they make by investing the cash they receive from premiums before they have to pay out claims

Most of their income typically comes from investments. Insurers can and do make money from their insurance operations, but they usually price their products competitively so that they receive as many premiums as possible. Sometimes this means that they break even (or even come out negative) on a given insurance product because if they price it any more expensively then a competitor will capture that premium.

Premiums are analogous to a bank's deposit base – they represent cash with almost no cost-of-capital (or even negative cost of capital if an insurer is able to turn an operating profit) that insurers can invest for themselves (hence why Warren Buffet loves insurance so much). They want the investment income they can make on the cash they have lying around while it's waiting to be paid out for policies.

Life vs. P&C

The insurance industry is broadly divided into two categories: Life Insurance, and Property & Casualty (P&C) Insurance (i.e. car / house / medical insurance – anything that isn't life insurance). The reason for the distinction is because of the nature of the payout periods for life insurance vs. other kinds – life policies, by definition, last longer than any other type of insurance a consumer may purchase. Therefore, once they sell a policy, they know with reasonable certainty that they have the capital they get from those premiums for a fairly long amount of time, allowing them to make conservative, long-term investments that will generate more investment income than ones with lower time horizons.
P&C insurers, on the other hand, have much shorter policies and payout periods. As such, in addition to investment income, they tend to rely slightly more on the income they can generate from their actual underwriting operations because they're churning through policies.

Accounting Quirks

The total value of a given insurance policy is not static. The revenue and expenses associated with a policy (both historical and projected) can change over multiple periods. As such, there are a lot of accounting quirks associated with how insurers report their financials, mostly to do with how to reconcile the timing mismatch and estimates informing their underwriting profit. There are a boatload of variables that can affect how a policy is valued.

Example to demonstrate:

Let's say you have a 3 year renters insurance policy, which you paid entirely up front. The insurer now has your cash in its hand, which it can use to invest, but it doesn't actually "earn" the money for years 2 and 3 until years 2 and 3 happen, so what's the fairest way to recognize it? And what about the associated investment income?

Then, let's say halfway through year 2, you get robbed and they have to pay out the full value of your claim. The recognized claim expenses associated with the policy to that point had actually been nil, but the reported expenses had been estimated (based on actuarial statistics). Now the insurer has to take this actual expense amount (the claim payout) and spread it out over the 3 years, including retroactively updating the recognized year 1 expense amount.

Then on top of that it turns out the salesman who sold the claim had a clause in his contract that he would lose his unvested bonus if a certain amount of his policy sales resulted in claims, so now the commission expense associated with the policy also has to retroactively change for year 1 and the estimate for commission expense may have to be lowered for year 3.

You also have the investment income / losses, which include both realized and unrealized interest income, dividends, capital gains and losses, etc, and all the fun accounting rules that get associated with them.

Add to all this the fact that most insurers also take out their own insurance policies (called re-insurance) in order to hedge / manage their overall risk, so if your policy was reinsured it was likely ceded, or "given" to another insurer, who is actually the one now responsible for paying you (though indirectly).

Oh, and don't forget the taxes associated with all of the above.

As a result of these complexities, a lot of understanding insurers comes down to understanding the accounting rules associated with them.

To oversimplify, there are basically three kinds of accounting insurers use:
– GAAP / IFRS – Traditional accounting required by the SEC. This focuses on trying to what an insurer "earned" in a given period so that shareholders can see that the business is healthy

– Statutory – Accounting required by state insurance regulators (insurers are primarily regulated at the state level). This focuses on the cash insurers actually receive from premiums and pay out as claims so that regulators know that an insurer will have enough cash to cover their required payouts in the future. It also informs the rules surrounding when insurers are allowed to issue dividends to their shareholders (similar to bank capital regulation)Associated with Statutory accounting is what is called **Statutory Capital & Surplus (C&S)** – similar to shareholder's equity, but with some adjustments. C&S is used by regulators to determine the maximum amount of dividends that an insurer can pay out to shareholders. The differences are basically that the income or earnings added to C&S each period are closer to actual cash earnings than in GAAP. Examples of specific differences include: Bonds are generally recorded at amortized cost (vs. as securities); Acquisition costs (cost of new and renewal policies) are charged as incurred and not "as earned"; Realized capital gains/losses resulting from changes in interest rates are deferred and amortized over the life of the associated security

– Embedded Value (EV) – While not required disclosure, EV accounting is used by life insurers as a way of determining the intrinsic value of all the policies on their books. If XYZ insurance company suddenly decides to stop doing business , then their existing policies they have would still generate premium revenue and have claims to pay for many years into the future. EV tries to estimate what the implied value of these policies would be.

Income Statement and Profitability Ratios

Basic Income Statement
Direct Premiums

Add: Assumed Premiums
= Gross Premiums
Less: Ceded Premiums
= Net Premiums

Insurers will report both Gross and Earned premiums for each of the above, the difference being that Gross Premiums represent the premiums expected to be received over the full life of a given policy, while Earned Premiums represent, predictably, the value of the premiums from a policy that an insurer actually earned over a given period based on the contracted length of the policy.

Net Premiums Earned
Add: **Interest & Investment Income**
= Total Revenue
Less: **Losses and Loss Adjustment Expenses (LAE) Incurred**
Less: **Commissions**
Less: **Underwriting Expenses**
Less: Other SG&A Expenses
= Operating Income
Less: Interest
= Pretax Income
Less: Taxes
= Net Income

For statutory accounting purposes, net income is slightly different:
Pretax Income
Less: **Increases (Decreases) in Deferred Acquisition Costs (DAC)**
= Statutory Pretax Income
Less: Taxes
= Statutory Net Income

Definitions

Direct Premiums = Policies the insurance company wrote themselves
Assumed Premiums = Blocks of policies the insurer took from another insurance company (in order to provide reinsurance)
Ceded Premiums = Blocks of policies the insurer gave to another insurance company (in order to get them re-insured)
Interest & Investment Income – Similar to interest income for banks, though there is no associated interest expense in the top line
Losses and LAE = The claims the insurer actually had to pay out in a period, along with any associated adjustments to previously paid out claims
Commissions = Commissions paid for the policies generated in the period
Underwriting Expenses = Expenses associated with actually implementing the policies they have – office
Deferred Acquisition Costs (DAC) = DAC is an asset on the balance sheet that represents the expenses associated with acquiring (generating or purchasing) new policies that have been paid but not yet been incurred (since per GAAP rules they must be spread over the life of the policy).

Change in DAC represents a non-cash item on the income statement, so Statutory Net Income adjusts for it in order to get a picture of what actual cash earnings are

Unearned Premium Reserve (B/S Item): Similar to a bank's loan loss reserves (though not a contra asset), insurers create a reserve for premiums insurers they up front on multi-year policies. They create a liability called an that increases when they receive upfront premium payments and decreases when over time as they actually earn the said premiums.

Ratios

Retention Ratio = NWP / GWP
– Tells how much reinsurance an insurer relies on to balance their risks

Weighted Investment Returns = Interest and Investment Income / Total Value of All Cash and Investments
– Higher is better
– Tells if an insurer is putting its money to good use

Loss & LAE Ratio = Losses & LAE Expense / NEP
– Lower is better
– Ranges between 50 and 75% for P&C

Expense Ratio = Total Expenses (Commissions + Underwriting Expense) / NEP
– Lower is better
– Typically around 25%

Combined Ratio = Loss Ratio + Expense Ratio
– Lower is better
– Typically 90-110%. Under 90 is unusual
– Underwriting margin is 1 – Combined Ratio

Reserves Ratio = (GWP or NWP) / Reserves
– Lower is safer
– Typically around 150%

Solvency Ratio = C&S / NWP
– Higher is safer
– Usually around 70%, minimum of 10-20% depending on regulator

Risk Based Capital (RBC) Ratio = Total Adjusted Capital (TAC) / RBC
– NAIC regulatory ratio, similar to bank solvency ratios
– TAC = Statutory surplus
– RBC is calculated in a similar way to RWA for banks, with different weightings given for their various investments and other assets
– Above 200% is good, anything below 150% is bad. Under 70% requires state regulators to take control unless is corrected in 90 days.

Valuation: Valuing insurers is slightly different for Life vs. P&C insurers. Both generate investing income, so valuation based on balance sheet (including ROE and ROA) is important in the same way it is for banks. Because P&C insurers generate more of their income from underwriting, their

valuation is also informed more by their operational performance. **Ratios Both:** (P/BV or P/ TBV – Higher for higher ROE; P / GWP or P/ NWP – Higher for higher premiums growth); **For P&C:** (P/E – Higher for higher quality earnings); **For Life:** (P/Embedded Value – Higher for higher ROEV)… DCFs are also possible for insurers in a similar way to banks – they can be valued based on their expected future dividends assuming constant capital requirements.

Other FIG Sub Sectors (Yes we likely missed a few here)

Diversified or Specialty Finance: These include FinCos (payday lenders, etc.), "Non-Bank" Credit Card Companies (Visa / AmEx / MC), Mortgage REITS, Business Development Companies (BDCs), and agency (GSEs). The main source of revenue for both banks and specialty finance companies is net interest spread earned on loans and leases, with the funding model as the primary differentiator. Whereas banks primarily extend loans by expanding credit through fractional reserve banking, i.e. "deposit funding", specialty finance companies must secure its loanable funds in the capital markets
Deposit funding is a unique legal privilege granted to banks, but comes with significant regulatory strings attached limiting the potential scope of banks' lending activities Hence, there is a need for specialty finance companies to deliver credit products that do not fit well within a bank regulatory construct Specialty finance companies also compete directly with banks in certain areas. Diversified financials are valued in the same way that banks are.

Asset Management: Asset managers include both traditional long-only firms, like Franklin or Fidelity, and alternative asset managers like KKR or Fortress. Working on Wall Street, you should be familiar with the asset management business model. They invest (and hopefully make) money for people (or endowments, insurance companies, etc.) in return for a fee. Broadly, there are two kinds of fees asset managers can take: **1) Management Fees** – This is a % of the total AUM, and is paid regardless of performance; **2) Performance Fees** – this is a % of the returns generated by the asset manager, with fees usually assessed on any performance above a given benchmark or high water mark

Because of this, one of the most important metrics for asset managers is their AUM, and how quickly it is growing (or shrinking). AUM can grow (shrink) in 3 ways: 1) Investment gains or losses; 2) Organic Flows = Money given to or taken out of an asset manager by their clients; 3) Acquired Flows = AUM acquired from another asset manager
The net organic flows of an asset manager or highly predictive of it's market value, with higher flows obviously being better.
Besides AUM and flows, however, asset managers are valued and treated similarly to other EBITDA companies, so we won't go into more depth here.

Securities: Finally, there is "all the rest" – other financial firms that don't fall into the categories outlined above. These are primarily in the securities industry, and are valued and analyzed in the same way as Widget companies. Examples of securities companies include: Brokers (online and retail); Boutique investment banks or advisory firms; Exchanges; Execution Services Firms; Financial Technology / Software Companies; Market Data Providers; Financial Processors