

FLIP FEATURE

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In a previous essay, Prof. Brinks explained why it is important to start investing early in your career in high yielding assets. In this essay we look more closely at what an investment is, the various types of investments that are possible, and why one type of investment has a higher return than another. In addition, we will look at the benefits of diversification in order to reduce risk.

What is an Investment?

In its simplest terms, an investment is an asset (anything of value that you own) that generates a return or profit to the owner. There are many things that qualify as an investment. For example, you can invest in gold or precious gems, art, collectibles, real estate, businesses, stocks, bonds, and savings accounts, among others. Some of these assets generate periodic returns in the form of rents, interest payments, or dividends. In addition to these periodic returns an investor can also earn a capital gain, or an increase in the value of the asset, which is then captured when the asset is sold.

Some of the assets listed above provide only periodic payments as a return. For example, if you put \$10,000 in a savings account you will receive periodic interest payments (usually monthly), but you cannot sell the account for more than you originally invested. An investment in gold has the opposite outcome; you don't collect periodic payments from gold, but you can hope to sell it for more than you paid for it, earning a *capital gain*. Again, consider a hypothetical investment of \$10,000 in 10 ounces of gold selling for \$1,000 per ounce. The gold sits in your safety deposit box earning nothing. However, 2 years after you purchased the gold at \$1,000 per ounce the market price has risen to \$1,500 per ounce. You now sell your 10 ounces, which cost you \$10,000, for \$15,000, making a \$5,000 capital gain. So, even though you did not get any periodic income from the gold you still made a profit when you sold it. Lastly, an investment could earn both periodic returns and a capital gain. For example, you could buy a house for \$200,000 and rent it out for \$1,000 per month, earning \$12,000 per year (assuming away costs of maintenance, etc. for simplicity). After collecting \$12,000 per year rent for 5 years you decide to sell the house which is now worth \$250,000. So, in addition to collecting the periodic rent payments you also collect a \$50,000 capital gain on the sale of the house.

For something to be an investment, there must be a reasonable expectation by the investor that it will pay some sort of return: either a periodic payment in the form of interest or rent, a capital gain at sale, or both. Any other purchased asset, like a car or anything else that depreciates or falls in value over time and that does not give you some kind of return in the future, is not an investment. It is consumption.

Now that we have an idea of what is and what is not an investment, we can focus our attention on making some good investments for our future. Some investments, like gold and real estate, are relatively easy to understand. Other investments, like stocks and bonds, are more mysterious since we don't encounter them in our daily lives. However, in principle, they are as easy to understand as gold and real estate. Remember, all investments must pay either a periodic return, a capital gain, or both. Let's see how stocks and bonds qualify as investments.

Bonds:

Bonds are debts issued by large corporations or governments. Every bond has several common features including the coupon, the par value, and the maturity date. The coupon is the periodic interest payment made to the bond holder and is a percentage of the par value, or what the bond issuer pays the investor back at maturity. Lastly, maturity is the amount of time that the bond issuer borrows the money for. The maturity date will be the day that the loan, or bond, will be redeemed or paid off. Maturities can be as short as a year or up to 30 years or more.

Let's consider an example; if ACME Corporation needs to buy \$100 million worth of equipment but doesn't have the cash to pay for it, it can borrow the money in the bond market. It can break the \$100 million loan into smaller pieces so that many individual investors can participate, so it sells the loan as 100,000 separate bonds with a par value of \$1,000 each. Any investor can buy as many or as few as they would like. Assume you purchased one of the bonds for \$1,000. What would you gain from it? The bond would pay you interest at the coupon rate. Let's assume that the rate is 8%, so the coupon would pay \$80 per year of interest (\$1,000 x .08 = \$80). As the investor you would collect this coupon of \$80 until the bond matured, or expired, and then ACME would return your \$1,000 investment to you. Let's assume this particular bond has a 5-year maturity. If all goes well, you earn 8% on your investment for the next 5 years and then get your investment, or principal, returned to you.

In the example above everything went well, but in reality, there are risks to every investment. Instead of making money on your investment you can lose it. The two major risks to investing in domestic bonds (bonds issued in your domestic currency) are: (1) default risk and (2) interest rate risk. If you invest in a foreign bond (a bond issued in a foreign currency) you can add (3) currency (exchange rate) risk to the mix. For simplicity we will concentrate only on domestic bonds in our examples.

Default risk is the chance that the issuer of the bond will not pay either interest or principal as specified in the bond contract. Consider ACME corporation which spent \$100 million on a factory to build typewriters in the early 1980's. You (or your grandfather!) bought the bonds thinking that they would be a good investment since typewriters were in high demand then. The computer revolution happens, making the typewriter factory obsolete and ACME earns no money. Obviously, it cannot either make the interest or coupon payments on the bond nor return the principal or par value to the investors, so it is now in default. Instead of making money this investment has lost money.

Interest Rate Risk is the risk that interest rates in the market will rise before your bond matures, causing a fall in its value. You will still earn the coupon interest payment but if you sell your bond early you will have a capital loss instead of a gain. Since the investor continues to get the coupon as promised and also gets the full par value at maturity, interest rate risk is not as obvious as default risk. However, the risk is real. Let's look at an example. Remember the \$1,000 par value ACME bond with a coupon of \$80 yielding 8% interest and maturing in 5 years? Assume that you needed your money back early and went to sell your bond in the bond market. Let's further assume that interest rates have risen to 11% since you purchased the 8% bond. Newly issued \$1,000 bonds will have coupons of \$110 on them but your \$1,000 bond only has an \$80 coupon. If you take yours to market, you will have to lower the price below \$1,000 far enough so that an investor who could have bought an 11% bond will be willing to buy your 8% bond. The calculation to figure out how much you will have to lower your price to make your low yielding bond compete in the market with newer, higher yielding bonds is beyond the scope of this article, but it should be obvious that if you sold your bond you would have to

take a loss. The longer the bond has to maturity and the larger the gap between your existing bond coupon rate and the current market rate, the larger the reduction in price you will have to accept to get it sold. Instead of a capital gain you now have a capital loss.

The takeaway from this discussion is that bonds are not risk free. Investors in corporate bonds have both a default risk and an interest rate risk on every bond they purchase. Even bonds issued by the U.S. Federal Government, which are considered to be default risk free, are not interest rate risk free. All investments have some risk associated with their purchase. No investment is risk free. However, the riskier the investment the higher the rate of return has to be to attract investors. You can reduce the risk by investing in safer companies, but you also have to accept a lower rate of return. If you want a higher rate of return you need to take more risk.

Stocks:

Bonds are investments in the debt of a company or government. Stocks are different and represent an ownership share of the company rather than a debt. As a partial owner of the company, you are entitled to your share of the profits earned by the company. If the company makes money, it pays out a portion of the profits as dividends to the stockholders. However, if the company makes less than anticipated, it can reduce its dividend since it is only obligated to pay its owners their share of the profits. If profits decline, then dividends decline. But, on the bright side, if profits go up, you as an owner are entitled to a higher dividend than previously paid. This is different than what the bond holder gets. The bond holder gets only a contractually guaranteed payment of the coupon whether the company is doing poorly or making a fortune. Consider two investors in Proctor and Gamble (a firm that was founded as a soap company in 1837 but now produces a wide array of consumer goods, with revenues of over \$84 billion in 2024). One chose to invest in 30-year P&G bonds at 7% and the other in P&G stock. P&G does incredibly well, so it pays its bond holders the 7% interest agreed upon for the next 30 years. The stockholders, however, got an increase in their dividends every year for 69 years. In addition, the stock value went up dramatically. Stockholders in Proctor and Gamble have done much better than the company's bond holders!

So, why would anyone invest in bonds when you can buy stock where the dividends can grow? It turns out that not all companies have done as well as P&G. What if ACME Typewriter company from our pervious example did not go bankrupt but instead reconfigured its factory to make auto parts? Unfortunately, it makes only enough money to pay the 8% coupon bond every year but then has nothing left over to pay dividends to shareholders. All companies are legally required to pay bond interest before dividends can be paid. In addition, if the company goes bankrupt, the bond holders get first dibs at any money recovered by selling off the company's assets. The stockholders get whatever is left over after the bond holders get paid. In this example, the stock investor invested significant amounts of money in ACME but got small and declining dividends or even suspended dividends over the years.¹ Which investor would you rather be now; the bond investor or the stock investor? As you can see, the benefits of stock ownership come with increased risks. As with bonds, the more risk you take the higher the expected returns. Overall, investment in stocks is riskier than investment in quality bonds.²

¹ Companies are not required to pay dividends in any particular year. Dividends can be suspended when management feels that the company cannot afford to pay them. Dividends can also be cut or reduced if the firm is not doing well. Of course, if conditions improve, the dividend can be reinstated or increased. ² Quality bonds are known as Investment Grade Bonds. Bonds are graded by rating firms such as Standard and Poor's, Fitch, and Moody's. Ratings of either BBB or Baa or higher are investment grade, meaning that

Advantages of Stocks and Bonds Compared to Other Assets

Even with the risks inherent in owning either stocks or bonds, they are still among the best investment vehicles for most investors. Those advantages include incremental investing, liquidity, diversification, portfolio construction to tailor the risk of your investments to your preferences, and limited management responsibilities.

Consider the problem that young investors typically face. You start saving \$300 per month from your job. If you decide to invest in real estate, you would have to save for years to get enough money to make a down payment on a property. While real estate can be a good investment, it is "lumpy" or requires large, discreet payments to get involved. Lenders typically require a downpayment of 20% to purchase an investment property. Since most houses are valued at over \$100,000, it will take a significant amount of money to get started. Investment in art or precious gems faces the same problem, and it is very difficult to borrow money to buy them. With stocks or bonds, you could be investing after just a few months since they are denominated in smaller amounts.³

Another problem faced by investors is liquidity, or the ability to turn an investment into cash quickly with little or no loss in value. Investments like real estate, gems, or fine art are very illiquid, or hard to sell quickly for full value. The markets for them are "thin" with few buyers at any given time. It can take months to sell a house which also requires significant selling costs.⁴ Stocks and bonds, on the other hand, have "deep" markets with many buyers and sellers constantly in the market. Whether you are buying or selling, there will always be a ready and willing partner on the other side of the transaction. This is due to the U.S. having large financial markets exemplified by the New York Stock Exchange among others. On the issue of liquidity, stocks and bonds win by a mile!

In addition to the problems listed above, investors also need to diversify their investments. Diversification is the process of spreading the risk of an entire portfolio of investments over several different individual investments. This reduces the risk of loss by making any particular bad investment a small part of the total. Consider the following example. You have \$10,000 to invest. You hear that Kodak is a great company with many years of experience and has paid a dividend every year for decades. You invest the whole \$10,000 in this stock. Alternatively, still knowing that Kodak is a good company, you decide to diversify by investing \$1,000 in each of 5 stocks and 5 bonds. The stocks include Kodak, Home Depot, Proctor and Gamble, Ford Motors, and Apple and the bonds are investment grade bonds. Which strategy do you think is safer? Obviously, the first strategy is very risky since anything that hurts Kodak, such as the digital camera, will devastate your portfolio. Assume the digital camera revolution causes Kodak to fall 50% in value. You have just lost half of your \$10,000 portfolio. In the second strategy, Kodak is just a tenth of the total portfolio, so when it falls 50% your portfolio as a whole only falls 5%. The chance that all 5 companies will suffer like Kodak did is very low. No one has a crystal ball that predicts which company will suffer in the future, so diversification is the solution. To do this with real estate would require you to own multiple

they have a low probability of default. Any bond rated lower is not considered investment grade due to its increased chance of default.

³ In a future essay we will discuss the benefits of mutual funds for investing in stocks and bonds. With mutual funds you can get started investing with as little as \$100.

⁴ Selling a house usually requires a listing agent, repairs, closing costs, and other costs to get a house sold. Similar costs are necessary for selling art and gems.

units in various cities to avoid any particular calamity. Unless you are very wealthy this is hard to do! With stocks and bonds, it is child's play.

In addition, stocks and bonds let you build a portfolio that matches your risk preference. In the above example we chose 5 well-established companies' stocks and 5 investment grade bonds. If we chose a riskier portfolio in order to gain a higher expected return, we could reduce the 5 bonds to 2 and increase our stock portion from 5 to 8. This would substitute higher returning stocks for lower returning bonds, but at the cost of taking on more risk. Even though we are diversifying across several companies, the stock market as a whole is highly correlated with overall business conditions. When times are tough most stocks suffer, but bonds suffer less since the companies are legally required to pay the coupon interest. As you can see, by changing the composition of your portfolio by choosing different amounts of stocks and bonds, or by changing the types of companies included in your portfolio, you can change the risk/return profile of your entire portfolio to suit your needs.

Lastly, stocks and bonds require much less management on your part. Once you have made the decisions on what goes into your portfolio, you don't have to manage the companies themselves. It would be very difficult to become expert enough to manage a computer business, a soap business, a hardware and lumber business, and others at the same time. When you own stocks, you also get the professional management teams that the companies' board of directors hire to run the firms. If you own real estate you need to vet tenants, hire maintenance workers, and do many other things to keep your assets safe and growing. This can take a lot of time and if you are a busy professional you can't spare it. Stocks and bonds win again!

Conclusion

As you can see from the points made above, investing in stocks and bonds makes a lot of sense for the average investor. In future essays we will discuss appropriate risk/return options and how to think about them, how to use mutual funds to further your goals, as well as explore various options for you to pursue your own investment strategies.

Happy investing!