What is Your Opportunity Cost?

By Gil Hanoch, May 1, 2007

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You can pay for a service in one of two ways – which would you choose?

1. $100 per year forever
2. $1,000 once

Answer: It depends on your opportunity cost. What is opportunity cost?

Opportunity Cost: The cost of an alternative that must be forgone in order to pursue a certain action.

Before you struggle to understand the sentence above, let's continue with our example. If you pay $1,000 immediately, you forgo the opportunity to invest $1,000 and enjoy its growth (minus the $100 annual service fee).

The decision depends on the potential growth of the $1,000. Specifically, if you can gain at least $100 per year, or 10% (=$100/$1,000), you would be better off paying $100 forever, pocketing the extra growth.

Note a few important factors:

1. Consider the taxes on the growth of the money. More specifically, consider the taxes on selling $100 of the gains per year. If the gains are taxed at the long-term capital gains rate of 20% (the rate after 2010), you need to make $120 or 12% on your investment, to break even.
2. There could be an additional small tax component: the tax on capital gains distributions – internal sales within the mutual funds. This is usually harder to quantify and is relatively small (but not negligible).
3. If the $100 fee for the service may go up, your investment would have to make up for the growth in the fee. This would depend on the service contract.
4. When considering paying $100 per year forever, you should check what the word "forever" means. It usually does not really mean forever. It could mean the shorter of the life of the service receiver and the service providing company.

   An extreme example of a surprisingly short period is TiVo service. A few years ago, you could have chosen to pay a monthly fee for TiVo or a one time fee for the life of the TiVo player. Since TiVo players can stop functioning or the owner might want to upgrade to a new model, e.g., a larger hard drive or high definition quality, the life could be as short as 3-5 years.

   The shorter the service period, the more beneficial it is to pay the periodic fee as opposed to paying the large amount upfront.
5. If you choose to make the periodic payments and invest the money instead, the investments may fluctuate in value. If they are a part of a large long-term investment, it is not a big problem – over your lifetime the performance of your investments may not be extremely far from their long-term average. If the service term is short and the money is invested specifically to generate the income for the service fee, there is a real risk that the investment will experience severe declines right when you need the money. Please take this risk into account.

Fortunately, in many cases there is a clear preference for one over the other.

Example. If you invest in Long-Term Component by QAM, your long-term simulated average is 17.2%. If you need to sell the full gain for the periodic payments, your tax can be as high as 20%, reducing the gains to 13.8%. If the invested money is a part of a larger long-term portfolio, you can choose to make the payments as long as they are lower than about 10%-12% (to account for the unknown future performance + the tax on capital gains distributions).

Buying with a periodic payment plan. Let's say you are looking to buy a car. In this case, the basic decision can be simplified. Usually the interest implied by the payment plan is stated in the contract. If the interest is lower than the after-tax growth of your investments, you may choose to make the payments and incur the interest.

One word of caution: you need to make sure that you put the money in the more profitable investment. Otherwise, it is pure borrowing with no alternative gains to show for it.

Mortgage. A similar approach applies to mortgages. If the gains on your investments are higher than the mortgage rate, you might choose not to pay off the mortgage too quickly. Since taking the mortgage while having stock investments is considered borrowing to invest, the mortgage is tax-deductible (even above $1M – please consult with your tax advisor). Therefore, you may not need to consider the tax impact on your investments.

Note that this decision is very serious because the amounts tend to be very high. Therefore, you should do such a thing only if you have plenty of extra money to let you go through recessions without a problem. In addition, if there is any risk that you will panic and sell your investment during a recession, don't even think about taking a mortgage to invest. In general, this approach can be extremely risky if you don't have a very clear understanding about what you are doing and don't have plenty of extra money. In addition to having plenty of extra money and being very savvy, you need to make sure to invest conservatively by being globally diversified into many companies and avoiding any stock picking or market timing. I do not recommend this approach without the help of an investment advisor that specializes in such decisions and provides constant handholding throughout all recessions.

Repairs. You may have a leaky roof and you are not sure whether to repair it or replace it. The replacement cost is an immediate outlay, while the repair cost is a smaller payment that can prolong the life of the roof for some period. This may be tougher to decide because you cannot know how long the roof can last after the repair. In addition, the replacement has the benefit of peace of mind and pleasure of a new roof.

Whatever your considerations are, the potential gains of the money kept invested instead of spent on the new roof is a factor that is important to consider.

Summary

If you invest in a globally diversified portfolio with no stock picking or market timing and you are strong enough and financially stable to hold on to your investments throughout recessions, you can buy certain things in payments instead of an immediate outlay of the full cost. Contact your investment advisor to find out the long-term performance of your investments, take off a few percentage points for the investment risk and taxes and you can get an estimate of your opportunity cost. Purchases you can make at a lower interest than your opportunity cost may be worth their interest cost.

By making a few calculations and having a conservative investment plan, you have a recipe for making good money through simple financial decisions.

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