

# **Saving For Retirement? Start by Paying Off Your Credit Cards**

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# Introduction

Credit cards are a notable liability for many Americans. Approximately 50% of Americans maintain a monthly credit balance and are paying an interest rate of roughly 14% on the balances. This can represent a significant “cost” for someone saving for retirement, especially if this investor is only earning 4% or less on their fixed income or bond investments.

This paper will explore the potential benefit an investor (i.e., consumer) can achieve by postponing deferrals into a 401(k) plan and by paying off credit card debt instead. A key assumption is that the participant investor is not forgoing the employer match to pay off this credit card debt. The employer money is “free money” that many financial professionals and we believe all 401(k) participants should seek to maximize.

Through an analysis we determine that an investor who first pays off a credit card and then saves for retirement, versus just making the minimum credit card payment, can potentially increase his or her 401(k) balance at retirement by 14.1%. This 14.1% increase is equal to an effective return improvement (or increase) of 62 bps. This 62 bps can be thought of “financial planning alpha” or a gain that can be achieved from making intelligent investing decisions in light of the total economic balance sheet of an individual.



# Saving versus Investing

Saving is an important component of achieving a successful retirement; however, it is not the only component. In some cases an investor is better served by temporarily delaying saving for retirement and instead using those monies (that would have been saved) to pay down consumer debt. While this may seem counterintuitive, this idea stems from the idea that someone should seek to pay down a debt if the interest rate on the debt (i.e., the liability) is higher than the return that the investor expects to achieve on his or her assets.

For example, ignoring liquidity concerns (i.e., the need to keep cash available in case of an emergency), it could very well make sense for an investor who has a loan that has an interest rate of 10% (for example) to prepay the loan versus investing in Treasury bonds yielding 2%. While people tend to segment different assets and liabilities into different buckets, an individual's net worth is going to change based on the aggregate interest rate (or net return) achieved across all investments.

The interest rate on debt is effectively a negative interest rate, or negative return, since it is the rate someone pays (i.e., loses) as a cost associated with borrowing the money. An individual who has a loan with an interest rate of 10% is effectively experiencing a return of -10% for each interest payment. If a consumer could choose between paying off the loan or investing the money in an investment that would return +5% per year, the consumer would likely be better served paying off the loan because the "return" the investor "earns" by paying off the loan is higher. While in many cases there are certain types of debt with low interest rates and with tax advantaged features, such as mortgages and potentially student loans, one example of a "bad" debt is credit card debt.



# The Big Deal with Credit Cards

According to the Federal Reserve Bank of New York (2012) *Quarterly Report on Household Debt and Credit*, the total balances of credit cards in the United States as of March 2011 was \$679 billion. This is the third largest debt type for Americans, preceded by mortgages and student loans. According to the 2009 *Survey of Consumer Payment Choice* by the Federal Reserve Bank of Boston, 72.2% of consumers have a credit card and the average credit card user held 3.7 cards.

Among those with credit card debt there are different, yet relatively similar, estimates about the percentage of households that maintain a balance. NerdWallet (2012) notes 47% of households maintain a balance, versus 51% in a study by FINRA (2009) and 56% by the Federal Reserve Bank of Boston study. From these three studies we can extrapolate that roughly half of American households are carrying revolving credit card debt.

The amount of credit debt will obviously vary materially by household, but recent statistics from NerdWallet note the debt per indebted household was \$14,517 while a 2012 Federal Reserve Bank of New York study notes \$15,799. College students are carrying particularly high credit card balances. A study by Sallie Mae noted the average credit card balance for undergraduates in 2009 was \$3,173, with only 18% regularly paying off all credit cards each month. Seniors graduated with an average credit card debt of more than \$4,100 and close to one-fifth of seniors carried balances greater than \$7,000. These individuals are carrying over these same bad habits after graduation, with 41 percent of cardholders from the ages of 18 to 29 making only the minimum payment (FINRA).

In terms of interest rates, FINRA (2009) notes that 36% of credit card users don't know their interest rates. According to bankrate.com<sup>1</sup>, rates on variable interest credit cards as of July 25, 2012 are 14.50% versus 13.81% for fixed rate credit cards. According to the Federal Reserve's G.19 report on consumer credit<sup>2</sup>, the average interest rate on all credit cards as of March 31, 2012 was 12.36% versus 13.04% for those accounts that are being assessed interest.

Despite the fact credit card usage is significant in the United States, discussing credit card debt is highly taboo. According to a creditcards.com<sup>3</sup> research study, discussing the amount of credit card debt was at the top of the list of things that people say they are very or somewhat unlikely to talk openly about with someone they just met. Discussing credit card debt was more difficult than discussing the details of one's love life, someone's salary, or even health problems.



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<sup>1</sup> <http://www.bankrate.com/finance/credit-cards/current-interest-rates.aspx>

<sup>2</sup> <http://www.federalreserve.gov/releases/g19/Current/>

<sup>3</sup> <http://www.creditcards.com/credit-card-news/credit-card-industry-facts-personal-debt-statistics-1276.php>

# Sample Scenario

In order to determine the potential benefit of paying off credit card debt versus saving for retirement an analysis is conducted. For the analysis, we assume an investor (i.e., household) has credit card debt of \$15,000, which is approximately equal to the national average. We assume the investor is 35 years old and the credit card interest rate (APR) is 15%, again which is similar to the national average but slightly higher.

For the analysis, we assume an investor either makes the minimum payment on the credit card and saves the remainder in a 401(k) plan, or first pays off the credit card and stops contributing those monies to the 401(k). In either case whatever monies are not being used to pay down the credit card debt are saved in the 401(k), therefore the dollars available for the two scenarios are equivalent.

It is assumed that the investor is not forgoing any type of employer match by paying off the credit card (i.e., these monies are in addition to whatever is required to obtain the maximum match). The minimum credit card monthly payment is assumed to be 2% of the balance or \$20, whichever is greater, which are common minimum payment terms for credit cards today<sup>4</sup>.

We assume the 401(k) monies grow at 7% per year and all calculations are deterministic (i.e., no Monte Carlo simulations are performed). We assume the investor plans on retiring at age 67 (the normal Social Security retirement age for someone currently 35 years old), which leaves 37 years until retirement. We assume the investor is subject to a 25% tax rate, therefore a \$400 401(k) deferral would yield \$300 per month in after-tax income. This is the exact amount of the credit card minimum payment in the first month.

If the investor makes the minimum credit card payments on the \$15,000 credit card balance it would take 439 months, or 36.6 years, to pay off the credit card balance (i.e., the Minimum Payment scenario). This means the investor will finally pay off the credit card only five months before retirement (i.e., the Payoff Credit Card First scenario). Instead, if the investor decides to stop saving those monies in the 401(k) plan now (again, so long as he is not forgoing any type of employer match) and uses those monies to pay off the credit card debt, he will be able to pay off the credit card in 6.6 years (79 months).

While paying off the credit card first would result in a smaller 401(k) balance initially, since all monies would be used to pay off the credit card versus saved in the 401(k), doing so would have a positive impact on retirement savings in the long run. While the credit card debt will be \$0 at retirement (age 67, 37 years later) for both scenarios, the 401(k) balances will be quite different. Under the Minimum Payment scenario the 401(k) balance at retirement will be \$333,608 while for the Payoff Credit Card First scenario the 401(k) balance will be \$380,516. These results are depicted visually in Figure 1.

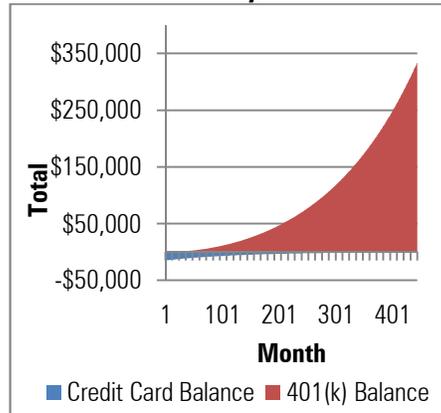


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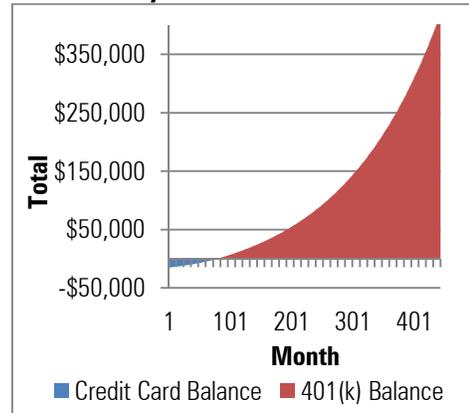
<sup>4</sup> <http://www.creditcards.com/credit-card-news/minimum-credit-card-payments-1267.php>

**Figure 1: Scenario Monthly Values**

**Panel A: Minimum Payment scenario**



**Panel B: Payoff Credit Card First scenario**



The Payoff Credit Card First scenario results in a 401(k) balance at retirement that is **14.1% higher** than the Minimum Payment scenario. In order for the balance at retirement for the Minimum Payment scenario to equal the Payoff Credit Card First scenario the annual return would need to increase by +.62% (from 7.00% to 7.62%). In other words, by first paying off the credit card debt and then saving in the 401(k) plan (again, this is assuming the participant is not forgoing any type of employer match) the effective return achieved by the investor is effectively **62 basis points higher**.

This 62 basis points is a form of “financial planning alpha” that can be achieved by making intelligent financial planning decisions. This concept is something Morningstar’s Investment Management division refers to as “Gamma”, which is based on the premise that, in many instances, how someone decides to save and plan for retirement can be equally, if not more, important than what he or she decides to invest in.



# Practical Considerations

This research suggests investors may be better served paying off high interest debt in certain situations versus saving for retirement. This idea stems from the fact the return achieved by an investor who is paying off the debt (i.e., the interest rate on the debt) is higher than the return the investor is likely to achieve by investing those monies in the market. Also, while the market return is uncertain, the interest rate on debt can be viewed as guaranteed. If, for example, there was a CD paying 15% annual interest it would be in significant demand. This guaranteed return is the type return achieved when paying off debt.

One potential solution for someone with a lot of credit card debt is to take a loan from the 401(k) plan to repay the debt, assuming the 401(k) plan allows loans. While this is one potential solution, borrowing money to pay off consumer debts (e.g., borrowing from your 401(k) to pay off a credit card) is a sign that someone may be overspending and living beyond his or her means. If an investor takes this “easy out” and doesn’t change the underlying behavior he or she will only dig him or herself into a deeper hole and winding up more in debt. However, this may be one solution for a disciplined consumer, but should be approached with caution.



# Conclusions

Credit card debt is the third largest form of consumer debt in the country, behind mortgages and student loans. Unlike mortgages and student loans, though, which are used to purchase a home or designed to help increase someone's human capital, respectively, credit card debt typically stems from overconsumption. This overconsumption comes at a significant cost, since the average interest rate on credit cards that have a rolling balance is approximately 14%.

Using generic US data on credit card users, an analysis was conducted to determine the potential benefit to a consumer/investor from postponing deferrals into a 401(k) plan and using these monies to pay down the credit card, versus just making the minimum monthly payments. It is assumed this investor would still be contributing up to the maximum match. This approach increased the 401(k) balance at retirement by 14.1% which is equal to an effective return increase of 62 basis points. Therefore, there are significant potential gains that can be achieved by investors from thinking about not only the potential growth of their assets, but the nature of their liabilities as well.



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