INVESTOR

Russell Investments

The power of compounding

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The common adage "the early bird gets the worm" is never more true than when considering the power of compounding on your investment portfolio.

Compounding is the process by which an asset's earnings, from either capital gains or interest, are reinvested to generate additional earnings over time.[1]

It's this process that makes your money grow faster than simple interest.

Indeed, one of the world's most famous investors, Warren Buffett, acknowledged the power of compounding in helping him build his fortune.

> *My wealth has come from a combination of living in America, some lucky genes, and compound interest.*[2]
>
> **Warren Buffet**

Anyone who has a credit card is familiar with the power of compounding when it works against you. Take a look at your credit card statement. Unless you paid it off in full the previous month, the interest charged will be added to your total, and next month's interest will be charged on that new, higher amount—the principal **plus** the interest. This will continue month after month until the entire balance is paid off. Over time, the total amount repaid can far exceed the initial debt.

Now let's look at how you can make compounding work in your favor.

The formula for compound interest is:

$$\boxed{A = P\,(1 + r/n)^{(nt)}}$$

Where:

A = the future value of the investment/loan, including interest

P = the principal investment amount (the initial deposit or loan amount)

r = the annual interest rate or return

n = the number of times that interest is compounded per unit t

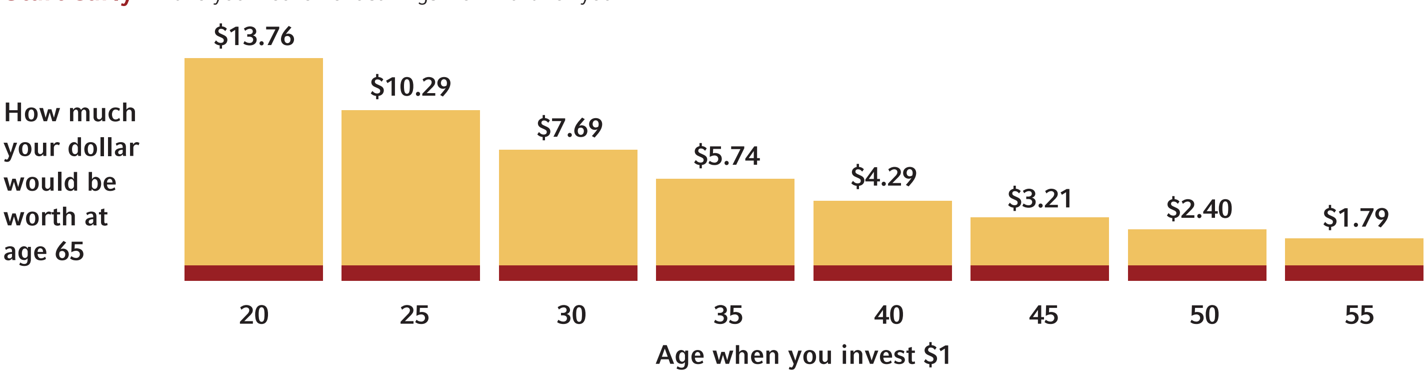
t = the time the money is invested or borrowed for

The key elements in this equation are the rate of return and the amount of time the money is invested.

Time is your best ally for harnessing the power of compounding in your retirement portfolio. Even a small nest egg, when created early, can become a large one over many years. The sooner in your working life you start investing for your future, the better.

The chart below illustrates this concept. It compares how much a $1 investment is worth at age 65, depending on the age at which you invest it. In this example, assuming a 6% annual growth rate, that dollar invested at age 20 is worth $13.76 when you reach the traditional retirement age. At the same rate of return, that dollar invested at age 40 grows to only $4.29 by the time you are 65. It's never too late to start investing for retirement or other long-term goals, but the earlier you start, the greater the potential benefit of compounding: your investment is actually working for you to help you pursue your long-term goals.

Start early / Make your retirement savings work hard for you



For illustrative purposes only. Assumes a 6% return.

1 Source: Investopedia

2 Warren Buffett – The Giving Pledge, 2010. www.givingpledge.org

Put your money to work for you

Starting to save for retirement when you are young provides additional financial flexibility, simply because you will end up with a larger nest egg. Trying to play catch-up later in life becomes increasingly difficult. You may be tempted to take on additional investment risk in hopes of obtaining additional return. That could boost your portfolio if markets rally, but if markets decline, your riskier portfolio will likely pay the price. And a smaller late-in-life nest egg may mean you will need to save more, continue working longer than planned, or spend less in retirement—all choices most of us would rather avoid.

START EARLY AND PERHAPS YOU CAN:	START LATE AND YOU MIGHT HAVE TO:
Save less	Save more
Spend more in retirement	Spend less in retirement
Retire on time or perhaps even early	Postpone your retirement date
Take less risk with your investments	Take more risk with your investments later in life, when you ideally should be reducing risk

Let’s see how compounding works by looking at three different investors.

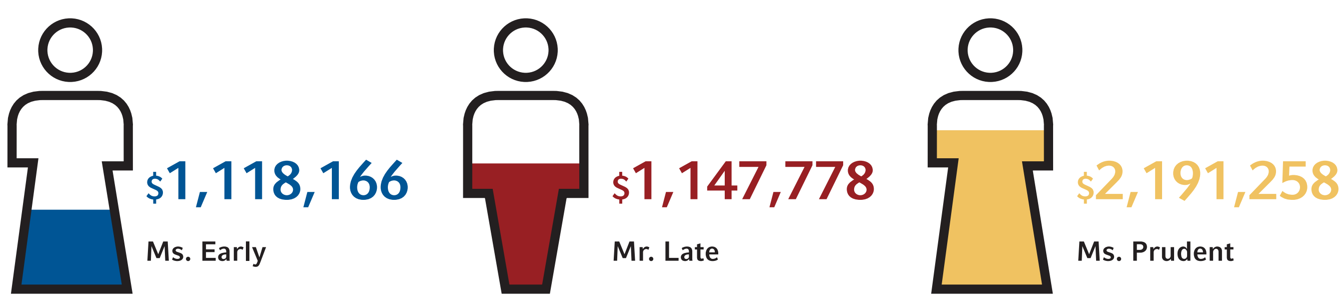
- **Vanessa Early** invests $10,000 every year from age 20 to age 30, totalling $110,000. Then she stops saving, but leaves the money invested until she retires at age 65.
- **Viktor Late** doesn’t begin investing until he is 30. But then he contributes $10,000 a year without fail until he is 64—or $350,000, which is triple the amount that Ms. Early contributed.
- **Victoria Prudent** starts early like her friend Vanessa, at 20, but she continues to invest $10,000 a year until retiring at 65. She has invested $450,000, four times as much as Ms. Early but only about 30% more than Mr. Late.

In this hypothetical example, all three investors receive 6% annual investment returns on their portfolios over time.

Mr. Late has invested three times as much as Ms. Early, yet his retirement account is only slightly higher than hers. Ms. Early saved for just 10 years while Mr. Late saved for 30 years. The best scenario here is Ms. Prudent, who begins saving early and never stops. As you can see, the value of her retirement portfolio dwarfs the other two.

All it took was starting early and remaining invested—two relatively simple strategies that together helped Ms. Prudent build substantial wealth.

You too can harness the power of compounding. By investing early and remaining invested, you may have a better chance of reaching your long-term financial goals.



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