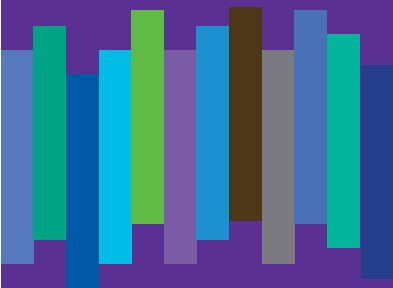**INVESTMENT PRINCIPLES**
INFORMATION SHEET FOR INVESTORS

THE POWER OF TIME AND RETURNS

1

IMPORTANT NOTICE

The term "financial advisor" is used here in a general and generic way to refer to any duly authorized person who works in the field of financial services, including the following:

· Investment brokers
· Mutual fund brokers
· Scholarship plan dealers
· Exempt market dealers
· Portfolio managers
· Investment fund managers
· Life insurance agents
· Financial planners (F.Pl.)

THE POWER OF TIME AND RETURNS

Saving and investing is about the accumulation of wealth in order to achieve an appropriate standard of living during retirement. This document illustrates the importance of starting to save early and the impact of higher returns. It also illustrates the significant cost of waiting to start saving and of being, perhaps, too conservative, or afraid, as a long-term investor.

A SIMPLE EXAMPLE OF THE IMPACT OF TIME AND INVESTMENT RETURN

Let's consider a single investment of $1,000 at an annual yearly return of either 3% or 6%. What if these returns could be maintained year after year?

Time	YEARLY RETURN = 3%		YEARLY RETURN = 6%	
	Total Wealth	Investment Income	Total Wealth	Investment Income
Now	$1,000		$1,000	
Year # 1	$1,030	$30	$1,060	$60
Year # 2	$1,060.90	$30.90	$1,123.60	$63.30
Year # 3	$1,092.73	$31.83	$1,191.02	$67.42
......				
Year # 30	$2,427.26	$70.70	$5,743.49	$325.10

The investment income grows each year because, with the passage of time, we not only earn income on the initial capital investment of $1,000 but also on the investment income accumulated year after year. For example, under a 3% return scenario, investment income after one year is $30 (or $1,000 x 3%) and total wealth increases to $1,030 (or $1,000 + $30). However, after two years, investment income is $30.90 (or $1,030 x 3%) and total wealth increases to $1,060.90 (or $1,030 + $30.90).
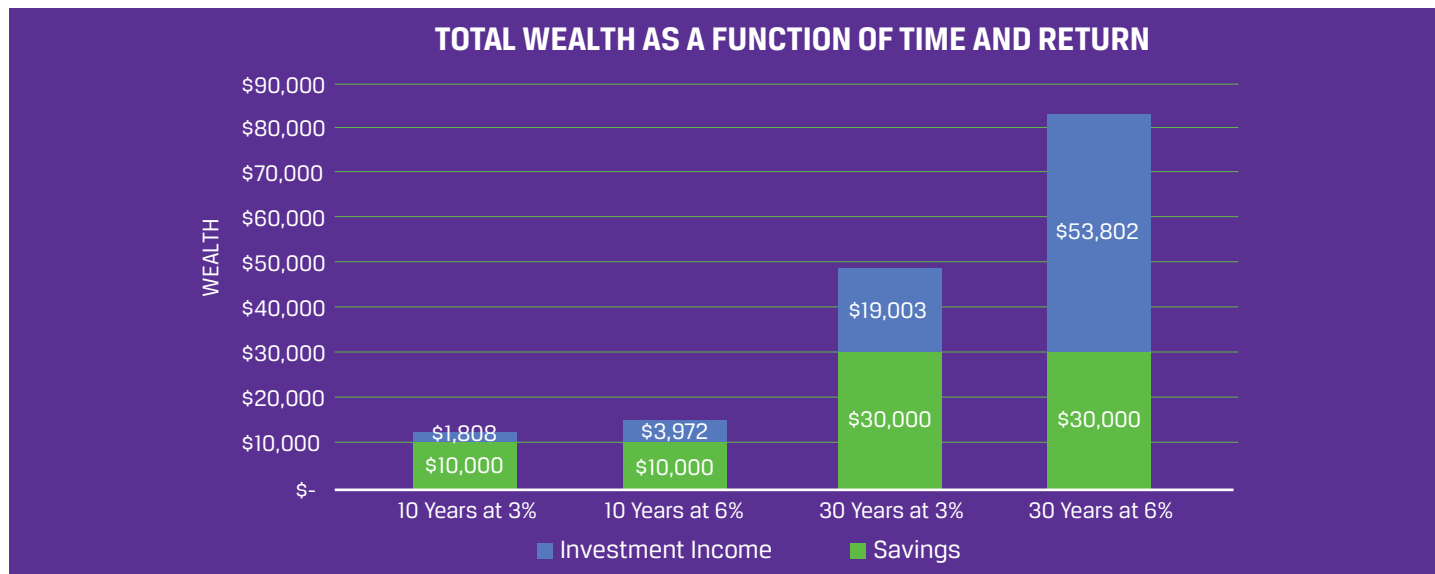
After three years, the total investment income accumulated under a 3% return scenario is $92.73 (or $1,092.73 minus the initial capital investment of $1,000), while it is $191.02 under a 6% scenario. Twice as much return implies more than twice as much investment income. This is what is known as the power of return compounding.

What if the horizon is as long as 30 years? The total cumulated investment income grows to $1,427.26 under a 3% return scenario (or $2,427.26 minus the initial capital investment of $1,000) and to $4,743.49 under a 6% return scenario.

A longer horizon and a higher return amplify the impact of return compounding.

A MORE REALISTIC EXAMPLE OF THE IMPACT OF TIME AND INVESTMENT RETURN

Of course, when preparing for retirement, we do not make just one contribution to our saving effort. We save month after month, year after year. The following chart illustrates what happens to our total wealth after 10 or 30 years when we save $1,000 each year, assuming either a 3% or 6% annual return. For example, in the case of the 30-year horizon and 3% return, the first $1,000 saved is invested at 3% for 30 years, the second $1,000 is invested for 29 years, the third $1,000 for 28 years and so on.

TOTAL WEALTH AS A FUNCTION OF TIME AND RETURN

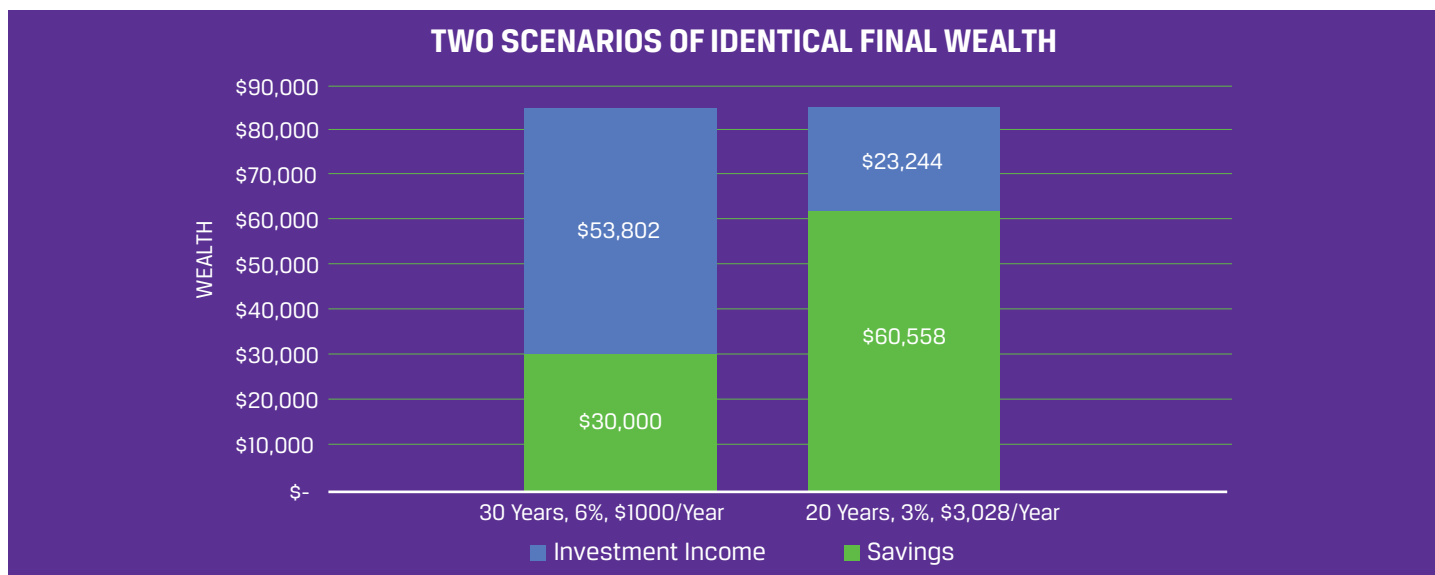|	10 Years at 3%	10 Years at 6%	30 Years at 3%	30 Years at 6%
Investment Income	$1,808	$3,972	$19,003	$53,802
Savings	$10,000	$10,000	$30,000	$30,000

Time and return are two primary determinants of final wealth. Assuming a 30-year horizon, final wealth will be $49,002 under a 3% return scenario ($30,000 from saving $1,000 a year for 30 years and $19,002 from the investment income) and $83,801 under a 6% return scenario ($30,000 from savings and $53,801 from investment income).[1]

Overall, total wealth after 30 years is 71% greater when yearly returns are 6% instead of 3%, which implies that the standard of living at retirement attributed to the accumulated wealth would likely be at least 71% greater! Of course, hoping to make a 6% annual return instead of 3% implies having a riskier portfolio. We will get back to this in Document #10.

THE IMPACT OF WAITING AND TAKING TOO LITTLE RISK

Let's assume your goal is to save $83,802 by the time you retire (as in the example above), but instead of saving $1,000 a year for 30 years at 6% return, you save for 20 years using an investment portfolio that offers a return of only 3%. How much would you need to save annually to achieve the same final wealth? The answer is $3,028, or more than three times as much.

In other words, in the first case, you save $30,000 (30 times $1,000) and generate $53,802 in investment income. In the second case, you save $60,558 (20 times $3,028) and your investment income is only $23,244. Waiting to save and being overly conservative can be costly. The following chart illustrates the two cases.

TWO SCENARIOS OF IDENTICAL FINAL WEALTH

Chart showing two stacked bars. "30 Years, 6%, $1000/Year": Savings $30,000 and Investment Income $53,802. "20 Years, 3%, $3,028/Year": Savings $60,558 and Investment Income $23,244. Y-axis labeled WEALTH from $- to $90,000. Legend: Investment Income, Savings.

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[1] Assuming savings of more than $1,000 a year, the final wealth would simply be proportionally greater. Twice as much in yearly saving contributions implies twice as much final wealth.

SUMMARY AND CONCLUSION

Time, returns and savings discipline are the primary determinants of final wealth. Being patient and dedicated while using a portfolio that can deliver a reasonable average return in the long run, without being overly risky, is paramount to improve your standard of living in retirement. Starting a savings plan late and being too conservative as an investor can be extremely costly. In fact, it may make it financially impossible to achieve the retirement goals that would have been possible if retirement planning had started earlier and if a less conservative portfolio had been adopted.

All other dimensions that will be discussed in the next three documents (fees, taxes, and inflation) are actually hurting final wealth and consequently our standard of living. Hence, it is important to understand the impact of each aspect and to "optimize" them appropriately to reduce their impact as much as possible.

In order to keep matters simple, we will continue with the same example of $1,000 annual savings over a period of 30 years to illustrate the impact of fees, taxes, inflation and risk.