

INSIGHT

Actionable perspectives
on topics that impact wealth



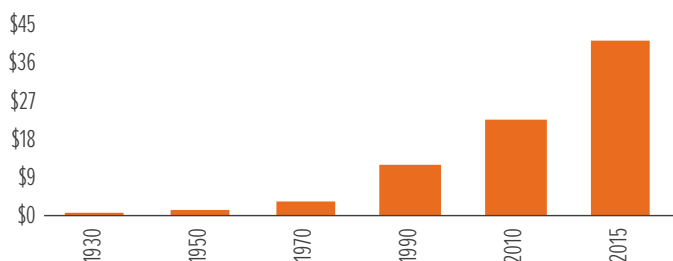
Reducing inflation risk during retirement: The compelling case for stocks

In April 2005, (when interest rates were arguably more normal than they've been during the low-rate, post-crisis economy, steered by the Federal Reserve) an investor could have purchased a 10-year Treasury bond with a yield to maturity of 4.4%. That represented an attractive boost over the dividend yield of the S&P 500 Index, which at the time was 1.9%.

Fast forward a decade to April 2015, and that same Treasury bond investor is recovering his/her principle, while also receiving the last of 20 identical coupon payments. Upon maturity, the investor has earned an annualized total return of 4.4% per year.¹

Today, the dividend yield on the S&P 500 Index is still around 2%, but the annual dividend per share is not what it was in 2005 (\$20.60). Rather, over the course of ten years the dividend has doubled to \$41.31. Based on the level of the S&P 500 in April 2005 (1,157), \$41.31 per share equates to a yield of 3.5%, a level far superior to the 2% yield on the 10-year Treasury bond in April 2015.¹

S&P 500 ANNUAL DIVIDEND/SHARE



Source: Bloomberg, April 1, 2005 – April 1, 2015

The chart above illustrates the annual dividend per share of the companies within the S&P 500 Index, a commonly used benchmark comprised of all the stocks in the S&P 500 weighted by market value. The index performance shown is for informational purposes only. Indices are unmanaged. Returns do not reflect any fees, expenses or sales charges. It is not possible to invest directly in an index. Past performance is no guarantee of future results.

Longer-term perspective

In 1930 the S&P 500 Index was paying a dividend of \$0.98 per share. Today's dividend per share of \$41.31 is 4,100% greater. This represents an annualized increase of 6.0%.

The growth rate of the S&P 500 dividend over this period not only kept up with inflation, but also outpaced it by more than 1% per year. Using the level of the S&P 500 at the end of 1930 (when it was at 15), today's dividend per share of \$41.31 equates to a yield of 295%.^{2,3}

How are dividends able to outpace inflation?

One reason dividends have historically kept up with (and at times outpaced) inflation is because businesses are able to pass along price increases to consumers. Just as corporations are collectors of taxes (by virtue of charging a tax on top of the price of their good or service and passing it along to the government), they also have the ability to charge higher prices.

KEY TAKEAWAYS

- ▶ Bonds may offer a portfolio diversification benefit, but when it comes to inflation protection, they're of little help.
- ▶ Stocks are better equipped to keep up with inflation because their prices and dividends are a function of earnings, which tend to reflect price levels in the economy.
- ▶ Since 1930, dividend growth in the S&P 500 has outpaced inflation by more than 1% per year.

INSIGHT

Consider this simple illustration to see how higher prices flow through to corporate earnings, dividends, and share prices:

	BEFORE INFLATION	AFTER INFLATION	
Product Price	\$1	\$2	Holding profit margins and P/E multiples constant, a higher product price will result in higher earnings that would demand a higher stock price.
Revenue	\$1	\$2	
Profit Margin	10%	10%	
Earnings	\$0.10	\$0.20	
Payout Ratio	30%	30%	
Dividend	\$0.03	\$0.06	Similarly, if a company maintains its dividend payout ratio, its dividend will also increase with earnings.
P/E Multiple	15x	15x	
Stock Price	\$1.50	\$3.00	
Dividend Yield	2%	2%	

Source: Milliman Financial Risk Management LLC, 2015.

The chart above is intended to provide a broad scope of the flow of inflationary price increases on corporate earnings, dividends, and share prices. This chart is for illustrative purposes only. Actual results will vary. There is no guarantee that inflationary price increases will be reflected in future corporate earnings, dividends or share prices. Past performance is no guarantee of future results. Revenue is the amount of money a company receives during a specified period. Profit margin is a ratio of profitability (net profit divided by sales), expressed as a percentage. Earnings is the amount of profit a company produces during a specified period. Payout ratio is the percentage of earnings paid to shareholders in dividends. A dividend is a distribution of a portion of a company's earnings to shareholders. P/E multiple compares a company's current share price to its per-share earnings. Stock price is the current market value of a stock. Dividend yield shows how much a company pays out in dividends each year relative to its share price.

What it all means

When it comes to planning for retirement, stocks' ability to keep up with or even out-pace inflation may offer retirees a way to protect purchasing power. We believe a larger allocation to equities allows retirees more flexibility in accounting for inflation, thereby increasing the potential for a higher sustainable withdrawal rate throughout retirement.

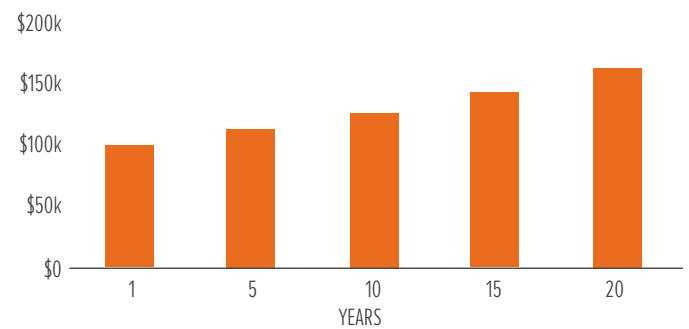
Here's why

Unlike stocks, bonds offer no ongoing means of adjusting to changes in inflation. A bond investor must use an estimate for inflation at the time a bond is purchased. Once the cost basis and yield are set, the compensation for inflation is locked in.

If a retirement portfolio is invested heavily in bonds, calculating a sustainable portfolio withdrawal rate requires an estimate of annual inflation-adjusted expenses during retirement. For example, if we assume \$100,000 in expenses at the beginning of a hypothetical 20-year retirement, and inflation of 2.5% each year, the plan would need

to account for total expenses of approximately \$2.7 million, with the 20th year costing \$164,000 (see illustration below).

HYPOTHETICAL INFLATION-ADJUSTED ANNUAL EXPENSE IN RETIREMENT



Source: Milliman Financial Risk Management LLC, 2015.

The chart above is meant to explain the annual increase in portfolio withdrawal when statically adjusting for inflation by 2.5% each year, for 20 years. It is for illustrative purposes only, and does not represent actual performance of any investment.

In practice, this static approach to inflation accounting means a person withdraws less from retirement funds during the earlier years of retirement, to offset the anticipated higher prices during the later years. In other words, retirees are “pre-funding” the future effects of inflation by way of a lower withdrawal rate.

Stocks, on the other hand, have shown a tendency to keep up with and even outpace inflation. From 1950 through 2014, 96% of rolling 12-month periods exhibited positive inflation. During those periods of positive inflation, the S&P 500 moved higher 74% of the time by an average of 16%.⁴

While past performance is no guarantee of future results, history bears witness to the ability (and arguably tendency) of stocks' earnings, dividends, and share prices to inflate with the economic price inflation. For this reason we believe investors should have a significant allocation to stocks, both when approaching and during retirement.

Footnotes:

1 Bloomberg L.P., April 1, 2005 – April 1, 2015. Past performance is not a guarantee of future results. The S&P 500 Index is a commonly used benchmark comprised of all the stocks in the S&P 500 weighted by market value. The index performance shown is for informational purposes only. Indices are unmanaged. Returns do not reflect any fees, expenses or sales charges. It is not possible to invest directly in an index. Past performance is no guarantee of future results. Investment return and principal value will fluctuate, so that shares, when redeemed, may be worth more or less than their original cost.

2 Bloomberg L.P., 1930 – April 15, 2015. Past performance is not a guarantee of future results. The S&P 500 Index is a commonly used benchmark comprised of all the stocks in the S&P 500 weighted by market value. The index performance shown is for informational purposes only. Indices are unmanaged. Returns do not reflect any fees, expenses or sales charges. It is not possible to invest directly in an index. Past performance is no guarantee of future results. Investment return and principal value will fluctuate, so that shares, when redeemed, may be worth more or less than their original cost.

3 Shiller, Robert J. S&P 500 Data, (April 30, 2015) via www.econ.yale.edu/~shiller/data.htm.

4 Source: Bloomberg L.P., 1950 – 2014. Past performance is not a guarantee of future results. The S&P 500 Index is a commonly used benchmark comprised of all the stocks in the S&P 500 weighted by market value. The index performance shown is for informational purposes only. Indices are unmanaged. Returns do not reflect any fees, expenses or sales charges. It is not possible to invest directly in an index. Past performance is no guarantee of future results. Investment return and principal value will fluctuate, so that shares, when redeemed, may be worth more or less than their original cost.

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