



INDEX EDUCATION SERIES

NAFA has created this series to promote education on how indices work and important factors to consider when investing in index-linked products.

ABCs OF INDICES

LETTER FROM THE CEO

As the CEO of NAFA, the National Association for Fixed Annuities, I am pleased to introduce our latest education series focused on understanding indices. The Index Education Series is designed to help consumers better understand index terminology, the various types of indices and how indices work within a fixed indexed annuity (FIA).

As illustrated in a previous NAFA Education Series, fixed indexed annuities are insurance products that provide downside protection from loss of principal, with a guaranty that the interest earned on the annuity contract can never go below zero. In an FIA, the return or rate is determined based on an interest crediting formula or method established by the issuing insurance company that is linked to the performance of a specific, external market index.

There are a variety of indices used today in fixed annuity contracts. NAFA's goal for this educational series is to demonstrate what indices are and the factors to consider when choosing an FIA. We believe this information is critical in helping consumers develop a plan that provides their retirement assets the potential for appreciation, while limiting the downside, or losses, they might be exposed to in other types of financial products.

Founded in 1998, NAFA is the premier trade association in the financial services industry dedicated exclusively to fixed annuities. We are committed to providing information and education regarding the value of fixed annuities and their benefits in helping Americans achieve financial and retirement security.



Charles J. DiVencenzo, Jr.
 President & CEO

The Index Education Series is produced on behalf of NAFA by The Index Standard[®].

**THE INDEX
 STANDARD**

ABOUT THE INDEX STANDARD[®]

The Index Standard[®] provides actionable insights and an unbiased perspective. We do this by providing ratings and performance forecasts for indices and index-linked products, along with model allocations for FIAs based on forecast annuity credits. Our solutions and research broaden understanding of complex indices and we support critical investment decisions with precise facts, clarity and comparisons.

INTRODUCTION

The development and use of indices has continued to be propelled by the increased interest in passive investing, dating back to the global financial crisis. There is a growing body of research that shows how indices can outperform active managers. This, together with indices' flexibility, has meant their use has mushroomed in ETFs and other financial products, and indices are also now extensively used in annuities.

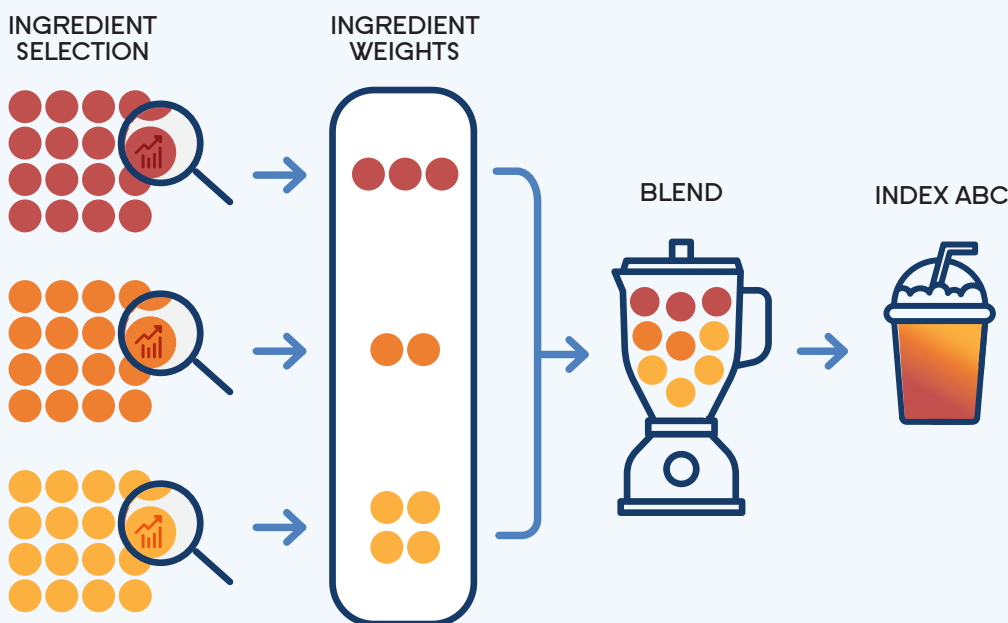
In their original role as benchmarks, indices have a key place in the financial ecosystem when it comes to measuring performance of particular aspects of the economy. In the context of retirement planning, both for saving and income purposes, over the last decade indices have become a cornerstone of innovative annuity designs and applications. This fact alone has created a need for ground-up education about important index terminology when used in annuities.

WHAT IS AN INDEX?

At its simplest, an index is a way to track the changes in value of a collection or basket of assets. Some of the best-known examples are benchmark indices, such as the S&P 500, the Dow Jones Industrial Average and the Bloomberg Aggregate. However, the assets involved can be almost anything: equities, fixed income instruments, commodities, all the way to complex derivatives and cryptocurrencies.

A key requirement is a source of prices for each asset included in the index. Ideally this is an exchange, for example the New York Stock Exchange, so that the prices are public and unambiguous. An index is then essentially just a blend of prices and weights through time, according to a recipe. Strictly speaking, The Index Industry Association defines an index as “a number calculated by reference to a theoretical collection of assets, market indicators, securities or derivatives whose absolute level or periodic difference relate to the performance of the theoretical collection over that period.”

How an Index Works



Index Rules: The Recipe

ASSET SELECTION

- type
- region
- size
- etc.



ASSET WEIGHTING

- market cap
- equal weights
- dynamic
- etc.



REBALANCING

- monthly
- quarterly
- annually
- etc.



All indices consist of three defining features: asset selection, asset weighting, and rebalancing. The rules that specify these features are the recipe for the index, and reflect the criteria required to meet the stated objectives of the index. Put simply, the index rules specify how to select the ingredients and how much of each is to be used in the blend through time. At a high level, the recipe should be freely available and easy to understand.

Indices are used to track a vast variety of underlying assets with different objectives. Index objectives range from tracking the value of global stock markets, or a particular country's stocks or bonds, or narrow market segments such as sectors, themes and factors, all the way to tracking the performance of dynamic multi-asset portfolios. As with any recipe, by having pre-set criteria, indices can consistently track to their stated objectives without deviation.

INDEX RULES SHOULD BE PRE-DEFINED AND ARE USUALLY NON-DISCRETIONARY WITH CHANGES KEPT TO A MINIMUM.

This is a key feature and differentiates an index from an actively managed fund.

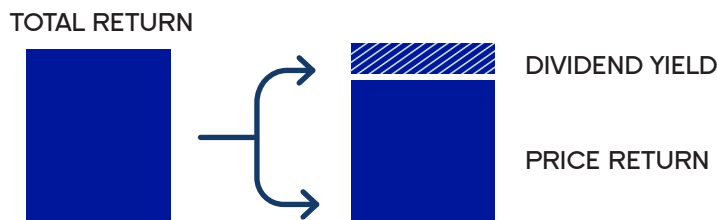
INDEX TERMINOLOGY

In this section we take a closer look at some of the most common terms used when discussing indices. We focus on separating indices by the type of return they are tracking, namely differentiating between price return, total return and excess return indices.

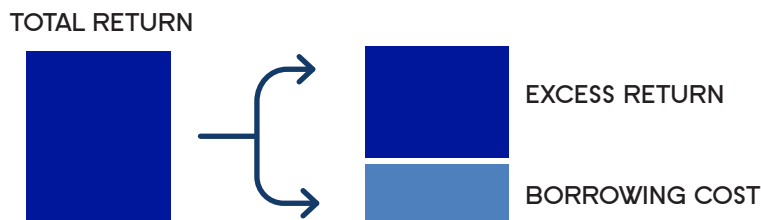
Inclusion of an index within an annuity adds levels of consideration that are not necessarily obvious and require further investigation. When comparing performance between indices, it is important to understand the distinction between price return, total return and excess return indices.

A **price return** index is an index that tracks prices of the underlying index components without accounting for any dividends. Excluding dividends can be impactful. To put this in context, we observe that approximately one third of returns from investments in US large cap equities historically came from dividends.

A **total return** index is an index that tracks prices of the underlying assets and includes any dividends. This is done by assuming dividends are immediately reinvested. In general, as its name indicates, a total return index reflects the changes in overall value through time of the underlying index components.



Many indices used in annuities are **excess return**. This concept is often not well understood. Put plainly, excess return indices are price return or total return indices with an assumed borrowing cost removed. This can be thought of as reflecting the return of an investment made using borrowed money. The “excess” return is then the return of the investment after the cost of borrowing.

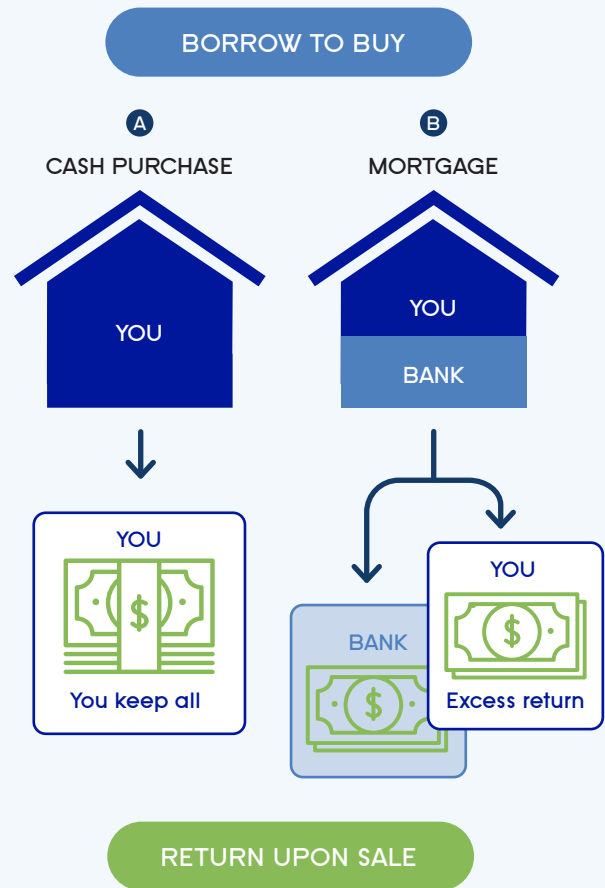


MOST BENCHMARK EQUITY INDICES USED IN ANNUITIES ARE PRICE RETURN INDICES, I.E. WITH DIVIDENDS NOT INCLUDED.

Excess Return: Like a House with a Mortgage

Investing in a total return index is similar to buying a house outright. The buyer purchases a house, and the seller receives cash. The deed for the house is received and that completes the process. On a future re-sale, total sales proceeds are kept by the seller.

Investing in an excess return index is akin to buying a house with borrowed money, by taking out a 100% interest-only mortgage loan. While you own the house, you pay interest on the loan – the borrowing cost. When you sell the house in the future, you must first repay the loan. Your earnings or sale proceeds are the sale price minus the loan and minus the borrowing costs. Similarly, an excess return index is the price or total return index minus a borrowing cost.



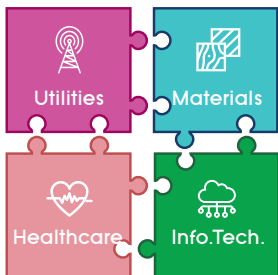
INDEX FLAVORS

With the understanding that almost any flavor of index can be included in an annuity, we turn our attention to a few broad categories that are most prevalent and explore them in greater detail. We further explore benchmark indices, as well as looking at thematic, ESG and risk control indices.

A **benchmark** is generally a broad, rules-based index that seeks to be representative of a country, region or segment of the economy. While the original role of benchmarks such as the S&P 500 and the Dow Jones Industrial Average was to measure economic performance, they are now also used extensively as the building blocks of investible products. Examples of other well-known benchmark indices are the Nasdaq-100, MSCI World, EURO STOXX 50, Russell 1000, Wilshire 5000 and the Bloomberg US Aggregate Index.

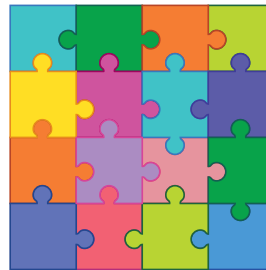
Typically, benchmark indices are market-capitalization weighted, whereby the largest assets have the most weight. These indices are calculated by large index providers who must adhere to strict regulatory guidelines. Investing in a product linked to a broad market index means the investor is, in effect, “buying” a slice of the economy, without having to buy each of the individual components. In this way, an investor may benefit from significant diversification with minimal effort.

SECTOR INDEX

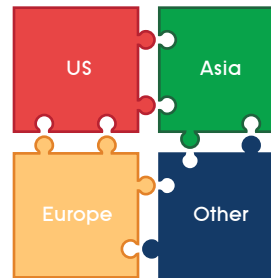


In addition to broad market indices, **sector indices** enable investors to benchmark and “take exposure” to the performance of a particular stock market sector or industry. To this end, each company is assigned an industry classification according to that company’s principal source of revenue. Companies with the same business activity are then grouped to form market sector indices, enabling investors not only to analyze sectors’ performance, but also to choose the parts of the economy in which they wish to invest.

BENCHMARK INDEX
 Rules-based broad basket of diversified assets
 Example: S&P 500



REGIONAL REPRESENTATION
 Example: MSCI World



What is an industry classification?

Index providers categorize stocks into sectors so that investors can access slices of a broad benchmark.

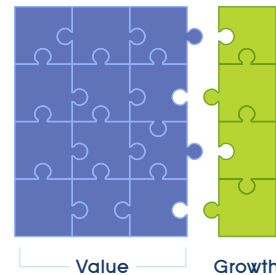
For example, Ford falls into the Industrials sector and Microsoft falls into the Information Technology sector.

11 SECTORS OF THE S&P 500 INDEX



Thematic indices are niche indices created to capture an emerging trend at the beginning of a significant growth cycle, or a major disruption to a certain industry. The most common themes are often technological trends that have the potential to transform industries, macro-economic changes that drive financial markets, or social phenomena that bring about new business trends or models. The effects of such trends may take years to play out, and investors are usually keen to invest early in the cycle. Thematic investing is intuitive to understand and if the theme captures the imagination of investors, products linked to these indices can also gather significant assets. Some regard ESG as a theme, but we give ESG indices special attention in the coming section.

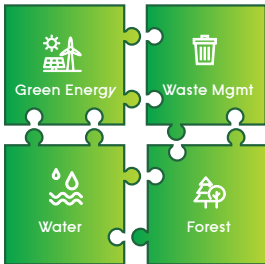
VALUE & GROWTH



ESG INDEX



Sustainability

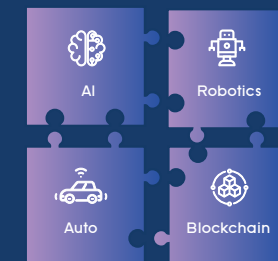


ESG stands for **environmental, social and governance**. These indices are designed for investors who seek investments that are considered sustainable, socially responsible and well-governed. These three factors are considered because they help analyze the future financial performance of companies in terms of return and risk, but not necessarily in the financial sense only. Environmental impact is measured in terms of a company’s carbon and waste footprint, climate impact and green policies. Corporate social responsibility, people and stakeholder management together play a vital role in the social profile of the organization, while corporate governance and behavior complete the tripod.

ESG INVESTING HAS BEEN GREATLY ACCELERATED BY MAJOR INTERNATIONAL PACTS AIMING AT REDUCING CLIMATE IMPACT, IN PARTICULAR THE PARIS AGREEMENT SIGNED BY ALMOST ALL COUNTRIES IN 2016.

Thematic investing

Early examples of thematic investing include: technology, clean and alternative energy, nuclear power, timber, water, and infrastructure, among others. Themes that gained popularity in recent years have included fintech, robotics and AI, Bitcoin, blockchain, drones, connected society, cybersecurity, cannabis, millennials, "working from home", and even pets.

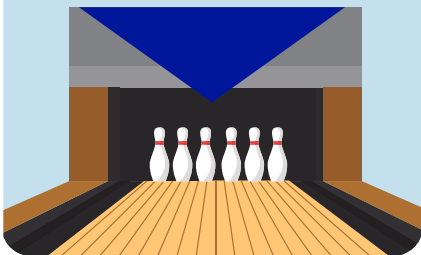


The above index categories form a large body of indices used in many contexts and products. In particular, benchmark indices historically have attracted large amounts of premium allocation in insurance products, even though they were not originally designed for such applications. By contrast, **risk control** indices were developed specifically for use in annuities and structured products. Risk control indices, also known as volatility control indices, were a response to the prolonged low interest rate environment over the last decade. They are designed to provide stable and predictable crediting strategy parameters for insurance carriers, while aiming to give smoother and more consistent returns for annuity owners.

Risk control indices are meant to cushion and smooth index performance by controlling the volatility of the index. Volatility refers to the movements or fluctuations of assets. The volatility-control mechanism is based on a simple observation that an increase in volatility implies higher risks and potential price declines. Risk control indices aim to control volatility to a pre-determined level and so deliver stabilized returns while keeping drawdowns low. They control the level of risk through a stabilization mechanism that switches allocations between the volatile asset(s) and a cash-like asset.

ORDINARY INDICES

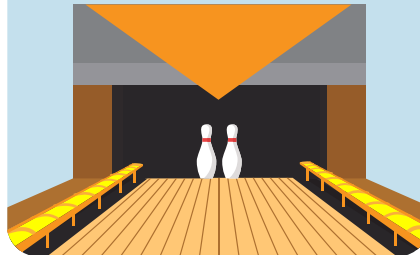
A WITHOUT BUMPERS



Bowling with a full set of pins, but with open gutters: possibility of a high score, but high risk of a negative outcome.

RISK CONTROL INDICES

B BOWLING WITH BUMPERS



Bowling with fewer pins, but with bumpers: reduced maximum score, but also lower risk of a negative outcome.

The first generation of risk control indices simply adjusted allocations between equities and cash using observed volatility as the trigger to alter allocations. The second generation of indices added more asset classes and well-known allocation methodologies, such as mean variance optimization, in addition to a volatility-control mechanism. The emerging next generation of risk control indices is using intraday volatility-control methods or even two-layer volatility-control mechanisms. There is also growing sophistication in the underlying portfolios, including equity “smart beta” and fixed income indices, as well as commodity benchmark and also “strategy” indices, using mean variance optimization in addition to a volatility-control mechanism.

EXPOSURES

In an investment context, “exposure” means sensitivity to changes in price of an asset. Exposures both within an index and to an index are very important topics.

Exposures within an index refer to the constituents and their allocated weights through time. Some indices provide fixed and pre-determined allocations, while others offer algorithms that can react and adjust depending on the overall market environment, risk tolerance or pre-set preferences. Understanding the exposures is critical for investors who are looking to invest in a particular market sector, asset class or combination thereof. Furthermore, annuities offer different levels of exposure to the underlying index. This is usually reflected via annuity parameters such as “index participation” that may change along the way and at different frequency and severity for different crediting strategies. For the annuity owners it is crucial to understand what their exposure is to the particular index via an annuity, as well as understand the make-up of the index itself. Only then can they use this information to construct a well-diversified portfolio that matches their investment objectives and risk tolerance, both within an annuity and in a total portfolio sense.



DATA AND METHODOLOGY AVAILABILITY

A key requirement for an index is transparent, accurate and timely price data for the index components. For this purpose, index providers ideally use data from exchanges. In this way, not only can index levels be replicated and verified, but the underlying components can actually be bought and sold to generate the returns measured by the index.

When an index is used as the basis of an indexed annuity, the insurance company contracts to make payments linked exactly to the performance of the index. Therefore the annuity buyer need only be interested in the performance of the index itself and the way the annuity credits the index-linked interest.

For investors to be able to evaluate and monitor an index, performance data and, ideally, the index levels themselves should be readily available. Long-standing indices such as the S&P 500 may have decades of history, allowing extensive analysis. For recently launched indices, index providers usually make available a synthetic history or “backtest” of the index levels for dates prior to the actual launch date, calculated using historical prices of the underlying components.

It is important to differentiate between the period for which index calculations are performed using a historical data set (“backtested performance”) and the period post-launch when the index is being calculated each day using updated prices of the underlying components (“live performance”). The beginning of the backtest period is usually referred to as the index start date or base date, while the start of the period of live performance is usually referred to as the index live date or launch date. Backtested performance should be treated with caution as it benefits from hindsight, insofar as the index rules were established while knowing how the underlying components performed in the past.

Life of an Index



In addition to index data, it is also important to gauge the availability and transparency of documentation describing an index’s methodology. While all index providers make available high-level descriptions, these vary in detail considerably. Also, some providers make their full set of index rules easily accessible, others make the index rules available on request, while some do not make the index rules available at all. This is sometimes determined by the intended scope and usage of the index itself. It is worth noting that formal index rules documents can be highly technical. Furthermore, for indices with a very large volume of products linked to them, there can be concerns that full disclosure enables so-called “front-running”, which may be detrimental to index performance. In all cases, clear and comprehensible descriptions of objectives and methodologies, sufficient for investors to make informed assessments, should be a requirement. ➡

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