Innealta
CAPITAL

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ALTERNATIVE EQUITY INDEXING

- While no truly standardized definition exists, thematically, indexes are collections of individual securities aggregated by some weighting mechanism within a hypothetical portfolio in order to provide a proxy (of performance, fundamentals, etc.) for a particular asset class. Most desirable of any index is a security weighting methodology that is straightforward and well understood.
- The desirability of such uncomplicated construction is readily evident in the context of passive investing. Beginning with a smattering of equity mutual funds and giving rise to the rapid growth within the exchange-traded fund (ETF) marketplace, passive investing makes otherwise uninvestible indexes investible. This 'indexing', in a common manner of speech, allows investors to mimic the performance of an index in the real world, a desire sourced from a long history of research that suggests much is to be made from investing at the level of indexes, with little more to be gained from investing in the individual securities that comprise them.
- In recent years, systematic rules-based equity strategies most widely known as 'alternative indexing' have sought to stretch the definition of index, or passive, investing. In this commentary we seek not to discredit the investment approaches, but rather the idea that these strategies are any less active than any other such effort. In order to test proclamations of supremacy over passive indexing, we evaluate and compare alternative indexing strategies using a mean-variance framework based on criteria that are desirable for any investment process, namely reliable alpha sources, effective risk control and low trading costs/high capacity. We illustrate that, while these alternative indexing approaches have some merits, they *generally lack theoretical justification and a clearly defined investment objective*. All of these strategies only address a subset of an investor's objectives and therefore are *deemed suboptimal*.
- In our view, the term 'alternative indexing' is a misleading misnomer. To step away from the classically accepted—and in our view more defensible—market-capitalization-weighted methodology, one must make an *active* decision in regard to the weighting methodology used. The resulting indexes, thus, are simply active investment strategies.
- One reason this discussion is relevant for the Innealta ETF portfolios is that the strategies can provide alternatives to the passive market-weighted (equity) ETFs that we utilize in our portfolios. Important for our readers to understand, while a number of active equity ETFs exist that employ alternative indexing strategies, Innealta has not used them and is not planning to use them in the future for our equity allocation.

ALTERNATIVE EQUITY INDEXING

By virtue of their professional endeavors, most readers of these pages should be familiar with the concept of an index. While no truly standardized definition exists, thematically, indexes are collections of individual securities aggregated by some weighting mechanism within a hypothetical portfolio in order to provide a proxy for a particular asset class (of performance, fundamentals, etc.). A fine example, the S&P 500 Index tracks the performance and can be used to quantify the fundamental aspects of the U.S. Large-Cap Equity market.

Most desirable of any index is a security weighting methodology that is straightforward and well understood. For the S&P 500, a market-capitalization methodology is employed. This method is 1) straightforward—market capitalizations are easily calculated and aggregated—and 2) easy to understand—each index member is weighted by its market cap within the particular universe.

The desirability of such uncomplicated construction is readily evident in the context of passive investing. Beginning with a smattering of equity mutual funds and giving rise to the rapid growth within the exchange-traded fund (ETF) marketplace, passive investing makes otherwise uninvestible indexes investible. This 'indexing', in a common manner of speech, allows investors to mimic the performance of an index in the real world, a desire sourced from a long history of research that suggests much is to be made from investing at the level of indexes, with little more to be gained from investing in the individual securities that comprise them (a notion we'll expand upon in a bit).

In recent years, systematic rules-based equity strategies most widely known as 'alternative indexing' have sought to stretch that list of specifications. Most often the distinguishing characteristic that makes the index 'alternative' is that the weighting methodology utilizes some factor other than market capitalization to aggregate performance—e.g. some notion of risk, fundamental characteristics, etc. This effort is made in an attempt to achieve a more desirable or efficient portfolio. Sometimes also referred to as Smart Beta, Strategy Indices, Systematic Alpha, Alternative Beta or Factor Indices, among many other monikers, these strategies have been utilized primarily in portfolios of equities, but they also have found application in other asset classes.

In our view, bounded as it is by the definition we offered earlier, the term alternative indexing is a misleading misnomer, as not all of the basic conditions hold for alternative indexing strategies. A thread to be expanded upon as we move through this commentary, to step away from the classically accepted—and in our view more defensible—market-capitalization-weighted methodology, one must make an *active* decision in regard to the weighting methodology used. The resulting indexes, thus, are simply active investment strategies. As a result, the decision whether to invest in these strategies rather than a more standard index is equivalent to an active vs. passive decision, which is certainly not a new topic!

One can argue that the popularity of these strategies has grown partly in response to the disappointing performance over recent years of both market-weighted indices and the active portfolio management that seeks to outperform them. And as investors looked to ever-more comprehensive quantitative strategies to address those perceived faults, they have found as much or more disappointment in the methods, relatively opaque and black-boxy as they can be, and in their results. Hasn't helped that it has also become more apparent that most quantitative managers have been using very similar strategies, in terms both of their return factors and risk forecasts, as well as of their more general methods for portfolio construction.

Again, enter alternative indexing methodologies to resolve even these ills, promoted as more intuitive and more transparent than full-blown quant models. A host of different alternative indexing strategies have become quite prominent, actually, including several purely risk-based strategies that do not require any expected return inputs (or alphas) in order to construct portfolios.

In both the more straightforward versions and the quant-like offspring, alternative indexing methodologies have been shown to outperform market-weighted indices over various past periods. The question, as for any active strategy, is whether the results are genuine or due to data mining and, related to that, whether the outperformance will continue.

Why we care to discuss...

One reason this discussion is relevant for the Innealta ETF portfolios is that the strategies can provide alternatives to the passive market-weighted (equity) ETFs that we utilize in our portfolios. Indeed, a number of equity ETFs have become available over recent years that give exposure to a country or regional equity market using alternatives to market-cap weights. In this commentary we seek not to discredit the investment approaches, but rather the idea that these strategies are any less active than any other such effort. And, further, explain some of the characteristics of the methodologies that support these indexes in order to provide additional insight into our lack of preference for their structures and exposures. Finally, in a more specific context we'll support our investment methodology that uses traditional index-based ETFs as a more defensible proposition to the use of narrower alternative indexing-based ETFs.

PREVIEW

In this commentary we present a number of well-known alternative indexing approaches, including equal weighting, minimum risk, maximum diversification and fundamental. In order to test proclamations of supremacy over passive indexing, we evaluate and compare strategies using a mean-variance framework based on criteria that are desirable for any investment process, namely reliable alpha sources, effective risk control and low trading costs/high capacity. We discuss each of these components in more detail in the following section and illustrate that, while these alternative indexing approaches have some merits, they *generally lack theoretical justification and a clearly defined investment objective*. All of these strategies only address a subset of an investor's objectives and therefore are *deemed suboptimal*.

Moreover, it turns out that most of these strategies' returns originate from a small number of well-established systematic factors—such as value, size, beta, etc.—that have been known and understood for decades. They are essentially somewhat simplistic (and possibly inferior) versions of standard quantitative processes and they are definitely not new or revolutionary. In fact, some of us at Innealta have employed such strategies in an active context to various degrees for the past two decades.

Important for our readers to understand, while a number of active equity ETFs exist that employ alternative indexing strategies, Innealta has not used them and is not planning to use them in the future for our equity allocation. We are looking for strategies that, most importantly, are internally consistent from a theoretical basis and that find a very specifically definable fit within the portfolio's diversity of exposures. Outlined in the following discussion, ETFs based on alternative indexing cannot satisfy these criteria. Moreover, they tend to have considerably higher fees than passive ETFs and often suffer from lower liquidity, further reducing appeal.

CHARACTERISTICS OF A SUCCESSFUL INVESTMENT PROCESS

Again, there are several features that we believe are core to any successful (or ultimately successful) investment process. These include the identification and exploitation of reliable alpha sources and the implementation of effective risk monitoring and management. Further, the manager must be able to implement the strategy via a process and within a package that offers low trading costs and that can be scaled with little additional effort and little consequence to potential return.

Reliable Alpha Sources

The main ingredients in any investment process are the expectations of future asset returns (or alphas). These expected return (or alpha) features apply to any investment process, whether it falls among the traditional fundamental segments or within a set of more systematic/quantitative approaches. Typically, traditional fundamental and systematic processes use similar information sources to evaluate assets; the differences will come in how they process that information.

To be truly defensible, return expectations should be based on sound financial economic theory; sources of alpha (again, the bases for the return expectations) must be intuitive, robust, diversified, stable and implementable. The investment process is otherwise unsound. Even more, the process must specifically address the risk of data mining, which is the finding of spurious relationships in past data that exist purely by chance and are therefore unlikely to hold up in the future.

For individual stocks, in order for return expectations to have any investment value they must be based on deep and accurate insight into a company's economic situation as well as its competitive and market environment. Moreover, the portfolio manager needs to assess whether his expectations are not already incorporated into asset prices. For stocks this is the typical 'good company, bad stock' problem: although a company may have outstanding operating performance, it may still be a poor investment as all positive information already may be 'priced in' and no future abnormal returns thus can be earned. A timely example is Facebook, which has disappointed investors since its IPO, having been priced at an outlandish valuation that seems most surely was based on far-too-optimistic prospects for future fundamental growth.

Even with substantially accurate and investible information in regard to individual securities, most of the active returns of both fundamental and quantitative strategies typically can be explained by exposures to a small number of well-known systematic (e.g. non-company-specific, such as market and sector) factors. For example, Ang, Goetzmann and Schaefer (2009) carried out an investigation of the active returns of the Norwegian Government Pension Fund, one of the largest sovereign wealth funds in the world, and discovered that "approximately 70% of all active returns on the overall fund can be explained by exposures to systematic factors." Pure alpha only accounts for 30% of the active returns, implying how difficult consistent outperformance from security selection is.

Innealta's approach to investing seeks to access this dominance of systematic factors in long-term returns by investing in equities at the asset class level, avoiding the substantially more onerous work required at the security-specific level to gain the relatively low value added in terms of additional long-term outperformance. Said another way, there can be some extra value in investing in individual securities. But that value can prove as ephemeral as it can be cyclical or otherwise randomly available. Even more, the cost to uncover and exploit that extra value can prove excessive, unwarranted. Our approach seeks to exploit systematic opportunities in market valuations that are more durable and more efficiently and cheaply accessible.

Effective Risk Control

A goal addressed by broadly accepted norms for investment management, investors should strive to get the highest expected return per unit of risk consistent with their abilities and desires to accept risk. The pursuit only of maximal returns is insufficient and suboptimal—any investment process needs to carefully manage risk. Risk management may take the shape of a formal risk forecasting model or risk control may be achieved more informally by ensuring that the portfolio is well-diversified or neutral/risk controlled with respect to the relevant sources of risk. At Innealta we go to great lengths to make sure we understand and control the risk of our portfolios. We review risk via a combination of qualitative and quantitative criteria that require constant monitoring and analysis.

Formal risk forecasting has developed into a huge industry over the last two decades. Well-known providers of third-party risk forecasting models include Axioma, MSCI-BARRA, Northfield and RiskMetrics. These vendors provide outsourced solutions in a one-size-fits-all framework. Generally speaking, these models cover all commonly used asset classes and are implemented by a large number of asset managers in their investment processes.

Alternatively, many asset managers have developed their own risk forecasting/management methodologies, often utilizing a factor-based approach. Here, a factor corresponds to a source of systematic risk, such as macro risks, which include inflation, interest rate and commodity price risk, etc. In addition, risks that are more microeconomic in nature may require attention, particularly those relating to stocks and corporate bonds. These risk sources include company leverage, market beta, idiosyncratic risk, default risk, etc.

Investors can formally or informally manage against all of these risk sources. An example would be a conscious effort to maintain a well-diversified portfolio, as defined by small individual asset weights and minimal portfolio concentration, in addition to minimal exposures to single countries, regions, sectors or other systematic risk factors.

Low Trading Costs/High Capacity

A recurring theme in our research publications, the best theoretical (e.g. modeled, but not managed) risk-adjusted return isn't very meaningful if it cannot be realistically achieved due to high trading costs or generally low liquidity of the market segment to which it applies. In other words, a portfolio's 'paper return' might not always be achieved in practice.

Trading costs often are not a big deal for strategies that only trade liquid securities and that have low turnover. However, a portfolio that strives for high diversification will often contain at least some assets that are illiquid. Trading in illiquid assets is expensive, either in terms of immediate execution costs or in terms of the opportunity costs that arise if assets cannot be traded in sufficient quantities to enable the portfolio manager to achieve the returns expected of the strategy. This means that the manager may have to forego alpha opportunities because assets are unavailable or otherwise too costly to trade in the desired quantity.

At Innealta, we must evaluate on a case-by-case basis whether it makes sense to add new ETFs to our portfolios in order to access additional/alternative segments of the market (e.g. emerging market ETFs or corporate bond ETFs) and therefore provide additional diversification and return opportunities. In many cases these newer ETFs have lower liquidity and higher trading costs.

As is the case for risk, trading costs can be managed using more or less formal methodologies. Some managers use sophisticated trading cost forecasting models that are calibrated using extensive historical databases of security transactions. A number of third-party trade cost forecasting models are available from various entities. Alternatively, trading costs can be monitored in a less formal manner by simply tracking the ongoing costs that brokers charge and adapting the trading venue as well as the quantity traded to the liquidity environment in the market. No matter the sophistication, any approach is at best only an approximation.

A strategy's capacity is directly linked to the level of liquidity and trading costs of the underlying assets. In this context, capacity is generally referred to as a strategy's maximum level of assets under management (AUM) that still allows the manager to attain a risk-adjusted return target. As AUM increases, trading costs increase; return targets become more difficult to achieve. For example if a portfolio manager targets a Sharpe ratio (risk-adjusted excess return over the risk-free rate) of 1, he should only accept AUM up to a level that still allows him to do so. In general, capacity rarely gets the attention it should and many asset managers have become 'asset gatherers', rather than 'performance optimizers'. At Innealta we have been very mindful of this issue and we

constantly evaluate whether increasing asset levels hinder our ability to reach our performance targets. This has not been the case for us yet and we do expect to encounter this problem in the near future. However, to the extent that capacity becomes an issue for us, we will not hesitate to close strategies to new investors in order to preserve our ability to generate meaningful alpha after transaction costs for our existing clients.

Portfolio Optimization

The three main criteria of a successful investment process are combined at the portfolio optimization stage. Its objective is to maximize the expected after-transaction cost return for a given target risk level, generally subject to various portfolio constraints, such as a long-only, maximum position, etc.

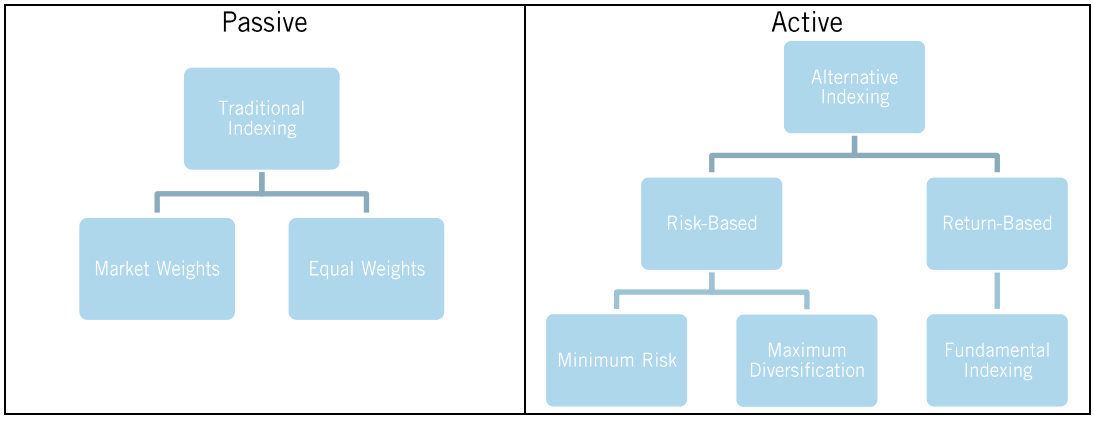
Again, this step may be achieved more formally using a mathematical optimization routine or in a less formal, more qualitative manner. No single approach strictly dominates the others. The optimal solution depends on a host of different portfolio and investment process characteristics, including the asset class traded, whether a quantitative or a qualitative investment strategy is used, etc.

While a formal portfolio optimization is useful, it suffers from a number of problems, which often have the effect of generating extreme portfolio weights. Coming up with optimal portfolio weights is both an art and a science. It is crucially important to get the balance right between these two aspects. At Innealta, we therefore combine a mathematical portfolio optimization with a human overlay in order to make sure that our portfolio weights make sense given our beliefs. Readers may revisit our commentaries from January and March of this year for further insight into our portfolio construction methodology.

WHAT ABOUT ALTERNATIVE INDEXING STRATEGIES?

Having outlined desirable characteristics of an investment process given investors' primary objectives, we are ready to examine how and whether various alternative indexing strategies offered address these requirements. Before evaluating the pros and cons of these strategies in more detail, we offer Figure 1 as a brief overview of some of the most popular approaches that many market participants view as alternatives to traditional indexing.

Figure 1: Traditional and Alternative Indexing



As we noted above, traditional indexing is a passive investment strategy, whereas all strategies that have been labeled 'alternative indexing' are simply active investment strategies that seek to outperform some kind of benchmark and involve a strategic approach of weighting securities in the portfolio. To support the thinking, we

start with an overview of market weighting or passive investing[1] as the basis for our analysis and then compare and contrast the different alternative indexing strategies to that approach.

Traditional Indexing

Traditional indexing is usually associated with the method of weighting stocks by their respective market capitalizations in a portfolio in a manner similar to the construction process of some well-known equity indices, such as the S&P 500. It is an approach of the utmost simplicity in that the portfolio is the index is the market; there is no decision in regard to the manner of the index's reflection of the market, aside from the capitalization levels at which one slices the market.

Market Weights

Market capitalization weighting, commonly referred to as passive indexing, is one of the most widespread investment approaches, in no small part due to its complete transparency and ease of portfolio replication. Offering low-cost and low-turnover exposure to equity markets, it is highly scalable and can absorb significant assets. If a particular market is mostly efficient it is very difficult to improve upon that market's return; this fact has been supported by performance studies that show that few managers consistently outperform their chosen bogeys. Obviously, matching the market return removes the risk of underperforming the benchmark index (at least before trading costs).

Under the Capital Asset Pricing Model (CAPM) the market weighted portfolio is the most efficient portfolio and will deliver the highest Sharpe ratio (risk-adjusted excess return over a risk-free investment). It is also the only portfolio that all market participants theoretically are able to hold. However, the market weighted portfolio is often concentrated at the sector or stock level and therefore can be seen as insufficiently diversified.[2] It is also well-known (among academics, at least) that the CAPM, which provides a rationale for passive indexing, does not price assets well. Out of sample, assets with high and low market beta tend to have similar returns, which contradicts the CAPM as outlined by Black, Jensen and Scholes (1972) and Fama and French (1992), among many others.

In general, there is strong empirical evidence that a number of systematic investment strategies or systematic factors improve upon a market-weighted portfolio. This list includes value, size, momentum, low beta, specific volatility and several others. This ability to (potentially) systematically outperform provides the basis for many *active* investment strategies at the asset-class (i.e. sub-index) and individual security levels. One should note, however, that such factor-based shifts over the market portfolio near always constitute active choices.

As we'll discuss later, Arnott, Hsu and Moore (2005) argue—in our view falsely—that the market-weighted portfolio on average overweights overvalued stocks and underweights undervalued stocks.[3] These arguments are seen as providing necessary support for alternative indices. But such support should in no way qualify the investment choices being made as passive.

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[1] Note that in this document we commonly refer to weighting stocks by their market capitalization as 'market weighting' or holding a 'market portfolio'. This is not to be confused with the notion 'the market portfolio' as it is used in academia, which includes all tradable assets that exist rather than just stocks. When we say, "the market," we mean, "weighting stocks by their market capitalization," within a certain universe, such as U.S. Large-Cap stocks, Emerging Markets stocks, etc. Although such portfolios are at most a noisy proxy for the true market portfolio, they are commonly referred to in practice as, "the market portfolio," in an individual asset class.

2 For example, in the UK Vodafone used to have a weight of more than 12% in the FTSE All-Share index at the end of March 2000. In July of 2002 its weight was less than 5%.

3 However, as Perold (2007) outlines, this argument is not valid unless several other restrictive assumptions are made which generally do not hold in practice.

Equal Weights

Equally weighting assets in a portfolio is a very simple portfolio construction approach, often executed in an attempt to achieve greater diversification over the market-cap-weighting scheme. Equal weighting ignores return and risk expectations. In a mean-variance framework, equal weighting is optimal if all assets have the same correlations with each other as well as identical expected returns and volatilities. Equal-weighted portfolios have been shown to outperform market-weighted portfolios on a risk-adjusted basis over most historical time periods, at least before trading costs have been subtracted.

While simple to execute, equal-weight mechanisms have several drawbacks: (1) The nature of the resulting portfolio is heavily dependent on the universe of assets considered. For example, equal weighting implies that sector weights in a portfolio depend on the number of stocks in a particular sector, which seems ad-hoc. (2) If risk levels are different for different assets, then equal weighting leads to risk concentrations in the portfolio. (3) Particularly for more comprehensive universes of assets that include small cap stocks, equal weighting is difficult to implement as the smallest and generally least liquid stocks are highly overweighted relative to large cap stocks. Hence trading costs can be high and the capacity of an equal weighted strategy can be very limited.

As a result of these limitations, equal weighting is mostly implemented in a universe of more liquid assets such as large cap stocks or ETFs that are baskets of a number of underlying securities. At Innealta we use equal weights in our country and sector rotation portfolios as country and sector ETFs tend to be quite liquid and the strategy is therefore more easily implementable. We also utilize an equal-weighting methodology as, at least in its expression within our current portfolios, our quantitative framework does not compare individual market (sector or country) valuations to those of the remaining markets. Further, a relative-weight context would leave many of our investible marketplaces (emerging and small-developed, in particular) with very minor potential exposures within the portfolio, and would otherwise strongly favor developed markets, adding a bias we might not necessarily favor.

As is the case even in market-weighted portfolios, at the security level equal-weighted strategies have been shown to be exposed to systematic factors, including value and size. They also have been shown to incorporate an implicit mean-reversion bet—a bet that asset prices revert to their long-term mean over time. Such characteristics aren't meant to be seen as limitations; rather they are meant to be understood as features that can be exploited either by acceptance in passive strategies or avoidance in active ones.

Alternative Indexing

Alternative indexing strategies generally can be categorized as either risk-based strategies that ignore return forecasts and solely focus on risk reduction/diversification or return-based strategies that ignore risk and weight stocks according to some characteristic or systematic factor. Neither of these strategy types, however, explicitly accounts for trading costs/capacity, though one may do so implicitly, as we discuss below.

Minimum Risk

The minimum risk portfolio has the lowest possible expected volatility of all portfolios of risky assets. It can be uniquely determined using a covariance matrix only while ignoring asset return expectations. It is the portfolio on the efficient frontier of risky assets with the lowest risk, but also with the lowest return *ex-ante*. In theory, the minimum risk portfolio of risky assets has little appeal. If an investor prefers a low-risk portfolio, modern portfolio theory suggests that a better way to achieve lower volatility and better risk-adjusted return is through a combination of cash and a market-weighted portfolio.

While seemingly unappealing on an *ex-ante* basis, *ex-post* the minimum risk portfolio has been found to have both higher returns and significantly lower risk than a market-weighted portfolio, a fact that in no small way has contributed to its increased appeal.

However, despite its low risk, the minimum-risk portfolio tends to be relatively concentrated, as it often overweights low-volatility assets. Moreover, the portfolio weights can be rather sensitive to measurement errors in the volatilities and correlations of component securities. Measurement error is a major issue for equities as one generally needs to estimate a covariance matrix for a large number of assets (usually at least several hundred individual stocks). It turns out that if the number of assets is large relative to the number of return periods that we can use to estimate variances and covariances, measurement error is amplified. Therefore, simply using historical returns to compute variances and covariances tends to produce poor results and either a systematic factor approach or some shrinkage estimator (application of an additional methodology to improve the results) needs to be applied. However, both the choice of systematic factors and the level of shrinkage are subjective (read: *active*) decisions that may have a major impact on variance and covariance estimates.

The minimum risk strategy has been shown to be exposed to several well-known systematic factors: value, size, low-beta and specific volatility. In fact (a theme we'll repeat for other alternative indexing categories), most seem specifically designed to (in our view *actively*) facilitate the investment in those systematic factors. Most of the strategy's return can be attributed to these factors, as demonstrated by Scherer (2010).

Maximum Diversification

Maximum diversification portfolios are built to maximize the so-called diversification ratio as demonstrated by Choueifaty and Coignard (2008). They define the diversification ratio as the weighted average of the volatilities of assets to the volatility of the portfolio of the same assets. The authors argue that the higher this ratio, the more diversified the portfolio is. The general idea behind this methodology goes back to an earlier study by Booth and Fama (1992) on the return benefit of diversification.

One conceptual problem with this approach is that diversification is not a well-defined concept. It relates to the risk of a portfolio and to the fact that the portfolio risk is reduced if you hold assets that have a low correlation with each other. The diversification benefit as Choueifaty and Coignard define it is a statistical concept which can be very high for a portfolio yet, at the same time, the portfolio may look very undiversified as far as its portfolio concentration is concerned or its distribution of portfolio weights in different stocks.

Moreover, the maximum diversification approach assumes that all assets have identical Sharpe ratios. This implies the existence of arbitrage opportunities and is a theoretical impossibility as a portfolio of two imperfectly correlated assets with identical Sharpe ratios always has a higher Sharpe ratio than each of the two individual assets since there is always a diversification benefit. The only case where no diversification benefit exists is for assets that are perfectly correlated (i.e. they are one and the same asset).

Maximum diversification portfolios have been shown to outperform the market on a risk-adjusted basis over the last two decades. At the same time, however, maximum diversification results in highly concentrated portfolios (even more so than minimum risk portfolios), both on portfolio weights and risk contributions. Hence, although the portfolio is designed to maximize Choueifaty and Coignard's diversification ratio, it turns out to be not as diversified when judged by other more objective definitions of diversification.

Maximum diversification portfolios have been shown to be exposed to similar systematic factors as minimum risk portfolios, namely value, size, low-beta and specific volatility. Most of the strategy's return can be attributed to these well-known factors.

Fundamental Indexing

Fundamental indexing, based on Arnott, Hsu and Moore (2005), builds portfolios based on accounting metrics of a company's size—book value, revenue, dividends and other 'value' factors—instead of market weighting assets. Here, the label itself is an oxymoron, as it infers an active approach to the passive framework of indexing.

Fundamental indexing, depending on the specific flavor, has been shown to outperform market-weighted portfolios over many historical time periods. Performance has weakened over time, though, particularly in the U.S. market. Proponents of fundamental indexing prefer fundamentally weighted portfolios as an attempt to overcome the supposed bias of the market portfolio, which they claim overweights the most overvalued stocks and underweights the most undervalued ones by construction. It is minimally an open question whether the market-weighted portfolios therefore have a growth bias or whether fundamental indexing portfolios have a value bias. It is easy to recognize the paradoxical nature of the entire alternative indexing argument. This feature simply relates to the age-old active vs. passive debate.

The strategy generally produces well-diversified portfolios that have low turnover and can therefore be implemented at low cost. However, it ignores risk and can have relatively large bets on large cap names. Moreover the strategy is essentially a value bet, lacking diversification across other return/alpha sources.

ALTERNATIVE VS. PASSIVE INDEXING—AT A GLANCE

Exhibit 1 summarizes the characteristics of the different alternative indexing strategies discussed above and compares them to passive indexing.

Exhibit 1: Strategy Characteristics

	Strategy	Alpha Source	Risk Control	Trading Costs/Capacity	Theoretical Foundation	Factor Exposures
PASSIVE	Market Weights	None	No active risk (apart from slight index tracking risk); market risk only	Minimal trading costs; huge capacity.	Strong. Capital Asset Pricing Model (CAPM)	Market
	Equal Weights	Not modeled. Empirically some paper alpha but high turnover and trading costs	No explicit risk control; large active bets in tiny small cap names; risk/return characteristics highly sensitive to size of universe	Depending on the universe, trading costs can be high; limited capacity.	Weak. Implicitly assumes that expected returns, volatilities and correlations of all assets are identical.	Value, size, mean reversion
ACTIVE	Minimum Risk	Not modeled. Empirically relatively steady alpha.	Explicit risk control; marginal (not total) risk contributions are identical for all assets; but portfolios are concentrated.	High trading costs since portfolios are highly concentrated; very limited capacity.	Weak. Theoretically suboptimal portfolio.	Value, size, low beta, specific volatility.
	Maximum Diversification	Not modeled. Empirically some relatively steady alpha.	Indirect risk control (if portfolio is very diversified); portfolios are highly concentrated.	High trading costs since portfolios are very highly concentrated; extremely limited capacity.	Weak. All assets are assumed to have the same Sharpe ratio → implies the existence of arbitrage opportunities. Unclear how diversification is measured.	Value, size, low beta, specific volatility.
	Fundamental Indexing	Alpha is modeled but in a simplistic manner. Empirically some alpha.	No explicit risk control; generally diversified portfolios.	Low trading costs due to low turnover and diversified portfolio; high capacity.	Captures value factor which has been shown to be a pervasive risk factor.	Value, mean reversion.

ALSO WHY IT MATTERS

To apply the discussion to our specific brand of investing, we'll take it outside the theoretical ideal underpinnings of an investment process and put the conversation into the context of our view of potential reward for the risk and effort taken on by a particular investment methodology.

It's important to note that most all alternative indexing methodologies have sought to exploit a particular systematic bias in the market that has shown to provide long-term outperformance. Elements of our quantitative framework might also seek to highlight potential reward from such factors. However, we have yet to come across a strategy that provides as durable a level of potential long-term outperformance on its own as we think does our particular active approach to equity-market investment. For us, the potential benefit of the review and acceptance of a particular risk/reward scenario presented by passive investment vehicles that track traditional indexes far surpasses that offered by more peculiar bets on theoretical market biases offered by alternative indexing methodologies. This is especially true when our insight into the construction of many alternative indexing strategies is burdened by what easily come across as active investment decisions.

To say it another way, alternative indexing bets may show their worth on occasion. However, any approach to broadly employing alternative index ETFs—and more importantly determining when, specifically, the investing environment has sufficiently warmed to the allocation of funds to any individual slice—is likely to prove less theoretically and empirically defensible than the one we currently employ. For sure, our methods will continue to evolve, as will the list of potential asset class exposures, but the paths are well unlikely to cross into the realm of alternative indexing.

SUMMARY AND CONCLUSION

We have explained and compared popular alternative indexing strategies based on criteria that are the main ingredients of any investment process, namely reliable alpha sources, effective risk control and low trading costs/high capacity. We find that, while these so-called indexing approaches have some merit and have generally shown promising returns historically, they generally lack theoretical justification as well as a clearly defined investment objective. All of these strategies only address a subset of the criteria discussed above and therefore seem to be suboptimal from a conceptual point of view. Moreover, most of these strategies' returns originate from a small number of well-established systematic factors such as value, size, etc. that have been known for many years, but that provide sources of potential outperformance that can prove inconsistent and therefore unreliable over shorter periods of time.

Alternative indexing strategies are essentially somewhat simplistic (and possibly inferior) versions of standard quantitative processes and they are definitely not new or revolutionary. In fact, some of us at Innealta have employed such strategies to various degrees for decades.

Given that alternative indexing is widely followed by investors nowadays, it also seems doubtful whether the promising performance of the past can be retained or whether a 'quant crowding' effect similar to the second half of 2007 is going to materialize. After all, greater focus on a particular market bias must over time limit the relative potential to exploit that bias.

While there are a number of active equity ETFs that employ alternative indexing strategies, Innealta has not used them and is not planning to use them in the future for our equity allocation. We are looking for strategies that, most importantly, are internally consistent from a theoretical basis and that find a very specifically definable fit within the portfolio's diversity of exposures. Variously explained on these pages, alternative indexing ETFs cannot satisfy these criteria. Moreover, they tend to have considerably higher fees than passive ETFs as well as lower liquidity, even further reducing their appeal.

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Investment in emerging markets subjects a fund to a greater risk of loss than investments in a developed market. This is due to, among other things, greater market volatility, lower trading volume, political and economic instability, high levels of inflation, deflation or currency devaluation, greater risk of market shut down, and more governmental limitations on foreign investment policy than those typically found in a developed market. In addition, the financial stability of issuers (including governments) in emerging market countries may be more precarious than in other countries. As a result, there will tend to be an increased risk of price volatility in a fund's investments in emerging market countries, which may be magnified by currency fluctuations relative to the U.S. dollar.

Diversification does not protect against loss in declining markets.

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Innealta is an asset manager specializing in the active management of portfolios of Exchange Traded Funds. Innealta's competitive advantage is its quantitative investment strategy driven by a proprietary econometric model created by Dr. Gerald Buetow, Innealta's Chief Investment Officer. The firm's products include Tactical ETF Portfolios, a U.S. Sector Rotation Portfolio and a Country Rotation Portfolio. Innealta aims to beat appropriate benchmark performance by tactically managing portfolios utilizing a proprietary econometric model. By harnessing the benefits of ETFs, Innealta is able to provide investors with exposure to multiple asset classes and investment styles in highly liquid, low cost portfolios.

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