S&P Dow Jones Indices

S&P Global

The Art Of Constructing A SOLID CORE

> While most would agree that the underlying benchmarks associated with building a solid foundation for core portfolios are relatively straightforward and simple, the intricacies behind benchmarking core—an important aspect of the portfolio building process—are often overlooked. One key factor requiring additional attention is the inclusion of mid and small cap exposures. Since beta exposure generates the majority of a portfolio's risk and return, choosing benchmarks to gain additional market cap exposure requires more oversight and attention than one might think. Why? Not all indices are created equal. Inherent and structural benchmark differences demand a thorough understanding of the pros and cons that drive returns for the underlying indices.

4 KEY FACTORS
To Bear In Mind When Benchmarking Core

1 INDEXING WORKS ACROSS MARKET CAPITALIZATIONS

Contrary to older mainstream views, indexing has worked just as well for mid-caps and small-caps as for large-cap stocks. Our bi-annual SPIVA® (S&P Index Versus Active) Scorecard—which reports on historical returns of active mutual fund managers versus their corresponding benchmarks—makes a consistently strong statistical case for indexing across all market capitalizations.

Exhibit 1—taken from our mid-year 2013 SPIVA Scorecard—shows how active equity managers failed to outperform their corresponding benchmarks in the U.S. equity space over one-, three-, and five-year periods. As the report shows, 72.72% of the large-cap active managers lagged behind the S&P 500®, 77.71% of mid-cap funds were outperformed by the S&P MidCap 400® and 66.77% of the small-cap funds were outperformed by the S&P SmallCap 600® (over a five-year period ending December 31, 2013).

Of course, Exhibit 1 covers a single period and results will vary from one period to another. Over time, however, the misconception that indexing works better for large-caps than it does for small-caps or mid-caps is debunked by the SPIVA report and its sister publication, the Persistence Scorecard. It is worth noting that active managers in all size segments, as a group, are challenged to consistently beat their benchmarks' beta returns.

2 MUTUALLY EXCLUSIVE BUILDING BLOCKS (NO OVERLAPS)

There are certainly more than enough options available to select from when benchmarking core exposures. However, there are important, structural differences in index methodologies which can dramatically impact their return patterns. For example, a closer look at some large-cap indices reveals the inclusion of mid-cap stocks and a more diligent eye on some of the indices available in the small-cap space introduce exposure to micro-cap stocks.

At S&P Dow Jones Indices, our core U.S. index lineup includes the mutually exclusive S&P 500, S&P MidCap 400 and S&P SmallCap 600, which together form the S&P Composite 1500®. These building blocks can be used to strategically compose and track a variety of exposures such as:

- Cap-weighted broad market exposure replicating all segments
- Cap-weighted broad market exposure with a market cap skew
- Tactically tilting toward one or multiple market cap segments

EXHIBIT 1: Excerpted From Spiva: Percentage Of U.S. Equity Funds Outperformed By Benchmarks

FUND CATEGORY	COMPARISON INDEX	ONE-YEAR (%)	THREE YEARS (%)	FIVE YEARS (%)
All Multi-Cap Funds	S&P Composite 1500	52.84	80.38	71.74
All Large-Cap Funds	S&P 500	55.8	79.95	72.72
All Mid-Cap Funds	S&P MidCap 400	38.97	74	77.71
All Small-Cap Funds	S&P SmallCap 600	68.09	87.32	66.77

Source: S&P Dow Jones Indices' 2013 Year-End SPIVA Scorecard.

[1]Since its first publication 11 years ago, the SPIVA Scorecard has served as the de facto core-keeper of the active versus passive debate. Over the last decade, we have heard passionate arguments from believers in both camps when headline numbers have deviated from their beliefs.

4 KEY FACTORS
To Bear In Mind When Benchmarking Core

3 INDEX INVESTABILITY

Our U.S. core indices are designed using investable stocks, making each index highly replicable. The investable nature of our indices relates to the liquidity and market depth in the selection of constituents. At S&P DJI, we employ specific criteria that focus on stocks with significant turnover relative to their free float and relatively high trading volumes as compared to peers. The reasons for emphasizing more liquid and tradable equity issues are three-fold:

i. Indirect costs may be lower (tighter bid-ask spreads, and potentially less market impact from index trading)
ii. Indices become highly replicable because trading can be done in large lots
iii. Investors tend to find more investable products (e.g. ETFs, index funds or listed derivatives) readily available in the market for replication and trading

4 BROAD BUT EFFICIENT MARKET REPRESENTATION

Market representation is also an important consideration when designing benchmarks. Generally, since smaller, less liquid stocks are less efficient to trade, investors face a trade-off between investability and market representation. Our U.S. core family of indices is broad yet efficient—generally omitting micro-cap exposure which cuts down index investability and adds little extra representation. In a market cap-weighted framework, micro-cap stocks have proportionately small index weights which presents more of a tradability drag than a performance kick.

DRILLING DOWN TO THE CORE ACROSS MARKET CAPITALIZATIONS

S&P COMPOSITE 1500

Designed for investors seeking to replicate the performance of the U.S. equity market or benchmark against a representative universe of tradable stocks

Represents approximately 90% of available market capitalization

S&P 500

Widely regarded as the best single gauge of large cap U.S. equities

Over USD 5.7 trillion in global assets directly benchmarked to the index

Captures approximately 80% of available market capitalization

S&P MIDCAP 400

Measures the performance of mid-sized companies

Reflects the distinctive risk and return characteristics of this market segment

Opportunities for unique fundamental exposure due to the distinctive positioning of mid-caps in their corporate life-cycle

S&P SMALLCAP 600

Measures the small cap segment of the U.S. equity market

Made up of companies meeting investability and financial viability criteria

Index constituents do not overlap with the S&P 500 or S&P MidCap 400

Accessing Our Core Lineup Of Indices

INDEX NAME	EXCHANGE TRADED PRODUCT NAME	ETF TICKER
S&P Composite 1500 ***Currency:*** USD ***Bloomberg Ticker:*** SPR	iShares Core S&P Total U.S. Stock Market ETF	ITOT
S&P 500 ***Currency:*** USD ***Bloomberg Ticker:*** SPX	SPDR	SPY
	iShares S&P 500 Index Fund	IVV
	iShares S&P 500 Index Fund	IUSA LN
	iShares S&P 500 Index Fund	IUSA IM
	Short S&P 500 ProShares	SH
	Ultra S&P 500 ProShares	SSO
	Ultrashort S&P 500 ProShares	SDS
	Guggenheim 2x S&P 500 ETF	RSU
	Guggenheim Inverse 2x S&P 500 ETF	RSW
	Horizons BetaPro S&P 500 Bear Plus ETF	HSU CN
	Horizons BetaPro S&P 500 Bull Plus ETF	HSD CN
	ProShares UltraPro S&P 500	UPRO
	ProShares UltraPro Short S&P 500	SPXU
	iShares S&P 500 (Acc)	SACC LN
	ComStage ETF S&P 500	C012 GY
	CS ETF (IE) on S&P 500	CSSPX SW
	db x-trackers S&P 500	XSPX LN
	HSBC ETF S&P 500	HSPX LN
	Lyxor ETF S&P 500	LSPX LN
	S&P 500 Source ETF	SPXS
	Amundi ETF S&P 500	500 FP
	EasyETF S&P 500	ESEEUR FP
	Listed Index Fund US Equity (S&P 500)	1547 JP
	Vanguard S&P 500 ETF	VOO

INDEX NAME	EXCHANGE TRADED PRODUCT NAME	ETF TICKER
S&P 500 (cont.)	UBS ETFs Plc - S&P 500 Index	S5USAS SW
	Vanguard S&P 500 ETF	VUSA LN
	SPDR S&P 500 ETF	SPY5 GR
	Direxion Daily S&P 500 Bull 3X Shares	SPXL
	Direxion Daily S&P 500 Bear 3X Shares	SPXS
	Horizons Universa US Black Swan ETF	HUS/U CN
	Vanguard S&P 500 Index ETF	VFV CN
	BMO S&P 500 ETF	ZSP CN
S&P MidCap 400 ***Currency:*** USD ***Bloomberg Ticker:*** MID	MidCap SPDR	MDY
	iShares S&P MidCap 400 Index Fund	IJH
	Short MidCap 400 ProShares	MYY
	Ultra MidCap 400 ProShares	MVV
	Ultrashort S&P MidCap 400 ProShares	MZZ
	Rydex 2x S&P MidCap 400 ETF	RMM
	Rydex Inverse 2x S&P MidCap 400 ETF	RMS
	ProShares UltraPro MidCap400	UMDD
	ProShares UltraPro Short MidCap400	SMDD
	Vanguard S&P Mid-Cap 400 ETF	IVOO
	SPDR S&P 400 US Mid Cap ETF - A	SPY4 GR
	Direxion Daily Mid Cap Bull 3X Shares	MIDU
	Direxion Daily Mid Cap Bear 3X Shares	MIDZ
S&P SmallCap 600 ***Currency:*** USD ***Bloomberg Ticker:*** SML	SPDR S&P Small Cap 600 ETF	SLY
	iShares S&P SmallCap 600 Index Fund	IJR
	Ultra SmallCap 600 ProShares	SAA
	Short SmallCap 600 ProShares	SBB
	Ultra Short SmallCap 600 ProShares	SDD
	iShares S&P SmallCap 600	ISP6 LN
	Vanguard S&P Small-Cap 600 ETF	VIOO

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