

Fundamental Selection and Weighting of Stocks in a Portfolio

Comments at Blogs and Forums

Some of these blogs provided no obvious way to post a comment. Additional comments are located in related documents at the following link:

Documents from Scientific Research <http://www.numeraire.com/download.htm>

- Letter to the Editor of *The Wall Street Journal*: Turning on a Paradigm?
- Comments on: Turning on a Paradigm? [WSJ]
- Letter to the Editor of *WSJ.com*: The ‘Noisy Market’ Hypothesis
- Comments on: The ‘Noisy Market’ Hypothesis [WSJ.com]
- What Is Fundamental Indexation?

Blog or Forum	Threads	Date Posted or Visited
Grow Your Funds	1	July 3, 2006
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MoneyScience.org	3	July 7, 2006
Wilmott.com [Quant] Forums	1	July 7, 2006
Phat Investor Stock Market Blogs	directory	n/a
StockBlogs.com	directory	n/a

Grow Your Funds

http://www.growyourfunds.com/2006/06/fundamental_indexation.html

Fundamental Indexation

Larry Stay [MBA, CFA] ~ June 14, 2006

Know More: [Dividends](#), [ETFs](#), [FTSE](#), [Fundamental Indexation](#), [Investing Basics](#), [Jason Hsu](#), [Jeremy J Siegel](#), [PIMCO](#), [Phillip Moore](#), [RAFI](#), [Research Affiliates Fundamental Index](#), [Robert Arnott](#), [WisdomTree Asset Management](#)

The *Wall Street Journal* concluded a two part series today, 6/14/06 on their Opinion page on Efficient Markets. Jeremy J Siegel was today's columnist. Among the topics he addressed was "Fundamental Indexation." I was fascinated and spent much of the last few hours getting better educated on the topic.

Robert Arnott, Jason Hsu and Phillip Moore wrote a paper about a year ago on Fundamental Indexation [Arnott, Robert D., Jason C. Hsu and Philip Moore, "Fundamental Indexation", *Financial Analysts Journal* 61:2 (March/April 2005), 83-99, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=713865]. The paper posits that there are better ways to construct an index rather than Market Capitalization (the way most indexes are constructed.) Based on the paper Mr. Arnott has constructed an index weighting companies based on Sales, Cash Flow, Book Value and Dividends. It is called the RAFI (Research Affiliates Fundamental Index) and is sponsored by the FTSE among others. Mr. Arnott's company, Research Affiliates has also set up some ETFs traded against this index as has PIMCO. The RAFI index outperforms most market capitalization indexes according to their research.

Of course as with all things on Wall Street, Mr. Arnott and colleagues' paper is not without criticism. There are several scholarly papers taking exception to this or that part of his theory.

Mr. Jeremy J. Siegel who is a professor at the Wharton School and who is an advisor to WisdomTree Asset Management, Inc. has done additional research. He advocates using dividends as THE fundamental factor for constructing indexes. I quote his article, "According to my research, dividend-weighted indexes outperform capitalization-weighted indexes and are particularly valuable at withstanding bear markets." He feels that dividends are the only fundamental variable that is, "...completely objective, transparent and unable to be manipulated by managers who tinker with accounting assumptions."

I looked up the funds he advises at www.wisdomtree.com [See appended information below] and must say I am impressed. Expenses are low and performance is good. You may want to check out their prospectus and their Capabilities Brochure. WisdomTree has a whole family of ETFs available to investors.

According to Mr. Siegel, "The historical data make an extremely persuasive case for

fundamental indexing. From 1964 through 2005, a total market dividend-weighted index of all stocks outperformed a capitalization-weighted total market index by 123 basis points a year and did so with lower volatility. The data indicated that the outperformance by fundamentally weighted indexes during the same period is even greater among mid-sized and small stocks.”

So, it might be worth your while to check out fundamental indexed funds. They might make you some money.

Appended Information

WisdomTree ETFs

http://www.wisdomtree.com/wt_etfs.asp

<u>Name</u>	<u>Expense Ratio</u>	<u>Ticker</u>	<u>NAV*</u>	<u>Related Index</u>
WisdomTree Dividend Top 100 Fund	0.38%	DTN	51.16	WTTOP
WisdomTree LargeCap Dividend Fund	0.28%	DLN	51.36	WTLDI
WisdomTree MidCap Dividend Fund	0.38%	DON	51.23	WTMDI
WisdomTree High-Yielding Equity Fund	0.38%	DHS	51.09	WTHYE
WisdomTree SmallCap Dividend Fund	0.38%	DES	51.75	WTSDI
WisdomTree Pacific ex-Japan Dividend Fund	0.48%	DND	51.16	WTDIPR
WisdomTree Pacific ex-Japan High-Yielding Equity Fund	0.58%	DNH	50.20	WTDPHY
WisdomTree Japan Total Dividend Fund	0.48%	DXJ	51.62	WTJDI
WisdomTree Japan High-Yielding Equity Fund	0.58%	DNL	51.23	WTJHYE
WisdomTree DIEFA Fund	0.48%	DWM	51.95	WTDFA
WisdomTree International LargeCap Dividend Fund	0.48%	DOL	51.90	WTILDI
WisdomTree International Dividend Top 100 Fund	0.58%	DOO	51.75	WTITOP
WisdomTree International MidCap Dividend Fund	0.58%	DIM	52.01	WTIMDI
WisdomTree DIEFA High-Yielding Dividend Fund	0.58%	DTH	51.62	WTDHYE
WisdomTree International SmallCap Dividend Fund	0.58%	DLS	51.91	WTISDI
WisdomTree Europe Total Dividend Fund	0.48%	DEB	52.08	WTEDI
WisdomTree Europe High-Yielding Equity Fund	0.58%	DEW	51.71	WTEHYE
WisdomTree Europe SmallCap Dividend Fund	0.58%	DFE	52.35	WTESC
WisdomTree Japan SmallCap Dividend Fund	0.58%	DFJ	51.42	WTJSC
WisdomTree Total Dividend Fund	0.28%	DTD	51.36	WTDI

* NAV as of 7/5/2006 5:17:47 PM

WisdomTree Indexes

<http://www.wisdomtree.com/IndexListing.asp>

Of the 20 WisdomTree indexes, all 20 have an inception date of 6/1/2006.

Of the 20 WisdomTree index funds, 19 have an inception date of 6/16/2006, and one has an inception date of 10/1/2006 (SmallCap Dividend Fund).

WisdomTree DIEFA Index

http://www.wisdomtree.com/detail_index.asp?IndexID=116

The WisdomTree Dividend Index of Europe, Far East Asia and Australasia (WisdomTree DIEFA) is a fundamentally weighted Index that measures the performance of dividend-paying companies in the industrialized world, excluding Canada and the United States that pay regular cash dividends and that meet other liquidity and capitalization requirements. It is comprised of companies incorporated in 16 developed European countries, Japan, Australia, New Zealand, Hong Kong and Singapore. Companies are weighted in the Index based on annual cash dividends paid. The Index was established with a base value of 300 on May 31, 2006 and is calculated in US dollars and is updated every 15 seconds between 9:30 a.m. and 4:00 p.m. to reflect market prices and exchange rates. Closing or last-sale prices are used when non-U.S. markets are closed.

WisdomTree FAQs

<http://www.wisdomtree.com/faq.asp>

Q: Who is WisdomTree?

A: WisdomTree Investments, Inc. ("WisdomTree Investments") is a publicly traded company specializing in the creation of proprietary stock indices. WisdomTree Investments is the parent company of WisdomTree Asset Management, Inc. ("WisdomTree Asset Management"). WisdomTree Asset Management is registered as an investment adviser with the Securities and Exchange Commission (SEC) and is the investment adviser to the WisdomTree Trust, a family of 20 ETFs.

WisdomTree Press and Media

http://www.wisdomtree.com/press_media.asp

Page 4; July 6, 2006

November 17, 2004: Index Development Partners, Inc. [July 26, 2005: Company name changed to WisdomTree Investments, Inc.] Announces Professor Jeremy J. Siegel as Senior Investment Strategy Advisor

NEW YORK--(BUSINESS WIRE)--Nov. 17, 2004--Index Development Partners, Inc. (PINK SHEETS: IXDP.PK) today announced that Wharton Professor Jeremy J. Siegel has joined the Company as its Senior Investment Strategy Advisor. Professor Siegel, who will continue his full-time teaching position at Wharton, will serve on a consulting basis, advising the Company on investment strategy regarding its proprietary stock indexes. Professor Siegel will also serve as a member of the Company's Board of Directors.

"Professor Siegel will play an important role in product development and in communicating the advantages of indexing. We share a common vision on how to best serve investors," said Company CEO Jonathan Steinberg.

Jeremy J. Siegel is the Russell E. Palmer Professor of Finance at the Wharton School of the University of Pennsylvania. He graduated from Columbia University in 1967, received his Ph.D. in Economics from the Massachusetts Institute of Technology in 1971, and spent one year as a National Science Foundation Post-Doctoral Fellow at Harvard University. Prof. Siegel taught for four years at the Graduate School of Business of the University of Chicago before joining the Wharton faculty in 1976.

WisdomTree Board of Directors

http://www.wisdomtree.com/board_of_directors.asp

Prior to establishing WisdomTree, Mr. Steinberg founded, and served as Chairman, and CEO of Individual Investor Group, Inc. From 1998 to 2004 he held the role of editor in chief of Individual Investor and Ticker magazines. Before his entrepreneurial accomplishments, Mr. Steinberg was an analyst in the Mergers & Acquisitions division at Bear, Stearns & Co. Inc. Mr. Steinberg attended The Wharton School at University of Pennsylvania, and is the author of Midas Investing, published by Random House in 1996.

WisdomTree SAI

http://www.wisdomtree.com/customimages/146401_WTSAI_Web.pdf

Page 18: Jonathan Steinberg, Interested Trustee (year of birth): 1964.

COMMENTS

Theory is missing from the data-centered analysis of fundamental indexation.

Analysis of the problems with dividends and certain other so-called fundamental metrics for either selecting stocks or weighting stocks in a portfolio can be found online. There are links at numeraire.com/download.htm to documents about this topic.

To facilitate fair, open discussion about this matter among interested persons, one of the linked documents includes comments by bloggers. I trust this conforms to fair use pursuant to *The Chicago Manual of Style*, 14/e.

Posted by: Bob Coleman | July 3, 2006 - 01:32 PM |

http://www.growyourfunds.com/2006/06/fundamental_indexation.html#comment-93752

Financial Rounds

<http://financialrounds.blogspot.com/2006/06/bogle-and-malkiel-discuss-fundamental.html>

Thursday, June 29, 2006

Bogle and Malkiel Discuss Fundamental Indexing

Today's Wall Street Journal has a great op-ed piece by John Bogle (former head of Vanguard funds) and Burton Malkiel (Princeton finance Professor and author of "A Random Walk Down Wall Street"). In it, they do a pretty thorough job of discussing some of the potential problems with "fundamental indexing."

For those unaware with the term, here's a little background: Indexes (and index funds) can be weighted many ways - by market capitalization (i.e. a stock with twice the market cap would have twice the weight in the portfolio), equally (all stocks have equal weight) or by some other factor. The S&P 500, for instance, is a market-cap weighted index.

Proponents of "fundamental indexing" contend that portfolios that are indexed by some fundamental factor could significantly outperform traditional cap-weighted index. For example, Eugene Fama and Kenneth French contends that portfolios of small-cap and high price-book firms would be superior, Robert Arnott proposes indexing on factors such as sales or book values, and Jeremy Siegel suggests portfolio weighting on the basis of dividends.

Bogle and Malkiel provide several good reasons why fundamental indexing is unlikely to outperform cap-weighted indexing:

- Higher annual operating expenses
- Higher management fees
- Higher portfolio turnover
- Higher tax burden tax

Read the whole thing [here](#) (note: online subscription required)

Updated 6/29: To place things in a better context (and give the other side's arguments in their own words), I thought I'd link to the op-ed piece that Jeremy Siegel wrote in the WJS on 6/14, titled "The Noisy Market Hypothesis". You can read it [here](#) (as before, online subscription required):

Posted by The Unknown Professor at [8:14 AM](#)

[About Me: East Coast, United States, finance professor.]

Date visited: July 3, 2006.

EconLog

http://econlog.econlib.org/archives/2006/06/a_simple_but_re.html

A Simple but Revolutionary Investment Idea

[Arnold Kling](#) (June 14, 2006)

June 14, 2006

[A Simple but Revolutionary Investment Idea](#)

[Arnold Kling](#)

[Jeremy Siegel writes](#), [an article in *The Wall Street Journal Online* restricted to subscribers]

Fundamental indexation means that each stock in a portfolio is weighted not by its market capitalization, but by some fundamental metric, such as aggregate sales or aggregate dividends. Like capitalization-weighted indexes, fundamental indexes involve no security analysis but must be rebalanced periodically by purchasing more shares of firms whose price has gone down more than a fundamental metric, such as sales, and selling shares in those firms whose price has risen more than the fundamental metric.

...According to my research, dividend-weighted indexes outperform capitalization-weighted indexes and are particularly valuable at withstanding bear markets. For example, the Russell 3000 Index lost almost 50% of its value between the bull market peak of March 2000 and the October 2002 low. Over this same period, a comparable total market dividend-weighted index was virtually unchanged. A dividend weighted index did have a bear market, but it only corrected by 20%. Moreover, the dividend-weighted index bear market didn't start until March 2002, and it lasted only six months (compared to 24 months for the cap-weighted index). The dividend-weighted index is now about 40% above its March 2000 close, whereas the S&P 500 and Russell 3000 are still not yet back to even. A similar performance occurred in other bear markets.

The historical data make an extremely persuasive case for fundamental indexing. From 1964 through 2005, a total market dividend-weighted index of all U.S. stocks outperformed a capitalization-weighted total market index by 123 basis points a year and did so with lower volatility.

COMMENTS (6 to date)

[Latest Comment \[No. 6\]](#) | [Trackbacks \(1\)](#)

[Ironman](#) writes:

Nice to see some additional confirmation that [fundamental indexing](#) is a viable investing strategy.

Now, all we need is for the brokerage houses to create a new generation of ETFs and mutual funds that will allow investors to actually do it!

Posted June 14, 2006 10:56 AM

ErikR writes:

"Now, all we need is for the brokerage houses to create a new generation of ETFs and mutual funds that will allow investors to actually do it!"

Ticker: PRF

Posted June 14, 2006 02:40 PM

[purpleslog](#) writes:

"Recently, Roger Arnott has rocked the indexing world with the introduction of the Research Associates RAFI 1000 index, which is now tradeable in ETF form (ticker: PRF). In short, Arnott contends that market value weighting in indexes is inefficient, and that indexes should be weighted by fundamental factors such as price to book, price to cash flow, and others. Arnott contends that his RAFI 1000 index has dramatically outperformed the S&P 500 for the last 40 years (This is calculated via back testing, of course)."

I don't remember where I clipped the above text from, sorry.

Posted June 15, 2006 12:16 AM

[Ironman](#) writes:

ErikR & purpleslog,

Thanks for identifying PRF - although I was already aware of its existence, I should have noted it in my original comment. My point, which I should have made more clear, is that there should be more such ETFs, offering investors the opportunity to select a particular fundamental performance measure for weighting the fund in which they choose to invest.

That way, we would have the option of choosing the dividend-weighted index investigated by Siegel, instead of just Arnott's PRF ETF - although, you have to admit, for the six-month period encompassing its [short history](#), this fund of 1000 stocks has already outperformed the S&P 500 and the Nasdaq!

The Dow is a different story, but one that might be expected given that it only consists of 30 stocks that also benefit from the "flight to quality" during bearish markets.

Posted June 15, 2006 09:21 AM

[Ironman](#) writes:

I've [answered the question](#) - the quick summary: they're on the way, pending SEC approval.

Posted June 15, 2006 01:13 PM

Tom writes:

I've long thought that an Earnings Weighted index would be a very good investment approach.

Posted June 15, 2006 02:59 PM

TRACKBACKS (1 to date)

The author at Bayesian Investor Blog in a related article titled ["How to Weight Holdings in Stock Funds,"](#) writes:

For those investors who (unlike me) can't afford to do fundamental analysis on a large number of companies (and if you can't afford to analyze thousands of companies, you're probably using a questionable method to select which ones to analyze), there's..... [\[Read more\]](#)

Posted June 17, 2006 12:33 PM

<http://www.bayesianinvestor.com/blog/index.php/2006/06/17/how-to-weight-holdings-in-stock-funds/>

For those investors who (unlike me) can't afford to do fundamental analysis on a large number of companies (and if you can't afford to analyze thousands of companies, you're probably using a questionable method to select which ones to analyze), there's a new class of ETFs which sounds like fixes some of the worst problems with typical stock funds.

Most people invest in funds that are based on a capitalization weighted index, which means that any time there's a bubble affecting some of the stocks in the index, the fund is buying those stocks at the peak. The more popular those funds are, the easier it is to create bubbles in the stocks they buy.

There's a new ETF (symbol PRF) that [weights its holdings on dividends instead](#), which will sell stocks that are affected by bubbles (except in the unusual case where the company increases its dividend in step with the bubble).

The [Political Calculations blog](#) mentions similar strategies which appear to work about as well (the dividend weighting selects against small immature companies, and it ought to be possible to avoid that).

Weighting on revenues sounds like it works well, although it overweights retailers and underweights successful pharmaceutical companies and oil producers that find cheap sources of oil.

Weighting on the number of employees should work (although that underweights companies that outsource).

I'm somewhat partial to weighting on book value, but instead of the standard book value, I'd use tangible book value plus an estimate of amortized R&D expenses.

Shorting the 5 or 10 companies with the largest market capitalizations would probably be a good way to invest a modest portion of a portfolio in a way that would reduce risk and improve returns.

These strategies do have the potential to underperform if they become as popular as buying and holding S&P 500 funds was around 2000, but it will take some time to become that trendy, and even if it does there will probably still be funds using unpopular versions of fundamental weighting that will remain good investments.

This entry was posted on Saturday, June 17th, 2006 at 9:50 am and is filed under [Investing](#). You can follow any responses to this entry through the [RSS 2.0](#) feed. You can [leave a response](#), or [trackback](#) from your own site.

<http://econlog.econlib.org/authorakling.html>

Arnold Kling received his Ph.D. in economics from the Massachusetts Institute of Technology in 1980. He was an economist on the staff of the Board of Governors of the Federal Reserve System from 1980-1986. He was a senior economist at Freddie Mac from 1986-1994. In 1994, he started Homefair.com, one of the first commercial sites on the World Wide Web. (Homefair was sold in 1999 to Homestore.com.) Kling is an adjunct scholar with the Cato Institute. He teaches statistics and economics at the Berman Hebrew Academy in Rockville, Maryland. In 2004 and 2005, he has taught "Economics for the Citizen" at George Mason University in Fairfax, Virginia.

Kling is the author of three books: *Under the Radar: Starting Your Internet Business without Venture Capital* (Perseus, 2001); *Learning Economics* (Xlibris, 2004); and *Crisis of Abundance: Rethinking How We Pay for Health Care* (Cato, 2006). He is a contributing editor to TCSdaily.com. His web site at arnoldkling.com has been cited by *The New York Times* and in the *Journal of Economic Perspectives* as being entertaining and educational on the subjects of economics and technology.

Arnold Kling co-edits EconLog, along with [Bryan Caplan](http://BryanCaplan).

<http://econlog.econlib.org/authorbcaplan.html>

Bryan Caplan is an Associate Professor of Economics at George Mason University. Caplan's articles have appeared in the *American Economic Review*, the *Economic Journal*, the *Journal of Law and Economics*, *Social Science Quarterly*, and numerous other outlets. His webpage, <http://www.bcaplan.com>, features both his academic research and his numerous other interests, including the online [Museum of Communism](http://MuseumofCommunism).

Bryan Caplan co-edits EconLog, along with [Arnold Kling](http://ArnoldKling).

<http://www.econlib.org/>

The Library of Economics and Liberty

<http://econlog.econlib.org/>

EconLog: Issues and Insights in Economics

Seeking Alpha

<http://etf.seekingalpha.com/article/13118>

Arnott vs. Siegel: The Fundamental Indexation Battle Begins

Posted on Jul 6th with stocks: [PRF](#)

[Richard Kang](#) submits: Let's get ready to rumble. Non-market cap weighted indexation is starting to heat up even further. DFA started it a long time ago. Rydex brought out RSP a little over 3 years ago.

Rob Arnott has been talking about fundamental indexation for a few years now, and his firm Research Affiliates teamed up with index provider FTSE and manufacturer PowerShares to provide the first "fundamentally based" index ETF with The PowerShares FTSE™ RAFI US 1000 Portfolio ([PRF](#)).

With WisdomTree's version of fundamental indexation based on the research of Professor Jeremy Siegel (focused on dividends, while Arnott's version is based on four fundamental factors: book value, income, sales and dividends) launched just last month, PowerShares has countered with news of the registration with the SEC for **ten new funds**. Again they will be branded as PowerShares FTSE™ RAFI Portfolios but will cover nine sectors.

COMMENT

[Robert Coleman](#) wrote on Thu Jul 6th @ 7:16 pm 

Theory is missing from the data-driven analysis of fundamental indexation. The fatal problems with dividends and certain other so-called fundamental metrics for either selecting stocks or weighting stocks in a portfolio have been analyzed with theory in mind. To avoid excessive repetition here, the full analysis can be found at the following webpage.

At www.numeraire.com/download.htm there are documents about the fatal fallacy of dividends and other factors: WSJ letter; WSJ article; WSJ.com article, and blogs. The WSJ letter to the editor is a response to the WSJ Op-Ed article, which in turn is a response to the WSJ.com Commentary article. These documents are supported by two published articles also available at the numeraire.com webpage: IJEB in June, 2005; and AEF in May, 2006.

To facilitate fair, open discussion about this matter among interested persons, one of the linked documents (labeled "blogs") at the numeraire.com webpage includes comments by bloggers. I trust this conforms to fair use pursuant to The Chicago Manual of Style, 14/e.

Seeking Alpha

<http://etf.seekingalpha.com/article/12344>

Concerns With the New Wisdom Tree ETFs

Posted on Jun 21st with stocks: [WSDT](#)

David Fry (ETF Digest) submits: There's been a lot of hype and positive comments about WisdomTree's new ETF series. There may be good reason for this, but only time will tell. If you have a good reputation, are an award winning economist like Jeremy Siegel and have good Wall Street connections, then many think your theories applied to markets can be instant winners.

No doubt Wisdom Tree Investments agrees, for they've launched 20 ETFs based on indexes linked to Siegel's research which advises that companies with a record of increasing dividends will outperform those that don't. Of course, it's a more complex effort than this simple statement, but you get the idea.

COMMENT

[Robert Coleman](#) wrote on Thu Jul 6th @ 7:13 pm 

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Efficient Frontier

<http://www.efficientfrontier.com/ef/0adhoc/fi.htm>

Date visited: July 7, 2006

William J. Bernstein

Fundamental Indexing and the Three-Factor Model

A year ago, Rob Arnott, Jason Hsu, and Philip Moore published a piece in *Financial Analysts Journal*, "Fundamental Indexation," in which they describe a novel way of attacking the well-known tendency of market-cap indexing to overweight large growth stocks.

The usual approach to achieving this end is to "decapitate" traditional market indexes, such as the S&P 500 or Wilshire 5000, by including only those companies meeting predetermined balance-sheet ratios. For example, the Barra Large Value Index includes the bottom half of the S&P 500 sorted by price-to-book ratio (P/B), while the Fama-French Large Value Index includes only those names in the bottom third, more or less, of their large-cap index.

While noting that three-factor regression of their indexes had "exposure to the value factor and, to a lesser extent, the size factor," as well as an "estimated alpha of -0.1 percent" (presumably per year), they softpedal the possibility that a large part of the excess return of their fundamental indexes came from exposure to the two "supplemental" Fama-French factors, while nodding implicitly to it by observing that other value indexes do even worse, with alphas in the -1.5% range.

Note: There is no provision for posting comments at this webpage. The Center for Research in Stock Prices (CRSP), Graduate School of Business, University of Chicago, and Fama-French provide data for most of the DFA stock equity index funds, which are cap-weighted.

CRSP:

See CRSP website for cap-based decile portfolios and other products:

http://gsbwww.uchicago.edu/research/crsp/products/indices_data_detail.html

CRSP/DFA:

CRSP and Dimensional Fund Advisors Inc.

Fama-French:

See personal website of Kenneth R. French at Dartmouth College Tuck School:

<http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/> and data library:

http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html

Economist's View

http://economistsview.typepad.com/economistsview/2006/06/optimal_passive.html#comment-19416811

June 14, 2006

Optimal [Fundamental] Value-Weighted Portfolios

Jeremy Siegel talks about "the next wave of investing" as he gives investment advice based upon new research in finance.

However, new research implies this strategy can be beaten. Instead of capitalization-weighted indexes where the index weight is based upon the firms stock value (price times quantity) relative to total market value (the sum of price times quantity across all stocks), value-weighted indexes where the index weights are based upon sales or dividends may provide a better mix of assets:

Posted by: [Robert Coleman](#) at Jul 7, 2006 9:01:18 AM

Theory is missing from the data-driven analysis of fundamental indexation. The fatal problems with dividends and certain other so-called fundamental metrics for either selecting stocks or weighting stocks in a portfolio have been analyzed with theory in mind. To avoid excessive repetition here, the full analysis can be found at the following webpage.

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Financial Webring Forum

<http://www.financialwebring.com/forum/viewtopic.php?p=151265#151265>

[Rob Arnott's Editorials in the Financial Analysts Journal](#)

Robert

□ Posted: Fri Jul 07, 2006 12:19 pm Post subject: Fundamental Indexation

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The Art of Streetplay

<http://thelearningblog123.blogspot.com/2006/06/wisdomtree-update-june-20th-2006.html>

Tuesday, June 20, 2006

WisdomTree Update, June 20th 2006

They are 100% playing the "fundamental indexation" theme, which has been beaten to death on this blog. Siegel mentioned it in his piece in the WSJ, and it has been mentioned many other times since. As such, they are essentially piggy-backing off of a wave which really truly originated with Bob Arnott, off of which 2 companies have already put out ETF's. My hypothesis is that they started with a Dividend index, and not one of the other perhaps more "expected" fundamental metrics, because Siegel, their Director of Research, has already done quite a lot of work on dividends, which means there may be cost factors involved. In a [prior post](#) on this blog, I mentioned a study that he had done a while back, but concluded that the dividend space was too crowded for this to be a likely ETF candidate (oops). My bet is they either won't have to pay a licensing fee, or the licensing fee is greatly reduced, because Siegel can claim that this is all simply an extension of prior work that he has done, which gives him a claim on said work. If this is true, then he gets all the advertising and education benefits of the "fundamental indexation" wave-- which I am sure that he, Arnott, Steinhardt, and others in the pseudo-active ETF space now intend to drive into the heads of common investors around the globe-- without having to pay for it. If it works, maybe he can release other indices based on other fundamental metrics later.

Robert Coleman

July 07, 2006 9:39 AM

Theory is missing from the data-driven analysis of fundamental indexation. The fatal problems with dividends and certain other so-called fundamental metrics for either selecting stocks or weighting stocks in a portfolio have been analyzed with theory in mind. To avoid excessive repetition here, the full analysis can be found at the following webpage.

At www.numeraire.com/download.htm there are documents about the fatal fallacy of dividends and other factors: WSJ letter; WSJ article comment; WSJ.com article comment, and blogs comments. The WSJ letter to the editor is a response to the WSJ Op-Ed article, which in turn is a response to the WSJ.com Commentary article. These documents, in turn, are supported by two published articles also available at the numeraire.com webpage: IJEB in June, 2005; and AEF in May, 2006.

To facilitate fair, open discussion about this matter among interested persons, one of the linked documents (labeled "blogs") at the numeraire.com webpage includes comments by bloggers. I trust this conforms to fair use pursuant to The Chicago Manual of Style, 14/e.

The Art of Streetplay

<http://thelearningblog123.blogspot.com/2006/06/poking-holes-in-bogles-pro-cap.html>

Tuesday, June 27, 2006

Poking Holes in Bogle's Pro-Cap Weighting Rationale

Surprise surprise... John Bogle is putting down fundamental indexing in favor of, you guessed it, what has made him rich-- cap weighted passive indexing. And he got Burton Malkiel to back him up and give him a sense of credibility-- not too different from WisdomTree getting Siegel on board. Must be right if they've got an academic on board!

Robert Coleman

July 07, 2006 11:50 AM

Theory is missing from the data-driven analysis of portfolio weighting and indexation, whether based on non-market-cap fundamentals or on market-cap. The fatal problems with dividends and certain other so-called fundamental metrics for either selecting stocks or weighting stocks in a portfolio have been analyzed with theory in mind. To avoid excessive repetition here, the full analysis can be found at the following webpage.

At www.numeraire.com/download.htm there are documents about the fatal fallacy of dividends and other factors: WSJ letter; WSJ article comment; WSJ.com article comment, and blogs comments. The WSJ letter to the editor is a response to the WSJ Op-Ed article, which in turn is a response to the WSJ.com Commentary article. These documents, in turn, are supported by two published articles also available at the numeraire.com webpage: IJEB in June, 2005; and AEF in May, 2006.

To facilitate fair, open discussion about this matter among interested persons, one of the linked documents (labeled "blogs") at the numeraire.com webpage includes comments by bloggers. I trust this conforms to fair use pursuant to The Chicago Manual of Style, 14/e.

MoneyScience.org

<http://www.moneyscience.org/>

Search results for "Fama"

<http://www.moneyscience.org/tiki/tiki-index.php?page=Efficient+Market+Hypothesis>

http://moneyscience.org/tiki/tiki-view_forum_thread.php?comments_parentId=1308&forumId=21

http://www.indexfunds.com/articles/eugenefama_20031015_interview_with_eugene_fama.htm [Date visited: July 7, 2006.] *Excerpts:*

Eugene F. Fama is on the Board of Directors of Dimensional Fund Advisors. He is a member of their investment committee and serves as an investment strategist. Professor Fama received his Ph.D. from the University of Chicago in 1964 and he also holds an MBA from the University of Chicago, BA from Tufts University. Professor Fama is the *Robert R. McCormick Distinguished Service Professor of Finance* at the Graduate School of Business of the University of Chicago.

In the July 6, 1998 issue of *Fortune* Magazine, an extensive profiling of dimensional fund advisors included this on Professor Fama.
Oct-15-2003

http://www.indexfunds.com/articles/kennethfrench_20031015_interview_with_kenneth_french.htm [Date visited: July 7, 2006.] *Excerpts:*

Kenneth French and Eugene Fama are credited with identifying multiple risk factors in the stock market and developing the three-factor model to measure different types of risk. This three-factor model changed the world of finance. "I guess we were trying to answer the question: If you were trying to form a portfolio with high expected returns or low expected returns, how would you go about doing that? At the time, the capital asset pricing model was the basic theory that said high beta stocks--high expected returns, low beta stocks--low expected returns. And so we looked at that and we looked at a bunch of other things that people had already identified and what we discovered was, gee, beta didn't seem to work very well, knowing the stocks beta didn't seem to tell me anything about what its average return was going to be."

French remembers that others had already developed results indicating that small stocks tend to buy [*sic*; beat?] average returns more than big stocks. "And the result was that variables, like the ratio of the book value of equity to the market value of equity, mattered a lot in terms of identifying stocks with high expected returns and stocks with low expected returns. What we've discovered since then is there's no magic about book-to-market. You can measure it with dividend yield, earnings price, cash flow to price, basically anything where you have some fundamental value in the numerator and price in the denominator. So, it's a way to scale price, basically, and the way I like to think of it is, we're looking a discount rate. You get a discount, for example, for future cash flows at the expected return on the market. If you have a high-expected return, you get a high cash fair price. So a high cash fair price maps in higher expected return. Basically, it's using the idea that the expected return that we as investors are looking at on the stock is the

same thing as the discount rate or the cost of capital that the firm has to be thinking about. That's an easy way to identify differences in expected returns."

Since the three-factor model seems to be so effective, investors may be wondering if the capital asset pricing model is no longer relevant. "That's a tough question. The evidence is pretty strong that as far back as we can see, there seems to be little relation between beta, the fundamental variable of the capital asset pricing model, and average returns on stocks.

Maybe it's my upbringing, but if the argument is so compelling that stocks that vary a lot with the market bring a lot of risk to people's portfolio, they're bringing a lot of risk, people are going to demand a higher premium. So, I'm not willing to say no, there's nothing that the cap end tells us about differences in expected returns, but what I think we can say is, you have to add other variables. In addition to beta, I think what matters is sensitivity to what we call *size risk* and then, sensitivity to something we call *distress risk*. And the size risk, it's basically the size factor we see. Small stocks, again, have more of this size risk and more of the expected return. The distress risks, that's the book-to-market, or the cash flow to price, earnings price, that's that variable that we're talking about. Companies that are really sick, bad opportunities, poor investments, they have a higher expected return."

The subject French spoke of briefly, the subject of size, is more complex than one might expect. Most people can intuitively accept size as a risk factor, but seem to have more difficulty understanding the relationship between book-to-market ratios and risk. "Well, small stocks tend to be more volatile than big stocks, so it's natural for people to say, oh, this higher volatility, I'm going to require a higher expected return for that higher volatility. We don't see that when we're looking at stocks sorted on book-to-market. Basically, high book-to-market portfolios seem to have roughly the same volatility as low book-to-market portfolios, and what *that* says is you need a multi-factor model to really capture these differences and expected returns. What you need is a model that says okay, there's risk associated with movements in the market. That's beta risks for the capital asset pricing model. There's risk associated with the movements of small stocks relative to big stocks. That's the size risk that we're talking about and then this third dimension, what we're calling distress risk, that's how do I move with stocks that seem to be more distressed compared to stocks that are more robust.

Publishing the results of their research exposed French and Fama to the criticism of both the academic community as well as the investment industry. What kind of opposition did they face with their ideas? "The academic response was, our results, the research is screwed up! (The academics said), clearly this is wrong, perhaps there were just flaws in the approach Gene and I used. Maybe it's just the result of data mining. If you have enough people searching over the same data over, over and over again, somebody's sure to find patterns and so one claim was, this is just random, happened by chance.

"The fact that we have all of this international evidence, the fact that we have that evidence from '26 to '63, basically that (puts) the data mining complaint to rest. The concerns about the quality of our research, that we made mistakes, a bunch of people have pursued those arguments, (and) consistently found that if they dot the I's and cross their T's, they get *the same results we do.*" [Blue-color emphasis added.]

French believes the consensus is almost unanimous now in the academic market that there is a real book-to-market effect. The new debate is over why. "Some of us think it's probably mostly risk; other people are thinking it's probably mostly mistakes in the market. That's where the academic debate is (centered). I'm not quite sure of all the ramifications for institutional investors, but one of the things that's come out of it, I've alluded to, (is) this three-factor model." Institutions are reporting it a great way to frame their portfolio allocation decision. "Rather than worry about lots and lots of different dimensions, people have discovered we can summarize it, we can collapse it down into: How sensitive am I to movements in the stock market? What's my size tilt, do I look more like small stocks or big stocks, what's my value versus growth tilt? Do I look more like valued stocks or more like growth stocks? With those three dimensions, you can capture an enormous amount of what's going on in a portfolio."

Speaking academically, this is all very interesting and valuable. However, on a practical level, what would the relevance of such research be to financial advisors and their clients? Professor Fama believes the model equally useful for academics *and* investors. "Again, I think it's a great way to frame the portfolio allocation decision. I can look at it and say, am I comfortable with this exposure to the overall stock market? I can look at it and say, am I making the right trade-off, between the expected return I get from buying small stocks and the risk that brings? And then, am I making the right trade-off between the expected return I get from buying distressed stocks and the risk that that brings? By answering those three questions, I frame that portfolio decision in a really easy way, at least for me, to think about."

Just how long does it take, how many years of data, to identify a risk premium? "There's really two questions there. One has to do with riskiness, which academics call covariances. The inclination of one stock to move with another portfolio, the tendency of stocks to move together. You can identify covariances answers with relatively short periods. For example, people often use five years of monthly data to estimate beta, so if I wanted to know, is my stock very sensitive to movements in the market, I could use five years of data to answer that question very confidently. If on the other hand what we're trying to say is not is this a risk factor in the sense that it tends to move with something, but rather is there a reliable risk premium? That takes a long time. It depends on the magnitude of the premium and the volatility of the factor, but, you typically would need, perhaps 25, 30, 40 years to be able to confidently say yeah, this premium here is really different from zero. Again, it depends on the magnitude of the premium and the volatility, but 20 to 30 years is not an unreasonable number."

Oct-15-2003

Wilmott Forums

<http://www.wilmott.com>

Search results for "Fama French"

Forums > Technical Forum

Topic Title: fama french model

Created On: Feb 15, 2005

Wed Feb 16, 05 01:25 AM

There is a general textbook "Econometrics of Financial Markets" Andrew Lo et al. which briefly covers this.

Note: Search results at Amazon.com:

The Econometrics of Financial Markets

John Y. Campbell, Andrew W. Lo, A. Craig MacKinlay
1997, Princeton, N.J.: Princeton University Press.

Wed Feb 16, 05 02:29 PM

go to

<http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/>

You'll have everything you need.

Thu Feb 17, 05 03:03 PM

As you will soon find out the application of the F&F model is not that straightforward. First you will have to gather the lots data (!!!) and some of it is not easily available such as book value data.... good luck!

Forums > Technical Forum

Topic Title: Return Factors and Fundamental Indexation

Created On Mon Jul 10, 06 10:27 AM

Mon Jul 10, 06 10:27 AM **(NEW!)**

Fundamental indexation usually refers to stock-equity indexes and related investable indexes based on dividends, book equity, sales, cash flow and other non-market-capitalization metrics at the firm-level.

Return factors related to price, shares or dividends are a fatal fallacy due to vicious circular reasoning in the form of what, in introductory econometrics, is known as circular simultaneity. In essence, the fatal fallacy is failure to algebraically isolate the unknown. In a casual, inferential econometrics model of expected total return for stock-portfolio pricing, the unknown is the return variable, the dependent variable (left-hand-side variable), and the factors alleged to explain variations in the return variable are the explanatory variables (right-hand-side variables) in the model equation. These econometric circular simultaneities may be either direct (model specification of factors,

including stock weightings in a portfolio-based factor) or indirect (forming portfolios by grouping random data samples on circular-simultaneity factors), and may be either concealed or revealed. Typically, these econometric circular simultaneities are indirect and not disclosed, as in Fama and French (1993, JFE).

The Fama-French Three-Factor Model of return and CRSP/Fama-French indexes implemented by Dimensional Fund Advisors (DFA) stock-equity index funds, the FTSE RAFI fundamental index series and related investment products, the WisdomTree Investments dividend indexes and related investment products, among others, are based on instantiations of econometric circular simultaneity. As a result, they are logically invalid, logically meaningless, non-interpretable, indeterminate, destabilizing in the sense of moving market prices away from fundamental values (estimated using DCF techniques), irrational, inefficient, economically wasteful, and scientifically invalid.

Additional information about this topic is available at www.numeraire.com/download.htm for free viewing and downloading.