



“It seemed like we needed a 12-step program to cure us of our addiction to buying beaten-up stocks...”

-- Bill Miller, chairman and chief investment officer of Legg Mason Capital Management, second-quarter update letter to shareholders

Bill Miller's quote displays an enormous degree of self-awareness. While IFA welcomes Miller's stunning epiphany, his revelation comes tragically late for shareholders who have been punished with a 34% loss in the last year.

For the 15 years from 1981 through 1995, Miller seemed unstoppable as he consecutively outperformed the S&P 500. But, Miller has fallen hard and his widely regarded reputation has begun to unravel. According to a Fortune article dated August 1, 2008<sup>(1)</sup>, Legg Mason Value Trust Fund (LMVTX) has dropped 34% since last July while the S&P 500 fell 12%. LMVTX has hemorrhaged losses as assets have fled the fund. According to the article, the fund was valued at \$9.7 billion after the exit of more than \$2.4 billion in the first six months of this year. However, losses accelerated according to a Bloomberg article dated August 6, 2008<sup>(2)</sup> which reports that the Massachusetts state pension fund pulled its assets from the fund.

True enough, Miller is in need of a 12-step program and IFA is the perfect sanctuary for his recovery. As you know, IFA president Mark Hebner has developed his 12-Step Program for Active Investors as chronicled in his highly praised book *Index Funds: The 12-Step Program for Active Investors*. Miller's stockaholic rehab can begin immediately with the following program:

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1. Bill Miller: Toughest market I've seen, Fortune, August 1, 2008  
[http://money.cnn.com/2008/07/31/news/companies/miller\\_levenson.fortune/index.htm?source=yahoo\\_quote](http://money.cnn.com/2008/07/31/news/companies/miller_levenson.fortune/index.htm?source=yahoo_quote)  
 2. Bill Miller's letter to investors, Fortune, July 31, 2008  
[http://money.cnn.com/2008/07/31/news/companies/miller\\_letter.fortune/index.htm?postversion=2008073109](http://money.cnn.com/2008/07/31/news/companies/miller_letter.fortune/index.htm?postversion=2008073109)

## Step 1. Active Investors: Recognize an Active Investor.



As a seasoned active investor, Miller knows that active investors hope to pick winners among the many stocks, times managers or investment styles. He also appears to have learned at the school of hard knocks that markets are moved by news. News is unpredictable and random. Markets are also efficient, so news is rapidly reflected in market prices. As a result, active investing is not a viable strategy for anyone, not even Bill Miller.

Miller seems well-prepared for Step 1 as his second quarter letter to shareholders states, “We were commiserating over how badly we had done in this market...and how we were all losing clients and assets over and above our losses in the market.” This revelation should aid in his recovery.

## Step 2. Nobel Laureates: Recognize that Nobel Prize winners researched the market.



Nobel Prizes have been awarded to academics for their analysis of how stock markets work. In stockaholic rehab, Miller would undergo a steady transfusion of unbiased academic studies that comprehensively reveal the error of his stock-picking ways and the overwhelming data that supports a passively managed indexing strategy. Additionally, Miller would be cut off cold turkey from sensationalistic news articles and analyst reports which are all generated for the purposes of driving commissions or selling papers.

## Step 3. Stock Pickers: Accept that stock pickers do not beat the market.



This is a crucial step for Miller to undergo so he may achieve a complete recovery. He would have to accept that the primary factor influencing the success of a stock picker is simply luck. Miller would receive concentrated doses of studies and visual aids in the form of pie charts, each of which compares the performances of active managers to a corresponding asset class benchmark. An average of these studies shows that the corresponding index outperforms their actively managed counterparts by a margin of 92%.

### Step 4. Time Pickers: Understand that no one can pick the right time to be in or out of the market.



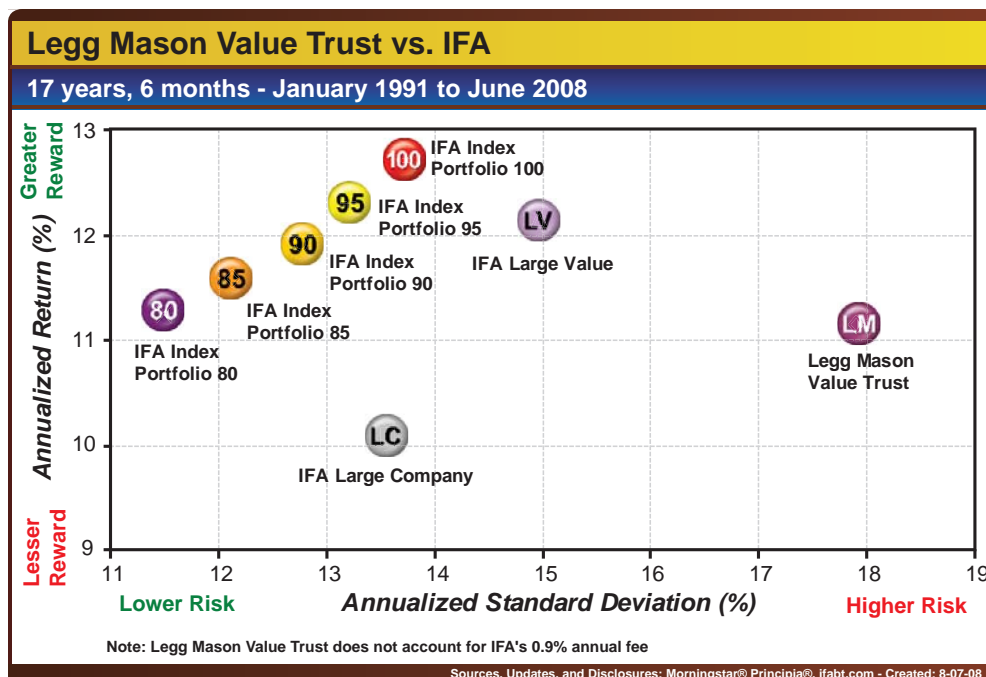
In this Fourth Step, Miller would gain an understanding that investors are unable to time the markets due to the high concentration of returns and losses that occur in a time period of a few days. In a recent 10-year period, 100% of the total gain was concentrated in just 20 days – an average of just two days per year. It is impossible to pick that handful of days in advance.

### Step 5. Manager Pickers: Realize that winning managers were just lucky.



This step is a critical hurdle for Miller, one that will test his commitment to a full and complete recovery as a stockaholic. Miller's so-called hot streak could render him reticent to accept the important premise that winning managers are lucky, not skilled. However, Miller did admit to the Wall Street Journal in January 2005 the following, "We've been lucky. Well, maybe it's not 100% luck — maybe 95% luck." Miller would have to take a bold leap and accept that his so-called streak was based on bad benchmarking. Yes, Miller's track record did exceed the S&P 500 — a large-blend fund, but Legg Mason Value Trust is more comparable to a large value index.

The figure below plots the risks and returns for Miller's fund LMVTX, IFA's Large Value and Large Company Indexes and for IFA Index Portfolios 80, 85, 90, 95 and 100 for the time period from January 1991 to June 2008. This time period was selected because 1991 is the beginning of Miller's winning streak. As you can see, Miller's Legg Mason Value Trust carried significantly more risk than each fund or index depicted in the chart. However, investors were not adequately compensated for the risk



they took. LMVTX earned returns in line with Index Portfolio 80, but it carried nearly 60% more risk. LMVTX also carried risk far greater than Index Portfolio 100 which earned significantly higher returns than LMVTX.

The risk and return story is even worse for investors who purchased LMVTX after Miller's streak was hyped. New money that poured into the fund as a result of a fresh "5-star rating" from Morningstar would likely experience even greater risk and lesser returns than plotted on the figure. To that point, it is worthwhile to consider that Morningstar ratings consider past performance. Past performance of actively managed funds is no guarantee of future returns. Just ask recent investors of LMVTX (which was recently downgraded to 1 star).

## Step 6. Style Drifters: Comprehend active management style drift.



Most mutual fund managers drift from once recent winner to another, altering a fund's stated objective. Miller appears to be no exception as he describes chasing the latest trends — albeit most unsuccessfully:

*"...it was obvious we should not have owned homebuilders, or retailers or banks, and that I should have known better than to invest in such things. It was also obvious that growth in China and India and other developing countries would drive oil and other commodities to record levels and that related equities were the thing to own. While I am quite aware of our mistakes, both of commission and omission, when I ask what is obvious NOW, there is little consensus. If there is something obvious to do that will earn excess returns, then we certainly want to do it."*

In Step 6 of The 12-Step Program for Active Investors, Miller would learn to understand that there are no obvious ways to earn excess returns, and that style performance rotates randomly so it is not possible to consistently predict tomorrow's winning style. In other words, don't try to beat the benchmark, buy the benchmark.

## Step 7. Silent Partners Recognize the partners in your returns.



There are partners that silently and subtly take a large slice of investment returns. Over a 15-year period of time, active investors keep only about 50% of the total return earned by their investment while index investors keep about 85%. Manager fees, higher taxes, transaction costs all eat away at an active investor's returns pie. For Miller's LMVTX fund, investors pay an expense ratio of 1.7%. In contrast, the expense ratio for an all equity index portfolio is about 0.45%.

## Step 8. Riskese: Understand how risk, return and time are related.



In this important step in Miller's recovery, he would have to fully comprehend the language of stock market risk. Lawyers speak legalese and the best investors speak riskese. Learning the language of riskese requires investors to have a basic understanding of the concepts of risk, return, time, correlation and diversification.

Most investors chase the short-term returns of stocks, markets and styles and concentrate their investments in just a handful of stocks that are highly correlated and his fund is very poorly diversified. Miller's LMVTX, for example, holds 97.5% of its investments in just 39 stocks. Additionally, Miller's fund invests in value companies, which are known to be risky. Again, Miller earned a return in excess of the S&P 500 because he took more risk than the S&P 500. Similarly, Miller has underperformed the S&P 500 because he took more risk than the S&P 500. This is the downside of excessive risk, a downside that investors were likely unaware of as Miller was compared to the S&P 500. Simply put, you cannot cheat risk.

## Step 9. History: Understand the historical risk and returns of indexes.



Moving into the homestretch of The 12-Step Program for Active Investors, Bill Miller would likely be encouraged by Step 9. During this phase of the recovery program, Miller would be faced with reams of data regarding style-pure asset class indexes. He may very well find himself enjoying a sense of calm as he delves into 80 years of risk and return data and rolling periods analysis. He will then likely abandon his desire to pick stocks, markets and styles, choosing instead to focus on quantifying risk so he

might rebuild his investing efforts upon a strong foundation of index data.

## Step 10. Risk Capacity: Analyze your five dimensions of risk capacity.



A risk capacity survey helps self-professed stockaholics determine how to invest their assets properly. Prior to investing, each individual should learn the extent to which they are able to take on stock market risk. A risk counselor or Investment Advisor Representative can help such investors quantify the appropriate amount of risk for their investments. This phase of stockaholic rehab includes analysis of five dimensions of risk capacity to arrive at a score that is matched to a corresponding

index portfolio. These five dimensions are time horizon and liquidity needs, investment knowledge, net income, net worth, and attitude toward risk.

## Step 11. Risk Exposure: Analyze your five dimensions of risk exposure.



Step 11 of The 12-Step Program for Active Investors provides the magical moment when a recovering stockaholic learns their risk capacity score and is matched with a corresponding Index Portfolio. At this point, they can view the asset allocation that is just right for them, not too much risk and not too little. They can replace their compulsion to speculate with a more logical and moderated understanding of returns and volatility data. They will learn where their Index Portfolio sits on the risk reward chart known as Harry Markowitz's efficient frontier. They can view the bell shaped curve that will show their average expected returns and the highs and lows for the portfolio for the last 80 years, and for many other time intervals.

## Step 12. Invest and relax.



The road to recovery for all stock market addicts, including Bill Miller, comes to a happy conclusion when they fully recognize that a strategy of buying, holding and rebalancing a portfolio of index funds is the best way for them to maximize the expected returns of their investments. They will be able to design, implement and maintain a portfolio that makes good use of risk, diversification, style purity and passive management. And when they do so, they will finally be able to invest and relax.

IFA would be pleased to lead Bill Miller through stockaholic rehab. Additionally, IFA welcomes the opportunity to assist disheartened investors of LMVTX and other actively managed funds, as well as stock pickers, market timers and style drifters in learning the benefits of proper risk management and broad diversification.

Index Funds Advisors is an expert in measuring and quantifying risk capacity for the long-term investment needs of individuals, 401(k) plans, institutions and corporations. This important measure enables investors to make sound decisions that can help them earn returns commensurate with the risks they take. IFA specializes in the passive rebalancing of risk-appropriate, globally diversified index portfolios that are low cost, tax managed and efficient. ■

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**Index Funds Advisors**  
matching people with portfolios

Index Funds Advisors, Inc. — 19200 Von Karman Ave., Suite 150 — Irvine, CA 92612

Call Toll Free: 888-643-3133 — Local Phone: 949-502-0050 — Fax: 949-502-0048 — Email: [info@ifa.com](mailto:info@ifa.com)

# SOURCES AND DESCRIPTION OF DATA

The following descriptions of IFA Indexes indicate how indexes are strung together to simulate similar risk and return characteristics back to 1928. This reduces the standard error of the mean which is unacceptably high for periods less than 20 or 30 years. When IFA Indexes are shown in Index Portfolios, all returns data reflects a deduction of 0.9% annual investment advisory fee, which is the maximum Index Funds Advisors (IFA) fee. Fees are based on assets under management at IFA. Unless indicated otherwise, data shown for each individual IFA Index is shown without a deduction of the IFA advisory fee. This method is used because the creation, choice, monitoring and rebalancing of diversified index portfolios are the services of the independent investment advisor. Therefore, fees are deducted from the whole portfolio data.

Live Dimensional Fund Advisors' (DFA) fund data reflects the deduction of mutual fund advisory fees, mutual fund company brokerage fees, other expenses incurred by the mutual funds and incorporates actual trading results. Simulated index data also reflects DFA's current mutual fund expense ratios for the entire period. Both simulated and live data reflect total returns, including dividends, except for IFA/NSDQ.

## IFA Indexes Legend

<b>LC</b> - IFA U.S. Large Company Index	<b>RE</b> - IFA Real Estate Securities Index	<b>EM</b> - IFA Emerging Markets Index	<b>2F</b> - IFA 2 Year Global Fixed Income Index
<b>LV</b> - IFA U.S. Large Value Index	<b>IV</b> - IFA International Value Index	<b>EV</b> - IFA Emerging Value Index	<b>5G</b> - IFA 5 Year Government Index
<b>SC</b> - IFA U.S. Small Cap Index	<b>IS</b> - IFA International Small Company Index	<b>ES</b> - IFA Emerging Small Cap Index	<b>5F</b> - IFA 5 Year Global Fixed Income Index
<b>SV</b> - IFA U.S. Small Cap Value Index	<b>ISV</b> - IFA International Small Cap Value Index	<b>1F</b> - IFA 1 Year Fixed Income Index	

### LC IFA U.S. Large Company Index (LC)

January 1928 – Dec 1990: S&P 500 minus 1.25 bp/month

Jan 1991 – Present : DFA US Large Company Symbol: DFLCX

**Investment Objective of DFA US Large Company Symbol: DFLCX :** The US Large Company Portfolio is a no-load mutual fund designed to approximate the investment performance of the S&P 500 Index, both in terms of the price of the Portfolio's shares and its total investment return. The Portfolio intends to invest in all of the stocks that comprise the S&P 500 Index in approximately the same proportions as they are represented in the Index. The S&P 500 Index is comprised of a broad and diverse group of stocks, most of which are traded on the NYSE. Generally, these are the US stocks with the largest market capitalizations and, as a group, they represent approximately 70% of the total market capitalization of all publicly traded US stocks.

Average Annual Total Returns	One Year	Three Years	Five Years	Ten Years	Number of Holdings	Price/Earnings (excludes negatives)
US Large Company Portfolio	-36.78%	-8.29%	-2.19%	-1.47%	499	10.20
S&P 500 Index	-37.00%	-8.36%	-2.19%	-1.38%	Weighted Average Market Cap \$78,440M	Dividend Yield 2.99%
					Weighted Average Book-to-Market 0.65	Expense Ratio (as of 11/30/07) 0.15%

\*All Data as of Dec 31, 2008, unless otherwise indicated.

### LV IFA U.S. Large Cap Value Index (LV)

January 1928 – February 1993: Dimensional Large Value Index minus 2.25 bp/month

March 1993 – Present: DFA US Large Cap Value Symbol: DFLVX

**Investment Objective of DFA US Large Cap Value Symbol: DFLVX :** The US Large Cap Value Portfolio is a no-load mutual fund designed to capture the returns and diversification benefits of a broad cross-section of US value companies, on a market-cap weighted basis. The Portfolio invests in securities of US companies with market capitalizations within the largest 90% of the market universe or larger than the 1,000th largest US company, whichever results in a higher market capitalization break. The market universe is comprised of companies listed on the New York Stock Exchange, American Stock Exchange, and NASDAQ National Market System. After identifying the aggregate market capitalization break, a value screen is applied to the universe. Securities are considered value stocks primarily because a company's shares have a high book value in relation to their market value (BtM). This BtM sort excludes firms with negative or zero book values. In assessing value, additional factors such as price to cash flow or price to earnings ratios may be considered, as well as economic conditions and developments in the issuer's industry. The criteria for assessing value are subject to change from time to time.

Average Annual Total Returns	One Year	Three Years	Five Years	Ten Years	Number of Holdings	Price/Earnings (excludes negatives)
US Large Cap Value Index Portfolio (I)	-40.80%	-11.56%	-2.05%	2.15%	208	8.36
Russell 1000 Value Index	-36.85%	-8.32%	-0.80%	1.36%	Weighted Average Market Cap \$34,809M	Dividend Yield 3.09%
					Weighted Average Book-to-Market 1.27	Expense Ratio (as of 11/30/07) 0.38%

\*All Data as of Dec 31, 2008, unless otherwise indicated.

### SC IFA U.S. Small Cap Index (SC)

January 1928 – March 1992: Dimensional Small Cap Index minus 3.17 bp/month

April 1992 – Present : DFA US Small Cap Symbol: DFSTX

**Investment Objective of DFA US Small Cap Symbol: DFSTX :** The US Small Cap Portfolio is a no-load mutual fund designed to capture the returns and diversification benefits of a broad cross-section of US small companies, on a market-cap weighted basis. The Portfolio invests in securities of US companies with market capitalizations within the smallest 10% of the market universe or smaller than the 1,000th largest US company, whichever results in a higher market capitalization break. The market universe is comprised of companies listed on the New York Stock Exchange, American Stock Exchange, and NASDAQ National Market System.

Average Annual Total Returns	One Year	Three Years	Five Years	Ten Years	Number of Holdings	Price/Earnings (excludes negatives)
US Small Cap Index Portfolio (I)	-36.01%	-10.23%	-1.99%	4.84%	2,617	11.13
Russell 2000 Index	-33.79%	-8.23%	-0.93%	3.05%	Weighted Average Market Cap \$729M	Dividend Yield 1.40%
					Weighted Average Book-to-Market 1.09	Expense Ratio (as of 11/30/07) 0.38%

\*All Data as of Dec 31, 2008, unless otherwise indicated.

# SOURCES AND DESCRIPTION OF DATA

## SV IFA U.S. Small Cap Value Index (SV)

January 1928 – February 2000: Dimensional Targeted Value Index minus 3.42 bp/month

March 2000 – Present: DFA US Targeted Value Symbol: DFFVX

**Investment Objective of DFA US Targeted Value Symbol: DFFVX** : The US Targeted Value Portfolio is a no-load mutual fund designed to capture the returns and diversification benefits of a broad cross-section of US small value companies, on a market cap-weighted basis. The Portfolio invests in securities of US companies whose size (market capitalization) falls in the smallest 18% of the market universe. The market universe is comprised of companies listed on the New York Stock Exchange, American Stock Exchange, and NASDAQ National Market System. After identifying the smallest 18% of aggregate market capitalization, a value screen is applied to the universe. Securities are considered value stocks primarily because a company's shares have a high book value in relation to their market value (BtM). This BtM sort excludes firms with negative or zero book values. In assessing value, additional factors such as price to cash flow or price to earning ratios may be considered, as well as economic conditions and developments in the issuer's industry. The criteria for assessing value are subject to change from time to time.

Average Annual Total Returns	One Year	Three Years	Five Years	Inception	Number of Holdings	1,506	Price/Earnings (excludes negatives)	9.42
US Targeted Value Portfolio (I)	-33.78%	-10.05%	-0.18%	8.22%	Weighted Average Market Cap	\$1,152M	Dividend Yield	1.86%
Russell 2000 Value Index	-28.92%	-7.49%	0.27%	7.15%	Weighted Average Book-to-Market	1.37	Expense Ratio (as of 11/30/07)	0.41%

\*All Data as of Dec 31, 2008, unless otherwise indicated.

## RE IFA Real Estate Index (RE)

January 1928 – December 1974: 50% IFA US SC Index and 50% IFA SV Index  
January 1993 – June 2008: DFA Real Estate Securities Symbol: DFREX

Jan 1975 – Dec 1992: Don Keim Equity REIT Index minus 2.75 bp/month  
July 2008 – Present: DFA Global Real Estate Securities Symbol: DGREX

**Investment Objective of DFA Global Real Estate Securities Symbol: DGREX** : The Global Real Estate Securities Portfolio is a no-load mutual fund designed to achieve long-term capital appreciation. The Portfolio invests in a broad range of securities of US and non-US companies in the real estate industry, including companies in developed and emerging markets, with a focus on real estate investment trusts or companies that Dimensional considers to be REIT-like entities. The Portfolio primarily purchases shares of Dimensional's Real Estate Securities Portfolio and International Real Estate Securities Portfolio. In addition to investing in these underlying funds, the Portfolio also may invest directly in securities of companies in the real estate industry. The Portfolio is currently authorized to invest in companies in the following countries: Australia, Belgium, Canada, China, France, Germany, Greece, Hong Kong, Japan, the Netherlands, New Zealand, Singapore, South Africa, Taiwan, the United Kingdom, and the United States. Other countries may be authorized for investment in the future.

Average Annual Total Returns	Inception (6/4/2008)	Number of Holdings	285	Price/Earnings (excludes negatives)	13.61
Global Real Estate Sec. Portfolio	-43.68%	Weighted Average Market Cap	\$4,307M	Dividend Yield	7.95%
S&P Global REIT Index (gross div.)	-44.93%	Weighted Average Book-to-Market	1.15	Expense Ratio (as of 6/4/08)	0.58%

\*All Data as of Dec 31, 2008, unless otherwise indicated.

## IV IFA International Value Index (IV)

January 1928 – December 1969: IFA US Large Value Index  
January 1975 – June 1993: MSCI EAFE Value Gross minus 3.67 bp/month  
March 1994 – Present: DFA International Value Symbol: DFIVX

January 1970 – December 1974: MSCI EAFE Gross Dividends minus 3.67 bp/month  
July 1993 – February 1994: LWAS/DFA International High BtM Portfolio

**Investment Objective of DFA International Value Symbol: DFIVX** : The US Large Company Portfolio is a no-load mutual fund designed to approximate the investment performance of the S&P 500 Index, both in terms of the price of the Portfolio's shares and its total investment return. The Portfolio intends to invest in all of the stocks that comprise the S&P 500 Index in approximately the same proportions as they are represented in the Index. The S&P 500 Index is comprised of a broad and diverse group of stocks, most of which are traded on the NYSE. Generally, these are the US stocks with the largest market capitalizations and, as a group, they represent approximately 70% of the total market capitalization of all publicly traded US stocks.

Average Annual Total Returns	One Year	Three Years	Five Years	Ten Years	Number of Holdings	528	Price/Earnings (excludes negatives)	6.72
International Value Index Portfolio	-46.33%	-7.41%	3.34%	4.75%	Weighted Average Market Cap	\$30,044M	Dividend Yield	5.47%
MSCI EAFE Index (net dividends)	-43.38%	-7.35%	1.66%	0.80%	Weighted Average Book-to-Market	1.17	Expense Ratio (as of 11/30/07)	0.44%

\*All Data as of Dec 31, 2008, unless otherwise indicated.

## IS IFA International Small Company Index (IS)

January 1928 – December 1969: IFA US Small Cap Index  
October 1996 – Present: DFA International Small Company Symbol: DFISX

January 1970 – September 1996: Dimensional International Small Cap Index minus 4.58 bp/month

**Investment Objective of DFA International Small Company Symbol: DFISX** : The International Small Company Portfolio is a no-load mutual fund designed to achieve long-term capital appreciation. The Portfolio pursues its objective by investing in the small companies of Canada (0-15%), Europe (25-50%), Japan (15-40%), Pacific Rim (0-25%), and the United Kingdom (15-35%). The Portfolio currently invests in companies in Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, and the United Kingdom.

Average Annual Total Returns	One Year	Three Years	Five Years	Ten Years	Number of Holdings	4,040	Price/Earnings (excludes negatives)	7.53
Int'l Small Company Index Portfolio	-43.87%	-9.52%	3.41%	6.96%	Weighted Average Market Cap	\$1830M	Dividend Yield	4.20%
MSCI EAFE Small Cap Index ^	-48.36%	-15.47%	-0.84%	2.27%	Weighted Average Book-to-Market	1.16	Expense Ratio (as of 11/30/07)	0.55%

^(price only) \*All Data as of Dec 31, 2008, unless otherwise indicated.

## ISV IFA International Small Cap Value Index (ISV)

January 1928 – December 1969: IFA Small Cap Value Index  
July 1981 – December 1994: Dimensional International Small Cap Value Index minus 5.75 bp/month

January 1970 – June 1981: IFA International Small Company Index  
January 1995 – Present: DFA International Small Cap Value Symbol: DISVX

**Investment Objective of DFA International Small Cap Value Symbol: DISVX** : The DFA International Small Cap Value Portfolio is a no-load mutual fund designed to achieve long-term capital appreciation. The Portfolio pursues its objective by investing in the stocks of small non-US companies which the Advisor believes to be value stocks at the time of purchase. Securities are considered value stocks primarily because a company's shares have a high book value in relation to their market value (BtM). This BtM sort excludes firms with negative or zero book values. In assessing value, additional factors such as price to cash flow or price to earning ratios may be considered, as well as economic conditions and developments in the issuer's industry. The criteria for assessing value are subject to change from time to time. The Portfolio currently invests in companies in Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, and United Kingdom.

Average Annual Total Returns	One Year	Three Years	Five Years	Ten Years	Number of Holdings	2,266	Price/Earnings (excludes negatives)	6.40
Int'l Small Cap Index Portfolio	-41.68%	-8.31%	5.07%	9.44%	Weighted Average Market Cap	\$834M	Dividend Yield	4.61%
MSCI EAFE Small Cap Index ^	-48.36%	-15.47%	-0.84%	2.27%	Weighted Average Book-to-Market	1.71	Expense Ratio (as of 11/30/07)	0.69%

^(price only) \*All Data as of Dec 31, 2008, unless otherwise indicated.

## EM IFA Emerging Markets Index (EM)

January 1928 – December 1969: 50% IFA US Large Value Index and 50% IFA US Small Cap Index  
January 1988 – April 1994: Dimensional Equally Weighted Emerging Markets Index minus 5 bp/month

January 1970 – December 1987: 50% IFA IV Index and 50% IFA IS Index  
May 1994 – Present: DFA Emerging Markets Portfolio Symbol: DFEMX

**Investment Objective of DFA Emerging Markets Portfolio Symbol: DFEMX** : The Emerging Markets Portfolio is a no-load mutual fund designed to achieve long-term capital appreciation. The Portfolio pursues its objective by investing in emerging markets equity securities that Dimensional deems to be large company stocks at the time of purchase. Dimensional will consider, among other things, information disseminated by the International Finance Corporation in determining and approving countries that have emerging markets. The Portfolio currently invests in companies in Brazil, Chile, China, the Czech Republic, Hungary, India, Indonesia, Israel, Malaysia, Mexico, Philippines, Poland, South Africa, South Korea, Taiwan, Thailand, and Turkey. Due to repatriation restrictions, the Portfolio currently holds but does not purchase securities in Argentina.

Average Annual Total Returns	One Year	Three Years	Five Years	Ten Years	Number of Holdings	593	Price/Earnings (excludes negatives)	8.31
Emerging Markets Index Portfolio	-49.20%	-3.72%	8.53%	9.44%	Weighted Average Market Cap	\$22,123M	Dividend Yield	3.76%
MSCI Emerging Markets Index ^	-53.18%	-4.62%	8.02%	9.31%	Weighted Average Book-to-Market	0.66	Expense Ratio (as of 11/30/07)	0.60%

^(gross dividends) \*All Data as of Dec 31, 2008, unless otherwise indicated.

# SOURCES AND DESCRIPTION OF DATA

## EV IFA Emerging Markets Value Index (EV)

January 1928 – December 1969: IFA US Small Cap Value Index  
January 1989 – March 1998: Fama/French Emerging Markets Value Index minus 5 bp/month

January 1970 – December 1988: IFA Emerging Markets Index  
April 1998 – Present: DFA Emerging Markets Value Portfolio Symbol DFEVX

**Investment Objective of DFA Emerging Markets Value Portfolio Symbol DFEVX :** The Emerging Markets Value Portfolio is a no-load mutual fund designed to achieve long-term capital appreciation. The Portfolio pursues its objective by investing in emerging markets equity securities that Dimensional deems to be value stocks at the time of purchase. Dimensional will consider, among other things, information disseminated by the International Finance Corporation in determining and approving countries that have emerging markets. Securities are considered value stocks primarily because a company's shares have a high book value in relation to their market value (B/M). This B/M sort excludes firms with negative or zero book values. In assessing value, additional factors such as price to cash flow or price to earning ratios may be considered, as well as economic conditions and developments in the issuer's industry. The criteria for assessing value are subject to change from time to time. The Portfolio currently invests in companies in Brazil, Chile, China, the Czech Republic, Hungary, India, Indonesia, Israel, Malaysia, Mexico, Philippines, Poland, South Africa, South Korea, Taiwan, Thailand, and Turkey. Due to repatriation restrictions, the Portfolio currently holds but does not purchase securities in Argentina.

Average Annual Total Returns	One Year	Three Years	Five Years	Inception**	Number of Holdings	2,051	Price/Earnings (excludes negatives)	6.57
Emerging Markets Value Portfolio (I)	-53.94%	-2.56%	11.05%	10.85%	Weighted Average Market Cap	\$7405M	Dividend Yield	3.76%
MSCI Emerging Markets Index ^	-53.18%	-4.62%	8.02%	5.28%	Weighted Average Book-to-Market	1.09	Expense Ratio (as of 11/30/07)	0.60%

^(gross div) \*All Data as of Dec 31, 2008, unless otherwise indicated. \*\*Since 4/1/98 Inception

## ES IFA Emerging Markets Small Cap Index (ES)

January 1928 – December 1969: IFA US Small Cap Index  
January 1989 – February 1998: Fama/French Emerging Markets Small minus 6.5 bp/month

January 1970 – December 1988: IFA Emerging Markets Index  
March 1998 – Present: DFA Emerging Markets Small Cap Symbol: DEMSX

**Investment Objective of DFA Emerging Markets Small Cap Symbol: DEMSX :** The Emerging Markets Small Cap Portfolio is a no-load mutual fund designed to achieve long-term capital appreciation. The Portfolio pursues its objective by investing in emerging markets equity securities that Dimensional deems to be small company stocks at the time of purchase. Dimensional will consider, among other things, information disseminated by the International Finance Corporation in determining and approving countries that have emerging markets. The Portfolio will invest in companies whose market capitalization is less than \$2.3 billion. The Portfolio currently invests in companies in Brazil, Chile, China, Hungary, India, Indonesia, Israel, Malaysia, Mexico, Philippines, Poland, South Africa, South Korea, Taiwan, Thailand, and Turkey. Due to repatriation restrictions, the Portfolio currently holds but does not purchase securities in Argentina.

Average Annual Total Returns	One Year	Three Years	Five Years	Inception**	Number of Holdings	1,882	Price/Earnings (excludes negatives)	6.35
Emerging Markets Small Cap Portfolio (I)	-54.53%	-4.84%	6.91%	11.37%	Weighted Average Market Cap	\$623M	Dividend Yield	4.41%
MSCI Emerging Markets Index ^	-53.18%	-4.62%	8.02%	9.31%	Weighted Average Book-to-Market	1.30	Expense Ratio (as of 11/30/07)	0.78%

^(gross dividends) \*All Data as of Dec 31, 2008, unless otherwise indicated. \*\*Since 3/5/98 Inception

## 1F IFA One-Year Fixed Income Index (1F)

January 1928 – June 1963: One-Month T-Bills minus 1.5 bp/month  
August 1983 – Present: DFA One-Year Fixed Income Symbol DFIHX

July 1963 – July 1983: One-Year T-Note Index minus 1.5 bp/month

**Investment Objective of DFA One-Year Fixed Income Symbol DFIHX :** The investment objective of the DFA One-Year Fixed Income Portfolio is to achieve stable real returns in excess of the rate of inflation with a minimum of risk. Generally, the Portfolio will acquire high quality obligations which mature within one year from the date of settlement. However, when greater returns are available, substantial investments may be made in securities maturing within two years from the date of settlement as well. In addition, the Portfolio intends to concentrate investments in the banking industry under certain circumstances. The Portfolio is diversified, and with respect to corporate debt obligations and commercial paper, the Portfolio generally invests in securities rated A1/P1 or better.

Average Annual Total Returns	One Year	Three Years	Five Years	Ten Years	Duration	0.77 Years
One-Year Fixed Income Index Portfolio	4.02%	4.66%	3.42%	3.96%	Average Portfolio Maturity Range	0.77 Years
Merrill Lynch 6-Month US Treasury Bill Index	3.58%	4.66%	3.65%	3.80%	Expense Ratio (as of 11/30/07)	0.18%
Merrill Lynch 1-Year US Treasury Note Index	4.75%	5.00%	3.62%	4.15%		

\*All Data as of Dec 31, 2008, unless otherwise indicated.

## 2F IFA 2-Year Global Fixed Income Index (2F)

January 1928 – June 1977: Five-Year T-Notes minus 1.5 bp/month  
January 1990 – February 1996: Citi World Government Bond 1-3 Years Hedged minus 1.5 bp/month

July 1977 – December 1989: ML US Treasury Index 1-3 Years minus 1.5 bp/month  
March 1996 – December 2007: DFA Two-Year Global Fixed Income Symbol: DFGFX

**Investment Objective of DFA Two-Year Global Fixed Income Symbol: DFGFX :** The investment objective of the DFA Two-Year Global Fixed Income Portfolio is to maximize total returns consistent with preservation of capital. Generally, the Portfolio will acquire high quality obligations which mature within two years from the date of settlement. The Portfolio expects to invest in obligations issued or guaranteed by countries that are members of the Organization of Economic Cooperation and Development, but may invest in other countries as well. Investments in corporate debt obligations, bank obligations, commercial paper, repurchase agreements, and obligations of other domestic and foreign issuers with high quality ratings may also be included. The Portfolio will also enter into forward foreign currency contracts solely for the purpose of hedging against fluctuations in currency exchange rates. The Portfolio is diversified; and with respect to corporate debt obligations and commercial paper, the Portfolio generally invests in US securities rated A1/P1 or better and non-US securities rated AA/Aa2 or better.

Average Annual Total Returns	One Year	Three Years	Five Years	Ten Years	Duration	0.82 Years
Two-Year Global Fixed Portfolio (I)	4.08%	4.60%	3.28%	4.06%	Average Portfolio Maturity Range	0.83 Years
Citigroup World Government Bond Index 1-3 Years	5.56%	5.31%	4.15%	4.48%	Expense Ratio (as of 11/30/07)	0.18%

\*All Data as of Dec 31, 2008, unless otherwise indicated.

## 5G IFA 5-Yr Government Fixed Income Index (5F)

January 1928 – December 1972: Five-Year T-Notes minus 1.92 bp/month  
June 1987 – Present: DFA Five-Year Gov't Income Symbol: DFFGX

January 1973 – May 1987: Barclays Intermediate Government Bond Index minus 1.92 bp/month

**Investment Objective of DFA Five-Year Gov't Income Symbol: DFFGX :** The investment objective of the DFA Five-Year Government Portfolio is to maximize total returns available from the universe of debt obligations of the US government and US government agencies. Ordinarily, the Portfolio will invest at least 80% of its assets in US government obligations and US government agency obligations that mature within five years from the date of settlement. The Portfolio may also acquire repurchase agreements.

Average Annual Total Returns	One Year	Three Years	Five Years	Ten Years	Duration	3.34 Years
Five-Year Gov't Portfolio	8.36%	5.93%	4.24%	5.29%	Average Portfolio Maturity Range	3.58 Years
Merrill Lynch US Treasury/Agency Index 1-5 Years	8.37%	6.75%	4.60%	5.21%	Expense Ratio (as of 11/30/07)	0.23%

\*All Data as of Dec 31, 2008, unless otherwise indicated.

## 5F IFA 5-Yr Global Fixed Income Index (5F)

January 1928 – December 1984: IFA Five-Year Government Fixed Income Index  
December 1990 – Present: DFA Five-Year Global Fixed Income Symbol: DFGBX

January 1985 – November 1990: Citi Global Government Bond Hedged minus 2.33 bp/month

**Investment Objective of DFA Five-Year Global Fixed Income Symbol: DFGBX :** The investment objective of the DFA Five-Year Global Fixed Income Portfolio is to provide a market rate of return for a fixed income portfolio with low relative volatility of returns. Generally, the Portfolio will invest in high quality obligations which mature within five years from the date of settlement. The Portfolio expects to invest primarily in obligations issued or guaranteed by any of the following countries (but may invest in other countries as well): Australia, Canada, Denmark, EMU countries, Japan, Sweden, Switzerland, the United Kingdom, and the United States. Investments in obligations of other foreign issuers rated AA or better, corporate debt obligations, bank obligations and commercial paper may also be included. The Portfolio will also enter into forward foreign currency contracts solely for the purpose of hedging against fluctuations in currency exchange rates.

Average Annual Total Returns	One Year	Three Years	Five Years	Ten Years	Duration	2.34 Years
Five-Year Global Fixed Portfolio	4.02%	4.38%	3.54%	4.71%	Average Portfolio Maturity Range	2.51 Years
Citigroup World Government Bond Index 1-5 Years	6.60%	5.66%	4.53%	4.79%	Expense Ratio (as of 11/30/07)	0.28%

\*All Data as of Dec 31, 2008, unless otherwise indicated.

# DISCLOSURE FOR BACKTESTED PERFORMANCE DATA

## Disclosure for Backtested Performance Information on the Simulated Strategies of IFA Indexes and IFA Index Portfolios (Indexfolios):

1. Index Funds Advisors, Inc. (IFA) was incorporated in March 1999 and placed its first independent client investments in early 2000. The performance information presented in the chart or table represents backtested performance based on combined simulated index data and live (or actual) mutual fund results from Jan 1, 1928 to period ending date shown using the strategy of buying, holding and annually rebalancing globally diversified portfolios of index funds. **Backtested performance is hypothetical (it does not reflect trading in actual accounts) and is provided for informational purposes to indicate historical performance had the index portfolios been available over the relevant period. IFA did not offer the index portfolios until November 1999.** Prior to 1999, IFA did not manage client assets. The IFA indexing investment strategy is based on the principles of Modern Portfolio Theory and the Fama and French Three Factor Model for Equities and Two Factor Model for Fixed Income. Index portfolios are designed to provide substantial global diversification (approximately 15,000 companies in 40 countries) in order to reduce investment concentration and the resulting increased risk caused by the volatility of individual companies, indexes, or asset classes. Client portfolios are monitored and rebalanced, taking into consideration risk exposure consistency, transaction costs, and tax ramifications to maintain target asset allocations as shown in the twenty index portfolios.

2. A review of the IFA Index Data Sources and IFA Indexes Time Series Construction is an integral part of and should be read in conjunction with this explanation of backtested performance information. For detailed descriptions and definitions of the underlying criteria and data used to construct backtested performance, see these two links: Data Sources and IFA Indexes Time Series Construction. Simulated index data is based on the performance of indexes as described in the Data Sources page. The index mutual funds used in IFA's twenty index portfolios are IFA's best estimate of a mutual fund that will come closest to the index data provided in the simulated indexes. Simulated index data is used for the period prior to the inception of the relevant live mutual fund data an equivalent mutual fund expense ratio is deducted from both live and simulated data. Live (or actual) mutual fund performance is used after the inception of each mutual fund. The IFA Indexes Times Series Construction goes back to Jan. 1928 and consistently reflects a tilt towards small and value equities over time, with an increasing diversification to international markets and the real estate index as data became available. In Jan. 1928, there are 4 equities indexes and 2 bond indexes, in Jan. 1970 there are a total of 8 indexes, and there are 15 indexes in March 1998 to present. If the original 4 equity indexes from 1928 are held constant until Dec. 2007, the annualized rate of return is 10.88%, after the deduction of a 0.9% IFA advisor fee and a standard deviation of 22.61%. The evolving IFA Indexes over the same period have a 11.14% annualized return after the same IFA fees and a 21.75% standard deviation. It is IFA's advice that the value of having a longer time series exceeds the concerns of index substitutions over the 1928 to present period. Due to the very high standard deviations of returns (22%) a 60 year or more sample size of data is recommended to reduce the standard error of the mean. In other words, in IFA's opinion, smaller sample sizes introduce larger errors than the errors introduced by stitching together indexes over time. This is the advice IFA provides to its clients. Check website to see the analysis of the evolution of these portfolios. Backtested performance is calculated by using a computer program and monthly returns data set that starts with the first day of the given time period and evaluates the returns of simulated indexes and index mutual funds, see Data Sources. In 1999, tax-managed funds became available for many different index funds. IFA uses tax-managed funds in taxable accounts. The tax-managed funds are consistent with the indexing strategy, however, they should not be expected to track the performance of corresponding non-tax-managed funds in the same or similar indexes. As such, the performance of portfolios using tax-managed funds will vary from portfolios that do not utilize these funds.

3. **Backtested performance does not represent actual performance and should not be interpreted as an indication of such performance. Actual performance for client accounts may be materially lower than that of the index portfolios.** Backtested performance results have certain inherent limitations. Such results do not represent the impact that material economic and market factors might have on an investment adviser's decision-making process if the adviser were actually managing client money. Backtested performance also differs from actual performance because it is achieved through the retroactive application of model portfolios (in this case, IFA's twenty index portfolios) designed with the benefit of hindsight. As a result, the models theoretically may be changed from time to time to obtain more favorable performance results.

### 4. History of Changes to the IFA Indexes:

1. **1991-1999:** Index portfolios 10, 30, 50, 70 and 90 were originally suggested by Dimensional Fund Advisors (DFA), merely as an example of globally diversified investments using their many custom index mutual funds, back in 1991 with moderate modifications in 1996 to reflect the availability of index funds that tracked the emerging markets asset class. Portfolios between each of the above listed portfolios were created by IFA in 1999 by interpolating between the above portfolios. Portfolios 5, 95 and 100 were created by Index Funds Advisors in 1999, as a lower and higher extension of the DFA 1991 risk and return line. See History of Changes to the IFA Indexes and Portfolios at <http://www.ifa.com/btp/historyofchange.html>

5. Backtested performance results assume the reinvestment of dividends and capital gains and annual rebalancing. The performance of the strategy reflects and is net of the effect of IFA's annual investment management fee of 0.9%, billed monthly. Monthly fee deduction is a requirement of our software used for backtesting. Actual IFA advisory fees are deducted quarterly, in advance. This fee is the highest fee IFA has ever charged. Depending on the size of your assets under management, your investment management fee may be less. Backtested risk and return data is a combination of live (or actual) mutual fund results and simulated index data, and mutual fund fees and expenses have been deducted from both the live (or actual) results and the simulated index data. Although index mutual funds minimize tax liabilities from short and long term capital gains, any resulting tax liability is not deducted from performance results. Performance results also do not reflect transaction fees (as seen here) and other expenses charged by broker-dealers, which reduce returns. IFA is not paid any brokerage commissions, sales loads, 12b1 fees, or any form of compensation from any mutual fund company or broker dealer. The only source of compensation from client investments is obtained from asset based advisory fees paid by the client. More information about advisory fees, expenses, no-load mutual fund fees, prospectuses for no-load index mutual funds, brokerage and custodian fees can be found on the Fee link in the gold navigation bar below and on every page at [www.ifa.com](http://www.ifa.com).

6. For all data periods, annualized standard deviation is presented as an approximation by multiplying the monthly standard deviation number by the square root of twelve. Please note that the number computed from annual data may differ materially from this estimate. We have chosen this methodology because Morningstar uses the same method. (see IFA Indexes Time Series Construction)

7. Not all of IFA clients follow our recommendations and depending on unique and changing client and market situations we may customize the construction and implementation of the index portfolios for particular clients, including the use of tax-managed mutual funds, tax-loss-harvesting techniques and rebalancing frequency and precision. In taxable accounts, IFA uses tax-managed index funds to manage client assets. However, the tax-managed index funds are not used in calculating the backtested performance of the index portfolios, unless specified in the table or chart. Some clients substitute the mutual funds recommended by IFA with investment options available through their 401k or other accounts, thereby creating a custom asset allocation. The performance of custom asset allocations may differ materially from (and may be lower than) that of the index portfolios.

8. Performance results for clients that invested in accordance with the Index Portfolios will vary from the backtested performance provided on the site due to market conditions and other factors, including investments cash flows, mutual fund allocations, frequency and precision of rebalancing, tax-management strategies, cash balances, lower than 0.9% advisory fees, varying custodian fees, and/or the timing of fee deductions. As the result of these and potentially other variances, our clients have not and are not expected to have achieved the exact results shown since November 1999, when we placed our first investment. Actual performance for client accounts may differ materially from (and may be lower than) that of the index portfolios. Clients should consult their account statements for information about how their actual performance compares to that of the index portfolios.

9. **As with any investment strategy, there is potential for profit as well as the possibility of loss.** IFA does not guarantee any minimum level of investment performance or the success of any index portfolio or investment strategy. All investments involve risk (the amount of which may vary significantly) and investment recommendations will not always be profitable.

### 10. Past performance does not guarantee future results.

11. IFA Indexes and Index Portfolios (Indexfolios) Value Data are based on a starting value of one, as of Jan 1, 1928. Sources and Disclosures: As stated above, [dfa.com](http://dfa.com), and [yahoo.com](http://yahoo.com)

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