

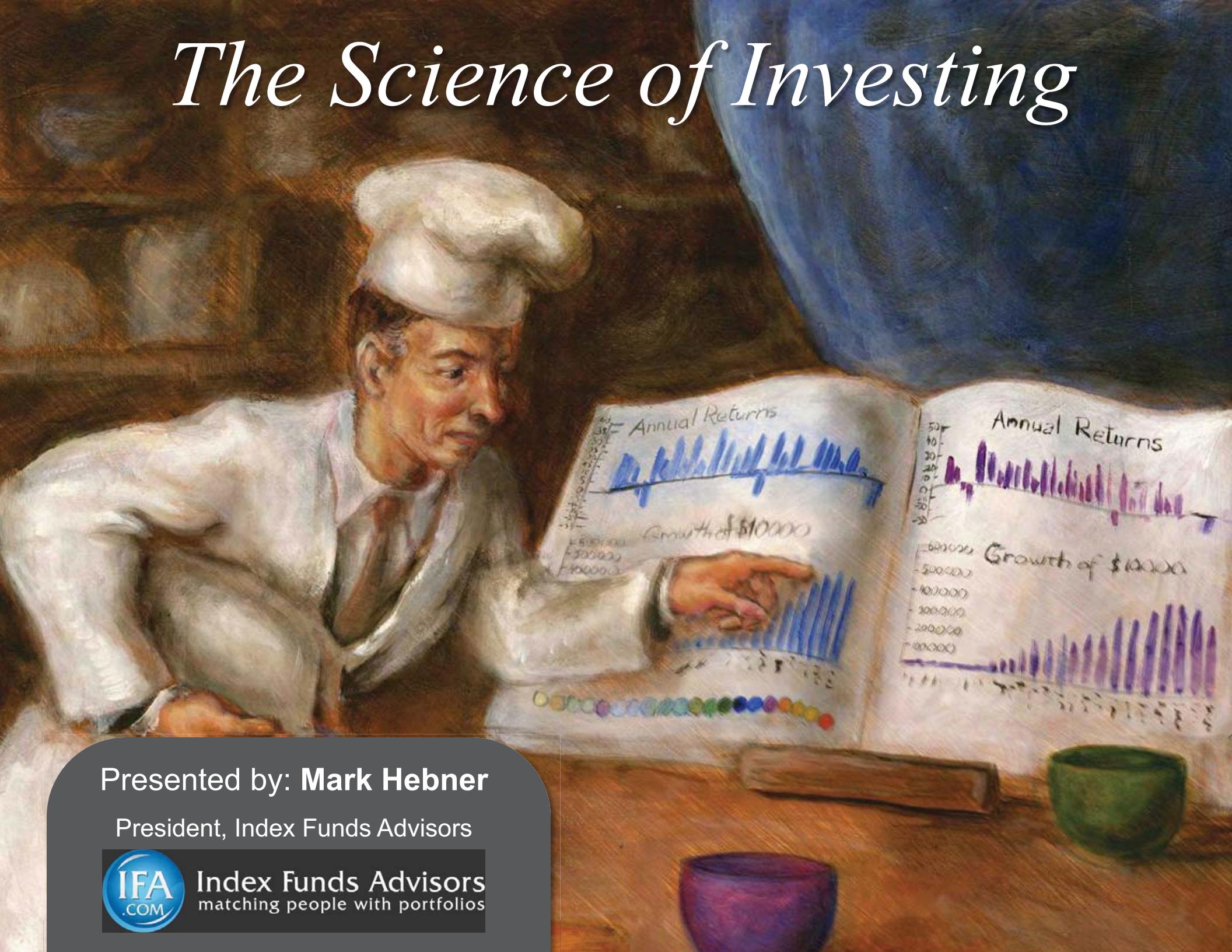
# *The Science of Investing*

Presented by: **Mark Hebner**

President, Index Funds Advisors

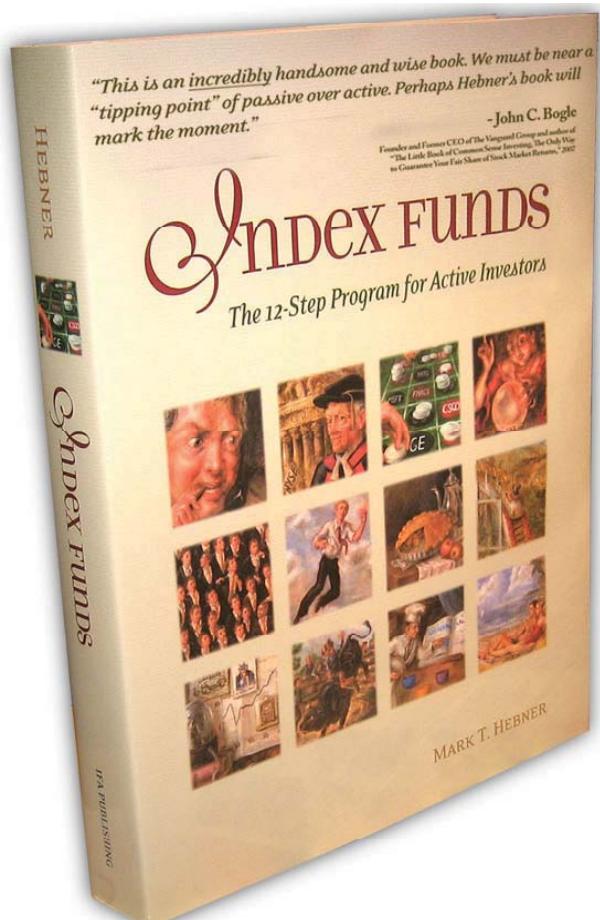


**Index Funds Advisors**  
matching people with portfolios





## *Industry experts, Nobel Laureates, academics and individual investors praise Mark Hebner's Index Funds: The 12-Step Program for Active Investors.*



***"This is an incredibly handsome and wise book. We must be near a "tipping point" of passive over active. Perhaps Hebner's book will mark the moment."***

**- John C. Bogle**

Founder, The Vanguard Group, & author of "The Little Book of Common Sense Investing, The Only Way to Guarantee Your Fair Share of Stock Market Returns"

***"Hebner gives good advice presented in a very appealing manner. Congratulations on a very nice piece of work."***

**- Burton G. Malkiel, Ph.D.**

Professor of Economics, Princeton University  
& author of "A Random Walk Down Wall Street"

***"It is a valuable reference and it benefits from many perspicacious commentaries."***

**- Paul A. Samuelson, Ph.D.**

Nobel Laureate in Economics, Professor of Economics, MIT & author of "Economics" and "Inside the Economist's Mind"

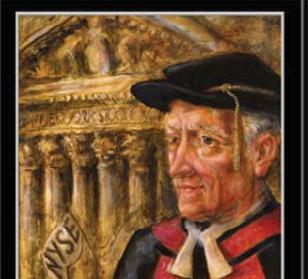


# Index Funds

*The 12-Step Program for Active Investors*



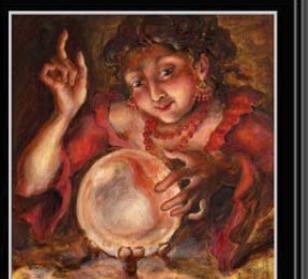
STEP 1  
ACTIVE INVESTORS



STEP 2  
NOBEL LAUREATES



STEP 3  
STOCK PICKERS



STEP 4  
TIME PICKERS



STEP 5  
MANAGER PICKERS



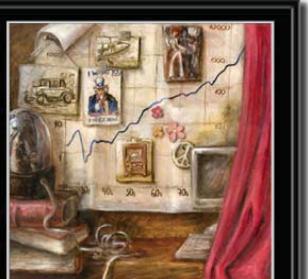
STEP 6  
STYLE DRIFTERS



STEP 7  
SILENT PARTNERS



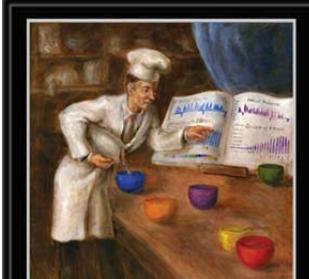
STEP 8  
RISKESE™



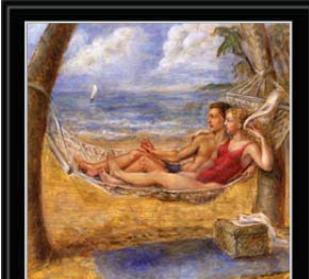
STEP 9  
HISTORY



STEP 10  
RISK CAPACITY™



STEP 11  
RISK EXPOSURE



STEP 12  
INVEST & RELAX



**Index Funds Advisors**  
matching people with portfolios

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Irvine, CA 92612

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Local Phone: 949-502-0050  
Fax: 949-502-0048

# Disclosure for Backtested Performance

Disclosure for Backtested Performance Information the IFA Indexes and IFA Index Portfolios (updates can be found at [www.ifabt.com](http://www.ifabt.com)):

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 January 1, 1928 to period ending date shown using the strategy of buying, holding and first of the year 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 refers to this hypothetical data as a Simulated Passive Investor Experience (SPIE). 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 11,600 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 IFA Portfolios.

2. A review of the IFA Index Data Sources, IFA Indexes Time Series Construction and several of the Dimensional Indexes is an integral part of this disclosure and should be read in conjunction with this explanation of backtested performance information. IFA defines index funds as mutual funds or exchange traded funds that follow a set of rules of ownership that are held constant regardless of market conditions. An important characteristic of an index fund is that it's rules of ownership are not based on a forecast of short term events. Therefore, an investment strategy that is limited to the buying and rebalancing of a portfolio of index funds is often referred to as passive investing, as opposed to an active investing. Simulated index data is based on the performance of indexes and live mutual funds as described in the IFA Indexes Data Sources page . The index mutual funds used in IFA's 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 and an equivalent mutual fund expense ratio is deducted from simulated index data. Live (or actual) mutual fund performance is used after the inception date of each mutual fund. The IFA Indexes Times Series Construction goes back to January 1928 and consistently reflects a tilt towards small and value equities over time, with an increasing diversification to international markets, emerging markets and real estate investment trusts as data became available. As of January 1928, there are 4 equity indexes and 2 bond indexes, in January 1970 there are a total of 8 indexes, and there are 15 indexes in March 1998 to present. See ([http://www.ifa.com/pdf/The\\_Evolution\\_of\\_IFA\\_Portfolio.pdf](http://www.ifa.com/pdf/The_Evolution_of_IFA_Portfolio.pdf)) to see the analysis of the evolution of these portfolios. If the original 4 equity indexes from 1928 are held constant until December 2010, the annualized rate of return of this simplified version of IFA Index Portfolio 90 is 10.44%, after the deduction of a 0.9% IFA advisor fee and a standard deviation of 22.79%. The evolving IFA Indexes over the same period have a 10.68% annualized return for IFA Index Portfolio 90 after the same IFA fees and a standard deviation of 21.99%. IFA advises clients to diversify their investments, however, this stitching together of index and live fund data and adding international markets, emerging markets and REITs only had a slight impact on risk and return over this 83 year period. Instead, it demonstrates the value of a small and value tilt in global equity markets, since over the same period a Simulated SP500 only had a return of 9.39% (with no advisor fee deducted), at a standard deviation of 19.31%. 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 (21.99%) a 60 year or more sample size of data is recommended to obtain a T-statistic of 2, that allows a conclusion at a 95% or higher level of certainty. In other words, in IFA's opinion, smaller sample sizes introduce larger errors than the errors introduced by stitching together indexes and live data over time. This is the advice IFA provides to its clients. 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. 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 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: 1991-2000: IFA Index Portfolios 10, 30, 50, 70 and 90 were originally suggested by Dimensional Fund Advisors (DFA), merely as a 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 (individualized and indexed) between each of the above listed portfolios were created by IFA in 2000 by interpolating between the above portfolios. Portfolios 5, 95 and 100 were created by Index Funds Advisors in 2000, as a lower and higher extension of the DFA 1991 risk and return line. As of March 1, 2010, 100 IFA Index Portfolios are available to IFA clients, with IFA Index Portfolios between the shown allocations being interpolations of the 20 allocations shown. In January 2008, IFA introduced three new indexes and twenty socially responsible portfolios constructed from these three indexes and five pre-existing IFA indexes. The new indexes introduced were: IFA US Social Core Equity, IFA Emerging Markets Social Core, and IFA International Real Estate. All three use live DFA fund data as long as it has been available. Prior to live fund data, they use index data supplied by DFA modified for fund management fees. Go to [www.ifa.com/btp/historyofchange.html](http://www.ifa.com/btp/historyofchange.html) to see a summary of changes made to the IFA Indexes and Index Portfolios.

5. Backtested performance results assume the reinvestment of dividends and capital gains and annual rebalancing at the beginning of each year. In reality, client's accounts will be rebalanced either more or less frequently depending on the fluctuation of the asset classes and the cash flow activity of the client. It is IFA's opinion that the assumption of first of the year annual rebalancing is a reasonable approximation to reality. It is important to understand that the assumption of annual rebalancing has an impact on the monthly returns reported for the IFA Index Portfolio in both in the Risk and Reward Table ([www.ifabtable.com](http://www.ifabtable.com)) and in the Index Calculator([www.ifacalc.com](http://www.ifacalc.com)). The reason for this difference is that with annual rebalancing, the monthly returns are calculated from the ratio of the year-to-date growth of \$1.00 at the end of the month to the year-to-date growth of \$1.00 at the beginning of the month. For monthly rebalancing, the monthly return is calculated with the assumption that the portfolio is perfectly in balance at the beginning of the month At [www.ifabt.com](http://www.ifabt.com), in section 5, there is an example of the monthly and year-to-date returns for October 2009 and how they would have differed if monthly rebalancing had been assumed. The reason for the small difference in the monthly returns observed above is that a mixed equity and fixed income portfolio like IFA Index Portfolio 50 that started on January 1st would be overweight in equities and underweight in fixed income at the beginning of October relative to the target allocation. Since equities did worse than fixed income in October, the annually rebalanced portfolio did worse than the monthly rebalanced portfolio. However, on a year-to-date basis, the annually rebalanced portfolio did better because the monthly rebalanced portfolio would have sold equities only to see them rise further. It is IFA's opinion that the overall impact of the assumption of annual rebalancing on the reported monthly and year-to-date returns is not material enough to warrant the creation of a second set of

# Disclosure for Backtested Performance

monthly figures. It is important to bear in mind that for any given month, the difference in the expected returns between annually and monthly rebalanced portfolios is statistically not significantly different from zero. The performance of the IFA Index Portfolios reflects and is net of the effect of IFA's annual investment management fee of 0.9%, billed monthly, unless stated otherwise. 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. When IFA Indexes are shown in IFA Index Portfolios, all returns data reflects a deduction of 0.9% annual investment advisory fee, which is the maximum IFA fee. Your fee may be less depending 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. We choose this method because the creation, choice, monitoring and rebalancing of diversified index portfolios are the services of the independent investment advisor and at that point the fees are appropriate to deduct from the whole portfolio returns. Since we accept no fees from investment product firms, IFA compares index funds based on net asset value returns, which are net of the mutual fund company expense ratios only. 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 at [www.ifafee.com](http://www.ifafee.com)) 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 at [www.ifa.com/Admin/fees.asp](http://www.ifa.com/Admin/fees.asp) and on the gold navigation bar at the bottom of every page of [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. Go to [www.ifabt.com](http://www.ifabt.com) for details. In those charts and tables where the standard deviation of daily returns is shown, it is estimated as the standard deviation of monthly returns divided by the square root of 22.

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 IFA 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 Index Portfolio Value Data is based on a starting value of one, as of January 1, 1928.

12. DISCLAIMER: THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, AS TO ACCURACY, COMPLETENESS, OR RESULTS OBTAINED FROM ANY INFORMATION PROVIDED HEREIN OR ON THE MATERIAL PROVIDED. This document does not constitute a complete description of our investment services and is for informational purposes only. It is in no way a solicitation or an offer to sell securities or investment advisory services except, where applicable, in states or countries where we are registered or where an exemption or exclusion from such registration exists. Any statements regarding market or other financial information, is obtained from sources which we, and our suppliers believe reliable, but we do not warrant or guarantee the timeliness or accuracy of this information. Neither our information providers nor we shall be liable for any errors or inaccuracies, regardless of cause, or the lack of timeliness of, or for any delay or interruption in the transmission thereof to the user. All investments involve risk, including foreign currency exchange rates, political risks, different methods of accounting and financial reporting, and foreign taxes. Your use of these materials, including [www.ifa.com](http://www.ifa.com) Web site is your acknowledgement that you have read and understood the full disclaimer as stated above. IFA Index Portfolios, times series, standard deviations, and returns calculations are determined in the DFA FA Returns 2.0 program. © Copyright 1999-2011, DFA, Inc.

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Updated 8-9-2011, for additional updates see [www.ifabt.com](http://www.ifabt.com)



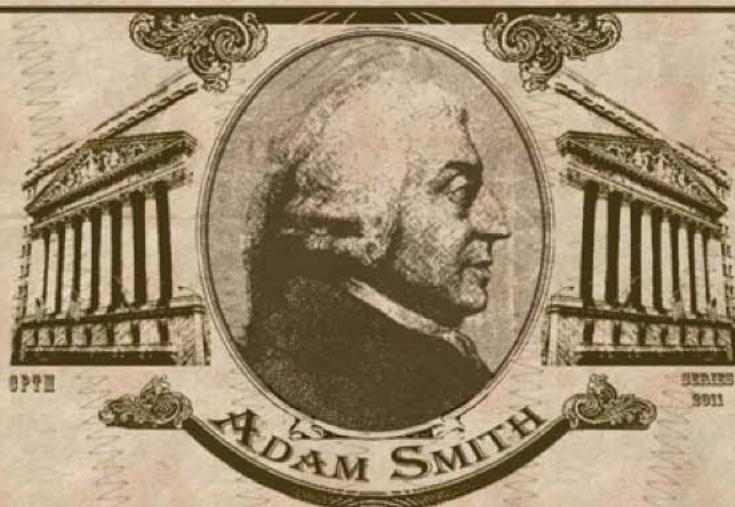
# What are Index Funds?

- Index funds are investments that have rules of construction that are adhered to regardless of market conditions.
- Globally diversified portfolios of index funds have about 16,000 stocks from 40 countries.
- Index Funds are essentially an investment in capitalism.



SHARES

SHARES



## 2011 SUMMARY STATISTICS\*

TOTAL MARKET VALUE: \$34,200,000,000,000

SALES: \$31,700,000,000,000

NET PROFITS: \$2,100,000,000,000

NUMBER OF EMPLOYEES: 61,449,000

CHIEF EXECUTIVE OFFICERS: 12,160

GENERAL INDUSTRIES: 442

COUNTRIES OF OPERATIONS: 192

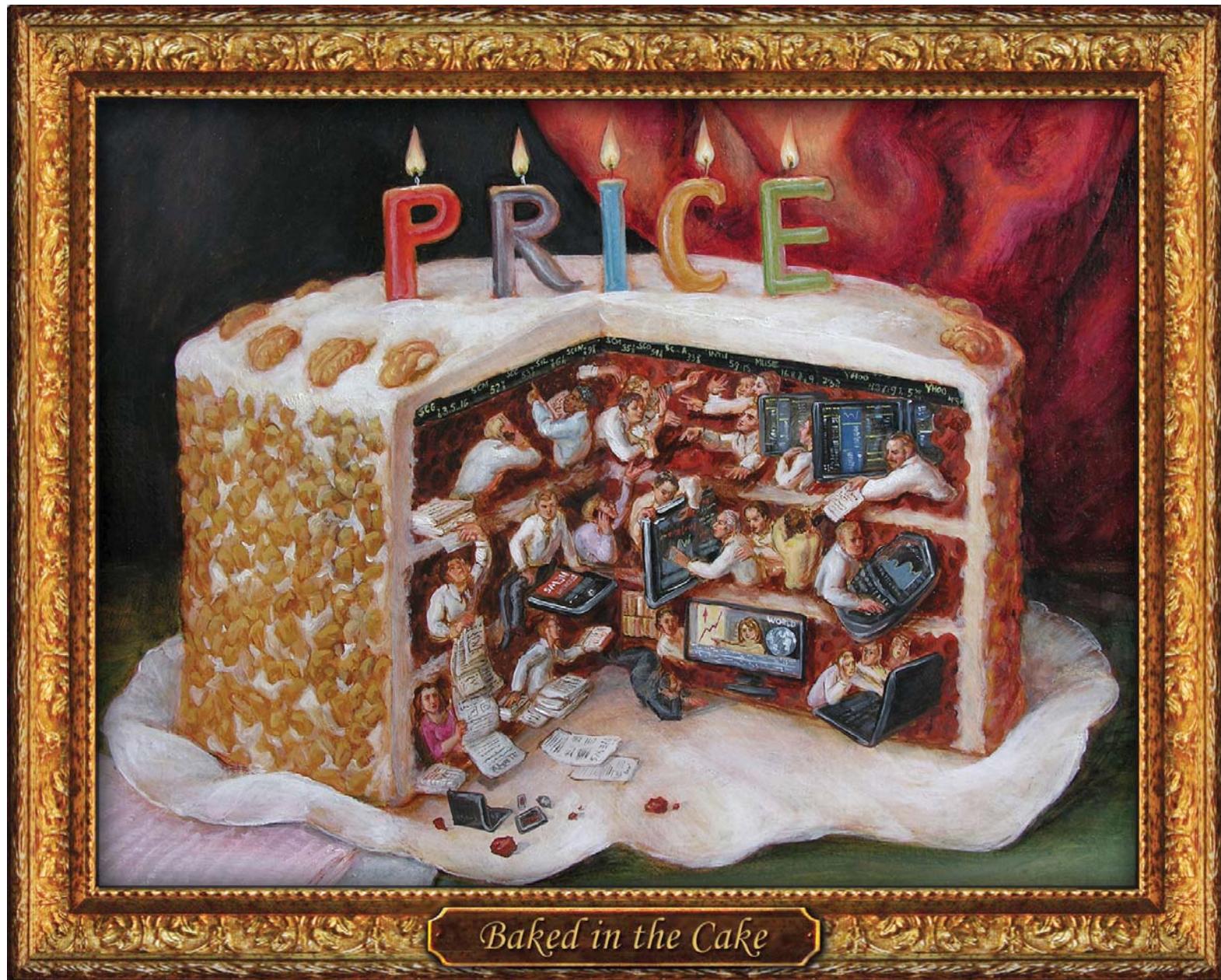
\*THE NUMBERS ABOVE ARE BASED ON A GLOBALLY DIVERSIFIED PORTFOLIO OF INDEX FUNDS SUCH AS THAT USED IN INDEX FUNDS ADVISORS INDEX PORTFOLIO 90. THEY ARE ESTIMATED BY EXTRAPOLATING FORTUNE 500 DATA TO PUBLICLY TRADED COMPANIES IN THE US AND ABROAD. CAPITALISM, INC. IS A HYPOTHETICAL COMPANY.



# Why Invest in a Portfolio of Index Funds?

	Because you get...	Because you avoid...
1.	Obtain market rates of returns with lower fees, expenses and taxes.	Speculation through stock, time, manager and style picking
2.	Increased Diversification	Unrewarded Concentration
3.	83+ years of Risk and Return Data for 100 Index Portfolios and 15 Indexes	Silent Partners and below market rate of returns
4.	Style Purity, Asset Allocation Consistency	Style Drift, Asset Allocation Shift
5.	Relaxation	Stress

# Celebrate the Price!

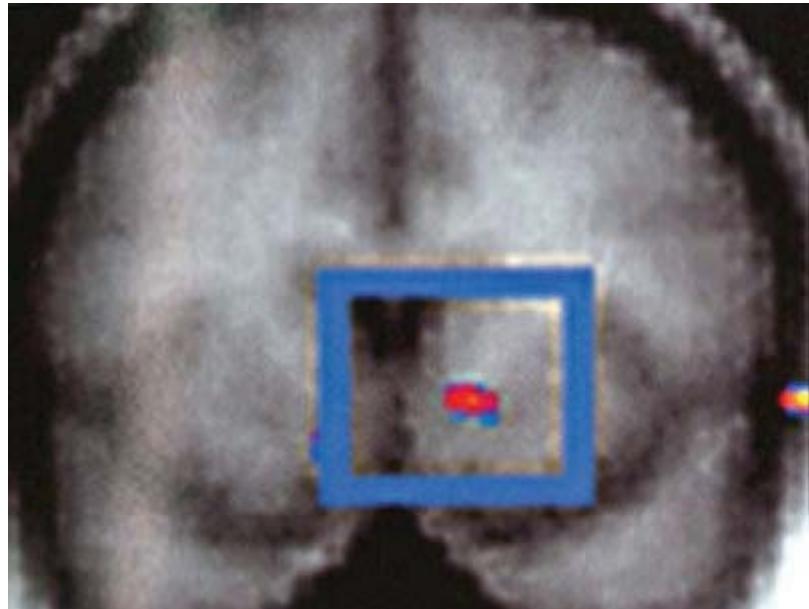
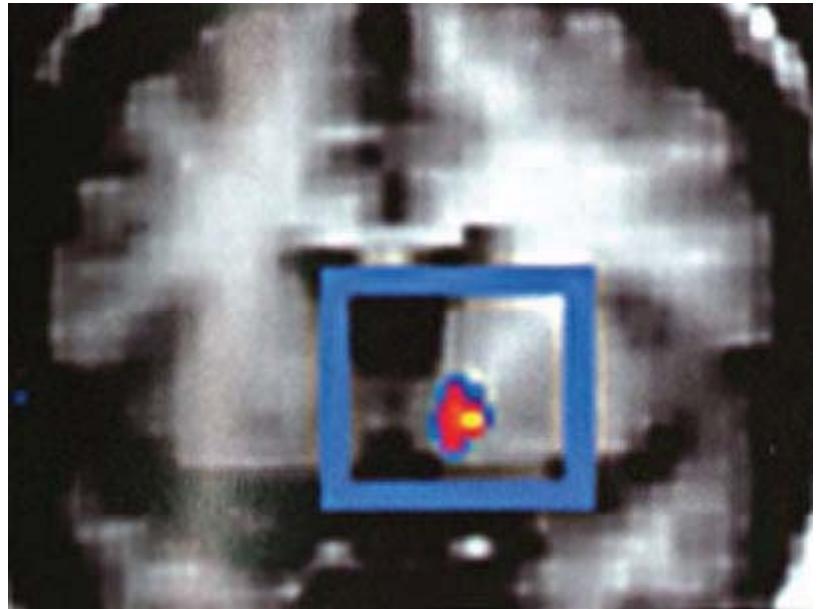




# STEP 1

## ACTIVE INVESTORS

# Expecting Dough vs. Expecting Dope



Nucleus accumbens flaring up

*“Scoring financially is almost indistinguishable from scoring a hit off an addictive drug.”*

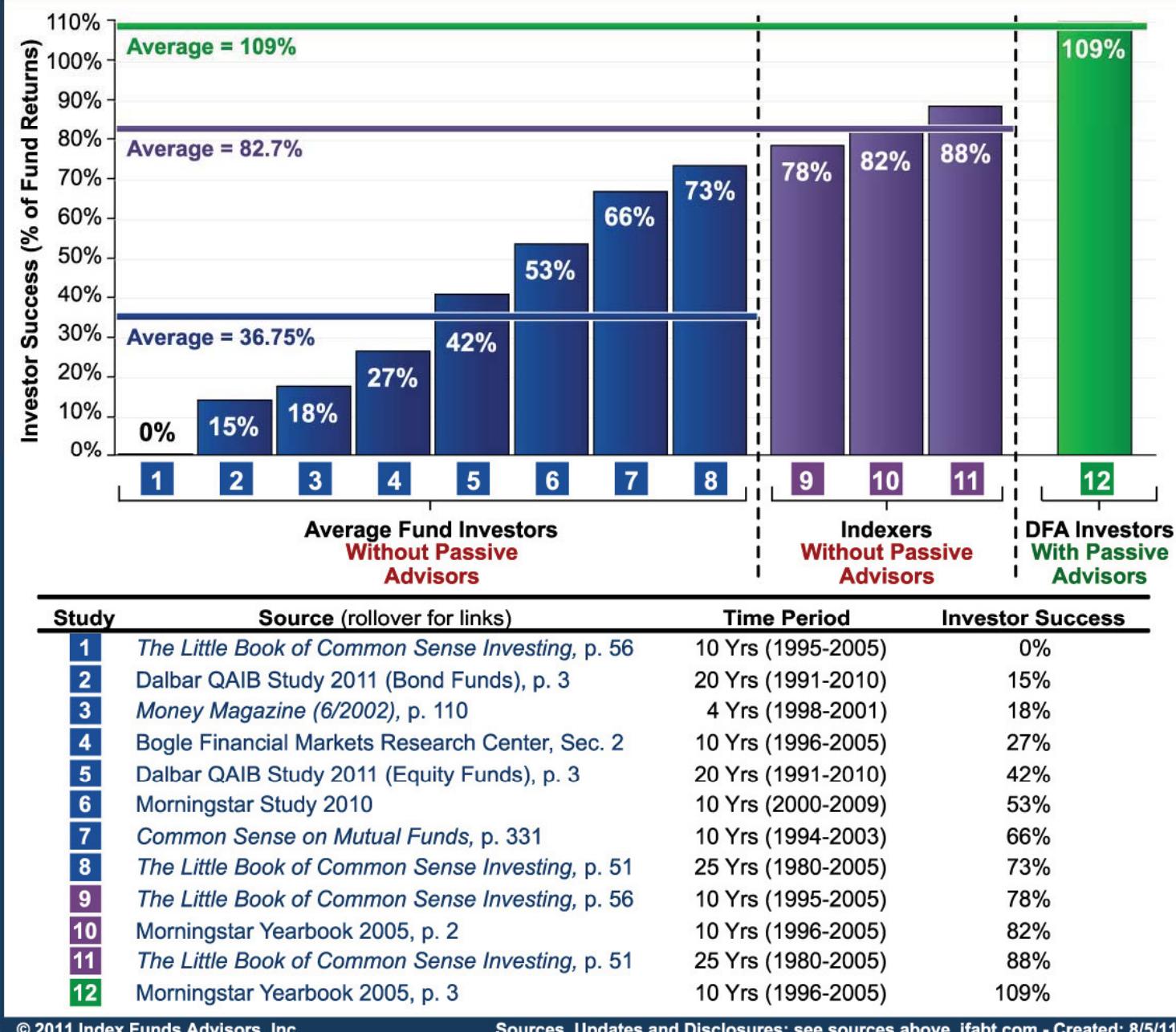
*This is referred to as the “prediction addiction.”*

Source: *Your Money & Your Brain*, Jason Zweig.  
(Courtesy of Hans Breiter, Harvard Medical School)

# Step 1: Active Investors

## Investor Success at Capturing Fund Returns With and Without Passive Advisors

Several Studies Over Various Time Periods Spanning 30 Years



## Investors Should “Tie Themselves to the Mast”



# Step 1: Active Investors

## Average Equity Fund Investor vs. Indexes

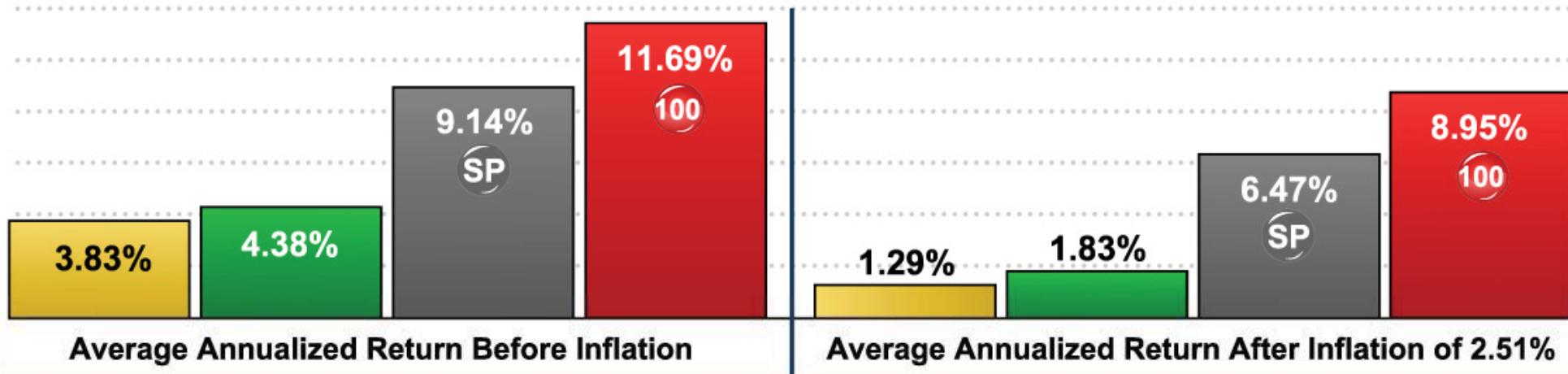
20 Years (1/1/1991 - 12/31/2010)

Average Equity Fund Investor

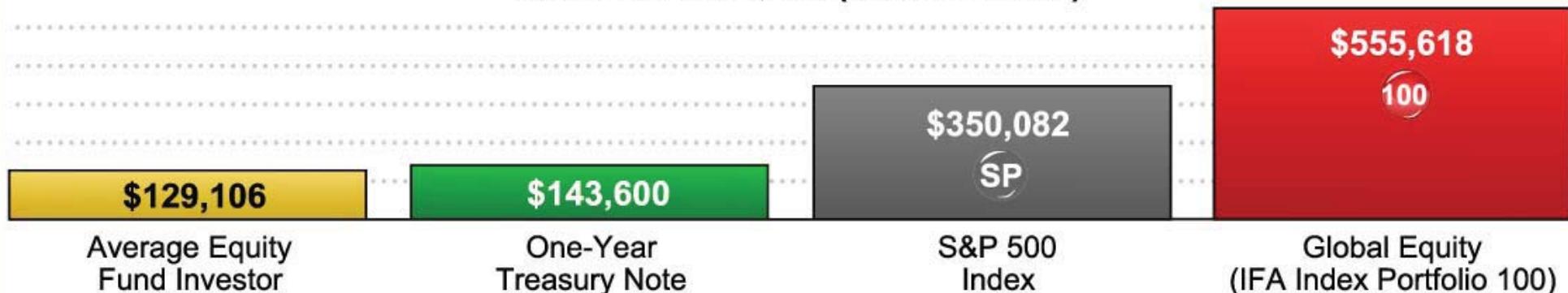
One-Year Treasury Note

S&P 500 Index

Global Equity (IFA Index Portfolio 100)



## Growth of \$100,000 (After Inflation)

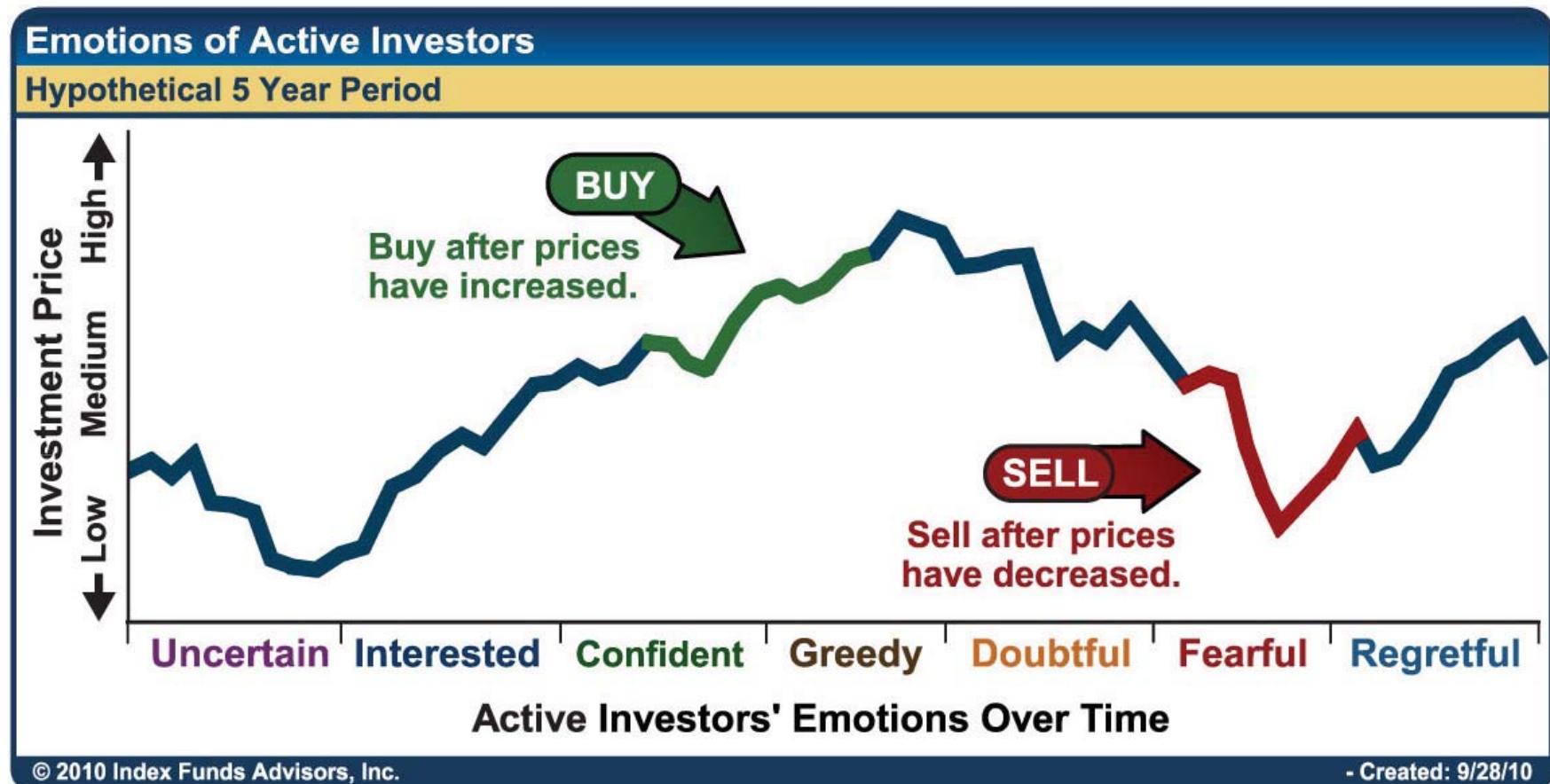


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Sources, Updates and Disclosures: Dalbar.com; ifabt.com - Created: 4/8/11

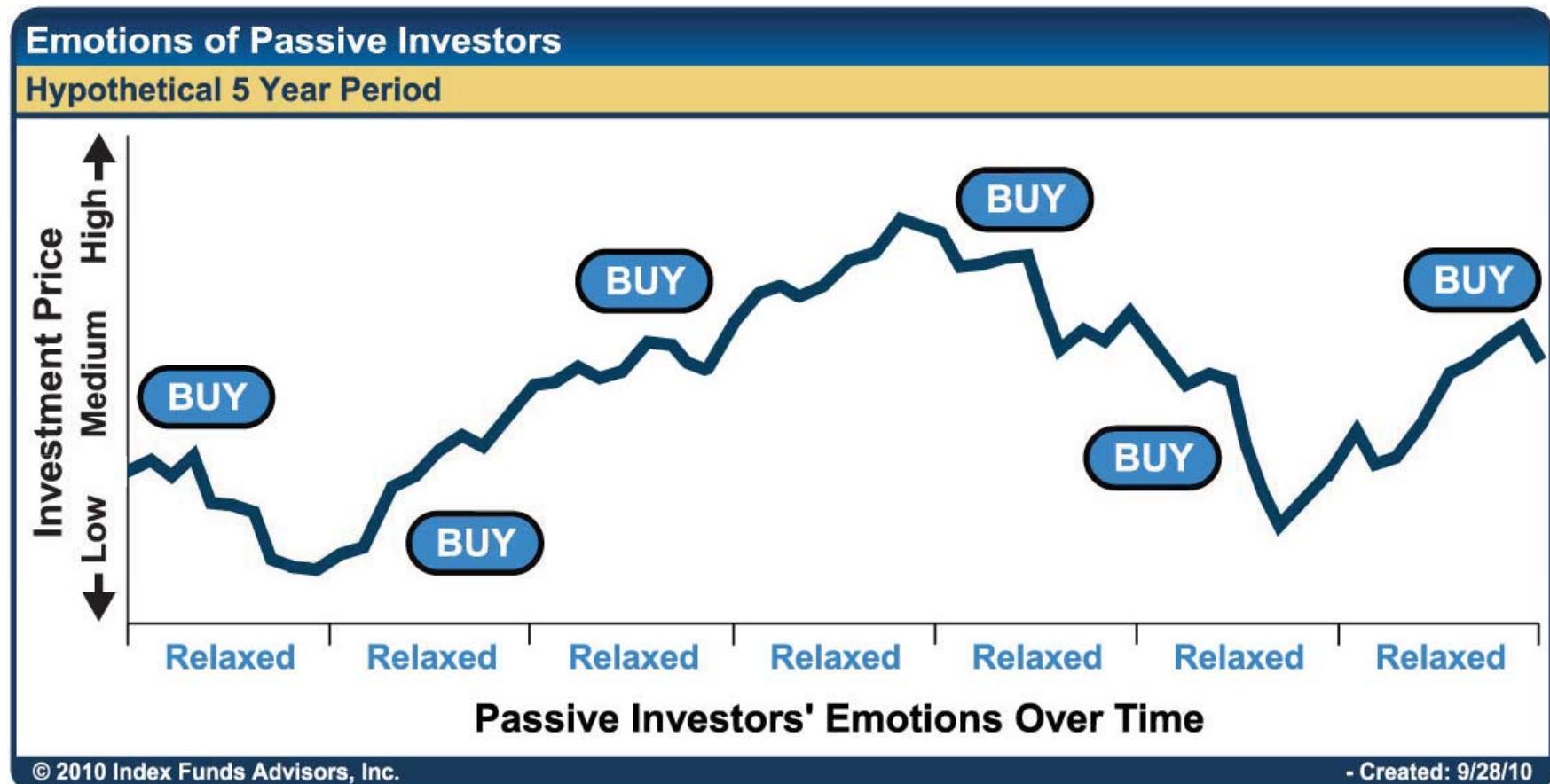
# Emotions of Active Investing

The emotions of active investors go up and down like a roller coaster, leading them to negative returns on average, after expenses and taxes are deducted. The lessons in this 12-Step Program should allow investors to resist the behaviors that have caused them such despair and poor results in the past.

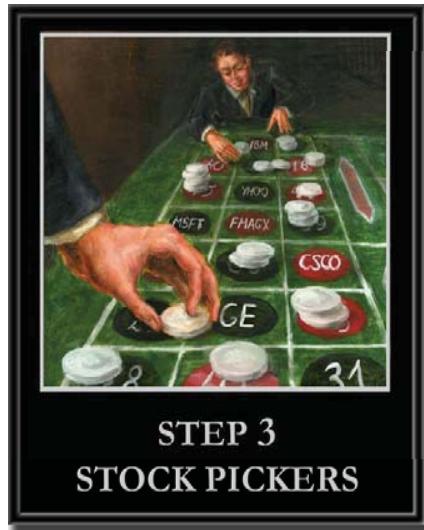


# Emotions of Passive Investing

As a contrast, passive investors invest whenever they have the money to invest and regardless of market conditions, as seen below.



# Four Types of Active Management

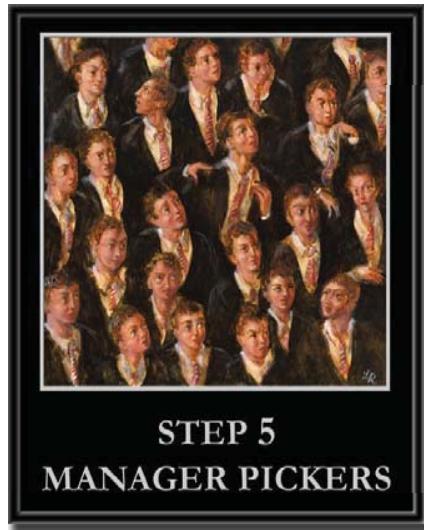
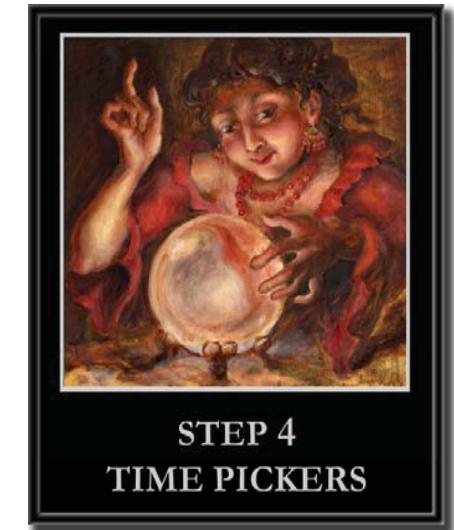


**Stock Pickers**

**Time Pickers**

**Manager Pickers**

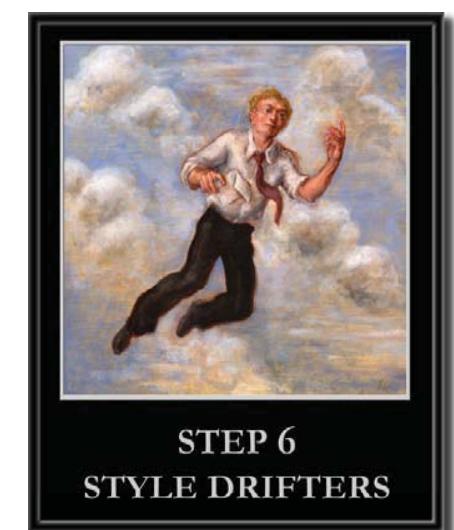
**Style Drifters**



**The Problem:**

Not one of them consistently achieves market rates of return.

Luck doesn't persist and the many will always know more than the few.





STEP 2

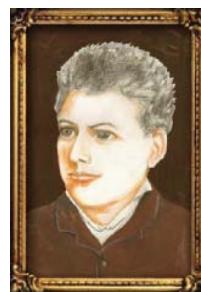
NOBEL LAUREATES

## Modern Portfolio Theory:

1. Markets move randomly and are efficiently priced
2. The allocation of priced risk factors determines returns
3. Diversification reduces risk and increases returns
4. Risk exposure must be matched to risk capacity
5. Probability and statistics help investors control the risk of investing



*Edmund Halley*



*Louis Bachelier*



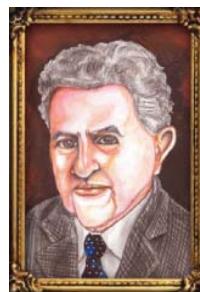
*Alfred Cowles*



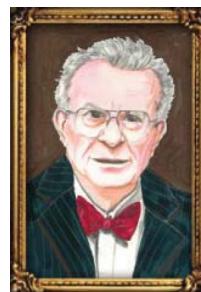
*Harry Markowitz*



*William Sharpe*



*Merton Miller*



*Paul Samuelson*



*Eugene Fama*



*Kenneth French*



*Burton Malkiel*

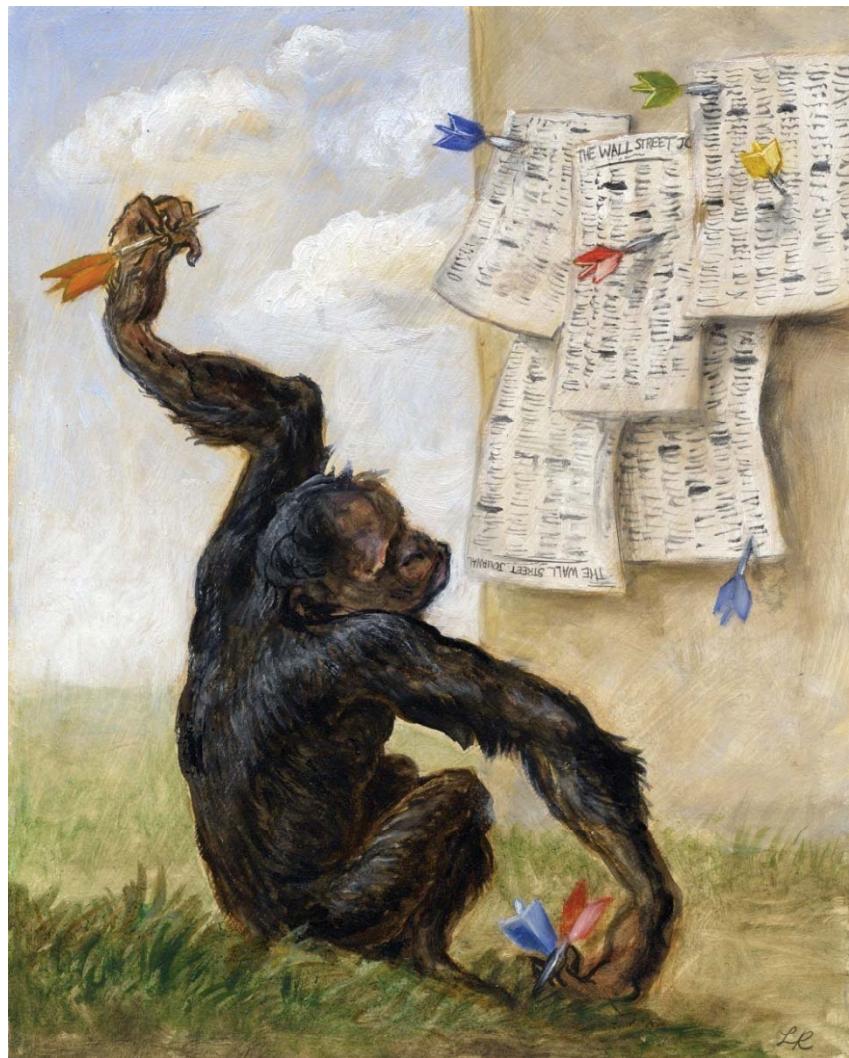
# STEP 3 STOCK PICKERS



## “A Devastating Conclusion... Success = Luck Rather Than Skill”

"A blindfolded monkey throwing darts at a newspaper's financial pages could select a portfolio that would do just as well as one carefully selected by the experts."

Burton Malkiel, Princeton University Professor Economics, "A Random Walk Down Wall Street" 1973



Source: The Trillion Dollar Bet

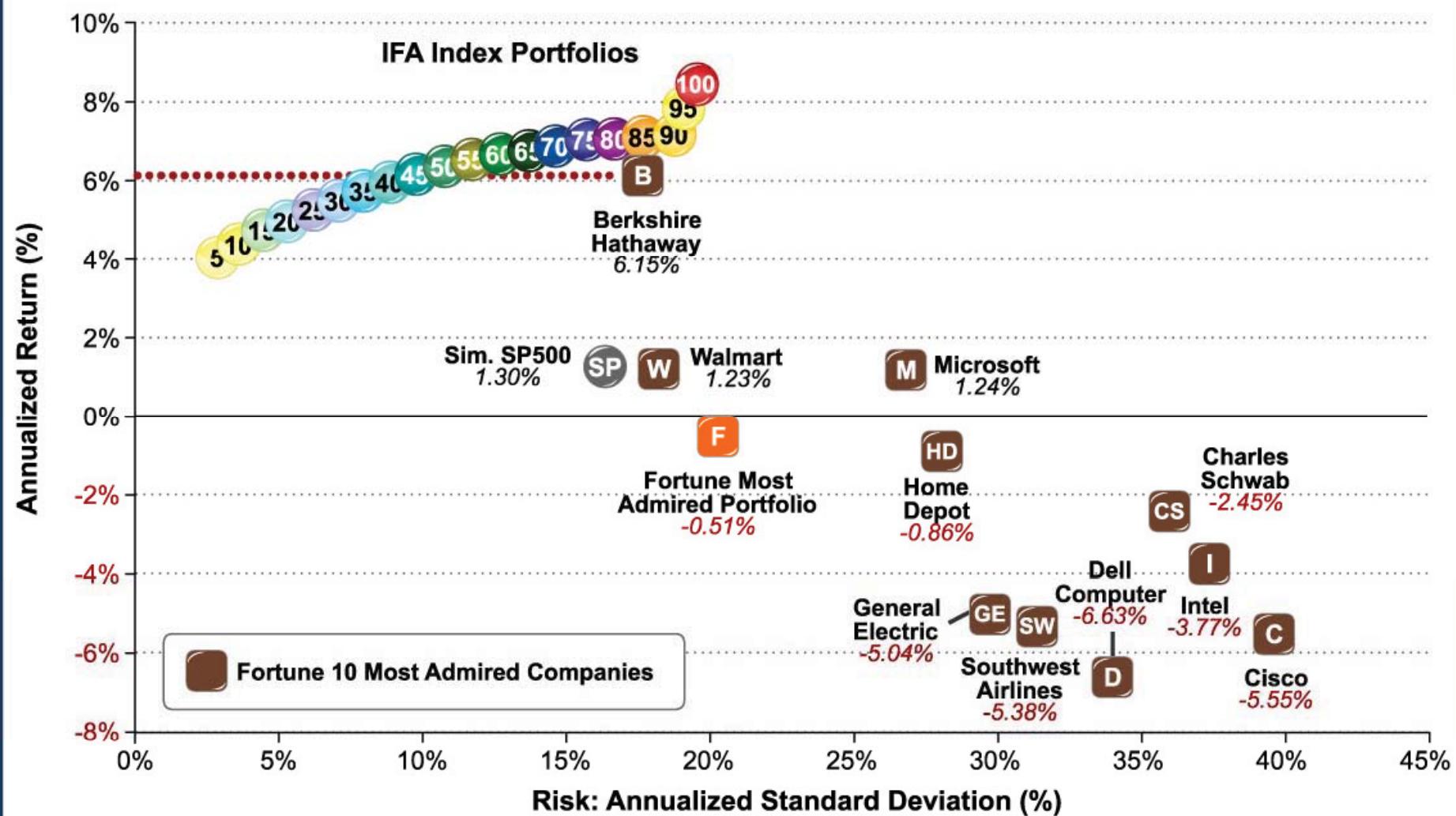


***Lusha Beat 94% of Russian Fund Managers***  
*-UK Daily Mail*

# Step 3: Stock Pickers

## Fortune Magazine's Ten Most Admired Companies in 2001 vs IFA Index Portfolios

10 Years (2/1/2001 - 1/31/2011)



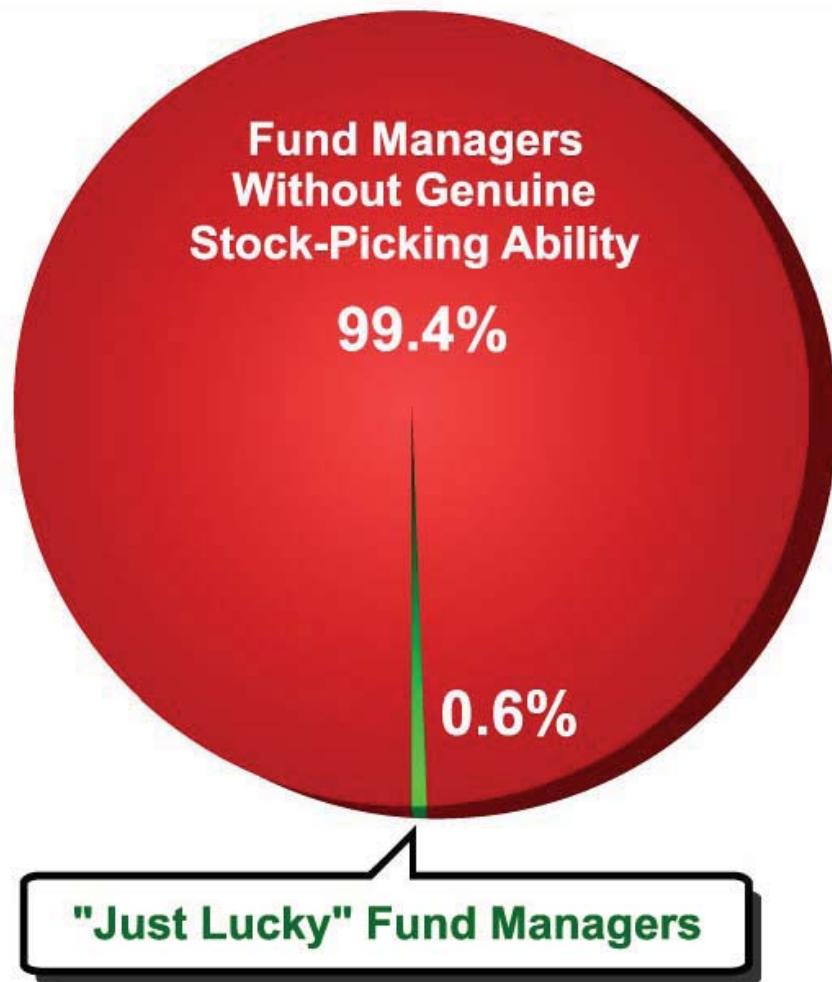
Note: IFA Index Portfolios are net of fund expenses and 0.90% advisory fee and assumed to rebalance annually on Jan 1st.

Fortune Most Admired Portfolio is comprised of an equal weighting of the Fortune 10 Most Admired Companies (Feb 19, 2001 Issue).

Fortune Most Admired Portfolio is assumed to rebalance annually on Feb 1st. All returns include the reinvestment of dividends.

## Stock Picking Skill Statistically Indistinguishable from Zero

32 Years (1/1/1975 - 12/31/2006) Sample Size: 2,076 Fund Managers



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Sources: Hulbert, Mark. "The Presidents Are Few." The New York Times, 7-13-08;

"False Discoveries in Mutual Fund Performance: Measuring Luck in Estimated Alphas - Created: 10/1/10

## “It Seems Almost Hopeless”

*“Professor Wermers says his advice has evolved significantly as a result of this study. Until now, he says, he wouldn’t have tried to discourage a sophisticated investor from trying to pick a mutual fund that would outperform the market. Now, he says, ‘it seems almost hopeless.’ ”*

-Mark Hulbert

“The Prescient Are Few”, NY Times 7/13/08

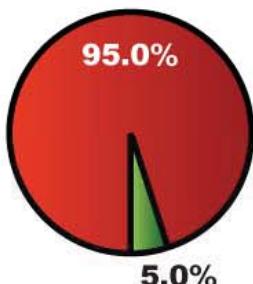
Academic Study: Barras, Laurent, Scaillet , O. and Wermers, Russ R., False Discoveries in Mutual Fund Performance: Measuring Luck in Estimated Alphas (September 1, 2008). Robert H. Smith School Research Paper No. RHS 06-043; Swiss Finance Institute Research Paper No. 08-18. Available at SSRN: <http://ssrn.com/abstract=869748>

# Passive Beats Active: No Matter How you Slice It

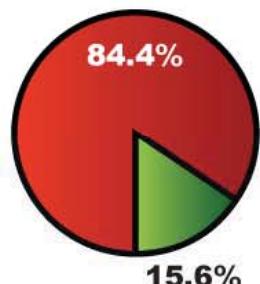
***“It’s like giving up belief in Santa Claus.”***

█ Underperform    █ Overperform

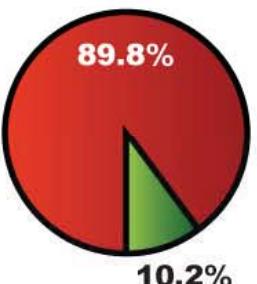
319 Large Value Funds vs.  
IFA US Large Cap Value Index  
2001 - 2006 (5 Years)



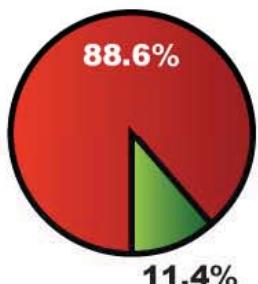
446 Large Value Mutual Funds  
vs. IFA Large Value Index  
1992 - 2007 (15 Years)



157 Small Cap Value Funds vs.  
IFA US Small Cap Value Index  
2001 - 2006 (5 Years)



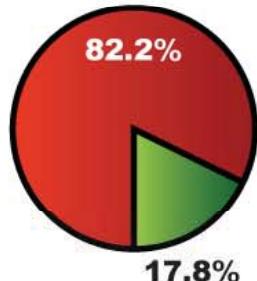
53 Small Value Mutual Funds  
vs. IFA Small Cap Value Index  
1992 - 2007 (15 Years)



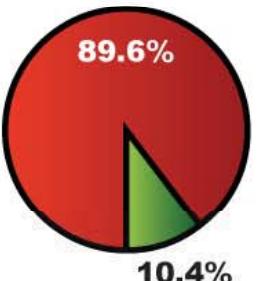
Standard and Poor's, ifa.com/btp

Morningstar, Inc., ifa.com/btp

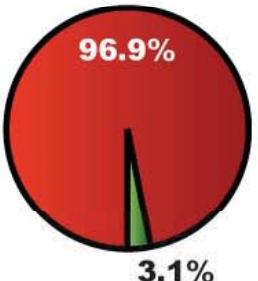
45 Foreign Large Value Mutual  
Funds vs. the IFA International  
Value Index  
1992 - 2007 (15 Years)



77 Emg. Markets Funds vs.  
IFA Emg. Markets Blended Index  
2001 - 2006 (5 Years)



128 World Stock Mutual Fund  
vs. IFA Index Portfolio 100  
1992 - 2007 (15 Years)



Morningstar, Inc., ifa.com/btp

Standard and Poor's, ifa.com/btp

Morningstar, Inc., ifa.com/btp

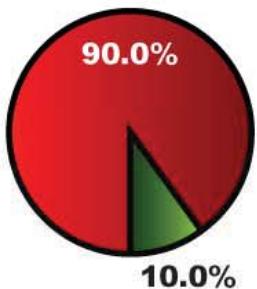
# Passive Beats Active: No Matter How you Slice It



█ Underperform █ Overperform



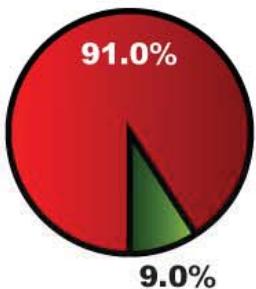
110 National Municipal  
vs. S&P National Municipal  
2003 - 2008 (5 Years)



\*Standard & Poors, Barclay's

8

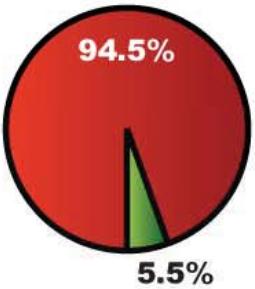
46 CA Municipal  
vs. S&P California Municipal  
2003 - 2008 (5 Years)



\*Standard & Poors, Barclay's

9

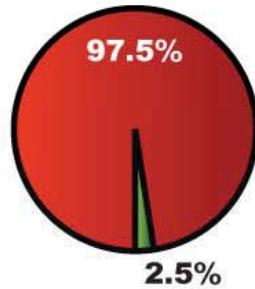
345 Funds vs. S&P 500  
1970 - 2000 (31 Years)



Bogle Financial Markets Research Center

10

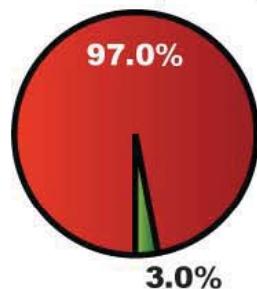
355 Funds vs. S&P 500  
1970 - 1999 (30 Years)



CRSP

11

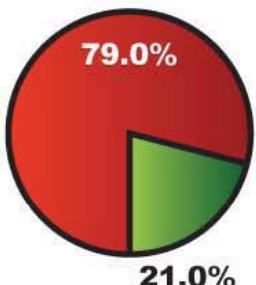
71 Large Cap Growth/Growth &  
Income Mutual Fund Managers  
vs. the S&P 500 Index  
2001 - 2006 (5 Years)



The Journal of Portfolio Management

12

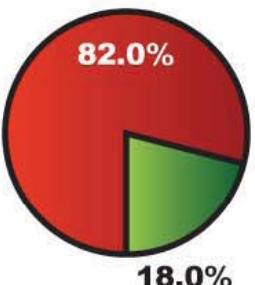
Large-Cap Equity Funds  
vs. the S&P 500 Index  
1996 - 2005 (10 Years)



"A Random Walk Down Wall Street"

13

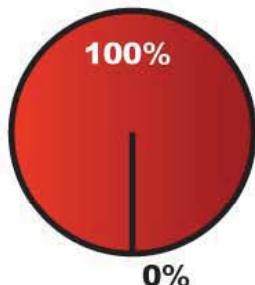
Large-Cap Equity Funds  
vs. the S&P 500 Index  
1986 - 2005 (20 Years)



"A Random Walk Down Wall Street"

14

32 Marketing Timing  
Newsletters vs. the S&P 500  
Index  
1988 - 1997 (10 Years)



Hulbert Financial Digest, Businessweek

15

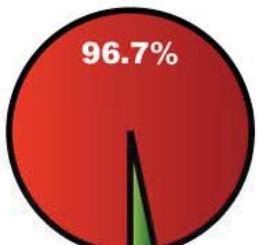
# Passive Beats Active: No Matter How you Slice It

***"Mutual funds can make no claim to superiority over the market averages."***

*"1951 Princeton Senior Thesis" John C. Bogle, Founder and Former CEO of The Vanguard Group*

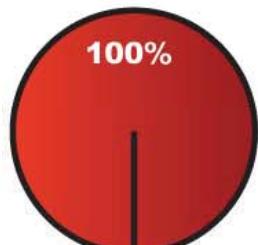
█ Underperform    █ Overperform

570 Peer Bond Funds  
vs. Vanguard Intermediate  
Bond Fund  
1996 - 2006 (10 Years)



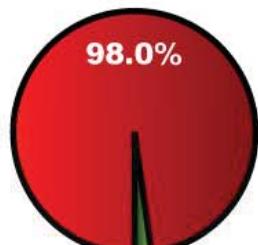
96.7%  
3.3%

194 Peer Bond Funds  
vs. Vanguard Long-Term  
Muni Bond Fund  
1996 - 2006 (10 Years)



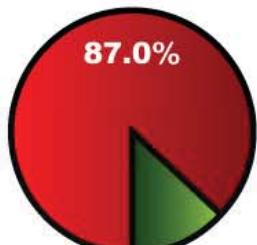
100%  
0%

62 Government Long Fund  
vs. BarCap Long  
Government Fund  
2003 - 2008 (5 Years)



98.0%  
2.0%

68 Government Intermediate  
Fund vs. BarCap Intermediate  
Government Fund  
2003 - 2008 (5 Years)

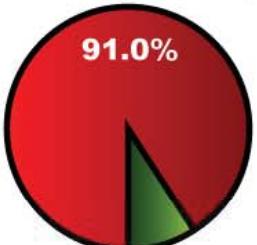


87.0%  
13.0%

"The Little Book of Common Sense Investing"

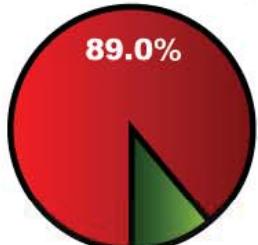
\*Standard & Poors, Barclay's

47 Government Short Fund  
vs. BarCap 1-3 Years  
Government Fund  
2003 - 2008 (5 Years)



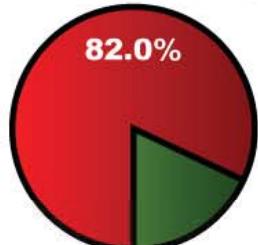
91.0%  
9.0%

149 Investment Grade Long vs.  
BarCap Long  
Gov't/Credit Fund  
2003 - 2008 (5 Years)



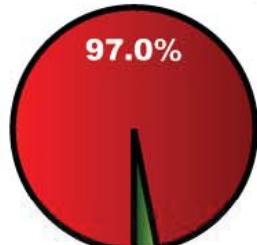
89.0%  
11.0%

221 Investment Grade  
Intermediate vs. BarCap  
Intermediate Gov't/Credit Fund  
2003 - 2008 (5 Years)



82.0%  
18.0%

60 Investment Grade Short  
vs. BarCap 1-3 Years  
Gov't/Credit Fund  
2003 - 2008 (5 Years)



97.0%  
3.0%

\*Standard & Poors, Barclay's

\*Standard & Poors, Barclay's

\*Standard & Poors, Barclay's

# Step 3: Stock Pickers

## Sources:

1. "319 Large Value Funds vs. IFA US Large Cap Value Index, July 2001 - June 2006 (5 Years)"; Standard and Poor's, ifabt.com
2. "446 Large Value Mutual Funds vs. the IFA Large Value Index, April 1992 - March 2007 (15 Years)"; Morningstar, Inc., ifabt.com
3. "157 Small Cap Value Funds vs. IFA US Small Cap Value Index, July 2001 - June 2006 (5 Years)"; Standard and Poor's, ifabt.com
4. "53 Small Value Mutual Funds vs. the IFA Small Cap Value Index, April 1992 - March 2007 (15 Years)"; Morningstar, Inc., ifabt.com
5. "45 Foreign Large Value Mutual Funds vs. the IFA International Value Index, April 1992 - March 2007 (15 Years)"; Morningstar, Inc., ifabt.com
6. "77 Emerging Markets Funds vs. IFA Emerging Markets Blended Index, July 2001 - June 2006 (5 Years)"; Standard and Poor's, ifabt.com
7. "128 World Stock Mutual Funds vs. IFA Portfolio 100, April 1992 - March 2007 (15 Years)"; Morningstar, Inc., ifabt.com
8. "110 National Municipal Funds vs S&P National Municipal, 2003 - 2008 (5 Years)"; Standard & Poors Indicies Versus Active Funds Scorecard, Report 13
9. "46 CA Municipal Funds vs S&P California Municipal, 2003 - 2008 (5 Years)"; Standard & Poors Indicies Versus Active Funds Scorecard, Report 13
10. "Dead Funds and Return of Surviving Mutual Funds Relative to the Market, 1970 - 1999 (30 Years)"; Bogle Financial Markets Research Center
11. "Dead Funds and Return of Surviving Mutual Funds Relative to the Market, 1970 - 2000 (31 Years)"; CRSP
12. "71 Large Cap Growth/Growth and Income Mutual Fund Managers vs. the S&P 500 Index, 1982 - 1991 (10 Years)"; "Is Your Alpha Big Enough to Cover Your Taxes?", The Journal of Portfolio Management
13. "Large-Cap Equity Funds vs. the S&P 500 Index, 1996 - 2005 (10 Years)"; Lipper, from Burton Malkiel's "A Random Walk Down Wall Street"
14. "Large-Cap Equity Funds vs. the S&P 500 Index, 1986 - 2005 (20 Years)"; Lipper, from Burton Malkiel's "A Random Walk Down Wall Street"
15. "32 Market Timing Newsletters vs. the S&P 500 Index, 1988 - 1997 (10 Years)"; Hulbert Financial Digest, Businessweek
16. "570 Peer Bond Funds vs. Vanguard Intermediate Bond Fund, 1996 - 2006 (10 Years)"; "The Little Book of Common Sense Investing" page 143
17. "194 Peer Bond Funds vs. Vanguard Long-Term Muni Bond Fund, 1996 - 2006 (10 Years)"; "The Little Book of Common Sense Investing" page 145
18. "62 Government Long Funds vs BarCap Long Government, 2003 - 2008 (5 Years)"; Standard & Poors Indicies Versus Active Funds Scorecard, Report 13
19. "68 Government Intermediate Funds vs BarCap Intermediate Government, 2003 - 2008 (5 Years)"; Standard & Poors Indicies Versus Active Funds Scorecard, Report 13
20. "47 Government Short Funds vs BarCap 1-3Years Government, 2003 - 2008 (5 Years)"; Standard & Poors Indicies Versus Active Funds Scorecard, Report 13
21. "149 Investment Grade Long Funds vs BarCap Long Government/Credit, 2003 - 2008 (5 Years)"; Standard & Poors Indicies Versus Active Funds Scorecard, Report 13
22. "221 Investment Grade Intermediate Funds vs BarCap Intermediate Government/Credit, 2003 - 2008 (5 Years)"; Standard & Poors Indicies Versus Active Funds Scorecard, Report 13
23. "60 Investment Grade Short Funds vs BarCap 1-3 Years Government, 2003 - 2008 (5 Years)"; Standard & Poors Indicies Versus Active Funds Scorecard, Report 13



STEP 4  
TIME PICKERS

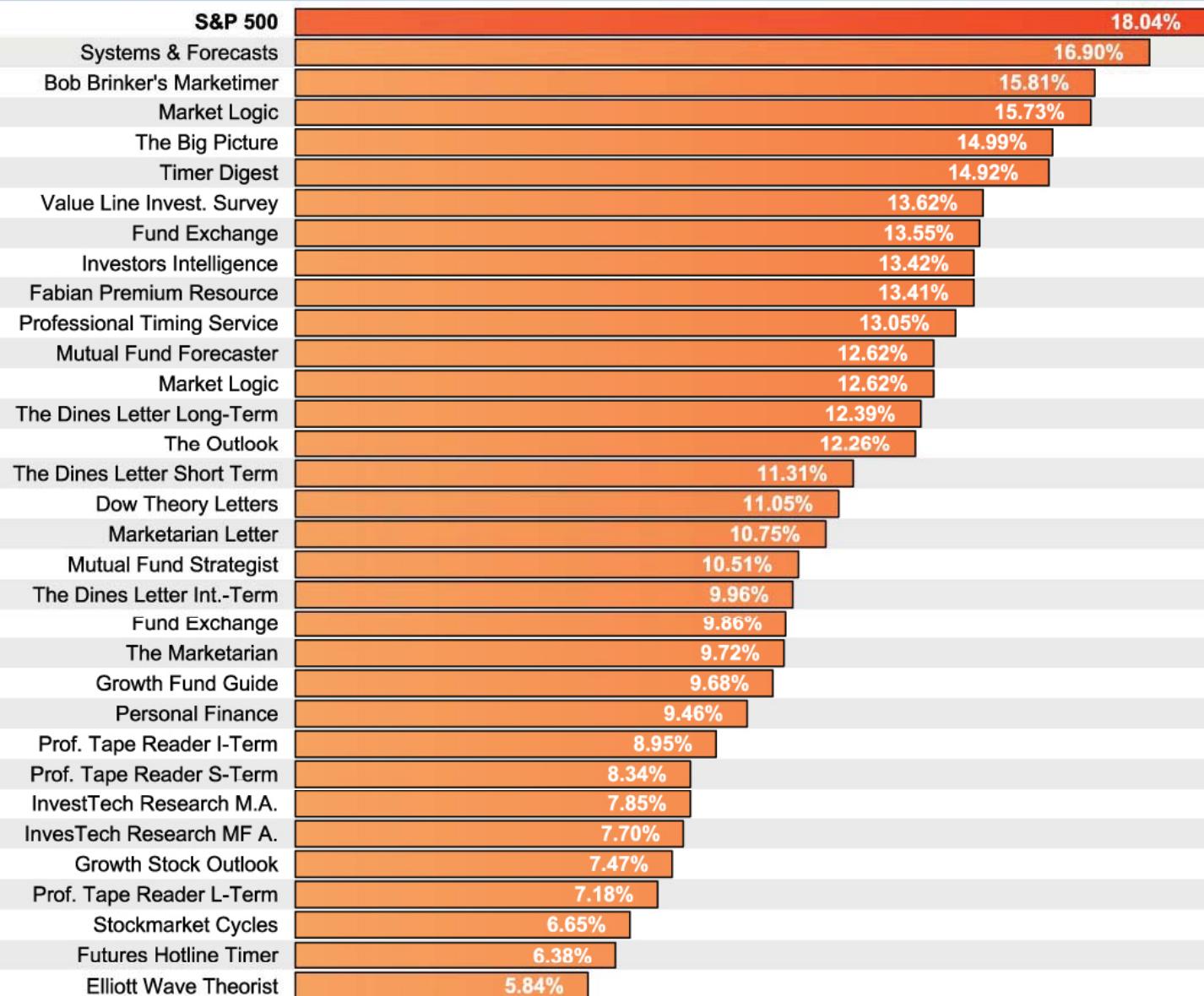
## Step 4: Time Pickers



# Step 4: Time Pickers

## Average Returns of Market Timing Newsletters

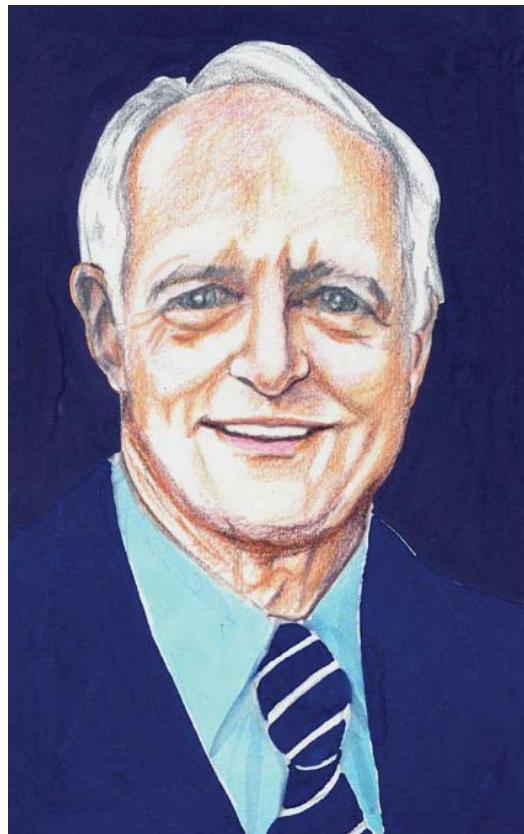
10 Years (1/1/1988 - 12/31/1997)



A dense crowd of people, mostly men in suits and ties, looking upwards with expressions of awe or admiration. A central figure in the middle ground points his finger upwards, drawing the eye towards the top of the frame. The lighting is dramatic, with strong highlights on faces and clothing against a dark background.

# STEP 5

## MANAGER PICKERS

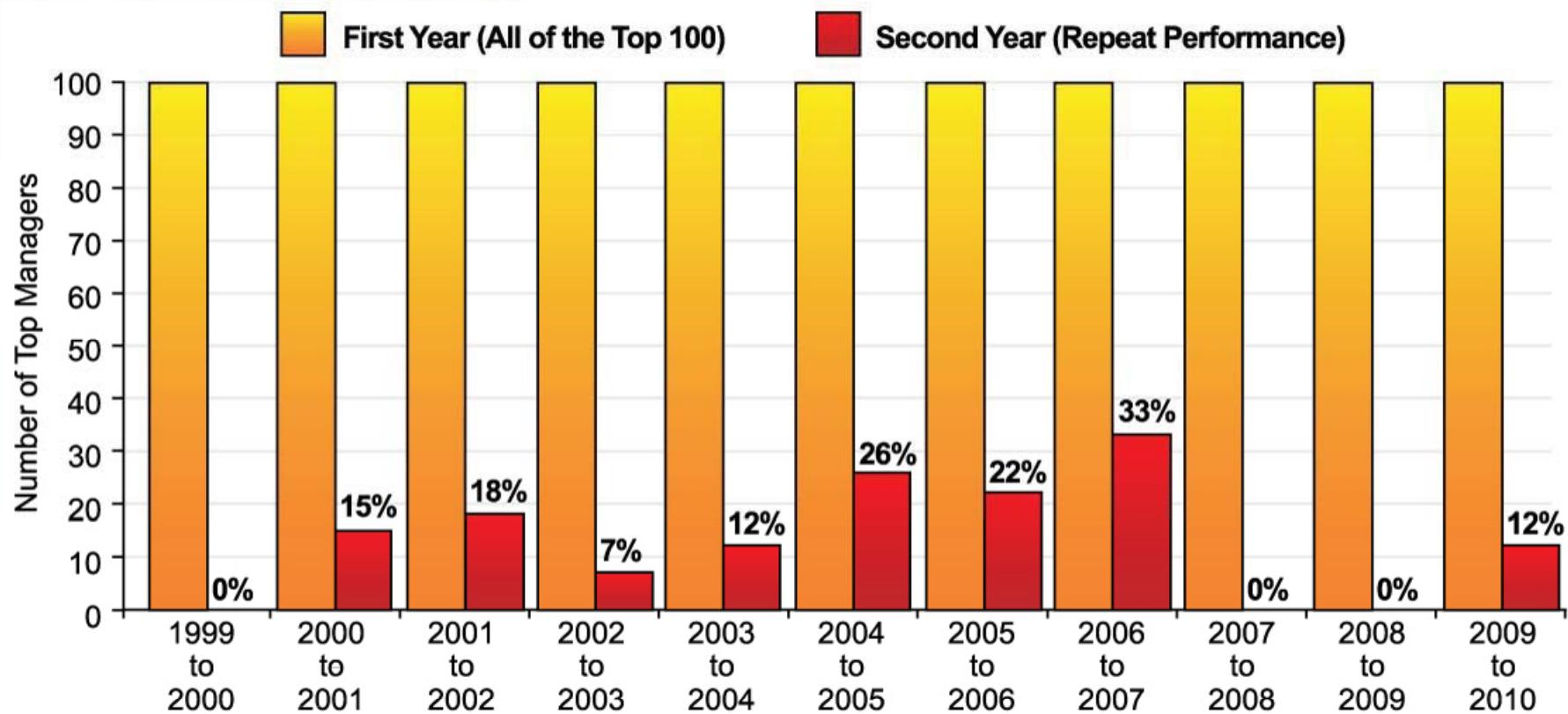


*“Wall Street’s favorite  
scam is pretending  
that luck is skill.”*

-Ron Ross, Ph.D.  
*The Unbeatable Market, 2002*

## What Percent of Top 100 Managers Repeat Their Performance?

12 Years (1/1/1999 - 12/31/2010)



Over this period, an average of only 13.2% of fund managers repeat their performance the following year.

© 2011 Index Funds Advisors, Inc. Source: Morningstar Principia 2010, Universe limited to "Distinct Portfolios", 2011 - Created: 2/8/11

## Performance Chasers Underperform

"We built a unique dataset that comprises hiring and firing decisions by approximately 3,700 plan sponsors over a 10-year period from 1994 to 2003.

Our data represent the allocation of over \$737 billion in mandates to hired investment managers.

Plan sponsors hire investment managers after large positive excess returns up to three years prior to hiring.

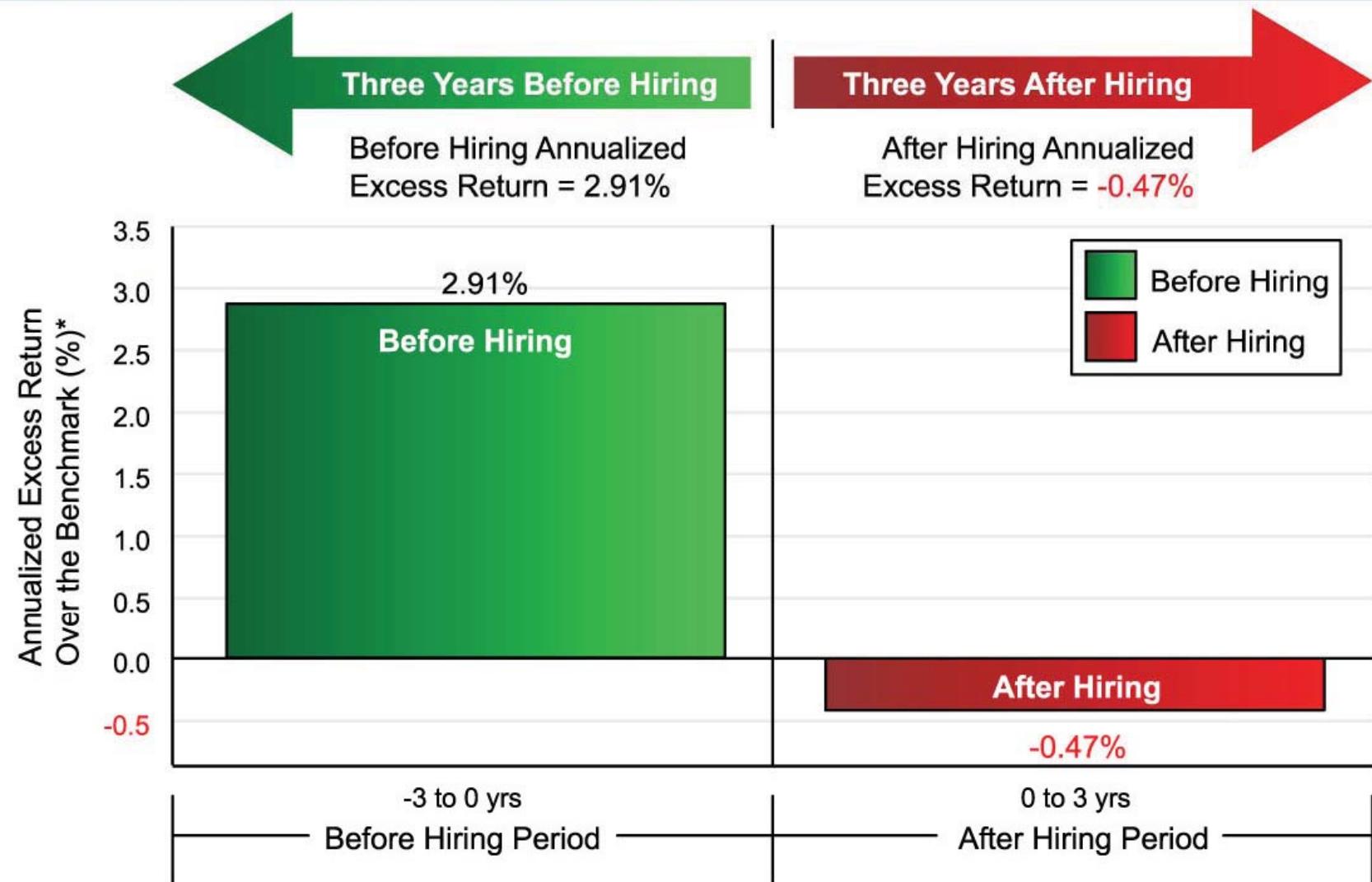
**...return-chasing behavior does not deliver excess returns; post-hiring excess returns [above benchmarks] are indistinguishable from zero."**

Source: *The Selection and Termination of Investment Management Firms by Plan Sponsors*, May, 2005, Sunil Wahal and Amit Goyal

# Step 5: Manager Pickers

## Before and After Hiring Returns of Investment Managers\*

8,755 Hiring Decisions Over 10 Years (1994 - 2003)

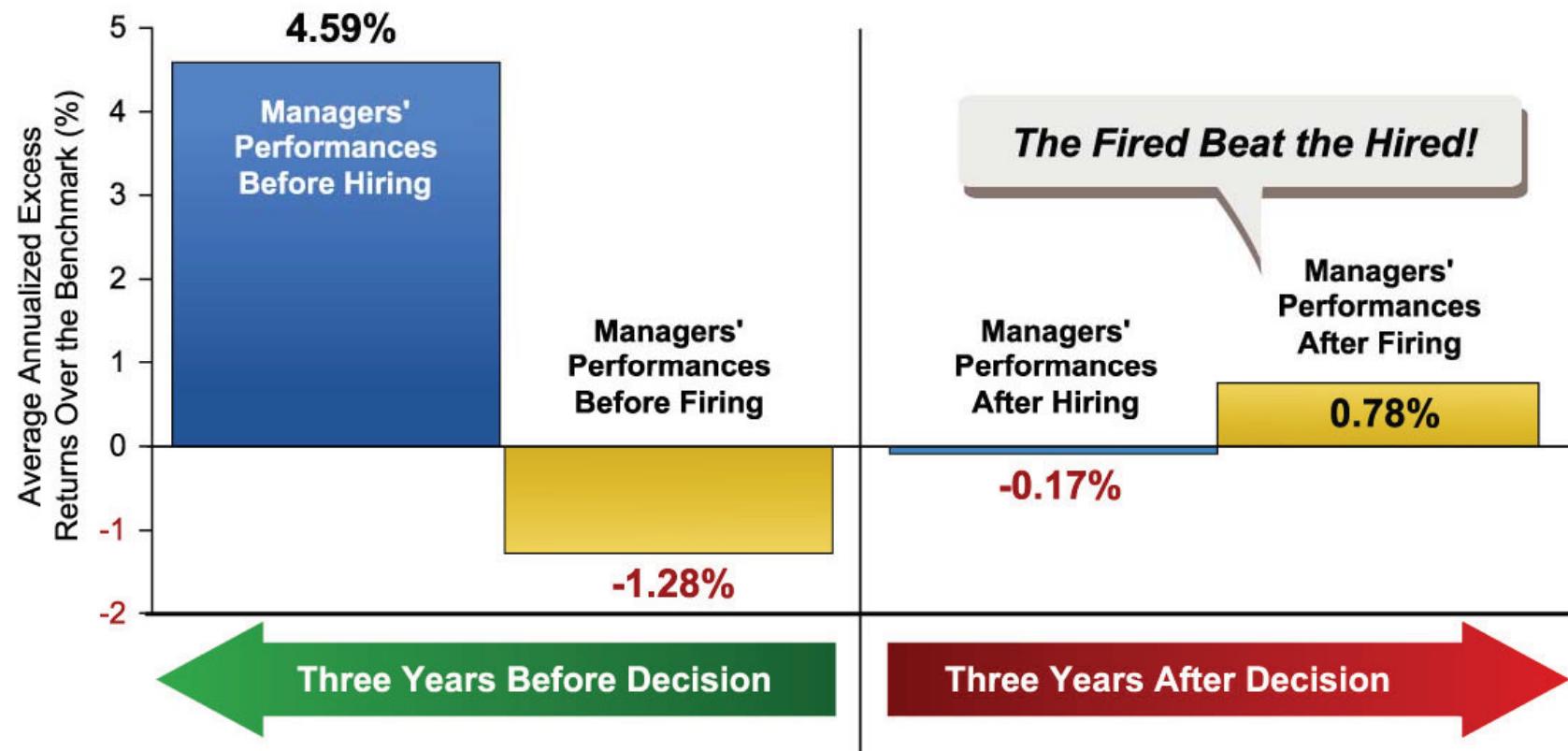


© 2010 Index Funds Advisors, Inc. Source: Selection and Termination of Investment Management Firms by Plan Sponsors - Created: 7/2/10

## Managers' Performance Before and After Hiring or Firing

8 Years (1/1/1996 - 12/31/2003) 660 Round-Trip Decisions

■ Hired Managers      ■ Fired Managers



Note: Investment managers' performances is measured by their average annualized excess returns over the benchmark. The bar chart reflects the results of the study minus an estimated annual 0.5% management fee and an annual 0.5% cost of transition in the after hiring manager returns.

© 2010 Index Funds Advisors, Inc. Source: The Selection and Termination of Investment Management Firms by Plan Sponsors  
- Created: 9/30/10

# Persistence in Manager Performance?

## 2005 Top Ten Managers and Subsequent Performance

Over 6 Years (1/1/2005 - 12/31/2010)

Fund Name	Ticker	Annual Rankings					
		2005	2006	2007	2008	2009	2010
ING Russia A	LETRX	1	6	4,892	5,452	9	415
Aberdeen Natural Resources A	GGNAX	2	801	4,965	4,902	754	4,362
Guinness Atkinson Global Energy	GAGEX	3	2,638	4,970	5,042	276	1,818
T Row Price Latin America	PRLAX	4	12	5,056	5,356	18	1,484
T Rowe Price Em Eur & Mediterranean	TREMX	5	122	4,852	5,456	10	117
Matthes Korea Investor	MAKOX	6	1,970	4,560	5,267	283	1,049
BlackRock Energy & Resources Inv A	SSGRX	7	3,520	4,909	5,289	118	733
Fidelity Latin America	FLATX	8	28	5,026	5,330	47	1,850
Blackrock Latin America Inv A	MDLTX	9	20	5,038	5,331	14	1,465
Fidelity Select Energy Service	FSESX	10	2,876	5,067	16	296	381

Total number of mutual funds used in the ranking: 6,492. Universe limited to "Distinct Portfolios" and "No Index Funds".

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Source: Morningstar Principia 2010 - Created: 2/23/11



STEP 6  
STYLE DRIFTERS

# Step 6: Style Drifters

## Style Drifters: Can You Pick the Next Asset Class Winner?

20 Years (1/1/1991 - 12/31/2010)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Highest Annual Returns	EM 69%	SV 31%	EM 89%	IV 9%	LV 38%	RE 34%	LC 33%	LC 29%	EM 72%	RE 28%	SV 18%	ISV 6%	ISV 66%	ISV 35%	EM 30%	RE 35%	EM 36%	1F 4%	EM 72%	SC 31%
	SC 48%	SC 20%	ISV 45%	ISV 8%	LC 37%	SV 24%	SV 33%	IV 15%	SC 25%	SV 25%	RE 13%	RE 4%	EM 60%	RE 32%	ISV 23%	IV 34%	IV 10%	SV -34%	ISV 40%	SV 29%
	SV 45%	RE 15%	IV 40%	1F 2%	SV 31%	LC 23%	LV 28%	LV 12%	LC 21%	LV 10%	SC 13%	1F 4%	SV 54%	EM 30%	IV 15%	EM 29%	LC 5%	LC -37%	IV 39%	RE 24%
	LC 30%	LV 14%	SV 23%	LC 1%	SC 30%	LV 20%	SC 24%	ISV 5%	ISV 19%	1F 7%	1F 6%	IV -9%	SC 51%	IV 29%	RE 13%	ISV 28%	1F 5%	SC -36%	SC 36%	EM 22%
	LV 31%	LC 7%	RE 19%	SV 1%	RE 12%	SC 18%	RE 19%	1F 6%	IV 16%	SC 2%	LV 4%	SV -10%	IV 50%	SV 25%	LV 10%	LV 20%	ISV 3%	RE -40%	RE 33%	LV 20%
	RE 23%	1F 5%	LV 17%	SC -1%	IV 12%	EM 11%	1F 6%	SV -3%	SV 13%	IV 0%	ISV -5%	EM -9%	RE 36%	LV 18%	SV 9%	SV 20%	LV -3%	LV -41%	SV 32%	ISV 18%
	IV 10%	EM 3%	SC 14%	LV -5%	1F 8%	IV 8%	IV -3%	SC -6%	1F 5%	ISV -3%	EM -7%	LV -15%	LV 34%	SC 18%	SC 6%	SC 17%	SC -3%	ISV -42%	LV 30%	LC 15%
	1F 9%	IV -11%	LC 10%	RE -8%	EM 2%	1F 6%	EM -19%	EM -9%	LV 5%	LC -9%	LC -12%	SC -19%	LC 28%	LC 11%	LC 5%	LC 16%	SV -8%	IV -46%	LC 27%	IV 11%
	ISV 4%	ISV -22%	1F 4%	EM -11%	ISV 1%	ISV 1%	ISV -23%	RE -15%	RE -2%	EM -29%	IV -15%	LC -22%	1F 2%	1F 1%	1F 2%	RE -19%	EM -49%	1F 2%	1F 1%	

**LC** IFA U.S. Large Company Index

**LV** IFA U.S. Large Value Index

**SC** IFA U.S. Small Company Index

**SV** IFA U.S. Small Cap Value Index

**RE** IFA Real Estate Securities Index

**IV** IFA International Value Index

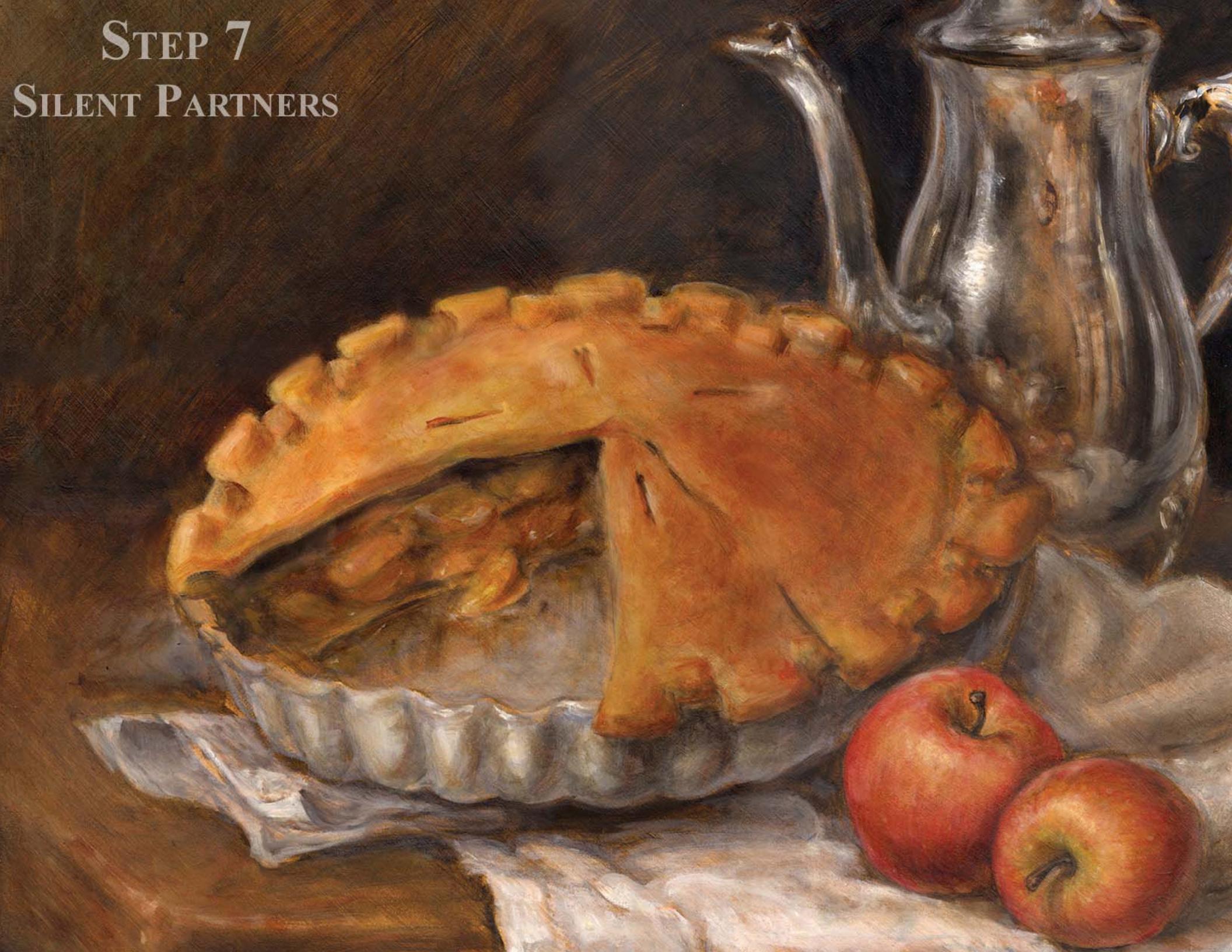
**ISV** IFA International Small Cap Value Index

**EM** IFA Emerging Markets Index

**1F** IFA One-Year Fixed Income Index

STEP 7

SILENT PARTNERS



## Numerous “Silent Partners” take bites out of your investments, these can include:

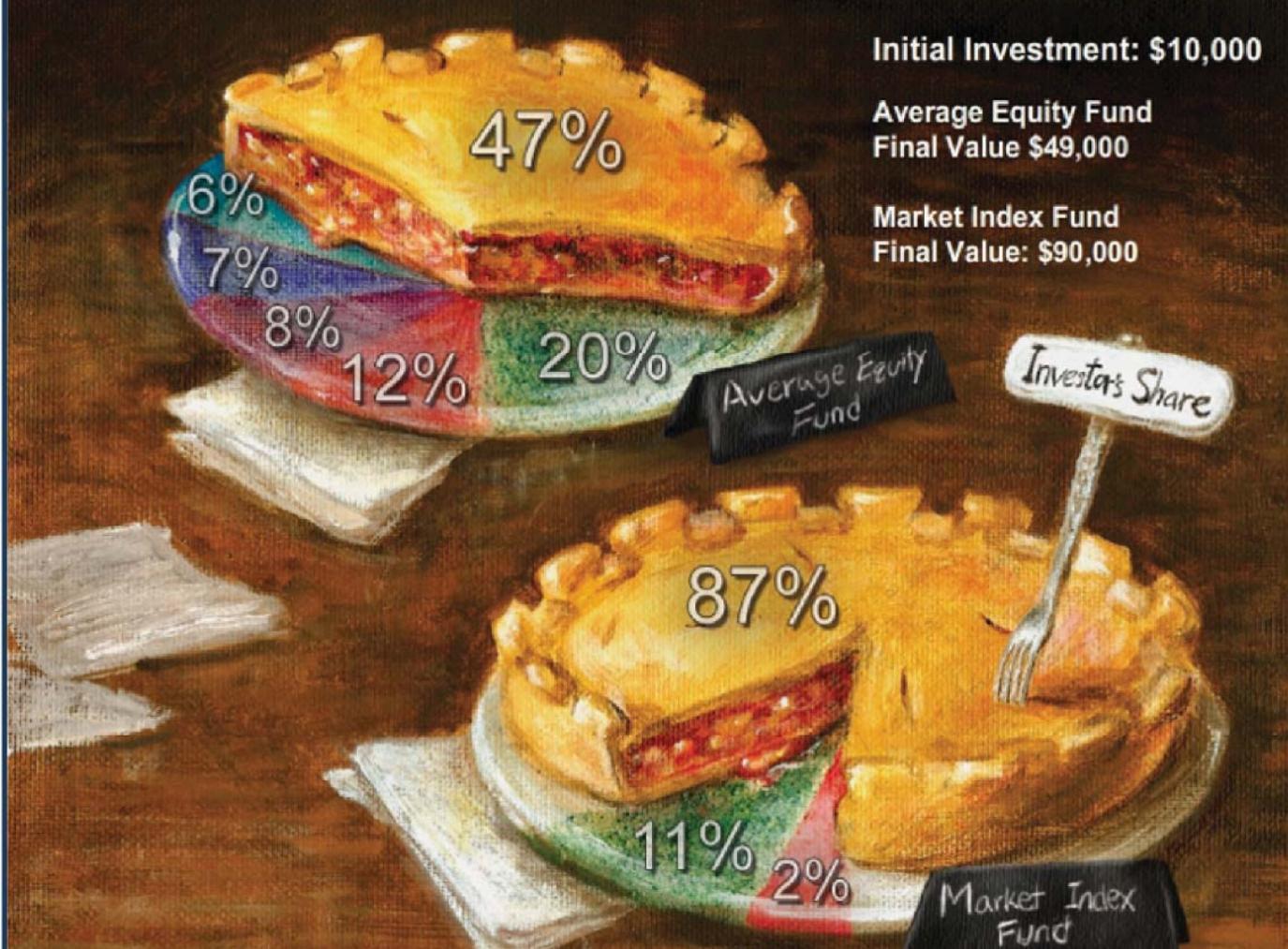
- Sales agents or stockbrokers
- Fund managers
- Accountants
- Investment advisory fees
- Market makers
- Transfer agents
- Mutual fund distributors
- Brokerage firms



# Step 7: Silent Partners

## Ending Values of the Average Equity Fund vs Index Fund

15 Years (1/1/1984 - 12/31/1998)



Investor Return



Transaction Cost



Cash Drag



Sales Commission



Expense Ratio



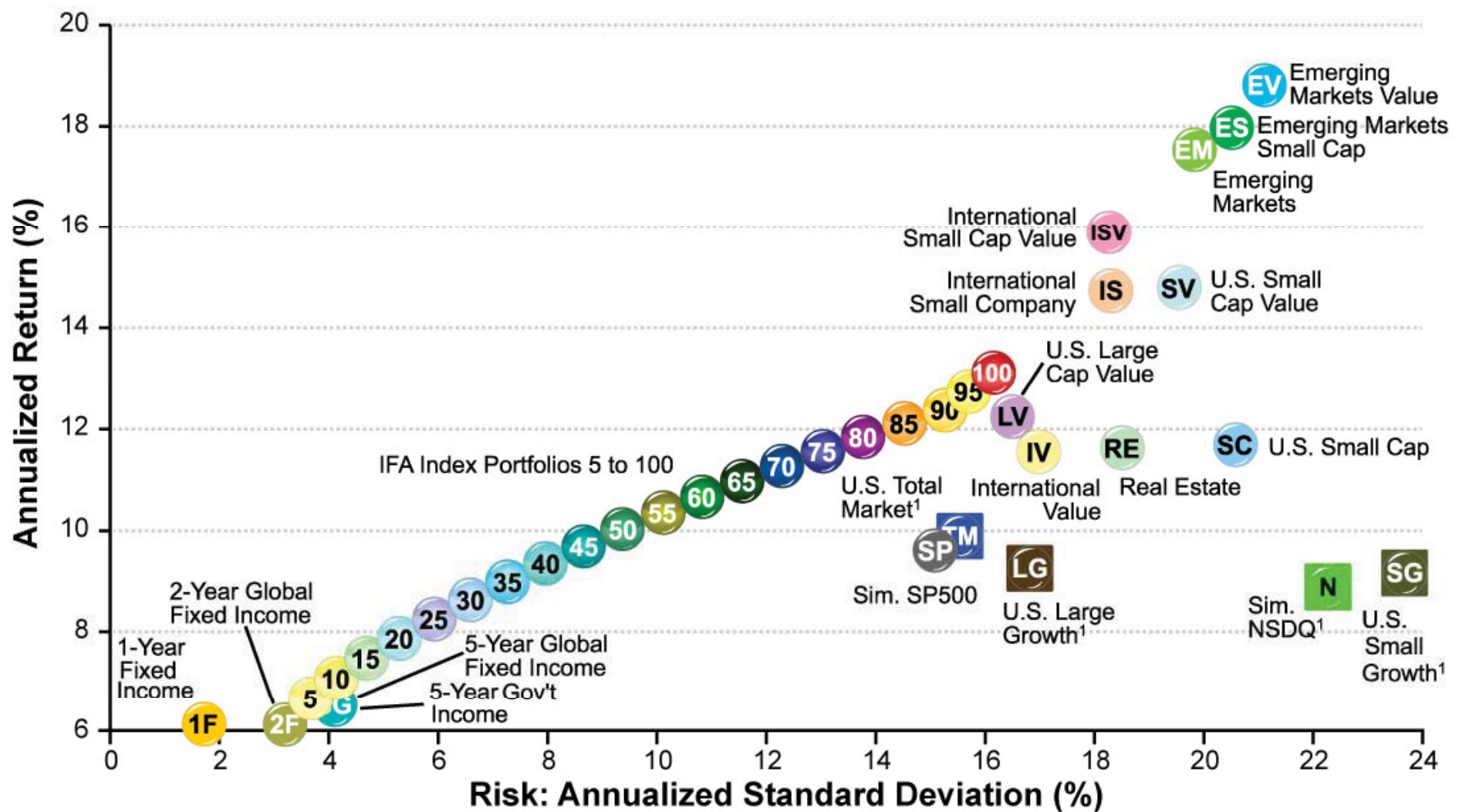
Taxes



STEP 8  
RISKESE

## Risk Return Scatter Plot of IFA Index Portfolios and IFA Indexes

50 Years (1/1/1961 - 12/31/2010)



<sup>1</sup> Indexes that are excluded from IFA Index Portfolios

*The job of the free market is to set prices so that investors are compensated for the risk they bear.*

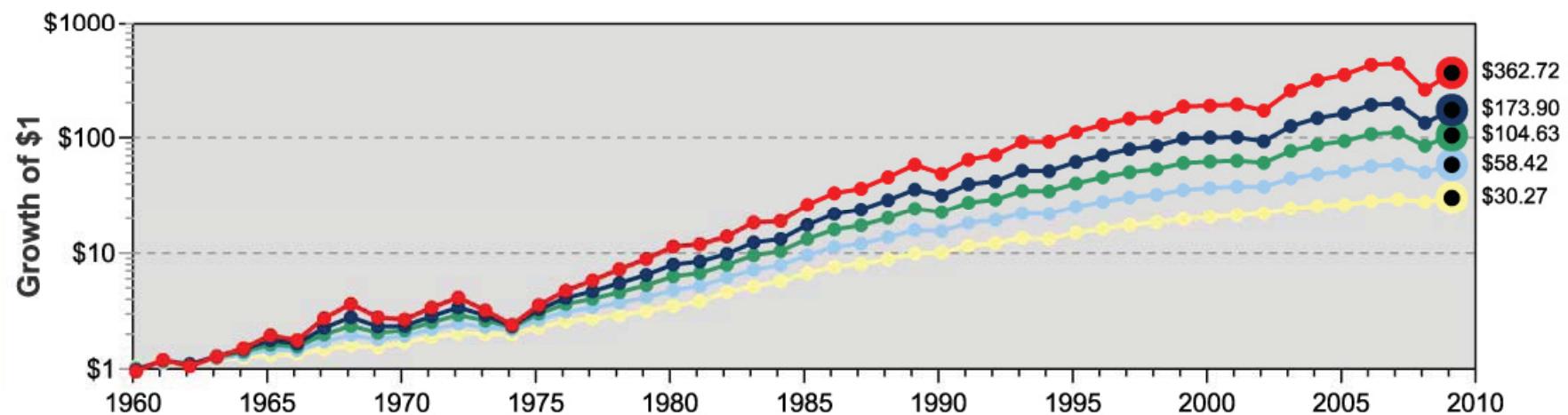
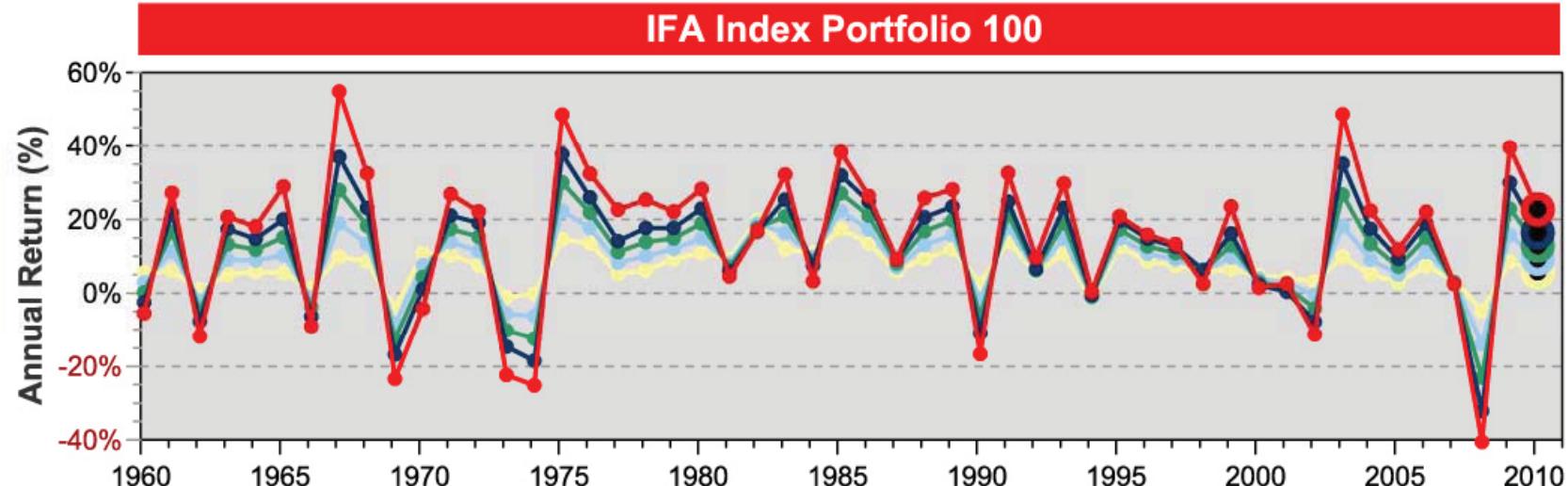


## Roller Coaster of Risk and Return for IFA Index Portfolios and IFA Indexes

50 Yrs (1/1/1961-12/31/2010) Click Buttons to Toggle On/Off, White Button to Clear

IFA Index Portfolios  5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

IFA Indexes SP LC LV SC SV RE IS IV ISV EM EV ES 1F 2F 5G TM LG SG ▶



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Sources, Updates and Disclosures: ifabt.com - Created: 1/13/11

$$P_i = E_r / U_{E_r}$$

Price = Expected Return/Risk





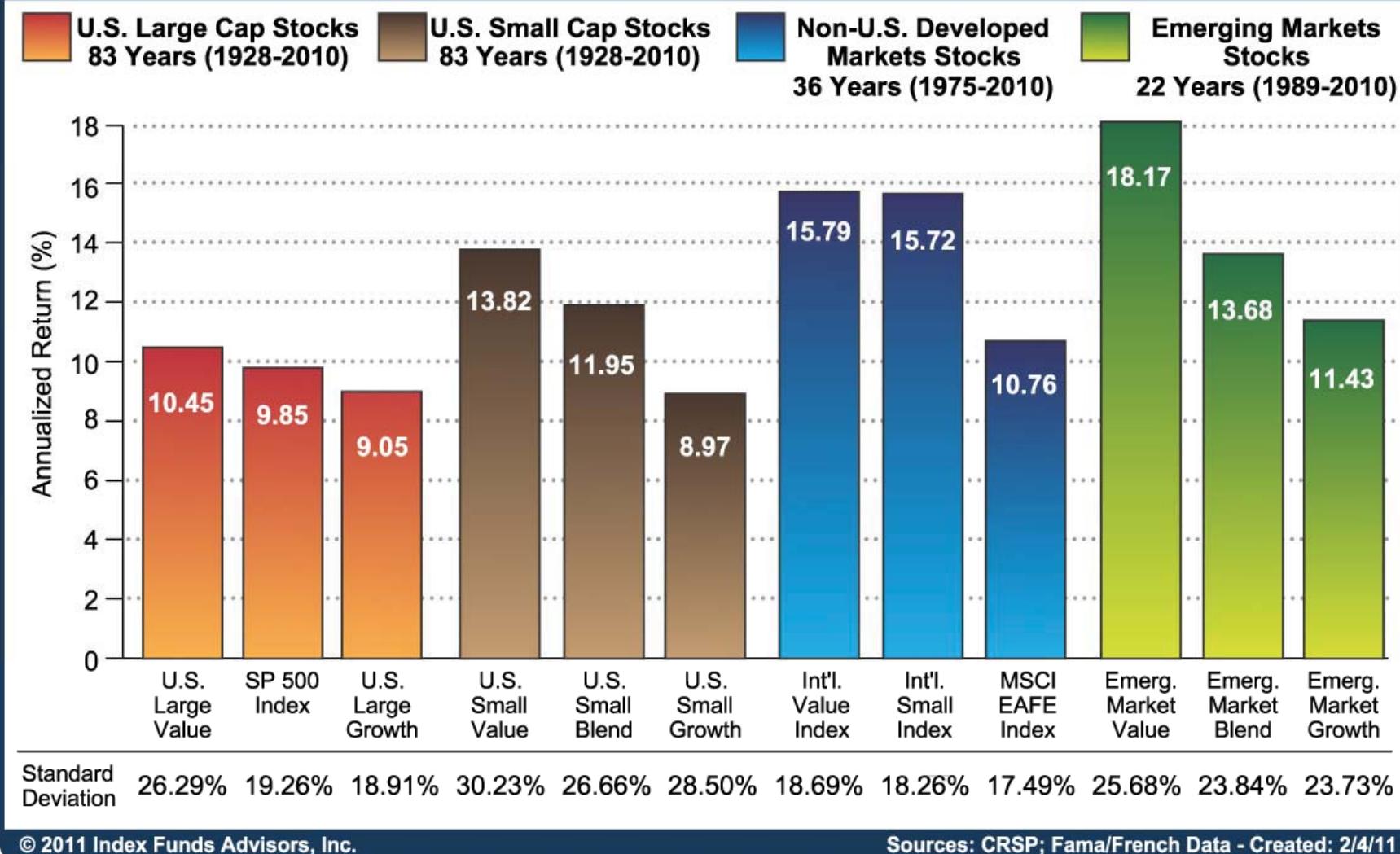
# **STEP 9**

## **HISTORY**

# The Case for a Small Value Tilt

## Value, Blend and Growth Indexes Around the World

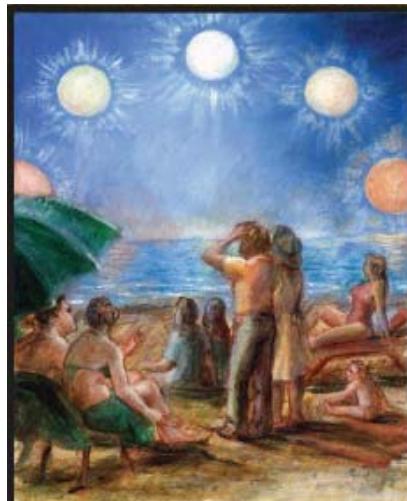
### Annualized Returns and Standard Deviation Over Various Periods



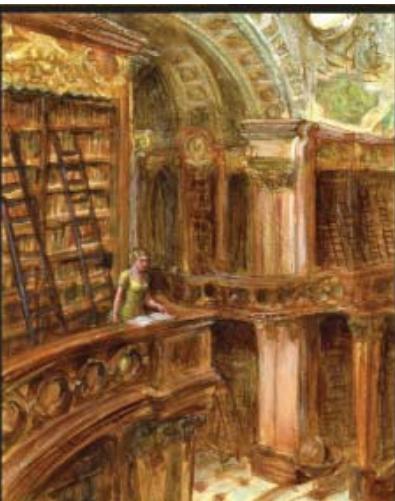


**STEP 10**  
**RISK CAPACITY**

## An Investor's 5 Dimensions of Risk Capacity



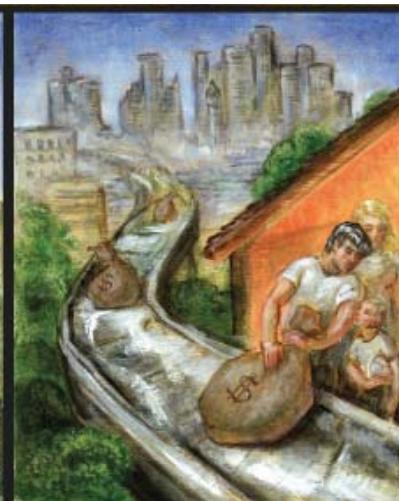
TIME



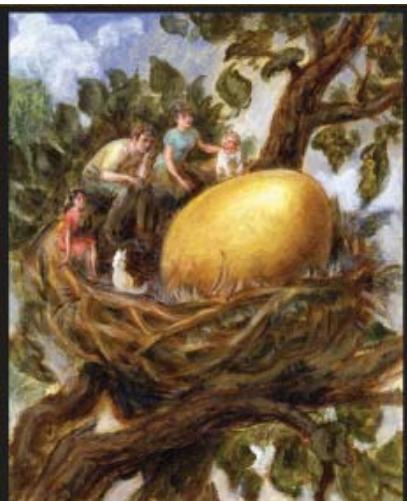
KNOWLEDGE



ATTITUDE



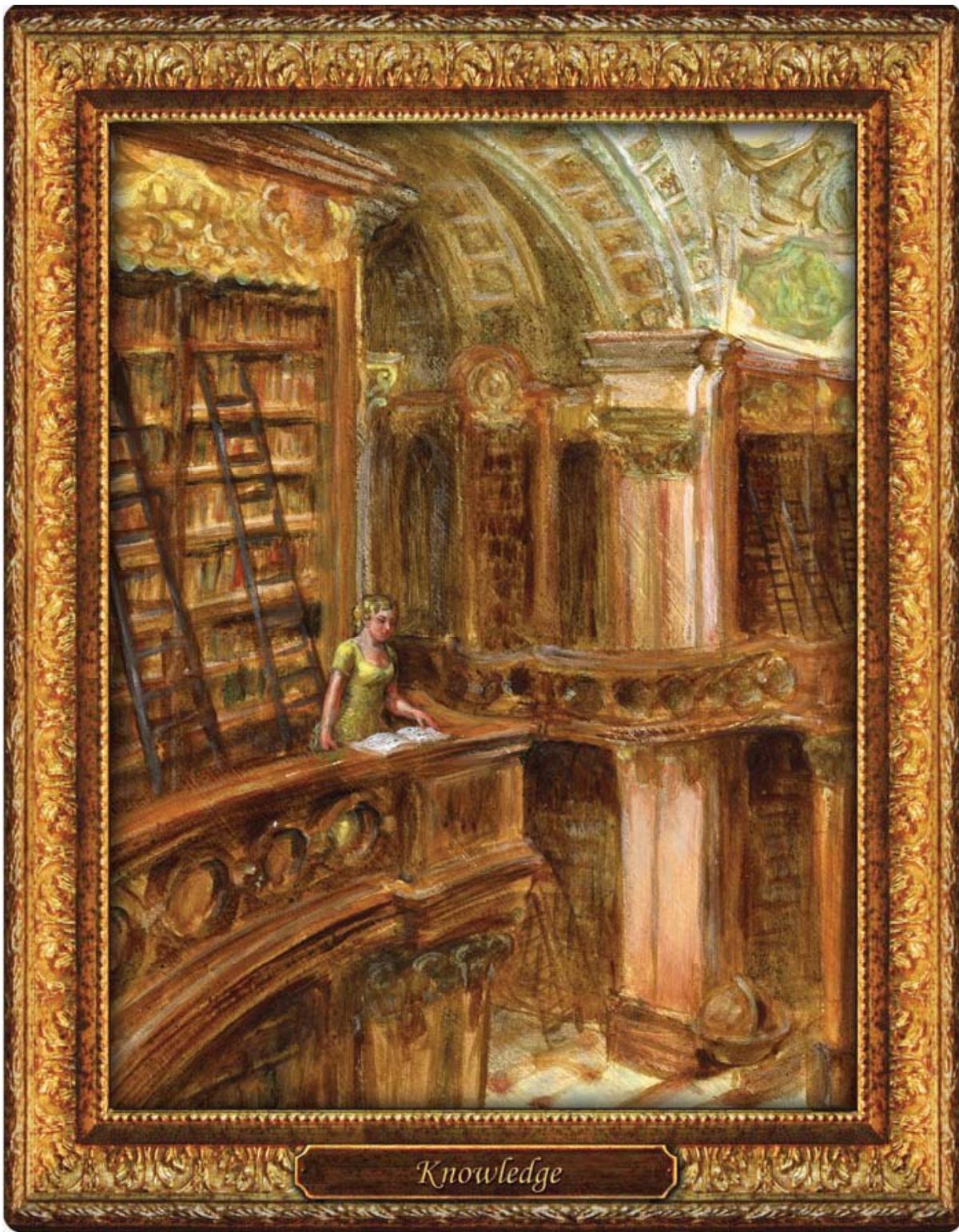
INCOME



WORTH



*Time*



*Knowledge*



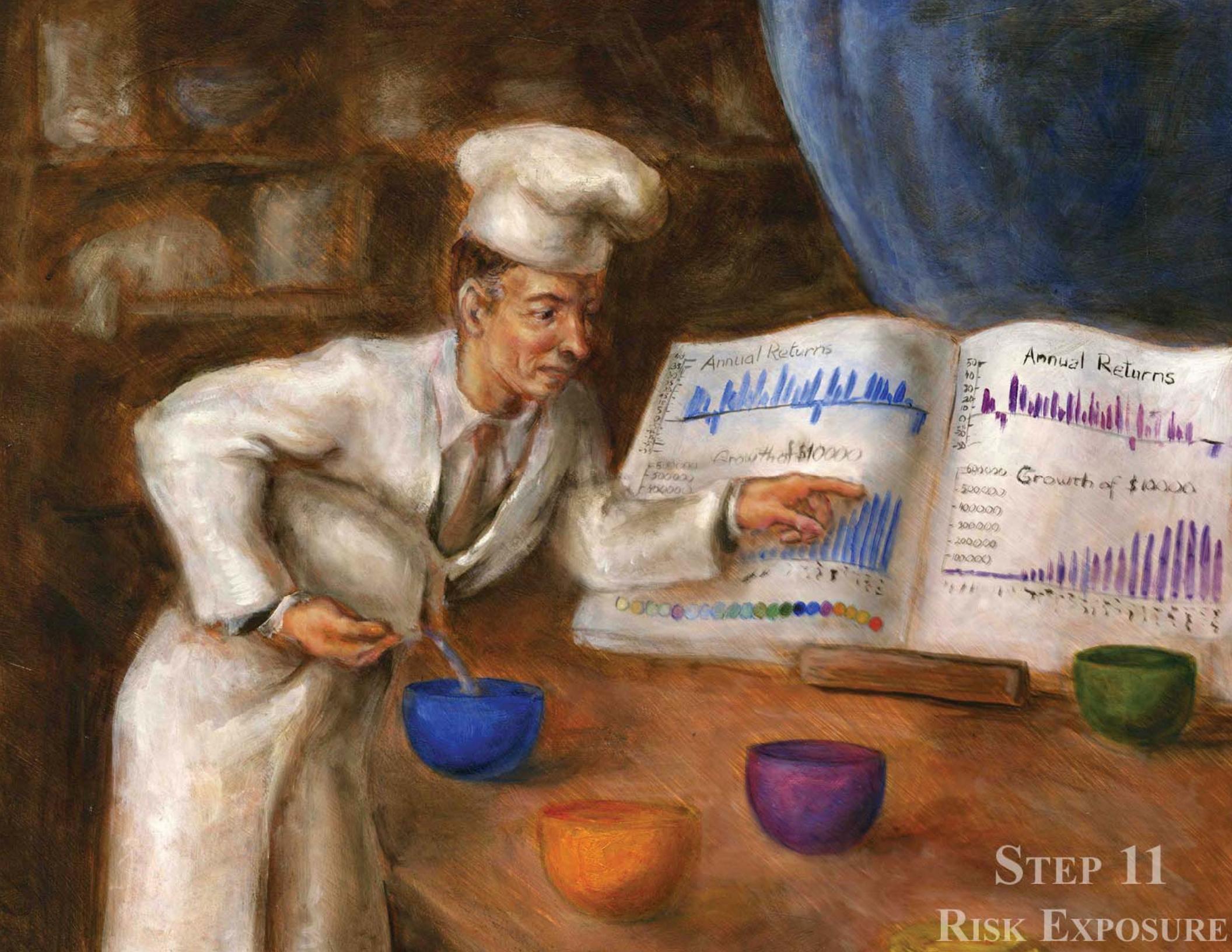
*Attitude*



Income



*Worth*



## STEP 11

### RISK EXPOSURE

## 5 Dimensions of Risk Exposure



MARKET

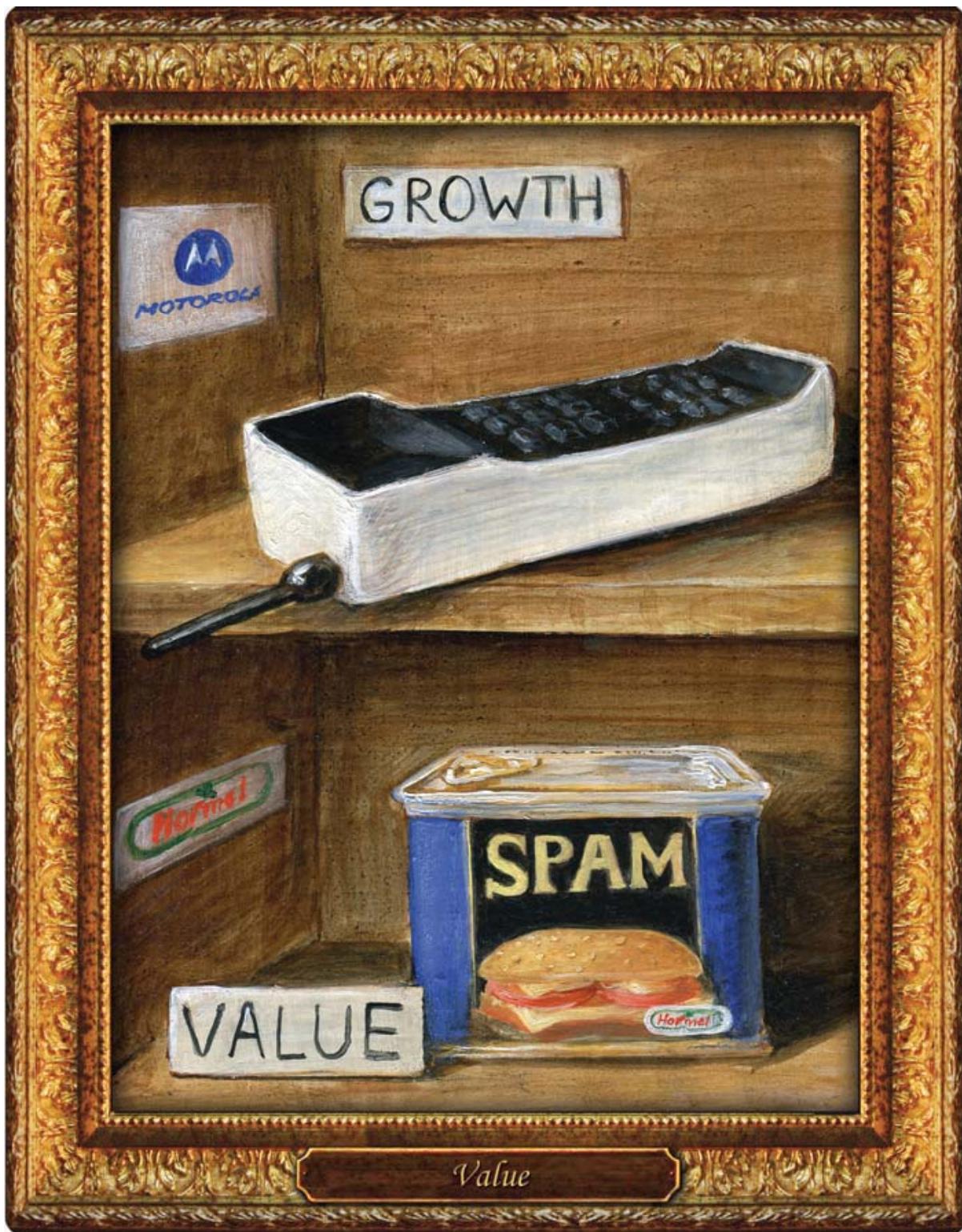
VALUE

SIZE

TERM

DEFAULT





*Value*



*Size*

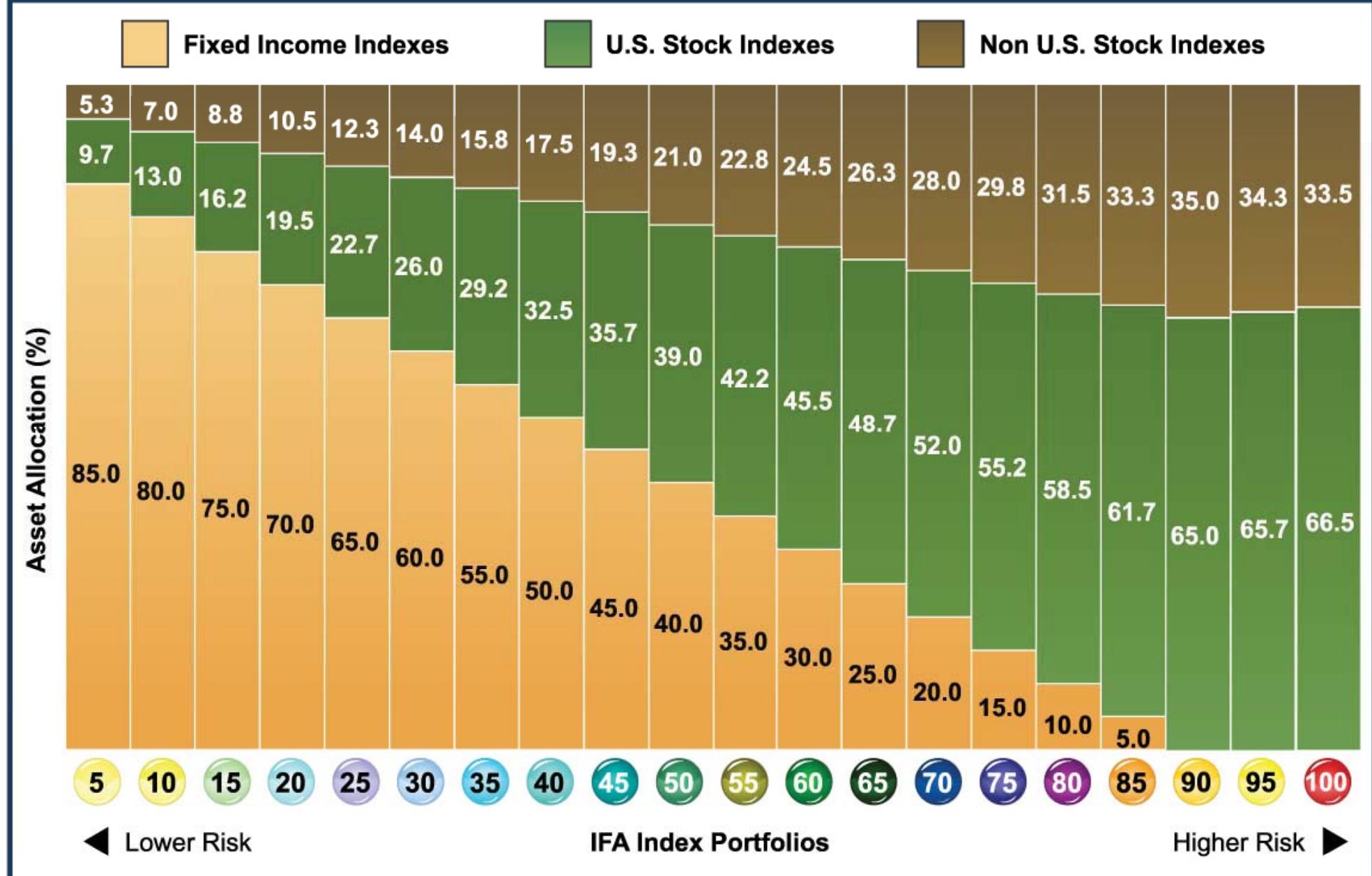




*Term*

# Step 11: Risk Exposure

## General Asset Allocation of IFA Index Portfolios



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Sources, Updates and Disclosures: ifabt.com - Created: 1/19/11

A painting of a man and a woman relaxing in a hammock on a beach. The man is on the left, wearing a red and white patterned shirt and yellow swim trunks, looking towards the right. The woman is on the right, wearing a red strapless top, also looking towards the right. They are surrounded by palm trees and a small sailboat is visible in the distance on the water. The overall atmosphere is relaxed and tropical.

# STEP 12

## INVEST & RELAX



*The Rebalancing Act*



# Emotions of Passive Rebalancing

## Emotions of Rebalancer

Hypothetical 5 Year Period





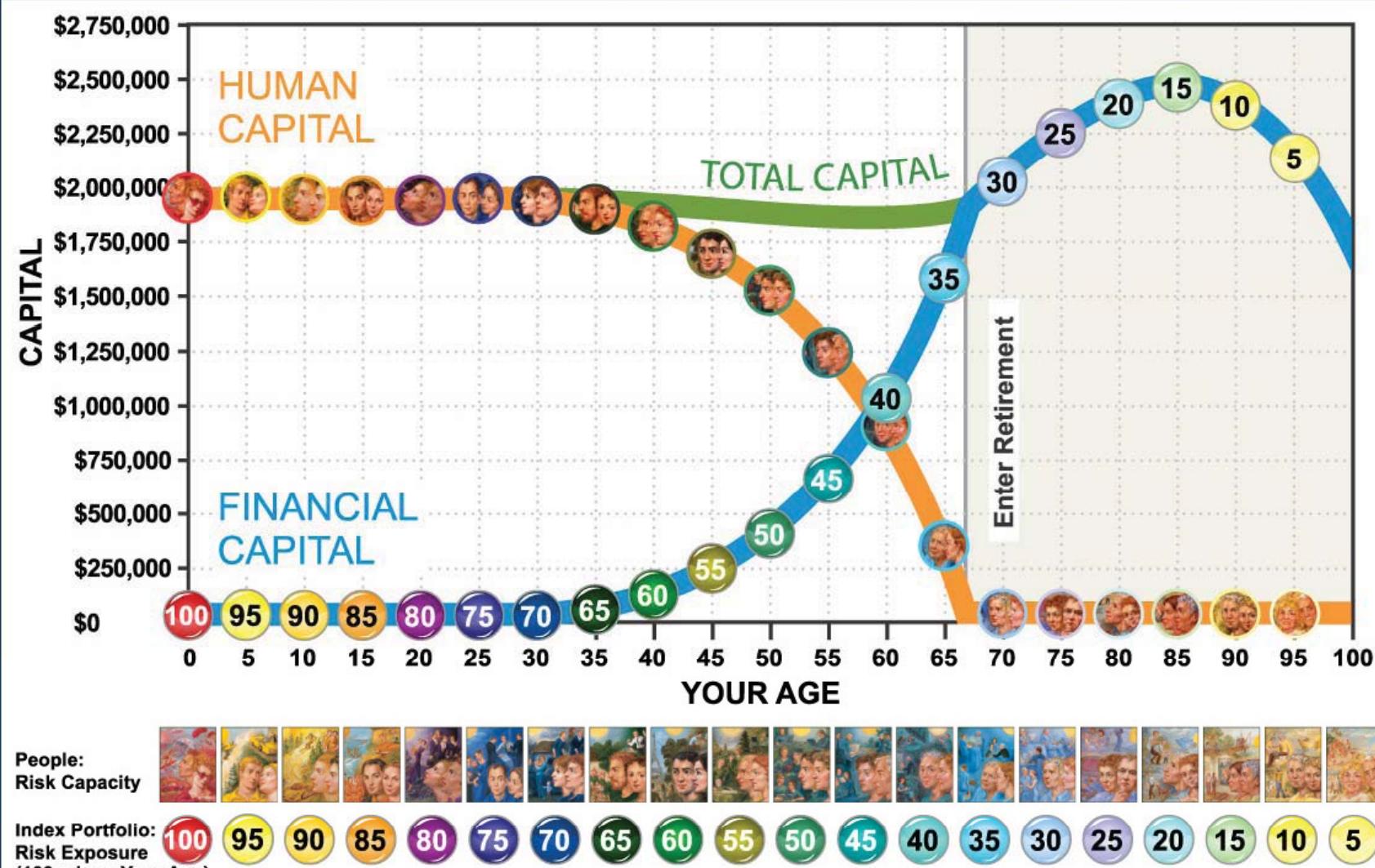
*Glide Path*



## Glide Path

The Value of Human and Financial Capital on the Glide Path Over a Lifetime

Total Capital = Human Capital + Financial Capital





*Tax Loss Harvester*



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