Renaissance Capital
The IPO Expert

White Paper

New Data Uncovers Hidden Truths About the IPO Market

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Renaissance Capital LLC • Two Greenwich Plaza • Greenwich, CT 06830 • www.renaissancecapital.com • 203.622.2978

Abstract

Since the internet bubble, investment advisors and academics alike have cautioned investors to avoid the IPO market, insisting that IPOs underperform in the long run and ultimately coining the phrase "IPOs are a loser's game." Despite the advice of these experts, an average of $130 billion is raised each year in the IPO market.

This paper discredits the notion that "IPOs are a loser's game" with new data that shows IPOs in fact outperform. Further, it examines how and why the IPO market attracts such a significant amount of capital despite forewarnings. This white paper also explains the benefits of incorporating IPOs into the asset allocation strategy and shows that if structured properly, IPOs can add superior risk-adjusted returns to a portfolio. Finally, this treatise explores common misconceptions about IPOs.

Investment Experts and Academics Advise Against Investing in IPOs

Over the years, investment experts and leading academics have told investors to avoid the IPO market. Some of this advice arises from an overreaction to stock market bubble periods, when investors chased unprofitable internet companies whose IPOs flew off the shelf, reaching valuation heights beyond realistic growth assumptions. After these periods, investment advisors seemed prudent in advising their customers to avoid IPOs.

This once correct call has since been hardened to the point where many advisors still encourage investors to avoid IPOs under all circumstances. In the *Investing Classroom* section of Morningstar's website, the advice is to stay away from IPOs altogether. Morningstar cautions "…the odds are stacked against average investors when they pick up shares of a recent IPO and hold them for the long term. Chances are you will either pay full price for a decent business (at best) or through the nose for a terrible one."[1]

Morningstar is not alone in its criticism of IPOs. Well-regarded small cap value quantitative manager Dimensional Fund Advisors (DFA), run by engineers and advised by Nobel Laureate Myron Scholes and the University of Chicago's Eugene Fama, won't own an IPO until it's been trading at least six months. In the early years after DFA was founded in 1981, says Robert Deere, a DFA portfolio manager and trading strategist, its small company funds were "getting slaughtered" because they held IPOs.[2]

In Wharton Professor Jeremy Siegel's best-selling book, *The Future for Investors*, he notes that "It is clear that buying IPOs, like buying lottery tickets, is a losing long-term strategy."[3]

Despite the admonitions of the experts, knowledgeable investors consider the IPO market to be an attractive sector. We will explore the reasons why they continue to invest in IPOs.

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[1] *Investing Classroom*, Morningstar, <http://www.morningstar.com/cover/Classroom.html>.

[2] Frick, Bob. "This Is Rocket Science." *Kiplinger's Personal Finance* Oct. 2008. *Kiplinger Personal Finance Archive*. Web. <http://www.kiplinger.com/magazine/archives/2008/10/DFA_funds.html?kipad_id=x>.

[3] Siegel, Jeremy J. "Investing in the New: Initial Public Offerings." *The Future for Investors: Why the Tried and True Triumph over the Bold and New*. New York: Crown Business, 2005. Page 84-101. Print.

Billions of Dollars are Poured into the IPO Market Globally Each Year

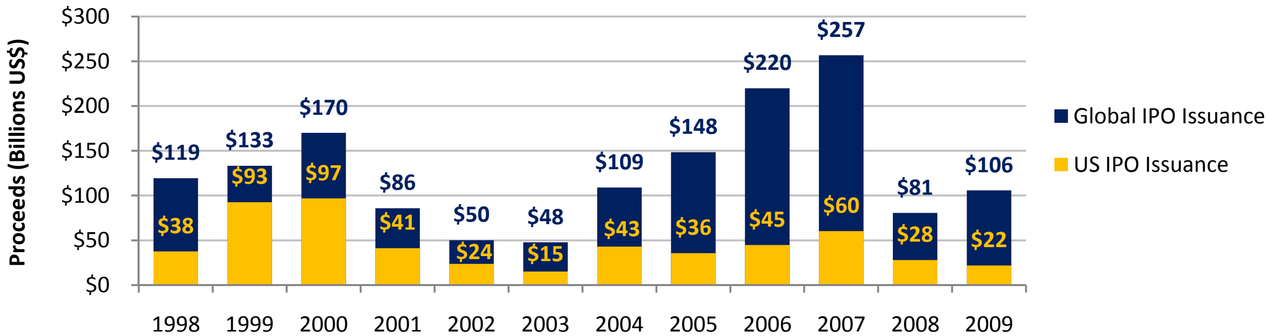
Over the last decade, investors have poured an average of US$130 billion a year into the global IPO market. When one considers the fact that the shares issued in an IPO typically represent only one-third of the total shares outstanding of the issuer, this implies that the total market capitalization for all companies going public amounts to a substantial US$400 billion in an average year.

Is this a case of investors ignoring the advice of sage experts at their peril? Or could the experts be wrong?

Even after a global shutdown of the IPO market from September 2008 to March 2009, an IPO drought not seen since the 1970's, the global IPO market staged a respectable recovery. New companies wouldn't be able to attract this magnitude of capital unless they offered something of value to investors. What might that be?

Exhibit 1

Global Investors Purchase an Average $130 Billion IPOs per Year
U.S. Investors Purchase an Average of $45 Billion IPOs per Year



Source: Renaissance Capital. Includes IPOs with deal size of US$100mm or greater.

Where is the Demand for IPOs Coming From?

In recent years (with the exception of China's restricted A-share market), major institutional investors have been the primary buyers of IPOs, not individual investors. Individual investors largely abandoned the IPO market after being burned after the last bubble in 1999-2000. In addition, smaller pension plan sponsors usually do not have the in-house investment staff required to analyze and invest directly in IPOs.

IPO investors are primarily well informed, disciplined institutional investors, such as active managers and hedge funds. They generally purchase some shares at the time of the IPO and build their positions in aftermarket trading.

These active managers and hedge funds buy IPOs to generate alpha, that is, unique/excess returns. They generate alpha from (1) uncovering future market leaders, (2) gaining exposure to growing new industry groups, and (3) identifying these companies before they are added to established indices. These unique returns come from new companies with new ideas.

Exhibit 2

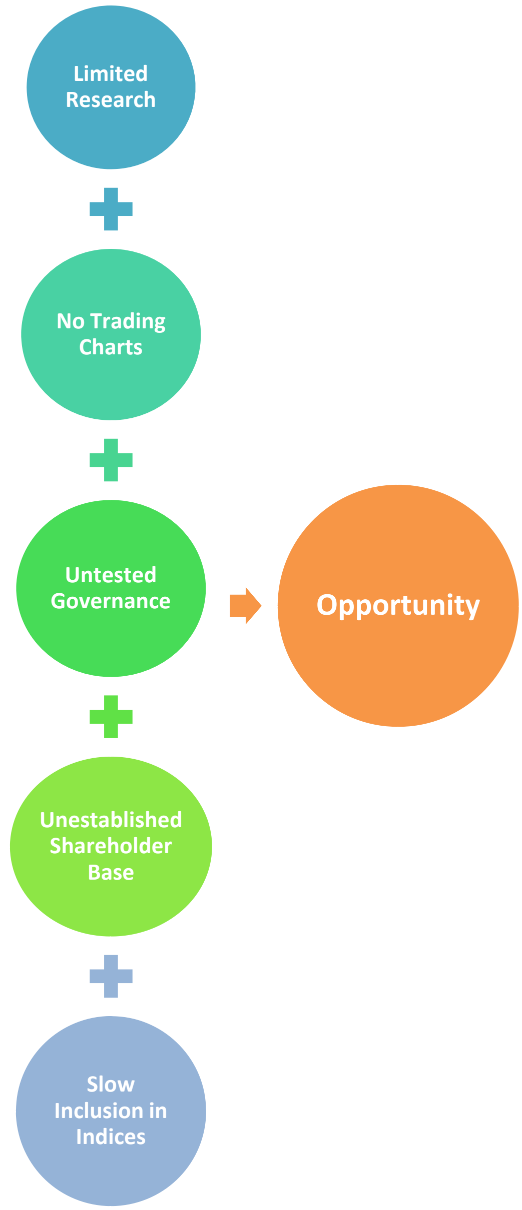
How Active Managers Use IPOs to Generate Alpha

Finding Alpha in the IPO Market

IPOs are different. They don't look like seasoned equities. Some of these new companies have disruptive technologies and business models that challenge the status quo. They are not well understood and when Wall Street is permitted to initiate research coverage (after a 40-day "quiet period" in the U.S.), it tends to be issued by the underwriter who has an inherent conflict of interest. IPOs lack the historical trading charts that make investors comfortable about price movements. IPOs have untested corporate governance, meaning that in most cases, management has not yet developed a track record of delivering results that meet investor expectations. Finally, they lack an established shareholder base, causing them to be more volatile than seasoned equities. IPOs offer the type of information asymmetries that are sought after by active managers to achieve outperformance.

Exhibit 3

Information Assymetries Create Opportunity



Active managers can generate alpha from identifying new growth industries, which tend to manifest themselves first in the IPO market. A good example is the solar industry, which initially established itself through a series of IPOs in 2005-2006 by companies such as SunPower, Suntech Power and First Solar. Currently, mobile and cloud computing are becoming new industries as these companies appear first as IPOs.

Most importantly, major indices (e.g. S&P, Russell) are slow to include IPOs. Thus, an active manager can capture returns from IPOs before they are added to major indices. For an active manager trying to outperform a benchmark, a successful IPO slated for inclusion into the benchmark index can be captured ahead of time. For example, the largest U.S. IPO ever, VISA, which went public in March 2008, rose +44% from its first day close before being added to the Russell 3000 in June 2008. VISA gained +57% before finally being added to the S&P 1500 in December 2009.

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Most Academic Studies Relied on Faulty IPO Data

Over the years, many studies of IPO market performance have been done by the academic community. Their studies almost universally argue that IPOs are a loser's game. While academics made reasonable conclusions based on the datasets they were analyzing, the conclusion that IPOs consistently underperform is inaccurate. Because information on new issues is difficult to obtain, academic researchers did not have the proper data to make equitable comparisons of IPO performance to other benchmarks. The academic conclusion that "IPOs are a loser's game" has been derived from a faulty dataset.

In order to accurately determine whether IPOs typically underperform or outperform, returns must be measured fairly against the market, as defined by a benchmark index. Almost all major equity indices adopt some sort of weighting scheme – whether it is weighting constituents by market capitalization, like the S&P 500, or adjusting for tradable shares and weighting by float-adjusted market capitalization, like the Russell indices. These indices also follow a detailed methodology which, among other considerations, includes rebalancing at least quarterly.

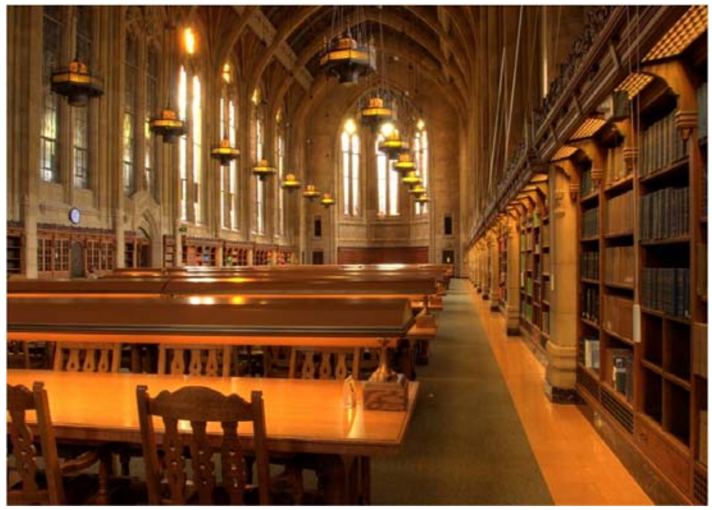
"The academic conclusion that 'IPOs are a loser's game' has been derived from a faulty dataset."

Until the more recent introduction of the SEC's online database EDGAR, data on IPOs was hard to obtain. Because of this limited data availability, IPO returns have historically been calculated by using an equal weight approach (i.e. calculating the individual return of each IPO in a given period, then taking the arithmetic mean of the sample set). An example of this can be found in Wharton Professor Jeremy Siegel's book *The Future for Investors,* where he concludes that IPOs underperform by examining a portfolio that "buys an equal dollar amount of *all* the IPOs issued in a given year."[4]

Comparing equally weighted returns to the returns of the "market", i.e. equity indices, whose constituents are weighted based on market capitalization, adjusted for liquidity and rebalanced for corporate actions, splits and other measures is an unequal comparison that produces faulty conclusions. Certainly the Russell 3000, a commonly used measurement of U.S. stock market performance, does not give the same weight to

[4] Siegel, Jeremy J. "Investing in the New: Initial Public Offerings." *The Future for Investors: Why the Tried and True Triumph over the Bold and New*. New York: Crown Business, 2005. Page 84-101. Print.

the first company as it gives to the 3,000th. As an example, the largest constituents in the iShares Russell 3000 ETF, which tracks the performance of the Russell 3000, are Exxon Mobil, Apple, and Microsoft, each of which carry an index weight between 1.5% and 2.5%. On the other hand, the smallest constituent weighs in at a mere 0.00005%. This means the largest constituent's weight is roughly 50,000x larger than that of the smallest constituent, which is quite different than an equal weighted approach. Constituent weightings are critically important.



Jay Ritter, a University of Florida professor who is well known for his historical IPO data and studies of IPO returns, focused on this issue in his recent studies. He found that if he sorted the IPO performance by the level of sales, returns were startlingly different. He concluded that "IPOs that had annual sales of less than $50 million severely underperform, whereas those that had achieved annual sales of $50 million don't underperform."[5] By aligning his calculations closer to the benchmarks (i.e. organizing returns by sales which typically have strong correlation to market capitalization), Professor Ritter was able to get closer to a true performance comparison.

[5] Ritter, Jay R. "Recent Developments in IPO Research." Oxford EFMA IPO Symposium. Apr. 2008. Web. <http://bear.warrington.ufl.edu/ritter/EFMIPOResearch.ppt>

The IPO Index:
A realistic approach to IPO Investing

To accurately measure the performance of IPOs, it's important to determine the best way to invest in them. Realistically, a manager would not distribute funds equally across a portfolio of IPOs. In an effort to provide the market with a strategic way to gain exposure to the space, Renaissance Capital combined its extensive database and knowledge of the IPO market with the indexing expertise of FTSE Group to develop the FTSE Renaissance IPO Composite Index (the "IPO Index"), an industrial strength investment vehicle launched in April 2009. The IPO Index's float-adjusted weighting scheme places emphasis on constituents with the greatest free-floats (typically larger, more established companies) and on those that generate strong performance. Stocks are held from the close of their first trading day for a period of two years, after which they are considered seasoned equities and removed from the Index. Because the IPO Index was designed to resemble how funds would (or should) be allocated in a portfolio of IPOs, it provides an accurate measure of IPO performance, a fair comparison of the IPO market to the broader equity market, and a clear and transparent way to gain exposure to new equities.

The primary reason that this benchmark for IPOs had never been constructed before is that indexing requires detailed information about a company and its capital structure – information that was historically not readily available for companies that are new to market. Very little data is available on IPOs before their shares begin to trade, and this data changes frequently in the company's early years as a public entity. Liquidity events such as the exercise of the over-allotment option, the expiration of the lock-up period and the occurrence of follow-on offerings make it difficult to track the tradable float, and yet this data is critical to constructing an index. The data gathering to create an IPO index is complex and includes:

1. Real time tracking of IPO pricing, deal size and market cap
2. Float adjustments for insider holdings, which are most significant for a new IPO
3. Industry categorization, which becomes tricky when new industries establish themselves first in the IPO market
4. Gathering of fundamental data such as sales, earnings estimates, growth rates, and book value, which is not widely available at the time of the IPO
5. Tracking corporate actions unique to IPOs, such as shares released pursuant to the exercise of over-allotment options and lock-up releases

The disparity of available information and the tedious process of tracking the float of these new issues make including them in indices an onerous process; thus, major index providers do not include IPOs as soon as they start trading – rather, they wait for months, if not years, before adding them to indices.

IPOs – Structured in an Index – have Outperformed

Since the January 1, 2003 inception of the FTSE Renaissance IPO Composite Index, the IPO market, as measured by the Index, has significantly outperformed the overall market. Specifically, on a year-by-year basis since 2003, the IPO Index outperformed in four out of the six years. It's surprising to see that this type of outperformance could be achieved without including the first day pop.

Exhibit 4a

IPOs have Outperformed since January 2003

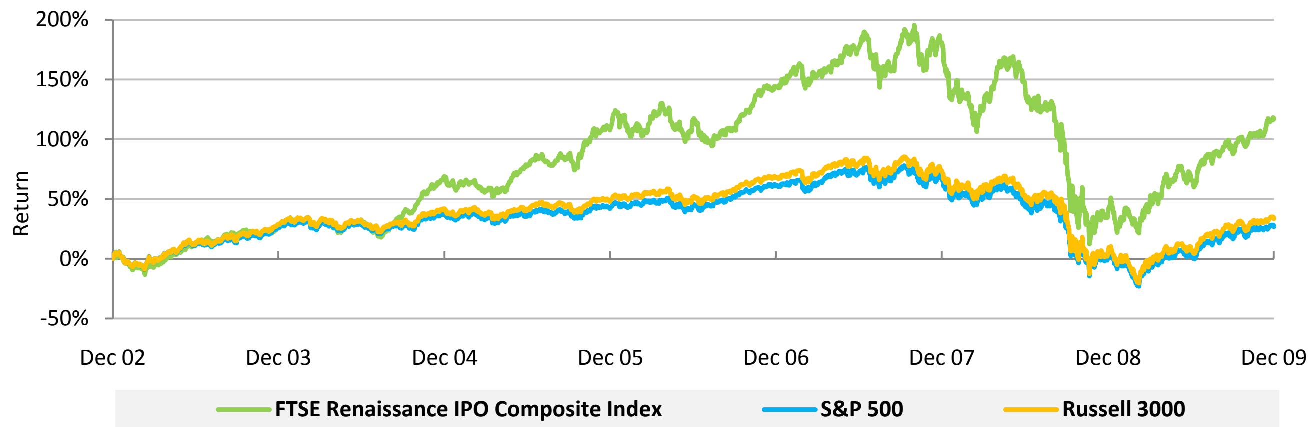
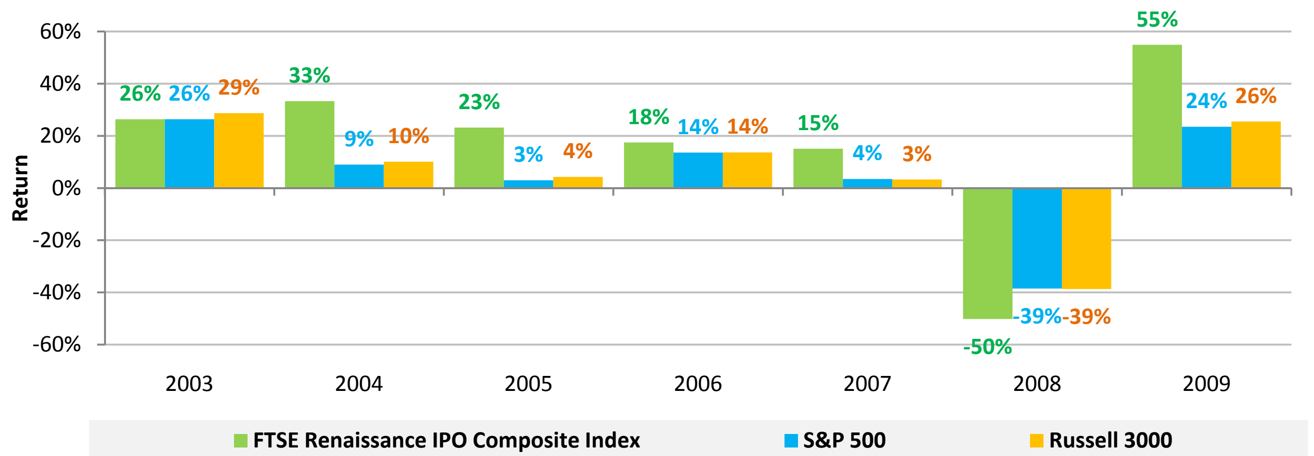


Exhibit 4b

In Most Years IPOs Outperform When Indexed



Source: Renaissance Capital.

IPOs Produce Superior Risk-Adjusted Returns

More interesting are the superior risk-adjusted returns, as measured by the Sharpe Ratio, produced by the IPO Index. The IPO Index has consistently produced superior risk-adjusted returns relative to other benchmarks in every year since 2003. It is not surprising that IPOs have greater volatility; what is surprising is that over the period, the returns have more than made up for the volatility.

Exhibit 5

IPOs produce Superior Risk-Adjusted Returns (Sharpe)

Sharpe Ratio	12/31/2005	12/31/2006	12/31/2007	12/31/2008	12/31/2009	3/31/2010
FTSE Renaissance IPO Composite Index	1.67	1.28	0.95	-0.53	-0.09	-0.06
S&P 500	1.14	0.78	0.34	-0.88	-0.41	-0.30
Russell 3000	1.23	0.82	0.37	-0.84	-0.37	-0.27

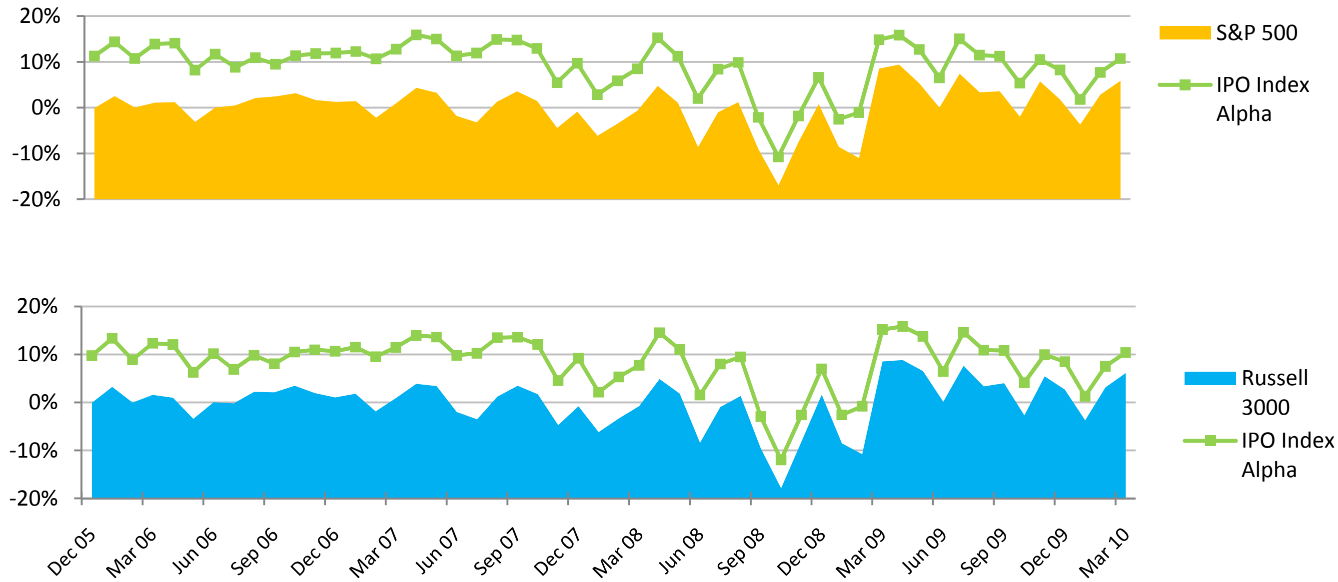
Source: Renaissance Capital. Based on 36 trailing monthly data points.

IPOs Add Unique Returns

Most importantly to institutional investors, IPOs add unique returns (Alpha) to portfolios. The IPO Index has consistently generated excess returns over the S&P 500 and the Russell 3000 in every period since 2003. This explains why, despite past academic studies to the contrary, institutional investors continue to be attracted to the IPO category of equities.

Exhibit 6

IPOs add Unique Returns (Alpha)



Alpha*	12/31/2005	12/31/2006	12/31/2007	12/31/2008	12/31/2009	3/31/2010
S&P 500	11.4%	10.7%	10.6%	5.8%	6.4%	4.8%
Russell 3000	9.8%	9.6%	10.0%	5.4%	5.8%	4.2%

*Indicates Alpha of the FTSE Renaissance IPO Composite Index generated over the S&P 500 and Russell 3000.

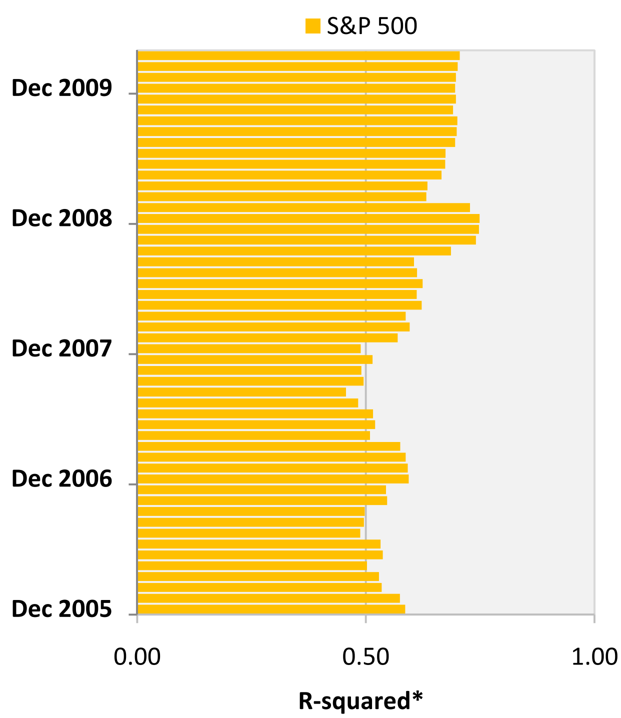
Source: Renaissance Capital. Based on 36 trailing monthly data points.

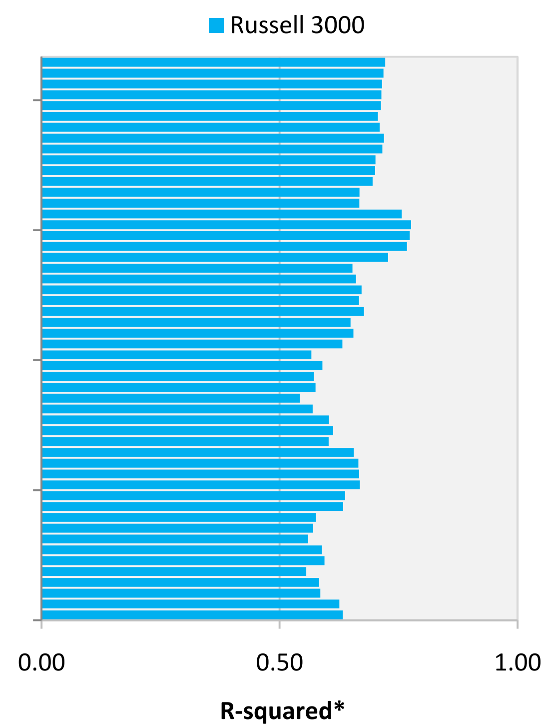
IPOs Add Diversification to Portfolios

Considering that IPOs are a part of the equity asset class, their correlation to equity indices as measured by R-squared has been surprisingly low. The correlation between the FTSE Renaissance IPO Composite Index and the S&P 500 has at times been below 0.50 and has never exceeded 0.75, even in 2008, when the correlation of asset classes in general moved closer to 1. Likewise, the correlation of the IPO Index to the Russell 3000, whose constituent base is more comparable to that of the IPO Index, has been as low as 0.54 and never exceeded 0.82. Moderate correlation contributes to portfolio diversification and hence helps reduce risk in an asset manager's portfolio.

Exhibit 7

IPOs add to Portfolio Diversification (R-squared)





R-squared*	12/31/2005	12/31/2006	12/31/2007	12/31/2008	12/31/2009	3/31/2010
S&P 500	0.59	0.59	0.49	0.75	0.70	0.71
Russell 3000	0.63	0.67	0.57	0.78	0.71	0.72

*Indicates correlation of the FTSE Renaissance IPO Composite Index and the S&P 500 and Russell 3000.

Source: Renaissance Capital. Based on 36 trailing monthly data points.

Conclusion

Similar to all asset classes such as commodities, fixed income and real estate, the IPO class of equities will have its excesses and it will have its attractive periods. We now have constructed an index that is truly comparable to other indices that can measure these periods. IPOs are an economically significant category of equities that can produce superior risk-adjusted returns, and contribute unique returns to a portfolio. This is especially true during periods when the excesses have been squeezed out of the market and only the fundamentally strong and most attractively-valued companies are able to go public. Active managers and hedge funds know this, which is why they are active in the IPO market. Avoiding the IPO market during these periods means missing superior risk-adjusted returns.

Appendices – IPO Myth Busting

I. Insiders Cash Out at the Top

II. IPOs are Timed to Benefit the Issuer

Appendix I

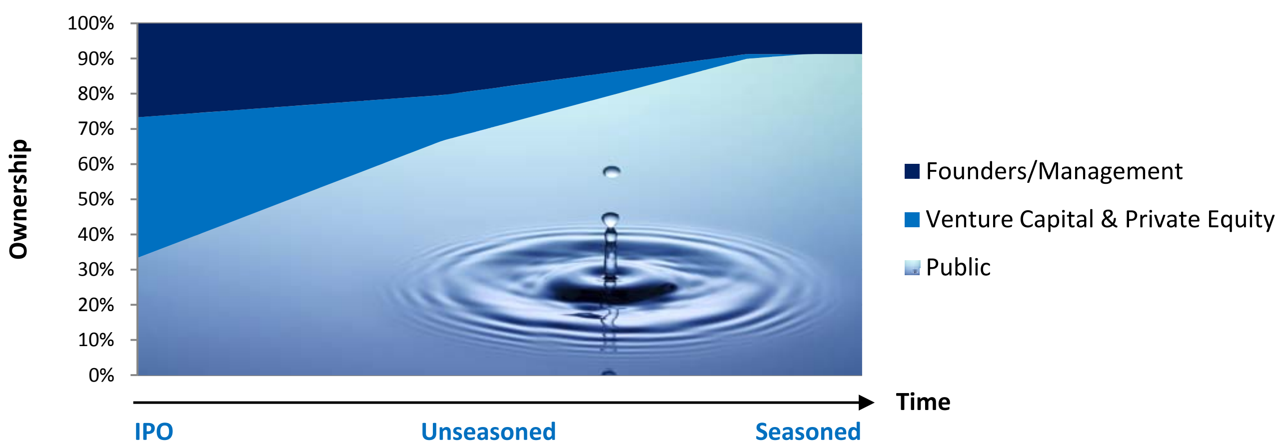
IPO Myth Busting: Insiders Cash Out at the Top

With a real IPO Index in hand, we can now address some IPO myths. A popular myth is that IPOs must be bad investments because an IPO is an event where insiders cash out at the top. A proponent of this thinking is Princeton Economist Burton Malkiel, who wrote in his famous book *A Random Walk Down Wall Street*, "…the major sellers of stocks of IPOs are the managers of the companies themselves. They try to time their sales to coincide with a peak in prosperity of their companies or with the height of investor enthusiasm for some current fad."[6]

The facts do not support Malkiel's conclusion. Research shows that IPOs do not represent a full cash out for insiders (i.e. managers and other pre-IPO investors such as venture capital and private equity), but rather a partial liquidation. While some insider selling may occur on the IPO along with new money raised, the majority of insiders continue to hold shares well beyond the IPO date. Our research shows that since 2003, insider shares sold on the IPO represented on average only 4.8% of the total market value of the company.

Exhibit A1

Venture Capital and Private Equity Investors Continue as Shareholders Beyond the IPO



Financial sponsors, such as private equity and venture capital firms, whose business models call for the realization of investment value of portfolio holdings over time, are subject to lock-up restrictions, which prevent them from selling their remaining shares for at least 180 days. This group of investors has a continued interest in the valuation of the newly public company beyond the day of the IPO.

[6] Malkiel, Burton Gordon. Chapter 3: "Stock Valuation from the Sixties through the Nineties." *A Random Walk down Wall Street: including a Life-cycle Guide to Personal Investing*. New York: Norton, 1999. Page 85. Print.

Appendix II

IPO Myth Busting: IPOs are Timed to Benefit the Issuer

With the IPO Index showing strong returns since 2003, what about the theory that IPOs are timed to benefit the issuer, not the investor?

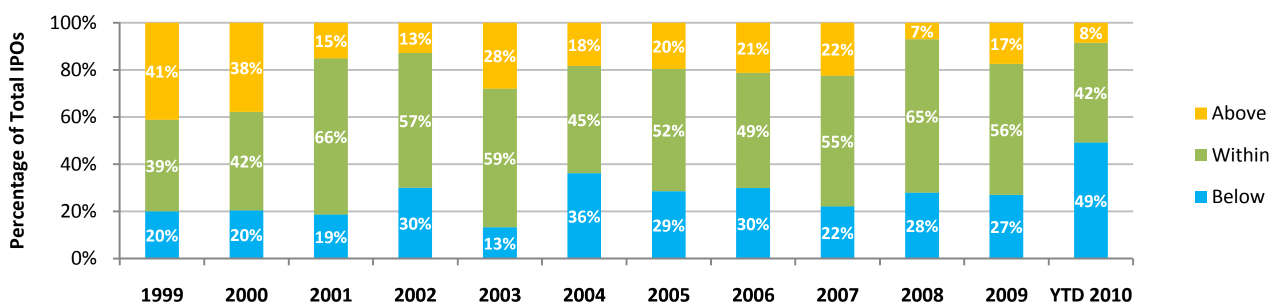
The famous value investor, Benjamin Graham, stated in his classic work *The Intelligent Investor,* that "Most new issues are sold under "favorable market conditions" – which means favorable for the seller and less favorable for the buyer."[7]

All things being equal, we admit that companies like to time their IPOs for favorable market conditions. However, timing the market is not always possible. Companies tap the IPO market to raise capital to fund growth, repay bank debt and to provide liquidity for an estate, financial sponsors, and employees. Many of these events are hard to time.

Our studies of IPO pricing relative to their expected ranges show that since 2001, we have been in a less favorable market for IPO issuers – that is, less favorable for the seller. So far in 2010, for example, half of all IPOs have been priced below the proposed range set by issuers and their underwriters.

Exhibit A2

Some IPO Markets are Favorable to Investors



Source: Renaissance Capital. Includes U.S. IPOs only.

In the current market environment, investors have a diminished appetite for risk and are highly sensitive to stock valuations. Meanwhile, private equity and venture portfolios are flush with investments in need of

[7] Graham, Benjamin, and Jason Zweig. "Portfolio Policy for the Enterprising Investor: Negative Approach." *The Intelligent Investor*. New York: HarperBusiness Essentials, 2003. Page 139. Print.

harvesting. In this selective IPO market, only the fundamentally stronger companies are able to go public, and they come to market at deeply discounted valuations. Out of this drought have come some of the largest and most established companies, including VISA in March 2008 and Mead Johnson in 2009, and many others are on the horizon. General Motors comes to mind.

About Renaissance Capital

Renaissance Capital, founded in 1991 and headquartered in Greenwich, CT, is the global leader in providing fundamental and quantitative institutional IPO research. The Firm maintains the FTSE Renaissance IPO Composite Index (symbol: IPOS), the definitive benchmark of IPO activity and performance. Renaissance Capital also provides IPO-focused investment management services as the advisor to the IPO Plus Fund (symbol: IPOSX), the first mutual fund to focus solely on investing in IPOs, and through separately managed institutional accounts. For more information visit our website www.RenaissanceCapital.com or call 203-622-2978.