Alternatives are risky

A research report authored by
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EXECUTIVE SUMMARY

> Alternative investments are still not fully de-stigmatized by many investors despite the fact that their inclusion in balanced portfolios has proven their merit at least twice during the previous decade. The purpose of this Series of reports is to demystify some of the myths and misconceptions still surrounding alternative investments. An "alternative investment" is essentially an investment that has not yet gone mainstream.

> It is no secret that the public image of so-called "alternatives," (e.g., hedge funds, vulture funds, private equity), is far from pristine. Hedge funds are regularly blamed for market movement, often irrespective of their being involved in a concerted fashion. Vulture funds are in the news for "helping" Argentina with its debt-issuance, and private equity firms are often taken to task for the externalities left behind from corporate reorganization. Generally speaking, alternatives are perceived as risky.

> Every investment, when viewed in isolation, is risky. This is true for any single investment, be it stocks, bonds, hedge funds, farm land, art, etc. However, most investors do not hold a single investment; most investors maintain portfolios comprised of single investments.

> The basic idea of portfolio management and portfolio construction is to diversify single entity risk. From this perspective, when risk matters, there is hardly a reason for the bulk of the whole portfolio not being in what we today call "alternatives."

> There is still a lot of myth with respect to alternatives being risky. Much of it is built on anecdotal evidence, oversimplification, myopia, or simply a misrepresentation of facts. Hedge funds aim for absolute returns by balancing investment opportunities and risk of financial loss. The same logic is applicable to constructing portfolios with alternatives. Where a single investment might be "risky," it is the combination of different risks that makes a portfolio less sensitive to accidents and losses. Diversification might be the only free lunch in finance.

"Skill is successfully walking a tightrope over Niagara Falls. Intelligence is not trying."
—Anonymous

Introduction

Every investment, when viewed in isolation, is risky. This is true for any single investment, be it stocks, bonds, hedge funds, farm land, art, etc. However, most investors do not hold a single investment; most investors maintain portfolios comprised of single investments. Investors diversify; diversification is often touted as the only free lunch in finance. The idea of diversification is very old and is essential to survival.

"Risk, to state the obvious, is inherent in all business and financial activity."
—Alan Greenspan

One way to define an "alternative investment" is essentially an investment that has not yet gone mainstream. An investment in equities was once perceived as an "alternative investment." Bonds were traditional investments fifty years ago; equities weren't. Stocks were perceived as "speculative" and many investors steered clear from the equity market. In some countries, equities were an alternative investment until the late 1990s. Investments in emerging market equities and bonds were also once alternative investments, something "one ought not to buy." Something that, when viewed in isolation, was perceived as too risky. Investments in both equities and emerging markets have lost their "alternatives" tag. Many of today's alternative investments are currently going mainstream too. Viewing an investment not in isolation, but in context of a portfolio, is central to an asset class or investment style going mainstream.

Equities were once an alternative investment too

The basic idea of portfolio management and portfolio construction is to diversify single entity risk. This is often perceived as the second best idea in investment management, the best idea being the invention of the ATM. The key to portfolio construction is combining entities with different risk characteristics. An ETF on the S&P 500® Index, a merger arbitrage hedge fund, and a Chardonnay winemaking farm in New Zealand might, at first glance, have nothing in common. The past returns might not be correlated. However, the experience from market corrections, and associated wealth destruction, is that carefully constructed portfolios with alternative investments withstand the storm much better than traditional portfolios. From this perspective, when risk matters, there is hardly a reason for the bulk of the whole portfolio not being in what we today call "alternatives."

"Diversification is the golden rule for prudent investment. If you add some judicious futures to the bonds, stocks, insurance, and real estate assets that are already in your portfolio, you can hope to sleep better at night."
—Paul Samuelson (1915-2009), first American economist to win the Nobel Memorial Prize in Economic Sciences

Accidents happen and risk matters

Risk is often equated to volatility. However, risk is not perceived as volatility. Private investors certainly do not perceive volatility as risk. Losing large chunks of one's capital, on the other hand, is a more pragmatic understanding of "risk." Recent financial history has shown that at the end of the day, it is losses that matter most. It is large losses that destroy the rate at which capital compounds. Risk, therefore, becomes the probability of losses, especially large ones. There are many ways to define risk. One way to put it is defining risk as "exposure to accidents." Accidents do not always unfold in a crash like 1987. Long periods of compounding capital negatively can too be viewed as historical "accidents" and can be more destructive to wealth than a sudden, one-day shock.

"The important thing in science is not so much to obtain new facts as to discover new ways of thinking about them."
—Sir William Bragg (1862-1942), British physicist and winner of the 1915 Nobel Prize in Physics

Accidents happen. They are surprising by definition. If they were predictable, they wouldn't occur. This logic might apply to slipping on a banana skin. However, this logic doesn't necessarily apply to finance. The introduction of the euro, for example, is an accident that is unfolding as we speak. It just took a while until it became apparent to everyone; well, nearly everyone. An investor has the choice to participate in the accident or hedge or invest elsewhere. Japan is not yet an accident but is one in the making due to its current debt levels and unfavourable demographic trend, or is, as author John Mauldin likes to put it, a "bug in search of a windshield."

"There are decades when nothing happens; and there are weeks when decades happen."
—Vladimir Lenin

Coco Chanel once said: "Fashions change but style endures." We are tempted to argue that this is applicable to the world of investments. Fashion is something that ebbs and flows. It is a question of time until your author's Hawaiian shirts will be fashionable again. (His old aviator Ray-Bans already are.) The same is true with long-only investments; they come and go, ebb and flow. However, an investment style that permanently focuses on risk management – the preservation of capital under difficult market circumstances – is something that endures.

"Fashions change but style endures."
—Coco Chanel

In the institutionalisation of the equity market, as with aviator Ray-Bans, there were pioneers, early adopters, and late-comers. The pioneers are typically a small group. For reasons that are beyond the scope of this report, it was the English-speaking economies that developed an equity culture of some sort very early on. In the U.S., the idea of investing 60% of assets in equities with 40% in bonds held for many years, decades even. Over the past 10-15 years, these pioneers and early adopters moved away from this 60/40 formula. One reason to invest in alternatives 10-15 years ago was to diversify the allocation to equities as valuations were historically high and prospective returns, therefore, low. Now, the same is true for bonds. Bond valuations are currently stretched and it is the same investors who are currently diversifying their bond allocations with allocations into alternative investments. The most important take-away is that these investors are motivated by considerations related to portfolio risk.

"The essence of investment management is the management of risks, not the management of returns."
—Benjamin Graham (1894-1976), British-born American investor and securities analyst

Tail risk, Murphy's Law and running a casino

Occasionally, alternative investments are bad-mouthed as having tail risk with their return distributions colloquially referred to as having "fat tails."

"A safe investment is an investment whose dangers are not at that moment apparent."
—Lord Bauer (1915-2002), Austria-Hungary-born economic adviser to Margaret Thatcher

The stigmatization, for example, of hedge funds having fat tails implies that other investments do not. Hedge funds, especially managers involved in arbitrage strategies, are "picking up nickels in front of a steamroller" it is often argued. This line of argument is nonsense for two reasons. First, the normal distribution has no meaning in the real world of social phenomena, in general, and investment management in particular. A weekly loss of say 4% can be a one standard deviation event for a long-only manager but a four standard deviation event for a hedge fund. Second, all investments have fat tails. You never know. Fat tails are not a distinguishing factor of alternative investments compared to other investments. Many bond markets ceased to function during 2008. In the previous decade, equities lost 50% twice. Hedge funds, by comparison, "only" lost 20% once.

Accidents happen and sometimes Murphy's Law applies

A long period of no accidents can lead to a false sense of safety, complacency, and an underestimation and under-appreciation of risk. This is true in life in general, both business life and investment life. Things just always *can* go wrong. In addition, sometimes Murphy's Law applies. Sometimes it happens that you have a weak economy *and* are hit by an earthquake *and* by a tsunami *and* have a nuclear disaster all at the same time, as was the case in Japan in March 2011. Accidents happen and sometimes Murphy's Law does indeed apply. Being risk-ignorant is perhaps the most risky, least conservative investment approach of all.

"We are not a casino."
—Institutional investor around 2000, Ludgate Communications, March 2000

Around the year 2000, an institutional investor was quoted saying: "No, we don't [currently invest in hedge funds]! It is completely obvious that hedge funds don't work. We are not a casino." Hedge funds are still often portrayed as speculators, or worse, as gamblers. However, we argue that hedge funds resemble more the entrepreneur *running a casino* than the gambler losing money *to* the casino. Running a casino or a lottery is a very attractive business. We could call it "statistical arbitrage." For instance, in roulette the casino collects all the money on the table when the ball stops at zero. If the wheel has 36 numbers and one zero, the casino wins on average with every 37th spin of the wheel. There is no need to win with every spin of the wheel. The odds are in favor of the house.

"People think I'm a gambler. I've never gambled in my life. To me, a gambler is someone who plays slot machines. I prefer to own slot machines."
—Donald Trump

The more a business generates its revenues from a predictable source, the better. To understand why a lottery has stable cash flows that are sustainable over time and, therefore, are predictable, we need to understand the "investment case." The reason lotteries and casinos work is because there are so many fools. (Some research suggests that the gambler is not a fool but has a utility function that is non-monetary or has an extremely asymmetric utility towards large gains that makes it "rational" to "invest.") The expected return is - in monetary terms - negative for the gambler, but positive for the operator, i.e., the statistical arbitrageur. It is more attractive to invest with the operator of such a game, rather than with the gambler.

Running a lottery operation is a license to print money

The reason why the cash flows are sustainable is because the world is not going to run out of fools any time soon. Neither will the buyers smarten up as they already (presumably) know that their purchase is uneconomical from a probability-weighted expected return (rational expectations) point of view. Given that the entrepreneur's returns are stable and sustainable, they are fairly predictable (especially in the absence of competition). A license to run a lottery is a license to print money. Note that we have ignored social/ethical considerations while discussing lotteries and casinos. Lotteries and casinos are potentially government-controlled to mitigate cash flowing from a loser (the gambler) to a winner (the operator). Given that active asset management is often perceived as being a zero-sum-game, a transfer of cash flow from losers to winners, active asset management could one day be "government-controlled" too.

Speculative techniques for conservative ends

The misconception that hedge funds are speculative comes from the myopic conclusion that an investor using speculative instruments must automatically be running speculative portfolios. One of the aims of this brief report is to challenge this misconception. Many hedge funds use "speculative financial instruments" or "speculative techniques" to manage conservative portfolios. Popular belief is that an investor using options, for example, must be a speculator. The reason why this is a misconception is that the "speculative instrument" is often used as a hedge; that is, as a position offsetting other risks. The incentive to use such an instrument or technique (for example, selling stock short) is to reduce portfolio risk: not to increase it. This is the reason why most *absolute* return managers regard themselves as more conservative than their *relative* return brethren. It was Alfred Jones who popularized this idea in the 1950s by merging two speculative tools, short sales and leverage. Jones used leverage to obtain profits, but employed short selling through baskets of stocks to control risk. Jones' model was derived from the premise that performance depends more on stock selection than market direction. He believed that during a rising market, good stock selection will identify stocks that rise more than the market, while good short stock selection will identify stocks that rise less than the market. However, in a declining market, good long selections will fall less than the market, and good short stock selections will fall more than the market, yielding a net profit in all markets. To those investors who regarded short selling with suspicion, Jones would simply say that he is using "speculative techniques for conservative ends."

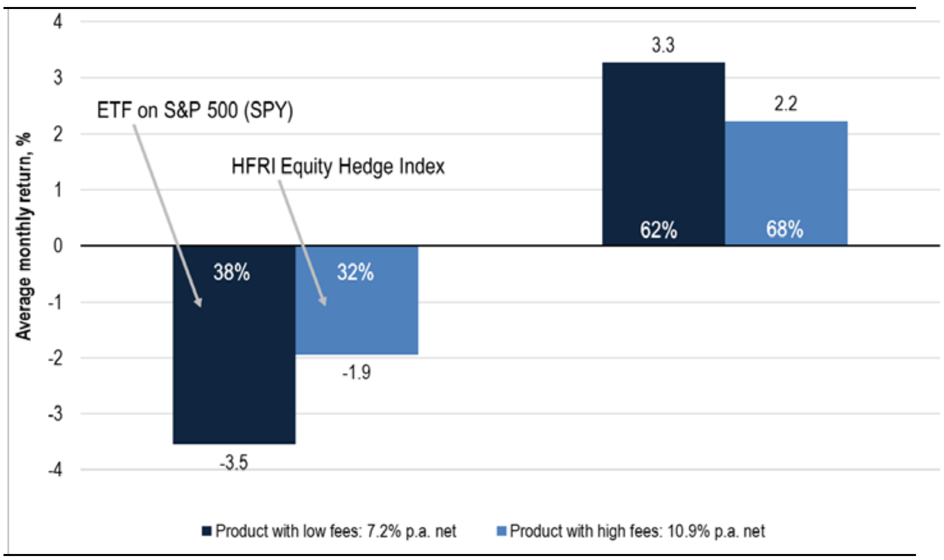
Asymmetric returns and compounding capital positively

One of the marketing one-liners in hedge funds is that "hedge funds produce equity-like returns on the upside and bond-like returns on the downside." While this is somewhat tongue-in-cheek, it is not entirely untrue. Hedge funds often underperform during bull markets and outperform in bear markets. The trick for superior long-term compounding of capital is asymmetry. The reason for this is that large losses destroy the rate at which capital compounds. A 50% loss requires a 100% gain to breakeven. A 20% loss "only" requires a 25% return to breakeven. This is a big difference. How does this work in practice?

"The opposite of hedging is speculating."
—Mark Twain

These asymmetries are best explained with an example. Figure 1 compares two investment philosophies: one where risk is actively managed and one where it is not. For the active portfolio, we use a proxy for the average equity long/short hedge fund portfolio, in this case the HFRI Equity Hedge Index which is an index comprised of equity long/short managers. For the passive portfolio we have chosen the oldest ETF of equities: SPY which tracks the performance of the S&P 500® Index. SPY was launched in January 1993 which means the observation period covers more than 21 years to June 2014. The chart shows the average of the positive returns for the two portfolios as well as the average of the negative returns. The compound annual rate of return (CARR) of the two portfolios is shown in the legend while the frequencies of returns are displayed in the bars.

Figure 1: SPY versus Equity long/short hedge funds (January 1993 – June 2014)



Source: IR&M, Bloomberg. **Past performance is no guarantee of future results.**

SPY, the passive long-only portfolio in this case, compounded at an annual rate of 7.2%, while the portfolio where risk is actively managed compounded at a rate of 10.9%, net of all fees in both cases. Compounding at 7.2% for 21 years turns a $100 investment into a $431 pot. Compounding at 10.9% for 21 years brings $100 to $878. Arguably, this is a big difference. Note that the investment approach with the higher fees compounded at a higher rate on a net-of-fees basis. How is it done?

"Compound interest is the eighth natural wonder of the world and the most powerful thing I have ever encountered."
—Albert Einstein

No asymmetry, no compounding

The average performance of the long-only investment when negative is -3.5% per (negative) month on average. The average positive return is 3.3%. In other words the asymmetry works against the investor, the negative returns are, on average, larger than the positive returns. However, in case of SPY, there are more positive returns; 62% of returns were positive and 38% negative. In Japan, this relationship is currently around 50% versus 50% and long-term returns are zero or slightly negative. This means that if there is no asymmetry of some sort, there is no positive compounding. In the equity long/short example from above, the average negative return is "only" 1.9%, much less than the average negative return in SPY. Furthermore, the average positive return is 2.2%, i.e., larger than the average negative return. This means the asymmetry works in favour of the investor. Putting it differently, the outperformance when returns are negative is 1.6 percentage points (3.5%-1.9%) but the underperformance when positive is 1.1 (3.3%-2.2%). While this looks small, it isn't; it's material. Over time, it results in explaining the superior long-term performance of an investment style that includes risk management over one that doesn't.

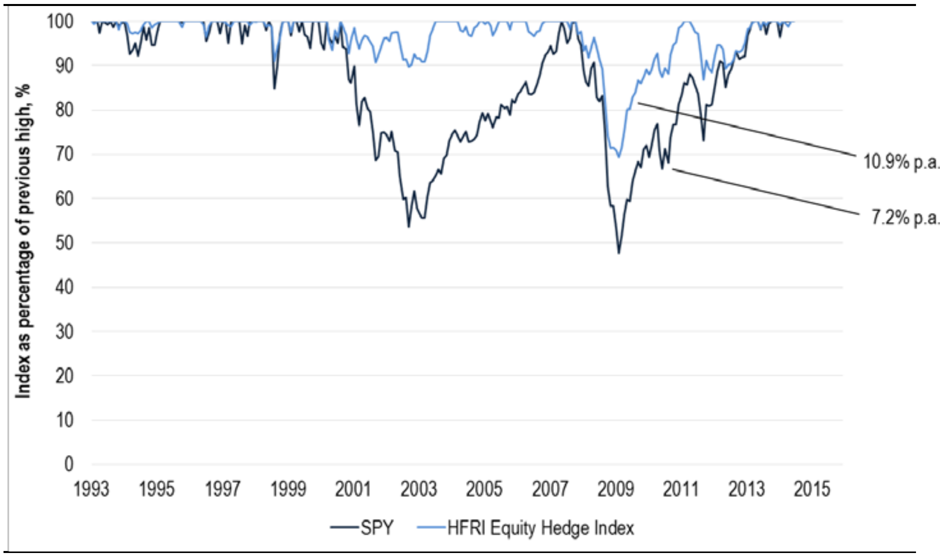
Smooth positive compounding of capital requires asymmetries

Our claims are simple. First, asymmetric risk/return profiles are attractive. It means nothing else than having a high probability of financial success and survival with a low probability of the opposite. Second, these profiles are not a function of randomness or market forces but a function of seeking (new) investment opportunities while actively managing risk, whereby risk is defined in absolute terms. By asymmetry, we actually mean two things: an asymmetry with respect to the *magnitude* of positive versus negative returns, as well as an asymmetry with respect to the *frequency* of positive versus negative returns. If our objective is the positive, smooth, and sustainable compounding of capital, one needs a combination of both of these asymmetries.

One aspect of risk management obviously is the avoidance of losses, especially large ones. One reason for avoiding large losses is that they negatively impact the rate at which capital compounds, as mentioned before, and it takes a long time to recover from large losses. Figure 2 shows the underwater perspective (in index in percentage of its previous all-time-high) of the two investments discussed earlier. When the line in the chart is 100, the strategy or asset class is generating new profits. The graph is a way to visualize losses and, equally important, the time it takes to recover from those losses. Generally speaking, it takes longer to recover from large losses than it takes to recover from small losses.

"It requires a great deal of boldness and a great deal of caution to make a great fortune, and when you have it, it requires ten times as much skill to keep it."
—Ralph Waldo Emerson (1803-82), American essayist

Figure 2: Under water perspective – SPY versus Equity long/short hedge funds



Source: IR&M, Bloomberg. **Past performance is no guarantee of future results.**

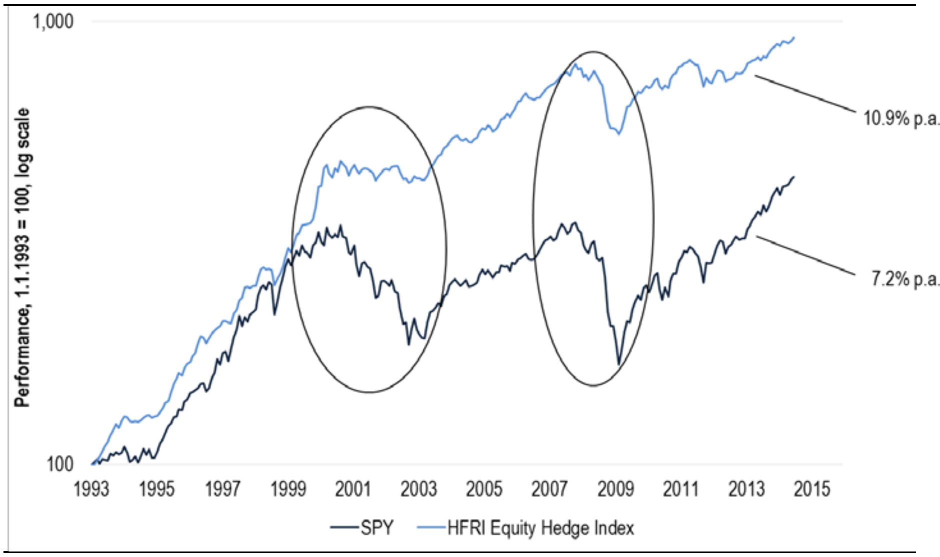
SPY lost roughly 50% of its value twice in the last decade. It took years to recover from those losses. Equity long/short as an equity-related subgroup of the hedge fund universe lost much less during these downturns. The practical relevance is that the pain from losing money is smaller, the recovery from the losses faster, and the long-term rate at which capital compounds is higher as a result.

"The conventional view serves to protect us from the painful job of thinking."
—John Kenneth Galbraith (1908-2006), Canadian-American economist

If you think of it for a moment, a product with high fees should be superior to a product with low fees. The other way around would make no sense at all.

Figure 3 shows the performance of these two investments. We apply a log scale for the swings of the two investments to appear comparable.

Figure 3: Performance - SPY versus Equity long/short hedge funds



Source: IR&M, Bloomberg. **Past performance is no guarantee of future results.**

Higher returns and a smoother path

The chart shows the benefits of the asymmetric return profile well: higher return and a smoother path over the long term. The chart visualizes where the superior performance comes from. It is derived mainly from a smoother path when things in capital markets go wrong (circled).

Concluding remarks

A risk-uncontrolled portfolio is a potpourri of risks

Returns are a function of taking risk. Hedge funds do not hedge all risks. If all risks were hedged, there would be no return. One difference between hedge funds and traditional long-only managers is that hedge funds hedge the risks where the portfolio managers do not expect to be compensated for bearing the risk. A traditional long-only portfolio, by contrast, is a potpourri of risks, some of which carry a reward, while others do not.

Hedging directional market risk does not mean nothing can go utterly wrong

Many hedge funds do seek to hedge against various types of market risk in one way or another, making consistency and stability of returns, rather than magnitude, their key priorities. Thus, some hedge funds are generally able to deliver consistent returns with lower risk of loss. Long/short equity funds, while somewhat dependent on the direction of markets, hedge out some of this market risk through short positions that provide profits in a market downturn to offset losses made by the long positions. Equity market-neutral funds that invest equally in long and short equity portfolios should not be significantly correlated to market movements. That does not mean there is no risk. It only means there is no directional market risk.

There is still a lot of myth with respect to alternatives being risky. Much of it is built on anecdotal evidence, oversimplification, myopia, or simply a misrepresentation of facts. Although hedge funds are often branded as a separate asset class, a point can be made that hedge fund managers are simply asset managers utilizing other strategies than those used by relative return long-only managers. The major difference between the two is the definition of their return objective: hedge funds aim for absolute returns by balancing investment opportunities and risk of financial loss. The same logic is applicable to constructing portfolios with alternatives. Where a single investment might be "risky," it is the combination of different risks that makes a portfolio less sensitive to accidents and losses. Diversification might indeed be the only free lunch in finance.

"Take care to sell your horse before he dies. The art of life is passing losses on."
—Robert Frost (1873–1964), American poet

Ineichen Research and Management AG ("IR&M") is a research firm focusing on investment themes related to absolute returns and risk management.

The firm was founded in October, 2009 by Alexander Ineichen. Mr. Ineichen started his financial career in derivatives brokerage and origination of risk management products at Swiss Bank Corporation in 1988. From 1991 to 2005, he had various research functions within UBS Investment Bank in Zurich and London relating to equity derivatives, indices, capital flows, and alternative investments, since 2002 in the role of a Managing Director. From 2005 to 2008 he was a Senior Investment Officer with Alternative Investment Solutions, a fund of hedge funds within UBS Global Asset Management. In 2009 he was Head of Industry Research for the hedge fund platform at UBS Global Asset Management.

Mr. Ineichen is the author of two publications *"In Search of Alpha – Investing in Hedge Funds"* (October 2000) and *"The Search for Alpha Continues – Do Fund of Hedge Funds Add Value?"* (September 2001). These two documents were the most often printed research publications in the documented history of UBS. He is also author of *"Absolute Returns – The Risk and Opportunities of Hedge Fund Investing"* (Wiley Finance, October 2002) and *"Asymmetric Returns – The Future of Active Asset Management"* (Wiley Finance, November 2006). He has also written several research pieces pertaining to equity derivatives and hedge funds and contributed to several chapters to financial books. He also wrote *"AIMA's Roadmap to Hedge Funds"* (November 2008) which was, at that time, the most often downloaded document from their website.

Mr. Ineichen holds a Bachelor of Science in Business Administration with Major in General Management from the Universities of Applied Sciences in Business Administration in Zurich (HWZ), Switzerland. He holds the Chartered Financial Analyst (CFA) and Chartered Alternative Investment Analyst (CAIA) designations and is a certified Financial Risk Manager (FRM). He is on the Board of Directors of the CAIA Association and is a member of the AIMA Research Committee.

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