WEALTHSHIELD

CAN YOU TIME ALTERNATIVE INVESTMENTS?

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Alternative investing is somewhat of a “catch-all” statement that characterizes any investment activity outside of the traditional stock and bond investments. You often times hear of asset class model frameworks where investment professionals identify stocks, bonds, cash, and alternatives.

What is an alternative?

The word alternative is defined as “of one or more things available as another possibility.” Instead of the traditional asset classes, investors can decide to invest in another possibility. Now this possibility includes things like commodities, real estate, private companies, venture capital, special situations, distressed debt, quantitative strategies, long-short equity strategies amid other more esoteric options. The problem with alternative investing today, and why the asset class in general is easily scrutinized, is the fact that the definition is too vague and broadly defined.

What an investor ends up with is a mess of too many strategies, too many funds, and a bunch of assets that do nothing but dampen volatility (including the upside)--causing a diversified portfolio to underperform during the 70% of the time the market has historically gone up. Not a very good strategy, we might add, and hence the reason for the large scale criticism.

However, groups of investors, typically the astute (Yale Endowment) seem to have mastered the alternative investment landscape to generate superior risk adjusted returns over the long-term (Figure 1). We believe that their success has largely been based on the fact that these groups concentrate their alternative exposure to capture certain risk premia, or provide diversification to the overall portfolio. The genius component is really how they use these unique assets to enhance the returns of their portfolio without increasing the overall downside risk of the portfolio.

	Fiscal Year				
	2017	2016	2015	2014	2013
Market Value (in millions)	$27,176.1	$25,408.6	$25,572.1	$23,894.8	$20,780.0
Return	11.3%	3.4%	11.5%	20.2%	12.5%
Spending (in millions)	$ 1,225.8	$ 1,152.8	$ 1,082.5	$ 1,041.5	$ 1,024.0
Operating Budget Revenues (in millions)	$ 3,692.2	$ 3,472.4	$ 3,297.7	$ 3,116.1	$ 2,968.6
Endowment Percentage	33.2%	33.2%	32.8%	33.4%	34.5%
Asset Allocation (as of June 30)					
Absolute Return	25.1%	22.1%	20.5%	17.4%	17.8%
Domestic Equity	3.9	4.0	3.9	3.9	5.9
Fixed Income	4.6	4.9	4.9	4.9	4.9
Foreign Equity	15.2	14.9	14.7	11.5	9.8
Leveraged Buyouts	14.2	14.7	16.2	19.3	21.9
Natural Resources	7.8	7.9	6.7	8.2	7.9
Real Estate	10.9	13.0	14.0	17.6	20.2
Venture Capital	17.1	16.2	16.3	13.7	10.0
Cash	1.2	2.3	2.8	3.5	1.6

Figure 1: Yale Investment Portfolios and Returns; Source: Yale Investments Office; Full report can be found here.

Our belief is that alternative investments can be divided into two main groups: **risk mitigators and return enhancers.** We will come back to the former in a minute, but to start, return enhancers are asset classes such as private equity, venture capital, activist funds, and real estate (among others). These asset classes are all designed to capture certain risk premia that exist in the marketplace. The benefits of these strategies are that they can outperform the traditional asset classes over the long-term and can add value to a portfolio through enhancing returns. Return enhancers tend to have longer investment horizons and longer lock-up periods associated with the investment.

The other main category of alternative investments are risk mitigators. Risk mitigator strategies include: long-short equity funds, statistical arbitrage funds, market neutral, absolute return, macro funds, and commodity trading advisors or managed futures. The advantage of these types of strategies is their ability to dampen volatility in a portfolio predominately comprised of stocks and bonds. More importantly, these types of strategies demonstrate (at least historically) the ability to mitigate downside volatility--the kind that really matters from a portfolio perspective.

Essentially, these funds win through risk mitigation and capitalization on certain edges. Often times, these types of strategies beat the market over the long-term. As an example, let's take a look at CTAs. In particular, we invite you to look at the systematic, diversified, long-term trend followers within this group (Figure 2) . These strategies have been able to consistently generate market-like growth with significantly less downside over the long-term.

Historical Performance of Equities and Managed Futures during Crises (%)
1987 - Present

PERIOD	starting VIX	ending VIX	Change in VIX	Equity RETURNS	Managed Futures Returns	Description of Crisis
SEP-NOV 1987	--	--	--	-29%	8.5%	Black Monday
JUL-OCT 1990	21.11	30.04	42.3%	-14.1%	13.5%	Iraq invades Kuwait
FEB-MAR 1994	10.63	20.45	92.4%	-7.0%	1.0%	First Fed hike since 1989
JUL-AUG 1998	19.71	44.28	124.7%	-15.4%	5.4%	Russian default and LTCM crisis
SEP-NOV 2000	16.84	29.65	76.1%	-13.1%	6.0%	USS Cole; Mad Cow outbreak; Bush v Gore
FEB-MAR 2001	22.02	28.64	30.1%	-14.9%	5.3%	Bush inaugurated; US and Britain attack Iraq
JUL-SEP 2001	19.06	31.93	67.5%	-14.7%	4.1%	Events leading up to 9/11 attacks
APR-SEP 2002	17.40	39.69	127.1%	-28.4%	18.7%	Enron and WorldCom; End of tech bubble
DEC-FEB 02'-03	27.50	29.63	7.7%	-9.7%	17.5%	War in Iraq; SARS outbreak
JUN-FEB '08-09	17.83	46.35	160.0%	-46.4%	7.2%	Global financial crisis (The Great Recession)
MAY-JUN 2010	22.05	34.54	56.6%	-12.8%	-2.8%	Greek crisis
MAY-SEP 2011	14.75	42.96	191.3%	-16.3%	-2.1%	Eurozone debt crisis; US credit downgrade
APR-MAY 2012	15.50	24.06	55.2%	-6.6%	2.2%	Continuing European crises
AUG-SEP 2015	12.12	24.50	102.1%	-8.4%	-0.2%	Chinese currency crisis
DEC-JAN '15-16	16.13	20.20	25.2%	-6.5%	1.3%	Draghi stimulus fiasco; first Fed hike since 2006

Figure 2: Historical performance of CTAs during crisis periods; Source: ctaperformance.com

The term risk mitigator should better be classified as a portfolio diversifier. Through diversifying a traditional portfolio, they mitigate risk of the overall portfolio construction. By themselves, the return and risk profile may suggest that they do the opposite of risk mitigation.

There are several considerations when determining the optimal blend of alternative assets. *First, an advisor must determine what percentage of assets should be allocated to the broad alternative investment arena overall.* This is a decision that should not be based on some rules of thumb, but rather informed by a combination of forward looking return and risk expectations and the underlying investor's behavioral profile. The last thing any advisor needs is to put their client into a portfolio they don't understand leaving them to abandon their strategy at an inopportune time in the future. Then the advisor has an unhappy client and has lost an advocate, while the client has challenged their chances to reach their financial objectives. For the purposes of this paper, we will assume a constant 50 percent allocation to demonstrate the effectiveness of allocating to alternative investments. In practice, however, this percentage can and should vary based on the objectives, constraints, and risk willingness and ability of the underlying client, as well as whether they are more subject to emotional or cognitive biases.

The second consideration that an advisor must make when allocating to alternative investments is how much should be in risk mitigation versus return enhancement strategies. Now, if we could figure out how to time these investments to optimize the concentration in either risk mitigation strategies or return enhancement portfolios, then investors would likely have significantly better outcomes from alternative investing.

It is our opinion, like with all investing, that the approach to alternative allocations should be dynamic in nature. What we mean by dynamic is that investments and position sizing should be informed by the business cycle. In theory, when the business cycle is in the early stages, investors should position more in the return enhancement category. On the flip side, when the business cycle is in the latter innings, investments should be concentrated in risk mitigators.

How does one know where they are in the business cycle? There are several methods for determining the current stage of the business cycle. One of our favorite methods is to use credit spreads to determine whether the credit markets are growing or slowing. This method is based on the belief that the credit cycle drives the business cycle, which drives the market cycle. So if you get the credit cycle right, you may ultimately get the market cycle correct. Therefore, when spreads start to widen, an investor using this method would begin to increase the overall allocations to risk mitigation strategies. When credit spreads start to tighten, the investor would allocate to risk enhancers.

To demonstrate the effectiveness of the above theory, we have run the following simple strategy:

1. When High Yield Option Adjusted Spreads are above the 5 month moving average- allocate 50% to managed futures.
2. When High Yield Option Adjusted Spreads are below the 5 month moving average- allocate 50% to private equity.
3. 50% of the portfolio is allocated to a traditional balanced strategy of 60% stocks and 40% bonds.
4. This allocation does not change other than being rebalanced quarterly.

For the purposes of this assessment, we only shift the asset allocation within the 50 percent of the portfolio earmarked for alternatives. We used the relative index investments to mimic the exposures and test the efficacy of the proposed strategy. Furthermore, we ran the system each calendar quarter to determine the allocation for the subsequent quarter.

Simulated Results:

The initial simulation of the methodology shows that the strategy would have historically outperformed a traditional portfolio of only stocks and bonds from 2000 through 2017. A $100 dollar investment in the 60/40 portfolio would have grown to almost $200 over the time period. On the other hand, a $100 investment in the Alternative Strategy would have grown to almost $500 (See Figure 3).

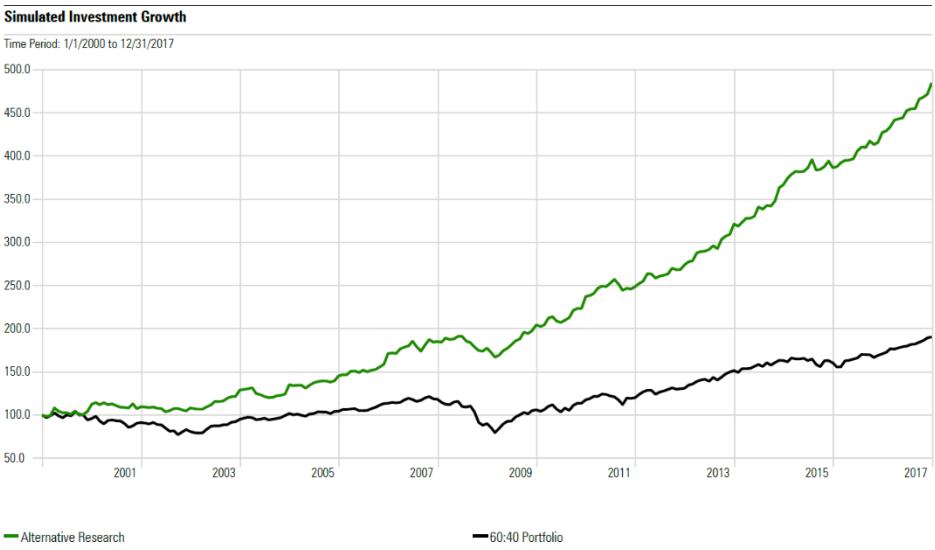

Figure 3- Simulated Investment Growth

The outperformance in the simulation is even more impressive when you consider the maximum drawdown and relative risk of the of the overall strategy. An investor in a 60/40 portfolio would have experienced two drawdowns since 2000 of over 20%. The max drawdown of the 60/40 portfolio was greater than 30 percent in 2008. On the contrary the alternative strategy would have had a max drawdown of slightly more than 10 percent (See Figure 4).

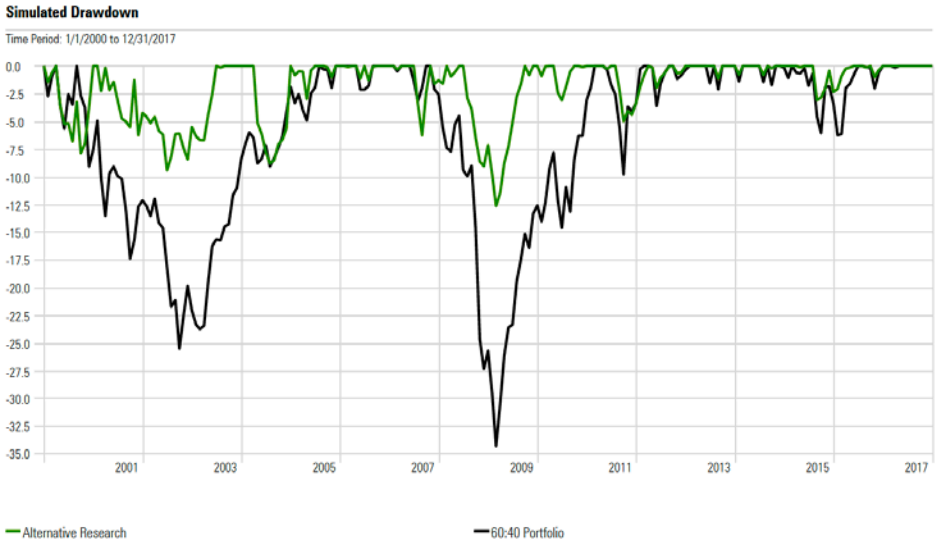

Figure 4- Simulated Drawdown

The monthly return tables below illustrate how smooth the annual return path would have been historically in the simulation. Smooth returns are important from a behavioral perspective and help keep investors in the portfolio through volatile times. This is especially desirable if the investor is able to generate outperformance over their corresponding benchmark (Figures 5 & 6)

Alternative Research - Simulated Monthly Returns

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
2017	0.46	1.08	1.79	0.30	0.28	1.88	0.47	0.04	2.45	0.48	0.73	2.75	13.42
2016	0.31	1.18	0.67	0.11	0.35	2.30	1.15	-0.14	1.84	-1.01	0.64	2.74	10.55
2015	2.00	1.22	0.91	-0.11	0.15	1.04	2.49	-3.09	0.26	0.83	1.66	-1.96	5.36
2014	-0.79	1.35	1.48	0.01	0.69	3.31	-0.81	1.30	-0.20	1.75	4.34	1.01	14.17
2013	1.34	0.34	3.28	0.53	0.20	0.67	1.49	-1.15	3.65	1.24	0.63	3.92	17.27
2012	1.53	1.08	3.35	-0.14	-1.84	0.94	0.42	0.60	2.47	-0.67	0.09	2.04	10.20
2011	0.51	0.98	2.53	1.01	-0.26	1.55	1.85	-2.16	-2.90	0.99	-0.37	1.11	4.80
2010	-0.92	0.89	3.90	0.71	-2.39	-0.73	1.27	1.38	3.95	1.09	-0.09	6.21	16.04
2009	-2.91	-3.12	1.40	3.03	1.62	2.35	2.47	1.14	4.22	-0.83	1.77	3.36	15.13
2008	-0.32	2.53	-0.95	0.39	1.61	0.04	-2.91	-1.00	-2.69	-2.31	-0.47	2.10	-4.06
2007	0.37	-0.32	3.08	1.13	0.78	3.05	-3.45	-2.92	4.12	3.58	-1.61	0.33	8.09
2006	0.89	-0.08	2.87	0.11	-1.15	1.95	-1.31	1.27	0.55	1.89	1.95	7.86	17.80
2005	-0.84	0.34	-0.01	-2.49	2.67	2.00	1.03	0.61	-0.11	-0.91	1.12	4.04	7.55
2004	0.68	0.49	1.04	-5.14	-1.07	-1.72	-1.11	0.33	1.52	0.48	1.09	8.76	4.90
2003	-0.90	-0.35	-0.03	2.44	2.00	3.69	-0.14	0.66	2.74	1.43	0.32	5.96	19.08
2002	-0.39	-0.57	0.60	-1.31	-0.37	-3.46	1.39	2.23	0.04	-1.43	-1.08	3.20	-1.33
2001	1.85	-2.27	2.18	-2.04	0.77	-1.74	-1.67	-0.29	-0.53	4.52	-5.07	2.17	-2.47
2000	-1.45	0.83	9.09	-3.52	-1.79	0.08	-1.75	3.86	-4.81	0.97	3.45	7.94	12.58
1999	–	–	–	–	–	–	–	–	–	–	–	–	–

Figure 5- Simulated Monthly Returns

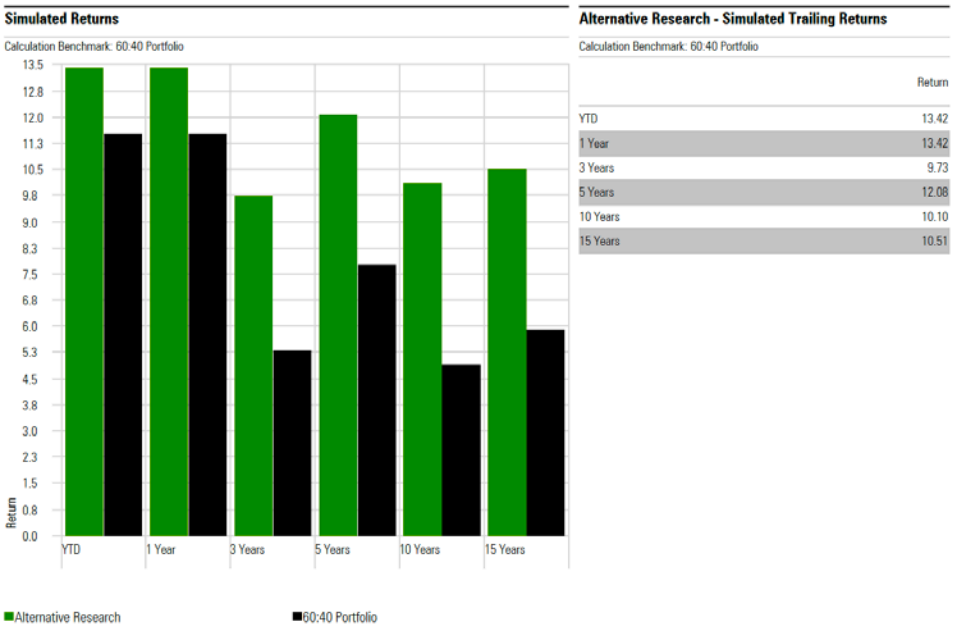

Figure 6- Simulated Monthly Returns

We have included additional return charts below to demonstrate performance relative to static exposures to either private equity or managed futures. This allows us to test whether or not the rotation strategy adds value. The green line is the rotation strategy, the black line is 50 percent 60/40 and 50 percent private equity, and the red line is 50 percent 60/40 and 50 percent managed futures. The drawdown chart is also illustrated to reference the risk characteristics of the three portfolios. The rotation strategy was superior in the simulation to the portfolios with static exposures from a return standpoint with the risk characteristics of a portfolio using exclusively managed futures as the alternative portion (Figures 7 & 8).

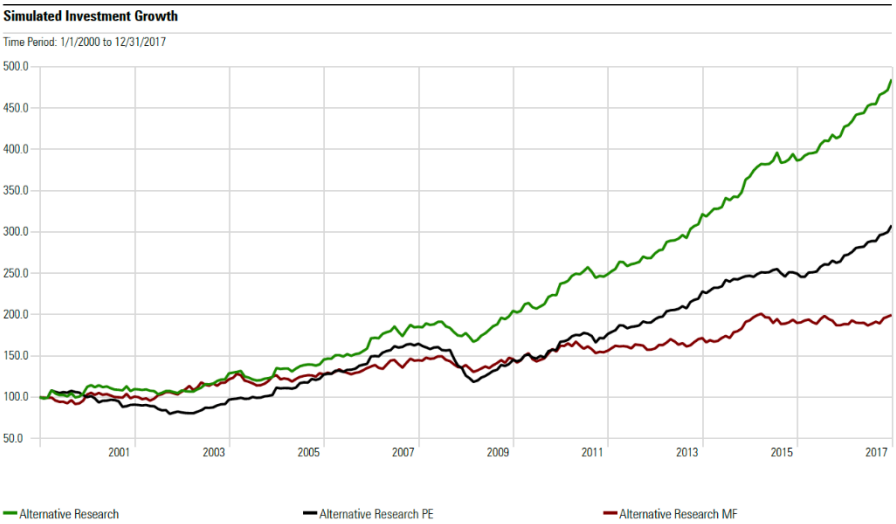

Figure 7- Simulated Investment Growth

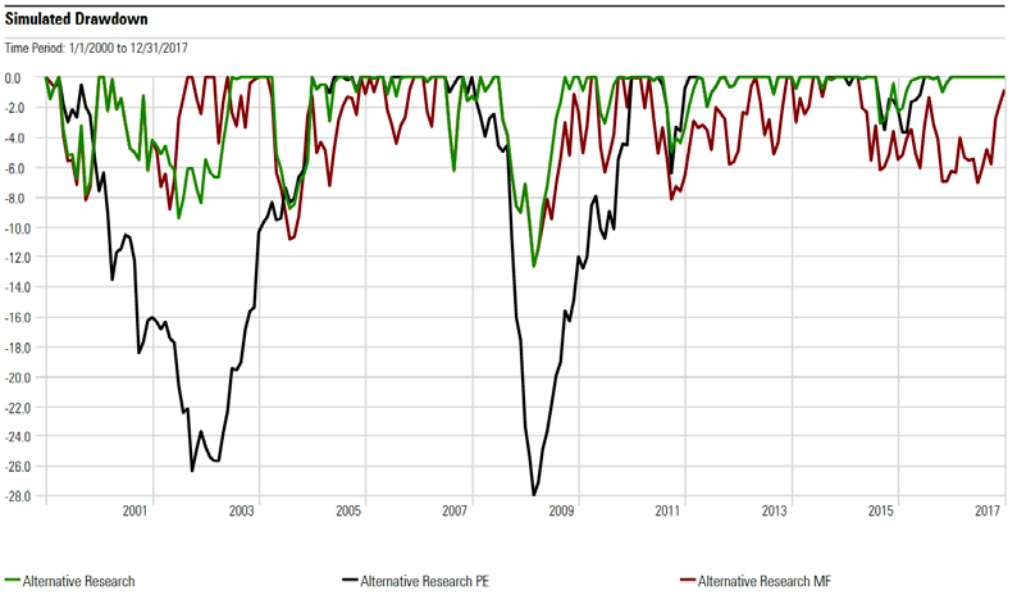

Figure 8- Simulated Drawdown

The Problem:

The problems with the previously discussed model are primarily concerned with the fact that most return enhancement investments and funds come with a certain time commitment or "lock-up" period.

This presents the problem and the main source of return. The fact that these lock-ups exist are also the main reason why a lot of these investments are advantageous from a return perspective. In fact, a 2009 study on the *Roles of Managerial Incentives and Discretion in Hedge Fund Performance* showed that returns are directly correlated with the length of the lock-up--meaning that the longer the lock up, the greater the returns. This is commonly referred to as the illiquidity premium: excess returns come from the inherent illiquidity within the strategy.

Therefore, timing these investments can be difficult because they often require significantly long-term commitments. Furthermore, the strategy does not take into account the transaction costs for making the rotations between exposures. We anticipate that this could reduce the returns demonstrated, but not enough to suggest the strategy would not have added value historically.

Another issue that needs to be addressed with the respect to alternative investing has to do with fees. Gaining access to managed futures or private equity funds comes with a higher than average fee structure that needs to be assessed within the context of the total portfolio. Fees for accessing these types of strategies can be as high as 2 percent for management fees and 20 percent for performance incentives. This would also have a negative effect on the relative returns.

The Solution:

In order to mitigate the potential difficulty caused by illiquidity and lock up periods, we believe investors can still utilize a similar strategy through derivative exposures or replication strategies.

For instance, using total return swaps could allow an investor the opportunity to gain the return stream of a private equity index or CTA index. This could potentially allow for the timing of the investments without the problems of buying and selling funds. This could also potentially reduce the overall fees associated with alternative investing.

Replication strategies are not that far out of reach either**.** AQR demonstrated in their paper, *A Century of Evidence on Trend Following Investing*, that a simple momentum system applied to several asset classes would have generated substantial returns and risk benefits. This is a strategy that could theoretically be used to replicate the managed futures exposure.

In his paper *Replicating Private Equity with Value Investing, Homemade Leverage, and Hold-to-Maturity Accounting*, Erik Stafford of Harvard Business School also demonstrates that private equity investments were essentially leveraged small capitalization stocks. Therefore, allocating to a leveraged form of small cap stocks could help gain exposure to similar return and risk characteristics of private equity.

Authors Brian Chingono and Daniel Rasmussen further exemplify this in their 2015 study of *Leveraged Small Value Equities*.

It is evident from the above example that using an informed business cycle approach to alternative investing have the potential to greatly enhance returns and reduce risk.

Alternatives and hedge funds in general have received a lot of heat during the last 9 years--the main reason being the lack of upside return out of the traditional hedge fund universe, especially those that should be classified in the risk mitigation category. This has caused a massive exodus among pension and endowments, and it has accelerated an already frothy passive investment bubble. Further evidence of this bubble was made evident in the bet between Buffett and the fund of funds that suggested hedge funds would underperform the S&P 500 over the period ending in January 2018.

Within the context of this paper, it seems to us that Buffett may have understood that alternative investing, like all investing, should be done within a business cycle informed framework. Making his bet at the beginning of a business cycle was a good one. Now we understand why he would not make it again!

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