# Managed Futures - Uncorrelated Volatility

The goal of any Alternative Fund should be to reduce a portfolio's Risk. Do Managed Futures Funds succeed? We begin our analysis with the following recent Morningstar articles. The first article is referenced and linked in the second.

## Managed-Futures Funds Vulnerable to Market Turbulence

## By Tayfun Icten | 02-02-18

The current general positioning of managed-futures funds is vulnerable to a market correction, and here is why.

Sustained directional upside or downside market movements determine managed-futures funds' positioning. Most of these systematic trend followers use multiple models that combine different look-back periods, creating "time diversification." In other words, managed-futures funds' short-term models enter the market first as a trend develops, and medium-term and long-term models follow. This helps managers to gradually enter and exit the markets, take profits, and ride trends successfully. Model agreement across the various time periods is also an important input for managed-futures funds' asset allocation, subject to a fund's risk target.

This simple process of following trends generally leads to high correlation among these funds because they operate in similar futures and forwards markets (the number of markets traded can vary). ... Note that correlation does not necessarily say anything about the magnitude of the comovements. Therefore, funds with high correlation may generate very different long-term performance depending on the initial design and implementation of the strategy.

Most managed-futures funds had a standout month in January 2018; it was the best month in the past three years. The funds' common positionings in the four major asset classes that they trade drove this exceptional performance. In general, managed-futures funds had the following positions in common at the end of 2017:

- Long Equities (following the persistent equity rally)
- Short Fixed Income (following the downtrend in rates markets)
- Long Commodities (particularly up-trending crude oil)
- Short USD (participating in the weakness of USD against major currencies like EUR)

According to recent quarterly communication from these funds, most of them allocated 30%-50% of their risk to equities (mostly long positions), and they have substantially increased their long exposure to energy markets such as crude oil. (Of course, while these funds may have similar overall directional asset class exposure, their

Exhibit 2. Strong Momentum Seen in Certain Asset Classes		
Market	January 2018 Return (%)	
U.S. Oil	7.3	
S&P 500 TR USD	5.7	
iShares 7-10 Year Treasury Bond ETF	-2.2	
U.S. Dollar	-3.3	

Source: Morningstar Direct

portfolios will differ in specific markets sometimes with offsetting positions in different regions.)

The January 2018 returns for indexes representing these asset classes, as shown in Exhibit 2, illustrate the strong momentum that drove these positions.

These clearly trending markets led to outsize gains by managed-futures funds in the month of January. Exhibit 3 shows performance for managed-futures funds covered by Morningstar analysts. The average managed-futures Morningstar Category return for January was 3.9%, the best monthly performance since January 2015.

Exhibit 3. Managed-Futures Funds Had Standout Performance in January 2018		
	January 2018 Return (%)	Morningstar Analyst Rating
Managed Futures Morningstar Category	3.9%	
American Beacon AHL Managed Futures	7.3%	Bronze
Natixis ASG Managed Futures	6.7%	Bronze
Credit Suisse Managed Futures	6.1%	Bronze
Abbey Capital Futures	5.2%	Bronze
LoCorr Market Trend	4.6%	Neutral
AQR Managed Futures	3.9%	Bronze

Source: Morningstar Direct

While these results are undoubtedly attractive, it's important to note that the asset-class positioning generating these results will not likely act as effective hedges or diversifying positions in the context of an investor's total portfolio--common uses of these strategies, which are largely touted for diversification benefits and potential downside protection. In fact, managed-futures strategies can be highly vulnerable to a rapidly developing risk-off scenario, in which riskier assets such as equities sell off while bonds and the U.S. dollar rally.

That's not to say that these funds can't still offer diversification and downside protection. Managed-futures funds dynamically allocate their assets to the four major asset classes as they buy more into a rising market and sell more of a falling market in a systematic way. They do not try to predict what is likely to go up or down but instead respond in a disciplined manner to directional changes in specific futures and forward markets in equity, fixed income, currencies, and commodity asset classes. While these funds' recent general positioning does not negate their long-term diversification benefits, current market trends have manifested themselves in a risk-on stance, which is vulnerable to an equity market turbulence.

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From Morningstar's John Rekenthaler on 2/9/18:

Managed-futures funds protected beautifully against the 2008 financial crash. Not that retail investors benefited. With one exception, the managed-futures funds that existed at the time were hedge funds, meaning that they weren't available for the rank-and-file. Too bad. Between late 2007 and early 2009, from the stock market's peak to trough, the average managed-futures hedge fund gained 12% while stocks dropped 41%.

The fund industry rapidly filled the gap; today, there are 43 managed-futures funds (124 counting all their share classes). To date, those funds haven't helped their investors—not necessarily through mismanagement, but

rather because there hasn't been any point in cushioning stock-market exposure. The more equities, the better. Hedging against downturns has meant leaving money on the table.

On Monday that changed, with the S&P 500 dropping by 4.1%. At least for the one day, managed-futures funds had their opportunity. And they... declined by an average of 3.1%. This showing would have come as no surprise to careful Morningstar readers. Last week, Tayfun Icten published an article entitled, <u>"Managed-Futures Funds Vulnerable to Market Turbulence,</u>" because, he wrote, they currently have a long position in equities. Four days later, he was proven correct. Good timing! (And good smarts—clever people, these physics majors.)

We continue with the following review of the academic research, the unedited version of which can be found on Alpha Architect's site: <u>http://www.alphaarchitect.com/</u>

## Time Series Momentum (aka Trend-Following): A Good Time for a Refresh

By Larry Swedroe | February 8th, 2018

Similar to some better-known factors like size and value, time-series momentum is a factor which has historically demonstrated above-average excess returns. Time-series momentum, also called trend momentum or trend-following, is measured by a portfolio which is long assets which have had recent positive returns and short assets which have had recent negative returns. Compare this to the traditional (cross-sectional) momentum factor, which considers recent asset performance only relative to other assets. The academic evidence suggests that inclusion of a strategy targeting time-series momentum in a portfolio improves the portfolio's risk-adjusted returns. Strategies that attempt to capture the return premium offered by time-series momentum are often called, "managed futures," as they take long and short positions in assets via futures markets — ideally in a multitude of futures markets around the globe. This piece dives into time-series momentum and examines some of its specific qualities — qualities that make a managed futures strategy a good portfolio diversifier (example shown here).

In general, an asset that has low (or negative) correlation with broad stocks and bonds provides good diversification benefits. Low or near-zero correlation between two assets means that there is no relationship in their performance: Asset A performing above average does not tell us anything about Asset B's expected performance relative to its average. The addition of a low-correlation asset to a portfolio will, depending on the specific return and volatility properties of the asset, improve the portfolio's risk-adjusted returns either by improving the portfolio's return, reducing the portfolio's volatility, or both.

## An Introduction to Time Series Momentum Research

AQR Capital Management's Brian Hurst, Yao Hua Ooi, and Lasse H. Pedersen contribute to the literature on time-series momentum with their June 2017 study, A Century of Evidence on Trend-Following Investing" — an update of their 2014 study, "Time Series Momentum." They constructed an equal-weighted combination of one-month, three-month and 12-month time-series momentum strategies for 67 markets across four major asset classes (29 commodities, 11 equity indices, 15 bond markets and 12 currency pairs) from January 1880 to December 2016. For each of the three strategies (one-, three- and 12-month), the position taken in each market is determined by assessing the past return in that market over the relevant look-back horizon. A positive past excess return is considered an "up" trend and leads to a long position; a negative past excess return is

considered a "down" trend and leads to a short position. Each position is sized to target the same amount of volatility, both to provide diversification and to limit the portfolio risk from any one market (see risk parity for dummies). The positions across the three strategies are aggregated each month and scaled such that the combined portfolio has an annualized ex-ante volatility target of 10 percent. Volatility scaling ensures that the combined strategy targets a consistent amount of risk over time, regardless of the number of markets that are traded at each point in time. Their results include implementation costs based on estimates of trading costs in the four asset classes. They further assumed management fees of 2 percent of asset value and 20 percent of profits, a traditional fee for hedge funds.

Below is a recap of the authors' Time Series managed futures strategy versus a long-only strategy trading the same futures contracts.





The following is a summary of the AQR researchers' findings:

- While trend-following has done particularly well in extreme up or down years for the stock market, the performance was remarkably consistent over an extensive time horizon that included the Great Depression, multiple recessions and expansions, multiple wars, stagflation, the global financial crisis of 2008, and periods of rising and falling interest rates.
- In each decade since 1880, time-series momentum has delivered positive average returns with low correlations to traditional asset classes. Further, time-series momentum has performed well in eight out of 10 of the largest crisis periods over the century, defined as the largest drawdowns for a 60/40 stock/bond portfolio tending to perform well when its benefits were needed most.
- The persistence, pervasiveness (there were positive average returns in each of the 67 markets, with an average Sharpe ratio of approximately 0.4) and robustness (three strategies) of the results make it highly unlikely that existence of price trends in markets is a product of statistical randomness or data mining.

- Annualized returns in excess of the risk-free rate, gross of fees but net of costs, were 11.0 percent over the full period, higher than the return for equities but with about half the volatility (an annual standard deviation of 9.3 percent). After applying a 2/20 fee typical of hedge funds, the net excess return was still 7.3 percent (note that investors now have access to lower-cost alternatives in the form of publicly available mutual funds and ETFs, which also provide daily liquidity).
- Net returns were positive in every decade, with the lowest net return being the 1.6 percent return for the period beginning in 1910.
- There was virtually no correlation between either stocks or bonds. Thus, the strategy provides strong diversification benefits while producing a high Sharpe ratio (net of fees and costs) of 0.76. (Even if future returns are not as strong, the diversification benefits would justify an allocation to the strategy.) The so-called "Trend Smile," or the historical finding that time-series momentum-based managed futures programs tend to rise in both extreme positive and negative markets, is compelling for investors looking to hedge their tail risks.

The chart below is from the paper:

## Fig. 4. The Trend Smile

The non-overlapping quarterly returns on the diversified (equally weighted across all contracts) 12-month time series momentum or trend strategy are plotted against the contemporaneous returns on the S&P 500.



Time-series momentum is not without risk, with the strategy experiencing significant drawdowns, losing up to 25 percent over extended time periods.

The researchers at AQR observed the following:

...a large body of research has shown that price trends exist in part due to long-standing behavioral biases exhibited by investors, such as anchoring and herding [and I would add to that list the disposition effect and confirmation bias], as well as the trading activity of non-profit-seeking participants, such as central banks and corporate hedging programs. For instance, when central banks intervene to reduce currency and interest-rate volatility, they slow down the rate at which information is incorporated into prices, thus creating trends.

### AQR's researchers continued:

The fact that trend-following strategies have performed well historically indicates that these behavioral biases and non-profitseeking market participants have likely existed for a long time.

### Why is this the case? They explain:

The intuition is that most bear markets have historically occurred gradually over several months, rather than abruptly over a few days, which allows trend followers an opportunity to position themselves short after the initial market decline and profit from continued market declines.... In fact, the average peak-to-trough drawdown length of the 10 largest drawdowns of a 60 percent stocks/40 bonds portfolio between 1880 and 2016 was approximately 15 months.

AQR also noted that these results were achieved even with a "2-and-20" fee structure. Today, there are funds that can be accessed with much lower, although still not exactly cheap, expenses (including AQR's own Managed Futures Strategy I Fund, AQMIX, which has an expense ratio of 1.22 percent, as well as the R6 version of the fund, AQMRX, which has a lower expense ratio of 1.15 percent). (Full disclosure: My firm, Buckingham Strategic Wealth, recommends AQR funds in constructing client portfolios as does HCM.) Additionally, AQR has found that its actual trading costs have been much lower than the estimates used in the literature and in their own study.

### **Time Series Momentum / Trend-Following is Pervasive**

The above findings are consistent with those from prior research, such as the 2013 study by Akindynos-Nikolaos Baltas and Robert Kosowski, "Momentum Strategies in Futures Markets and Trend-Following Funds." They studied, "The relationship between time-series momentum strategies in futures markets and commodity trading advisors (CTAs), a subgroup of the hedge fund universe that was one of the few profitable hedge fund styles during the financial crisis of 2008, hence attracting much attention and inflows in its aftermath." The authors noted that following inflows over the subsequent years, the size of the industry had grown substantially, and CTA funds exceeded \$300 billion of the total \$2 trillion assets under management (AUM) invested in hedge funds by the end of 2011. Their study covered the period from December 1974 through January 2012 and included 71 futures contracts across several assets classes, specifically 26 commodities, 23 equity indices, 7 currencies, and 15 intermediate-term and long-term bonds.

The following is a summary of their findings:

- Time-series momentum exhibits strong effects across monthly, weekly and daily frequencies. See figure below from the paper.
- Strategies with different rebalancing frequencies have low cross-correlations and therefore capture distinct return patterns.
- Momentum patterns are pervasive and fairly robust over the entire evaluation period and within subperiods.
- Different strategies achieve annualized Sharpe ratios of above 1.20 and perform well in up and down markets, which render them good diversifiers in equity bear markets.

• Commodity futures-based momentum strategies have low correlation with other futures strategies. Thus, despite the fact that they have a relatively low return, they do provide additional diversification benefits.



**Figure 4:** Sharpe Ratios and Correlations of Univariate Time-Series Momentum Strategies The figure presents the Sharpe ratios for the univariate time-series momentum strategies that comprise the aggregate monthly (Panel A), weekly (Panel B) and daily (Panel C) FTB strategies  $(M_{12}^1, W_8^1 \text{ and } D_{15}^1 \text{ re$  $spectively})$ . For comparison, the first bar of each panel reports the Sharpe ratio of the respective aggregate strategy. Additionally, each panel indicates with a little cross marker ("+") the unconditional correlation that each univariate strategy has with the respective aggregate momentum strategy. The Sharpe ratios and correlations account for the period that each futures contract is traded as reported in Table I.

Importantly, the authors found that momentum profitability is not limited to illiquid contracts. Rather, momentum strategies are typically implemented by means of exchange-traded futures contracts and forward contracts, which are considered relatively liquid and have relatively low transaction costs compared to cash equity or bond markets. In fact, they found the following:

for most of the assets, the demanded number of contracts for the construction of the strategy does not exceed the contemporaneous open interest reported by the Commodity Futures Trading Commission (CFTC) over the period 1986 to 2011.

They also found that the, "notional amount invested in futures contracts in this hypothetical scenario is a small fraction of the global OTC derivatives markets (2.3% for commodities, 0.2% for currencies, 2.9% for equities and 0.9% for interest rates at end of 2011)." Thus, they concluded:

Our analyses based on the performance-flow regressions and the hypothetical open interest exceedance scenario do not find statistically or economically significant evidence of capacity constraints in time-series momentum strategies.

## Maybe Trend-Following Has Been Overdone?

Following strong performance in 2008, the aggregate performance of trend-following CTA funds has been relatively weak. For example, from January 2009 to June 2013, the annualized return of the SG CTA Trend Sub-Index (formerly the Newedge Trend Index) was -0.8 percent, versus 8.0 percent over the prior five-year period. This occurred during a period of slow recovery in the United States and prolonged crisis in the Eurozone. Relatively poor performance, combined with large inflows following the strong performance, leads investors (including HCM) to question both whether the trend-following strategy has already become too crowded and if it will work in the future.

See below for the chart from the paper which highlights the AUM surge in CTA funds:



Figure 7: Number of Systematic CTA Funds, Total AUM of the Industry and Annual Fund Flows The figure presents in Panel A the evolution of the (12-month moving average of the) number of systematic CTA funds and the total Assets-under-Management (AUM) is billion \$ of the systematic CTA industry. Panel B presents the annual net flow of funds in the systematic CTA industry. All measures are constructed from the BarclayHedge database. The sample period is January 1980 to January 2012. The grey bands indicate the NBER recessionary periods.

Support for time-series momentum also comes from the 2014 study, "Is This Time Different? Trend Following and Financial Crises." Using almost a century of data on trend-following, the authors, Mark C. Hutchinson and John O'Brien, investigated what happened to the performance of the strategy subsequent to the U.S. subprime and Eurozone crises and whether it was typical of what happens after a financial crisis. They note: "Identifying a list of global and regional financial crises is problematic." Thus, they chose to use the list of crises from two of the most highly cited studies on financial crises, "Manias, Panics, and Crashes: A History of Financial Crises" (originally published in 1978) and "This Time Is Different: Eight Centuries of Financial Folly" (originally published in 2009). The six global crises studied were:

- The Great Depression in 1929
- The 1973 Oil Crisis
- The Third World Debt crisis of 1981
- The Crash of October 1987
- The bursting of the dot-com bubble in 2000
- Sub-Prime/Euro crisis beginning in 2007

The regional crises studied (with year of inception in parentheses) were as follows:

- Spain (1977)
- Norway (1987)
- Nordic (1989)
- Japan (1990)
- Mexico (1994)
- Asia (1997)
- Colombia (1997)
- Argentina (2000)

#### Exhibit 5

Log Cumulative Return of Trend Following Portfolio (January 1925 to June 2013)



The chart shows the log cumulative return of a diversified trend following portfolio from 1925 to 2013. The results are shown net of transaction costs and fees (2% management fee and 20% performance fee). The decade around World War II, from January 1940 to December 1949 is omitted from the analysis due to concerns about data accuracy.

The start date for each crisis was the month following the equity market high preceding the crisis. Because neither of the two aforementioned studies provided guidance on the length or end date of each crisis, rather than attempting to define when each individual crisis finished, the authors instead focused on two fixed time periods: 24 months and 48 months after the prior equity market high.

Hutchinson and O'Brien's dataset for the global analysis consisted of 21 commodities, 13 government bonds, 21 equity indices, and currency crosses derived from nine underlying exchange rates covering a sample period from January 1921 to June 2013. Their results include estimates of trading costs as well as the typical hedge fund fee of 2 percent of assets and 20 percent of profits.

The following is a summary of their findings:

- Time-series momentum has been highly successful over the long term. The average net return for the global portfolio from 1925 to 2013 was 12.1 percent, with a volatility of 11 percent. The Sharpe ratio was an impressive 1.1 (a finding consistent with that of other research).
- There is a breakdown in futures market return predictability during crisis periods.
- In no-crisis periods, market returns exhibit strong serial correlation at lags of up to 12 months.
- Subsequent to a global financial crisis, trend-following performance tends to be weak for four years on average. This lack of time-series return predictability reduces the opportunity for trend-following to generate returns.
- Comparing the performance of crisis and no-crisis periods, the average return (4.0 percent) in the first 24 months following the start of a crisis is less than one-third of the return (13.6 percent) earned in no-crisis periods. Performance in the 48 months after a crisis starts (6.0 percent) was well under half the return (14.9 percent) in that of no-crisis periods.
- Across stocks, bonds, and currencies, the results were consistent. The exception was commodities, where returns were of similar magnitude in pre- and post-crisis periods.
- They found a similar effect when examining portfolios formed of local assets during regional financial crises.

The authors noted that behavioral models link momentum to investor overconfidence and decreasing risk aversion, with both leading to return predictability in asset prices. Under these models, overconfidence should fall and risk aversion should increase following market declines, so it seems logical that return predictability would fall following a financial crisis. It is also important to note, as the authors did, that, "governments have an increased tendency to intervene in financial markets during crises, resulting in discontinuities in price patterns." Such interventions can lead to sharp reversals, with negative consequences for trend-following.

### Hutchinson and O'Brien concluded:

The performance of these types of [trend-following] strategies is much weaker in crisis periods, where performance can be as little as one-third of that in normal market conditions. This result is supported by our evidence for regional crises, though the effect seems to be more short-lived. In our analysis of the underlying markets, our empirical evidence indicates a breakdown in the time series predictability, pervasive in normal market conditions, on which trend following relies.

#### Exhibit 8

#### The Performance of trend following during financial crises (January 1925 to June 2013)





#### Panel B: Crisis Period Forty Eight Months



The chart shows the average annual performance of trend following strategies, at a diversified portfolio level and asset class level, from 1925-2013. All returns include trading costs. Panel A assumes a twenty four month crisis whereas Panel B assumes a forty eight month crisis period.

### Time Series and Trend-Following: Summarizing the Evidence

As an investment style, trend-following has existed for a long time. The data from the aforementioned studies provide strong out-of-sample evidence beyond the substantial evidence that already existed in the literature. It

also provides consistent, long-term evidence that trends have been pervasive features of global stock, bond, commodity and currency markets.

Addressing the issue of whether we should expect trends to continue, the AQR researchers concluded:

The most likely candidates to explain why markets have tended to trend more often than not include investors' behavioral biases, market frictions, hedging demands, and market interventions by central banks and governments. Such market interventions and hedging programs are still prevalent, and investors are likely to continue to suffer from the same behavioral biases that have influenced price behavior over the past century, setting the stage for trend-following investing going forward.

The bottom line is that, given the diversification benefits and the downside (tail-risk) hedging properties, I believe that a moderate portfolio allocation to trend-following strategies merits consideration. Note that the generally high turnover of trend-following strategies renders them relatively tax inefficient. Thus, there should be a strong preference to hold them in tax-advantaged accounts.

### **Our thoughts:**

In October of 2016 we ran a screen on the 124 rated Funds in Morningstar's Managed Futures category. The result was five 5\* (based on 3, 5, and 10 year performance) Funds, of which 3 were Funds of Funds, which had Expenses that were either too high or too opaque to determine. That left us with 2 Funds, both filled with Ph.D.s. While AQR Managed Futures Strategy (AQMIX) had trounced its Peers, which had actually lost money on average over the prior 6.8 years, its 2.8% annual compounded return was insufficient to support both you and your Registered Investment Advisor (preferably HCM), who is necessary to avoid the "\$5.0 mil Min. Inv." Natixis ASG Managed Futures Fund's Ph.D.s have outperformed AQMIX's. However, since inception ASFYX has suffered 5 Drawdowns of 10% or more: 4/29/11-11/21/12 (-21.8%), 5/17/13-6/24/13 (-10.0%), 4/15/15-12/4/15 (-15.3%), 2/11/16-7/6/17 (-18.2%), and the potentially ongoing correction that began on 1/26/18, with a 13.0% loss through 2/9/18. During that time the S&P 500 had suffered 3 such drawdowns.

In our first Worth Sharing of this series on Alternative Funds, we found 2 of the 20 no-load OEFs recommended by Morningstar's analysts and having a performance rating of at least 4 stars are from their Managed Futures category, CSAIX and ASFYX. (http://www.hughescapitalmanagement.com/2018/01/28/alternative-funds-12818/) While both of these OEFs are currently rated 4 stars for past performance, with AQMIX having dropped to 3 stars, the newer, lower cost and volatile CSAIX (9/28/12 inception) merely tracks the benchmark (green line), which ASFYX (blue line) has outperformed since its launch on 7/30/10. Both funds clearly outperform their peers (orange line), including AQMIX (yellow line).

Why even the best Managed Futures Funds have, so far, failed to live up to their hype may remain an open question, but fail they have. Our preferred Alternative Fund for reducing Risk, which we define as Maximum Drawdown, remains AQR Equity Market Neutral Fund, which takes a Factor-based Long/Short approach to Equity. We have added the S&P 500 (yellow line) and ASFYX (magenta line) to QMNIX's Morningstar chart, also shown below.



If low returns and high volatility isn't bad enough:

# The Hidden Fees Inside Managed-Future Funds

High expenses can turn potentially attractive returns into chump change

## By JASON ZWEIG

Jan 27, 2017

With investors fleeing mutual funds that charge high fees, some fund companies have finally been <u>cutting</u> <u>expenses</u>. Others, it seems, have been burying them.

Consider the odd contortions that managed-futures mutual funds go through in disclosing their expenses to investors. If your hobby is translating Egyptian hieroglyphics, you might enjoy spending a weekend trying to decode some of these funds' financial reports. Other people should remember the ancient maxim: Don't invest in something you can't understand.

The problem isn't that these mutual funds are inherently bad. Managed-futures portfolios, which rapidly buy and sell anything from soybeans and cotton to rubles and rupees, can diversify the risk of a conventional stockand-bond approach. Nor are these funds always expensive: AQR Capital Management charges as little as 1.2% annually, a fraction of what hedge funds and other managed-futures vehicles cost.

Other such funds, however, make it hard for you to figure out what they do cost. With financial advisers promoting the virtues of managed-futures funds ever since the financial crisis burned so many investors in stocks and bonds, you should hold back from investing unless the costs are clear.

Mutual funds specializing in managed futures have total assets of \$29.7 billion; in 2016, for the second year in a row, they took in more than \$8 billion in new money, estimates Morningstar, the research firm.

What you — and your financial adviser — might not realize is that many of these funds don't report all their expenses directly.

Consider the \$1.5 billion Equinox managed-futures funds, based in Princeton, N.J. Several of Equinox's eight portfolios don't invest all their assets directly in futures contracts. They also use what are called total-return swaps — instruments created by a bank to mimic the performance of a financial asset. That asset can be just about anything, including the stream of results generated by a portfolio manager.

But banks — and those portfolio managers — take fees out of total-return swaps. The \$574 million Equinox Campbell Strategy Fund, for instance, paid 0.35% of its assets in 2015 to cover bank fees on its swaps. It also pays 1% of its total assets and 20% of any trading profits to the portfolio manager whose returns are captured by the swap, Campbell & Co. of Baltimore.

Equinox Campbell Strategy reports "total annual fund operating expenses" of 1.15% in its March 2016 prospectus. But that "total" doesn't include the swap expenses.

Instead, those costs are subtracted from the fund's gross return. "The performance of the fund is net of all such embedded management and incentive/performance fees," the prospectus says in a bold-face footnote.

In 2015 such costs came to at least 1.35%, which would have more than doubled the fund's annual expenses if they had been included in the "total."

Equinox and Campbell didn't respond to requests for comment.

Other mutual funds, including three offered by Altegris Advisors of La Jolla, Calif., also use swaps and exclude the associated costs from the "total" expenses they report to investors.

Altegris says in a bold-face footnote to its prospectus that the incentive fees it pays through the total-return swaps "cannot be meaningfully estimated but generally range from 15% to 25% of the trading profits" and that its funds' returns are reported "net of all such embedded incentive/performance fees."

"We bold-face the statement at the bottom because we want to make sure people see it," says Matt Osborne, Altegris's co-founder and chief investment officer. "We want people to understand what they're buying."

Altegris plans to use a flat-fee structure in more of its funds, Mr. Osborne says. "We are very aware that low cost is vital, and we are moving actively in that direction."

Believe it or not, investment lawyers say fine-print disclosures like those of some managed-futures funds probably comply with rules set by the Securities and Exchange Commission. But do they tell investors what they need to know?

You would probably feel surprised, perhaps even exploited, if you went to a restaurant that promised you don't have to tip the staff — only to learn that the waiters eat 10% or 20% of your food before they bring it to your table.

The way some of these firms report their expenses is "one of the worst practices in mutual funds," says Jason Kephart, an analyst at Morningstar who follows managed-futures portfolios. "It's completely non-transparent."

Fees always matter, but they loom especially large in managed futures. An authoritative study of nearly two decades of performance, published in 2014, found that the average commodity trading adviser outperformed cash by an average of 6.1% annually before fees — but less than 2% after fees.

Such high expenses turn potentially attractive returns into chump change — and make it vital to determine exactly how much a given fund is charging.

If your financial adviser recommends that you invest in a managed-futures fund (we don't), ask him or her to prove to you that the fund includes all its costs — including on swaps and other offshore vehicles — in its total reported expenses. If you're looking at such a fund yourself and can't figure out how much you will have to pay to own it, don't buy it.