IDTP

I-System Diversified Trends Program All weather portfolio solution

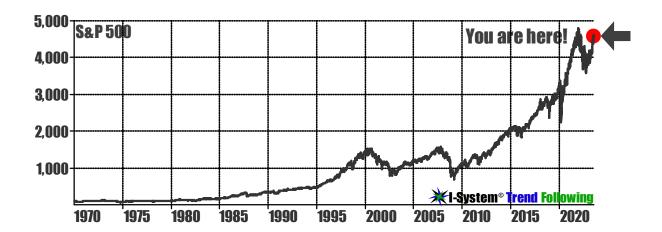
INFLATION

BEAR MARKET

COMMODITIES SUPER-CYCLE

The industry now faces an acute shortage of portfolio diversifiers at a time when it must take ever more risk to achieve its return targets.

Eric Peters, CIO, OneRiver Asset Management



Rising interest rates and the risk of a prolonged bear market in equities could result in substantial losses over the coming years. Furthermore, high inflation remains a risk, which could further erode the purchasing power of investor wealth.

To preserve their capital, investors will need effective and highly liquid diversifiers. IDTP offers a high-quality, high-octane and completely transparent hedge against inflation as well as protection against a bear market in stocks and bonds.

IDTP is also the ideal vehicle enabling investors to profit from the coming commodities super-cycle.



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1. A gathering storm of risks facing investors

At present, investors face a convergence of two key macroeconomic risks:

- 1. The looming inflation crisis
- 2. The bursting of financial asset bubble

Both scenarios will cause severe losses for investors. The most effective way for them to protect their wealth is through a diversified portfolio providing exposure to a broad range of financial and commodity markets. In this document we briefly explore these risks, the attributes of managed futures as a recession and inflation hedge, and the concrete solution I propose.

1.1 Inflation

Inflation is the greatest, most indiscriminate force of wealth destruction. Since 1960, more than two thirds of the world's market economies have experienced episodes of inflation of 25% or higher. On average, **investors lost 53% of their purchasing power during such episodes**. In many cases, the losses were much worse. During the 1970s inflation, US investors lost as much as 65% in real terms.

Inflation causes massive losses in real wealth			
Inflation experience	10-year inflation rate*	60/40 stock/bond portfolio real return*	Decline in real portfolio value
→USA (1972 – 1982)	9%	-3.5%	-65%
UK (1910 – 1920)	11%	-9.3%	-86%
Japan (1946 – 1956)	23%	3.3%	-52%

^{*} Annualized. Note also that the three experience above each spanned a ten-year period. Source: Alliance Bernstein, "Deflating inflation – redefining the inflation-resistant portfolio" – April 2010.

Since 2021, inflation has accelerated in most industrialized economies, kicking off another inflationary cycle that could span many years and result in a similar destruction of wealth. Without a doubt, this is a paramount and urgent risk for investors.

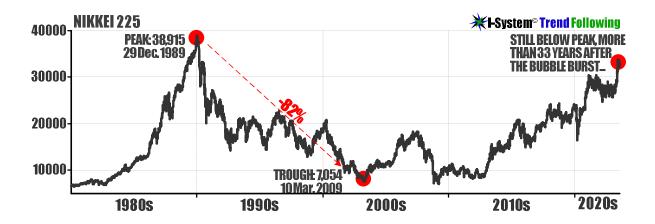
¹ S. Fischer, "Modern Hyper- and High Inflations," National Bureau of Economic Research Working Paper No. 8930

1.2 Bear market

Sooner or later a crash is coming, and it may be terrific.

Roger Babson, 5 September 1929

Without exception, all bubbles burst leaving investors with devastating losses. The great Japanese 1980s bubble was in many ways similar to the most recent bubble in the US. After a sharp correction in 1987, the Bank of Japan acted swiftly to prevent a crash by lowering the interest rates and boosting liquidity. The bubble was reinflated, but only for a time.



Once it peaked, the Nikkei fell into a 20-year bear market shedding over 80% of value. More than 30 years later, Japan's market has still not recovered.





These experiences might foreshadow the future of the recent asset bubble. Stock indices have appreciated strongly through the greatest bull market on record (2009 – 2022). If last year's correction morphs into a bear market, investors could incur severe losses that might take decades to recover.

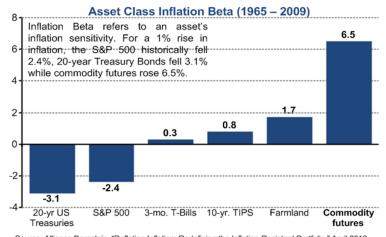
What's needed is a reliable way to profit from such price events regardless of market direction. By virtue of following trends, with the ability to trade stock indices and treasury futures both on the long <u>and</u> short side, IDTP offers this benefit for investors. **During the last bear market (2008/9), our portfolio generated a positive net return of +27% (audited).**

2. Managed futures as an inflation hedge

Managed futures outperform the other asset classes... No other asset class presents itself as a viable inflation hedge

Twomey et al. $(2011)^2$

As a rule, managed futures portfolios rely on trend following strategies to generate positive returns from bullish <u>and</u> bearish trends in a diverse set of markets. Empirical evidence strongly suggests that this strategy, especially in commodities, offers the most effective protection, both against inflation and against bear markets in stocks and bonds. In addition to the study quoted above, Alliance Bernstein analysis³ found that of all asset classes, managed futures had the highest inflation beta:



 $Source: Alliance\ Bernstein,\ "Deflating\ Inflation:\ Redefining\ the\ Inflation-Resistant\ Portfolio,"\ April\ 2010.$

Another report focused on 20 financial accidents⁴ over a 32-year period and found that "Managed futures delivered a positive return in 18 out of 20 accidents in the equity market. In the field of investment management, there is simply nothing that comes anywhere close to this." Gary Gorton and K. Geert Rouwenhorst analysed seven boom-bust cycles (1959 – 2004) and found that managed futures generated positive real performance both during recessions and periods of high inflation. 6

² Twomey et al. "Assessing Managed Futures as an Inflation Hedge within a Multi-Asset Framework" – The Journal of Wealth Management, Winter 2011. < https://jwm.pm-research.com/content/14/3/33>

³ Alliance Bernstein: "Deflating Inflation: Redefining the Inflation-Resistant Portfolio." – April 2010

⁴ Market accidents: incidences where MSCI World Index lost 7% or more within one, two, three, or four months

⁵ Ineichen Research and Management report (June 2012)

⁶ Gary Gorton & K. Geert Rouwenhorst. Facts and Fantasies about Commodity Futures, NBER Working Papers 10595, National Bureau of Economic Research, Inc., 2004.



Every crisis creates trends

Two reports published in 2021 specifically looked at the merits of systematic trend following as a viable way to mitigate inflation risk. In their paper, <u>'The Best Strategies for Inflationary Times,'</u> **Neville** *et al.* reviewed inflationary episodes in the U.S. between 1926 and 2021 and compared the performance of diversified trend following portfolios to other major asset classes, namely commodities, equities, US Government bonds and the traditional 60/40 portfolios.

They found that <u>trend following portfolios showed significant outperformance</u> <u>over other asset classes, all of which provided poor protection from inflation</u>. They conclude that trend followers are likely to be well-suited to future inflationary environments.

A <u>research report by Quantica</u>⁸ analyzed the performance of trend following portfolios through inflationary periods since 1962 and found that, "<u>Every crisis creates trends... a generic trend following strategy provides attractive smart diversification against inflation risk..."</u>

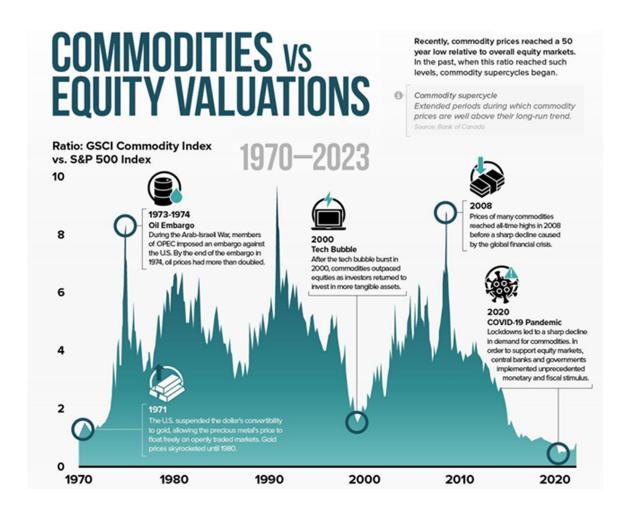
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3813202

⁸ https://www.efficient.com/Reports/QRTPVYZZX/misc/Quantica_trend%20following%20and%20inflation%20protection.pdf



3. Commodities super cycle: a "generational opportunity"

Over the last decade, commodity prices dropped to a 50-year low relative to equity valuations and still remain historically low.



If commodities merely reverted to their historical relationship, they could outperform equities by 8 to 20 times for the rest of this decade. These conditions have created what **Jesse Felder**, author of the Felder Report, called "a generational opportunity in commodities."

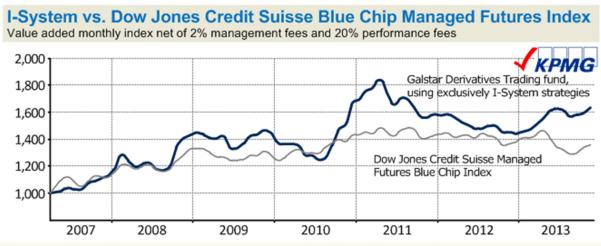
How best to profit from this opportunity?

How best to take advantage of this opportunity? Market readjustments could take years to run their course in a sequence of unpredictable rallies and corrections. Navigating trends in multiple financial and commodities markets requires a comprehensive, high quality investment strategy.



4. The solution: I-System Diversified Trends Portfolio (IDTP)

IDTP is a superbly well-engineered investment management <u>process</u>. It's proven effective and highly reliable in the past, consistently outperforming its strategy benchmarks from 2007 through 2019.



Between 2007 and 2013 our diversified commodities portfolio, Galstar Derivatives Trading outperformed the index of world's top ranked commodity hedge funds. The authenticity of our performance has been audited by KPMG

About this track record

In 2007 I set up Galstar Derivatives Trading (GDT) in 2007 to trade a futures portfolio similar to the one described here, based exclusively on I-System trend following strategies. Between 2007 and 2013, the portfolio outperformed the index of world's top rated managed futures funds, the Dow Jones Credit Suisse (DJCS) Managed Futures Blue Chip index. GDT was unwound in 2013.

This wasn't a lucky fluke: it spanned a period of six years, used 120 I-System strategies in 38 different financial and commodity markets and comprised close to ten thousand individual trades. This performance is repeatable as it was based on the same model, unaltered since 2003.

2011 - 2019

From November 2011 through December 2019 we used I-System strategies to manage a tail-risk portfolio for Altana Wealth Ltd. Over that period we outperformed the EurekaHedge Tail Risk index.

Alex Krainer 7

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⁹ DJCS Blue Chip Managed Futures index comprised the following hedge funds: Aspect Diversified Fund Ltd (USD), BlueTrend Fund Ltd (USD - Class B), Boronia Diversified Fund Limited, Campbell Global Assets Fund Ltd (Class A) Lynx (Bermuda) Ltd., Quantitative Global Fund, Ltd (Class D 1X), Roy G. Niederhoffer Fund (Ireland) Plc, Winton Futures Fund Ltd (Class B). DJCS stopped tracking the Blue Chip Hedge Fund indices as of 31 March 2014.



5. I-System: a supremely reliable trends auto-pilot

There are three avenues of opportunity: events, <u>trends</u> and conditions

Sun Tzu, "The Art of War"

In the past, major inflationary cycles tended to span a decade and commodity cycles could last up to a quarter of a century. Predicting price trajectories over such long time intervals is quite out of the question. But large-scale price events always unfold as trends that span many months and even years. The most reliable way of capturing windfalls from these events is through systematic trend following.

I-System: a 20-year success story

Managing risk in 30 or more markets simultaneously, navigating the diverse trends and tracking hundreds of trading strategies with undiluted focus requires a reliable methodology and quality technological solutions. It also requires experience.

To do this, I have developed the <u>I-System</u>, a trend following model which is capable of tracking thousands of trading strategies in over 200 global markets with no dilution in quality or focus. I-System has functioned glitch-free since 2003 with zero code tinkering, algorithm alterations or maintenance issues. More importantly, I-System is supremely effective at generating profits from price trends: in the past 20 years, it has never once failed to capture significant windfalls from market trends.

A more detailed description of the model's architecture, quality and performance are available at the links below:

About I-System (PDF): https://isystemtf.files.wordpress.com/2020/11/isystem_about.pdf

Why I-System could be the best trend following model ever built:

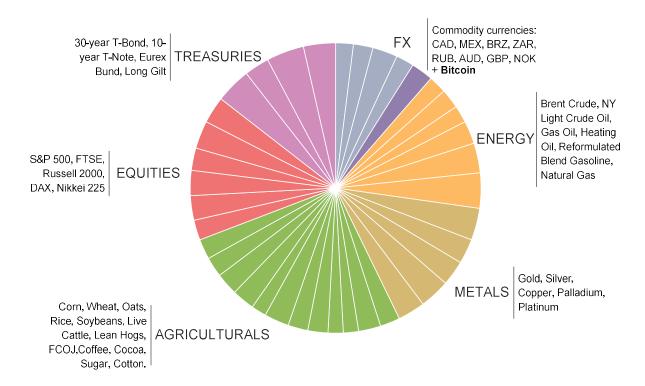
https://isystem-tf.com/2020/09/10/i-system-probably-the-best-trend-following-model-ever-built/

Sack your quant! In spite of the bombastic title, the discussion in this article is important and entirely serious: https://isystem-tf.com/2020/06/09/sack-your-quant/



6. Portfolio composition

The following chart illustrates a well-balanced, diversified portfolio where each segment in the pie-chart represents the risk weighting in each market, with just over half the risk allocated to commodity futures.



Each segment in the chart corresponds to the relative risk associated with the maximum allowed position limit per market. Depending on the size of the portfolio we can add 100 or more futures markets to the mix.

IDTP portfolio construction process

A more detailed explanation of the way IDTP portfolio is constructed is presented in the Appendix.

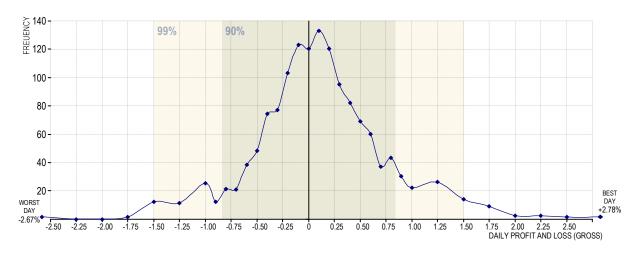


7. Risk profile and performance

IDTP's risk profile and performance attributes are based on a model \$5 million portfolio, diversified across 38 different markets with about half the risk allocated to commodities, as shown in the previous section.

7.1 Risk profile

Thanks to its broad diversification, portfolio's risk profile is well contained as the distribution of daily profits and losses over a seven-year period shows:



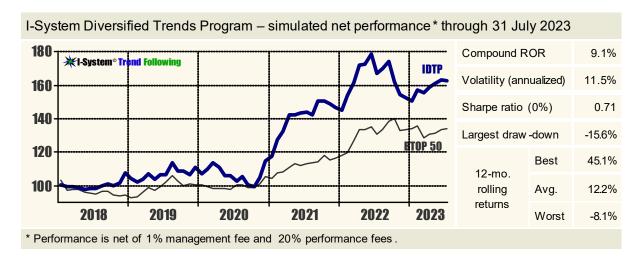
This risk profile will tend to correspond closely with what we experience in live trading: around 90% of all daily profits and losses will tend to fall within the +0.75% and -0.75% interval, and 99% of them within the 1.50% and -1.50%.

This is a relatively low-risk version for a managed futures portfolio. Here's how it compares to its benchmark (Barclays BTOP 50 index of managed futures funds and the S&P 500:

IDTP: a very favorable risk-to-reward profile*			
Interval: Jan 2018 – Jul 2023	IDTP	BTOP 50	S&P 500
Compound rate of return	9.11%	5.35%	10.13%
Annualized volatility	11.46%	7.84%	17.95%
Sharpe ratio	0.71	0.55	0.51
Maximum drawdown	15.58%	10.00%	24.31%
* All figures based on monthly return data over the same time interval			

7.2 Performance

The following chart and table summarizes IDTP's performance characteristics:



The 12-month rolling returns figures above, provide the best measure of what we can expect in the immediate future as a range of probable outcomes.

7.3 Investment horizon

Most managed futures investments rely on systematic trend following strategies, which tend to be rather similar. This provides us another basis to gauge performance expectations. Based on a larger sample of such funds comprising the Barclays BTOP 50 index over a 21-year period suggests that positive outcomes are highly probable over investment horizons spanning 30 months or more:





8. Risk management

If the highest goal of the captain was to preserve his ship, he would keep it in port forever.

St. Thomas Aquinas

To generate investment returns we must take risks and IDTP is an exceptionally risk-worthy investment: operationally, it is a very high quality process under competent, experienced and disciplined management.

However, while we can estimate a portfolio's risk profile quite accurately, we can't predict its future performance. The portfolio will be exposed to two principal kinds of risks: market related risks and operational risks.

8.1 Market-related risks

Market conditions are always subject to change and certain conditions could have adverse impact on an investment portfolio.

Sideways markets and reversals

For a trend follower, the absence of trends is a source of risk. When markets move sideways, or when major trends reverse, trend following strategies experience periods of flat or negative returns. We mitigate this risk through diversification: it is likely that we'll have profitable trends in at least some of the markets we trade at any one time.

Volatility

How much risk we take on each trade is set in accordance with each market's volatility. At times, markets go through periods of high and even extreme volatility. At such times, our positions could be more risky than usual. Diversification partly mitigates this risk, but sometimes we may need to reduce position limits.

Cross-correlation among markets

Risk-reducing effect of diversification will depend on low correlation among many of the markets we trade. However, there have been periods when cross-asset correlations converge with many markets moving in unison, reducing the benefit of diversification. Such periods can temporarily increase the portfolio's risk profile.



8.2 Operational Risks

Operational risks consist of factors that might impede us in carrying out our day-today tasks with adverse consequences for trading performance.

Loss of data or system breakdown

With constant connection to the internet and information sources, system contamination with worms, viruses, or spy-ware is possible. We guard against these risks by maintaining data and applications at multiple secure locations and full non-redundant application and database installations in three independent computer systems. Provisions have also been made for manual data entry if necessary.

Maintenance disruptions

I-System is robust and highly reliable. It hasn't experienced any maintenance issues since 2003. However, data access and the process of upgrading database tools and the operating system can cause temporary interruptions. We guard against such interruptions by maintaining three different installations of I-System.

Model risk

Model risk emanates from errors associated with the trading system. Such errors can adversely impact the investment management process. However, I-System has been used and tested extensively since 2003. Without any alterations to its algorithms, I-System has functioned without any glitches. This will not materially change going forward.

8.3 Mitigating the risks

Besides the risk factors just discussed, the most important aspect of this proposed portfolio management process is the way we tackle everyday risks associated with the trading operations. This is the key element of the investment process resting on more than 20 years' experience validated by our track record through some of the roughest market environments in decades. Risk management procedures are based on the following guidelines, observed at all times:



Trading decisions	Quality and consistency of trading decisions is the key element of our risk management framework. All market exposure is taken strictly in accordance with the I-System model. This measure prevents problems related to distraction, emotional trading or any departure from the predetermined investment process.
Stop-loss triggers	Stop-loss triggers are integral to each I-System strategy. A decision to exit a trade can occur for two reasons: to take profits after a favourable price move, or to cut losses in case of an adverse change. These triggers are expressed in terms of price fluctuation dynamics, never as a fixed percentage of portfolio assets.
Position limits	We adhere to a hard position limit in each market. Position limits are only revised upward if significant portfolio gains warrant such a revision. They may be revised downwards if we sustain significant draw-downs. Position limits are <u>never</u> increased in a draw-down in hopes of recuperating losses faster (no <i>averaging down</i>).
Diversification	To reduce the volatility of any one strategy's performance, risk is divided among multiple strategies in at least 20 commodities and financial futures markets. No more than 30% of total portfolio risk can be concentrated in any single market group and no more than 5% in any individual market.
Market liquidity	To avoid slippage from wide bid-ask spreads, we only trade in the most liquid futures markets where our portfolio's exposure represents only a very small fraction of the market's volume and open interest.



9. About Alex Krainer, the creator of I-System and IDTP

Alex has worked as a market professional, analyst, researcher, trader and award-winning author since 1996.

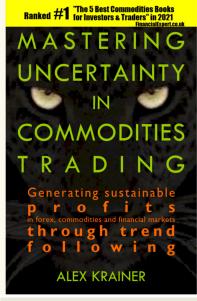
Market experience and trading

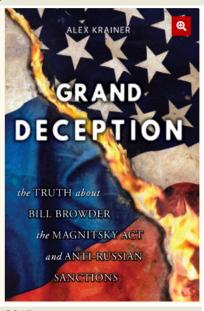
Alex has 25+ years' experience trading in over 50 different financial and commodity futures markets. He built the I-System and used it to manage a number of hedge funds and managed accounts, always with utmost, unwavering discipline. From 2007 to 2019 he consistently outperformed his strategy benchmarks, including the world's top, Blue Chip, managed futures funds (2007-2013, audited by KPMG). During the 2008 bear market, he was among the small number of managers who generated positive performance for his investors (+27% net of fees).

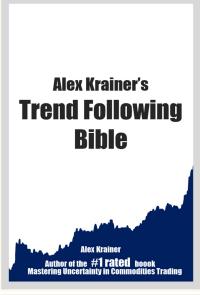
Books

Since 2015, Alex has published three books, two of them on commodities trading and trend following. His first book, "Mastering Uncertainty in Commodities Trading," was rated #1 book on FinancialExpert.co.uk list of "The 5 Best Commodities Books for Investors and Traders" for 2021 and 2022.

Books published since 2015







2015 2017 2021



Recognition

If trend following had a guru, it would be **Michael Covel.** Mr. Covel noticed Alex's writing and invited him on his podcast for an interview:

Alex's interview with Michael Covel

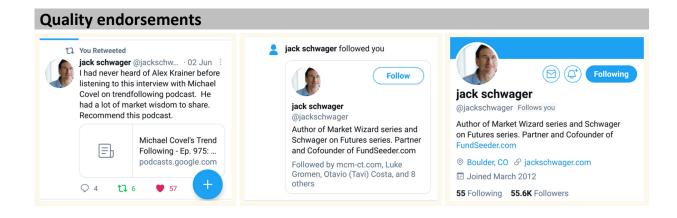


TrendFollowing.com:

<u>Episode 975: Alex Krainer Interview with Michael Covel on</u> Trend Following Radio

https://www.trendfollowing.com/2021/05/27/ep-975-alex-krainer-interview-michael-covel-trend-following-radio/

Here's how Jack Schwager, who has seen and heard a few things in his long career as a money manager and bestselling author, reacted to that interview:



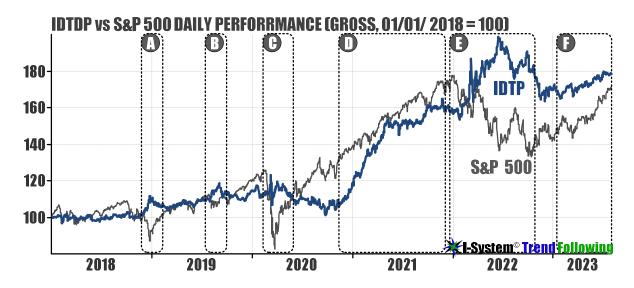
10. What makes this strategy attractive

Here are a few important reasons to consider this investment:

10.1 Diversification

Equities are near historically high valuations while bonds are a bear market. Meanwhile, commodities have lagged far behind and even a return to historical norm could result in very significant price readjustments over the next several years.

10.2 Non-correlation



Since 2018, the S&P 500 has experienced a number of significant corrections, marked on the chart in areas A, B, C and E. In each interval, IDTP quickly diverged from the index, generating positive returns during the stock market correction. Importantly, during the periods when the S&P 500 rallied (intervals D and F), the portfolio's correlation with the index turned positive.

10.3 Inflation hedging

Inflation is the single greatest macroeconomic risk facing investors. Multiple empirical studies show that managed futures represent by far the best hedge against inflation.

10.4 Liquidity

During market turmoil, investors may face difficulty redeeming their assets from illiquid investments. In such conditions, managed futures mandates can keep your money working for you, simultaneously providing a valuable source of liquidity.



10.5 Partial funding

A futures portfolio requires as little as 35%-50% cash funding. In other words, a \$1 million portfolio does not require a \$1 million investment: it can be funded with half as much or even less.

10.6 Preserving purchasing power for the post-crisis opportunities

The purpose of hedging against inflation and/or stock market crash is to preserve the purchasing power of your wealth. After the coming crisis unravels, the markets will turn up many investment bargains. Our study of the history of high inflations turned up many such examples. The most striking examples date from the aftermath of the Weimar Republic's inflationary crisis:

- In December 1922, <u>investors could purchase the whole interest in the Mercedes Benz company for the price equivalent to 327 of their cars</u> (they probably had more than that many units unsold in their dealerships)!
- Six-bedroom villas in the fashionable outskirts of Berlin could be bought for 100 US dollars (incidentally, this also speaks to the merit of real estate as an inflation hedge).

Other portfolio solutions based on I-System Trend Following		
EQUITY LONG & SHORT	A variety of long/short strategies is possible, including long-only, short bias, long/short or long extension ("130/30") portfolios	
SYSTEMATIC PORTFOLIO ALLOCATION	A dynamic alternative to the traditional 60/40 approach, allocating assets between stocks, bonds and cash depending on prevalent market trends.	
TAIL RISK HEDGE	Protection against stock market crash and/or extended bear market scenario	
→ INFLATION HEDGE	Portfolio protection in the event of an acceleration of inflation	
MOMENTUM INVESTING	A systematic approach to investing in best performing assets and optionally, shorting the underperformers.	
Each of the above investment strategies, including examples we created for several asset managers, are summarized		

at the following link: https://isystem-tf.com/portfolio-solutions/

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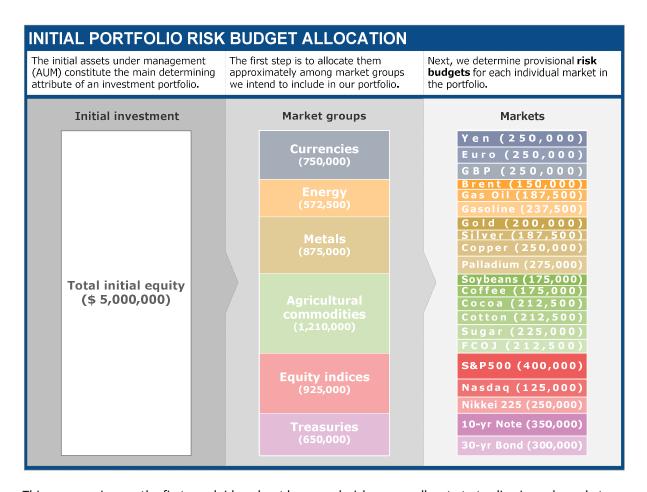


Appendix 1: The 3-step construction of a diversified portfolio

To de-mystify managed futures, we explain the process of constructing a diversified futures portfolio in some detail. For best results, it is essential to diversify the portfolio as much as possible and fragment investment risk across many uncorrelated markets and strategies. As an example, here we look at the construction of a simplified \$5 million portfolio trading across 21 different markets.

Step 1: initial risk budget allocation

First, we roughly allocate our risk budgets across six main market groups and further divide it among as many individual markets as possible:

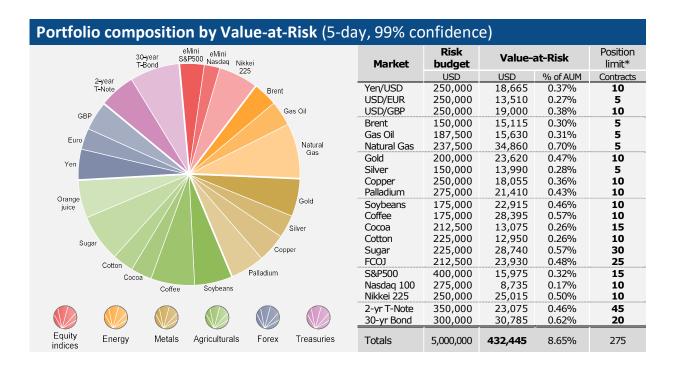


This process gives us the first rough idea about how much risk we can allocate to trading in each market.

Step 2: measuring risk and setting position limits

However, all these markets differ in terms of price volatility. Some (like Silver or Coffee) can be very volatile so we can only trade a few contracts of them. Others, like the 2-year US Treasury Note are tamer, allowing us to trade a much larger position to achieve the same risk. But we want to be quite precise about this, so to achieve approximately equal risk weighting and set position limits for each market, we use Value-at-risk, to measure the relative risk exposure in each market. The following exhibit illustrates the portfolio composition by VaR:





What do these numbers mean?

Position limit is the maximum position limit for this portfolio; the limits are revised every several months taking into account meaningful changes in the size of the portfolio and volatility in each market.

Value-at-Risk: If the largest 1% of 5-day price moves occurred at the same time, and we were fully exposed on the "wrong side" in each market, the portfolio would lose 8.65% over those 5 days. This scenario is plausible but highly improbable: first, given the broad diversification of the portfolio, it is unlikely that large price swings will occur at the same time in each market; second, I-System strategies do not hold full market exposure at all times, and third, some of the strategies will be on the right side of strong price moves, earning gains while other strategies possibly suffer losses. We get a more realistic idea about the portfolio's risk profile by simulating its daily profit and loss fluctuations as we saw in the P&L distribution histogram on page 9 above.

Step 3: selecting the strategies

Once we know how many contracts of what we'll be trading, we select our trading strategies, again trying to use as many individual strategies as possible and to achieve the best possible mix of long-term, medium-term and short-term trends.

In our experience, strategies that target longer-term trends tend to be more reliable, but medium and short term ones help reduce performance volatility in the near-term. Generally we prefer to include about $2/3^{rds}$ of long-term trend strategies and $1/3^{rd}$ medium and short-term ones.

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