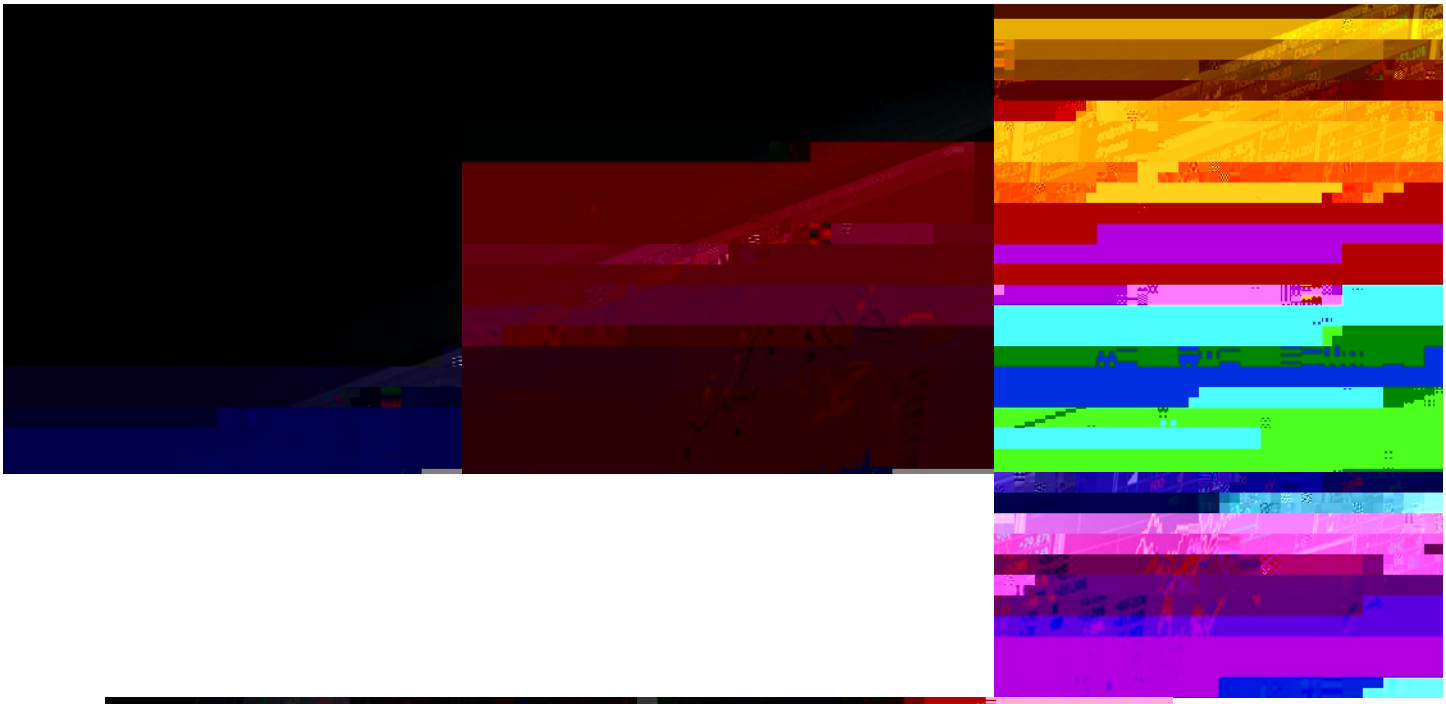
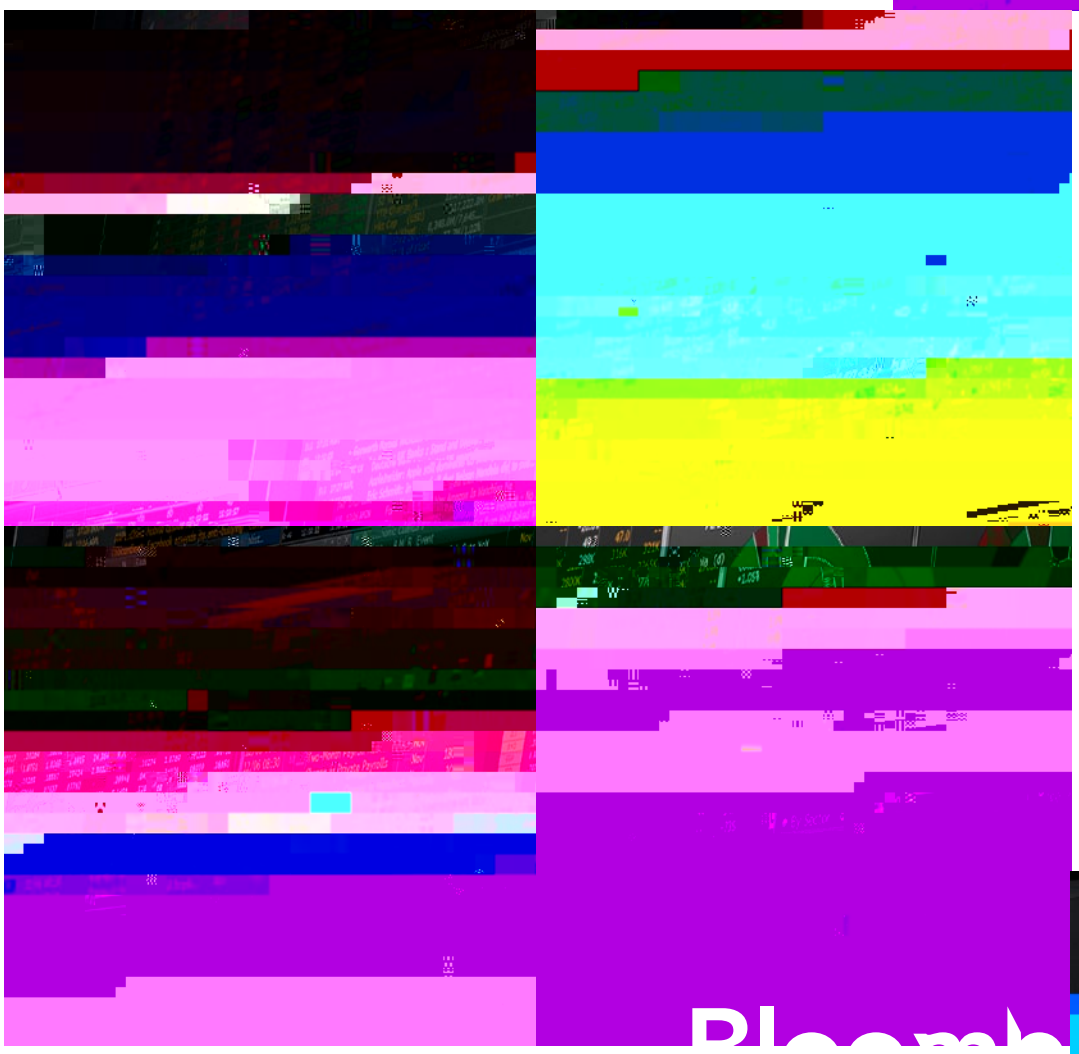
APRIL 2017 ISSUE





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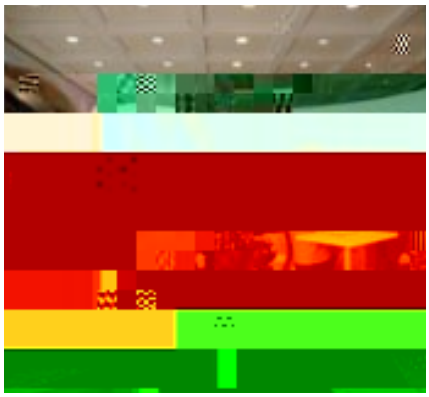
conference guide

A GLOBAL AUDIENCE



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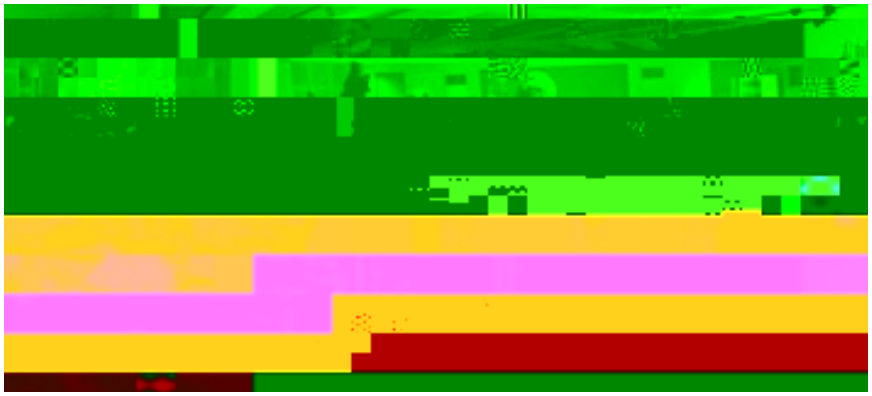

PRECONFERENCE KICKOFF
Wednesday, April 5th

Registration

Panel Discussion – *Technical Outlook: Industry & Market Trends*
Chris Verrone, CMT, Frank Teixeira, CMT, CFA, and Jay Woods
Moderated by Gina Martin Adams, CMT, CFA

Networking Reception

DAY 1
Thursday, April 6th

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Cross-Asset Strategy: Technical Tools for Global Macro Investing

In this FICC focused session, Jim Bianco, CMT and Sheba Jafari, CMT, MSTA will discuss the technical approach and methodology used to unpack the intermarket relationships between

WORKING LUNCH

New Ideas in Technical Analysis – Co-hosted by Fidelity Investments

Description: We will explore the impact of millennials on global investing. The panelists will address some of these key questions:

- How will this demographic boom impact the broad economy through consumption and production?
- Are there echoes of the baby boom generation that we can learn from as this story unfolds?
- What are the impacts on equity markets as millennials gain an investing capacity?
- How can technical analysis improve investors' capacity to assess risk reward opportunities in rapidly changing markets?

Moderator: John Gagliardi, CMT

gold, oil, and even bonds. In this session, he will demonstrate how the forward-looking nature of implied volatility can be used as a technical analysis tool.

CONFERENCE FORMAT

Panel Discussions & Interactive Sessions

The MTA Symposium is designed to be a high-energy conference with lots of movement and choice of content over the 2.5 days. The agenda is designed around general sessions primarily for panel discussions and more intimate sessions where the audience breaks up into three separate tracks. These interactive sessions focus on a single speaker and s⌈iv exxirhiiw xli sttsvxyrmx} jsv e deep dive on a single subject. The same presentation that is given on Thursday will be repeated on Friday. All attendees will be able to select their custom agenda through the conference app. By the end of the conference, attendees will have had the opportunity to view nearly all Interactive Sessions and will have access to video archives of any presentation they missed.

AUDIENCE

In recent years, the MTA has realigned our CMT Program to an institutional-focused candidate body. The expanded curriculum addresses the critical skills demanded of active asset managers erh rs{ rĢ s{Óh ... ÓÉ éirh xljs ... é ... {e

makers are better informed than ever, the decision making process has yet to evolve. In his talk, Stephen will explain why intelligence, education, experience and success fail to grant us immunity from decision-related mistakes, and what marginal adjustments can be made to trigger an evolutionary leap forward.

Richard Brath, Partner at Uncharted Software – Beyond Technical Analysis: Using Data Visualization to Understand Market Data, Fundamentals, Technicals, Models, News and More

In a world where the over-abundance of data does not translate into useful information, analysts and investors become paaalyzed trying to navigate through the noise. Richard Brath will share some techniques for visualizing the ever-growing pool of market data (both fundamental and technical), gvihmx0 kszivrergi0 wirxmqirx erh sxliv mrăyirxmep hexe2 Xli wiwwmsr {mpp wxevx {ml wsqi fewg

times larger than in the year of their launch, 2006." We can also see the increase in interest surrounding the Volatility Index by looking at trends in online searches with regards to low levels within the VIX. As of September 20th, 2016 there were 423,000 Google search results for "low VIX" and 4,610 results for "historic low volatility." Few investors would deny the importance of zspexmpmx} {lir mx gsqiwxs xli izepyexmsr sjărergmep qevoixw2

In this paper the author will provide a brief literature review concerning the history of the Volatility Index, important prior studies surrounding the topic of volatility followed by a discussion of alterative, yet ultimately suboptimal, methods of predicting large swings in the VIX. The paper will conclude with the description, analysis, and results based on the author's proposed methodology for forecasting outsized spikes within the VIX Index and how this approach may be used from a portfolio management standpoint to help investors better prepare based on the "calm before the storm."

Those that believe in the adage of buy-and-hold investing often mention that missing the ten or twenty best trading days has a substantially negative impact on a portfolio's overall return. They then in turn reject the idea of attempting to avoid the worst days in the market and active management as a whole. However, as Gire (2005) wrote in an article for the Journal of Financial Tperrmrk0 xli fiwx erh xli {swwx he}w evi sjxir ziv} gpswi mr xmqixs ier! liv2 WtigmĂgepp}0 50% of the worst and best days were no more than 12 days apart.[3] Looking at the bull market in the S&P 500 between 1984 and 1998, the Index rose an annualized 17.89%. Gire found that by missing the ten best days the annualized return fell to 14.24%, the statistic often c anrst and best d 0,nrsthavstina(anbatilitl tr for)18(ecang lar)28(ge spikethin the VIr the authos pr)18(opoa 14storn HedgthinTboas thhinOvmornal of FinanciaDeriv1elertheWhaley1(w9893(otn)1(an a, for)T(l 9Tw T

While previous studies have been conducted on forecasting future volatility, through a search on the

Chart 6:

Chart 7: Volatility Index with standard deviation and spike signal markers, daily data

Because standard deviation is essentially a measure of volatility in-and-of-itself, by using it to analyze the VIX we are in essence evaluating the volatility of the Volatility Index. Fortunately, the CBOE also has created a tool for measuring the volatility of the Volatility Index, called the VIX of the VIX (VVIX). This type of tool can be useful as the scope of this papei Vfoc usd ion

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method of using large declines in the VIX as a predictor of future spikes, the VVIX dispersion threshold has many false-signals that are now followed by volatility spikes.

Chart 8: Volatility Index with VVIX standard deviation signal markers, daily data

In order to continue to improve upon the idea that volatility dispersion is an optimal predictor of future VIX spikes, a simptnSstemtcs abptcturf usinbowitn the VIX

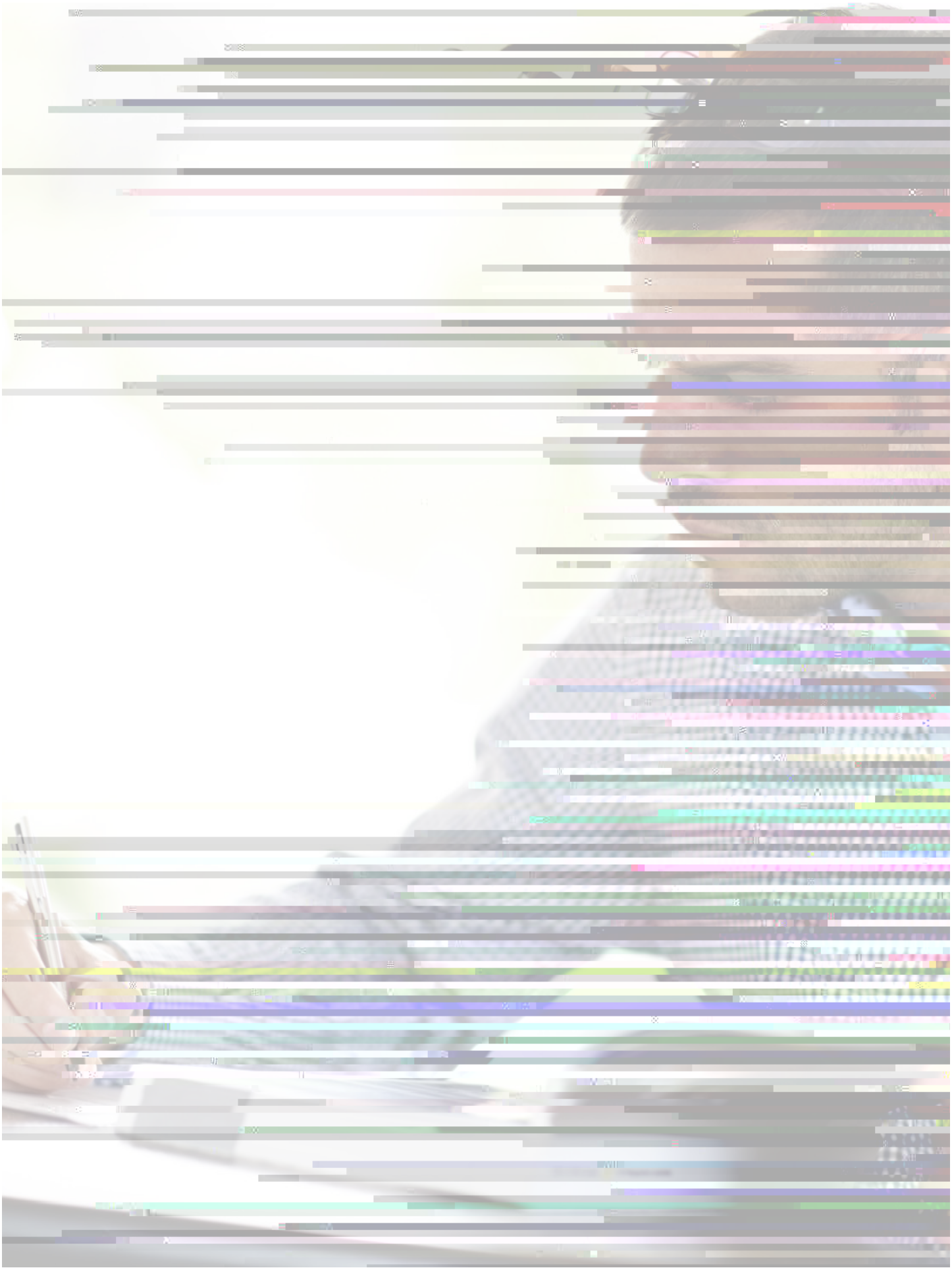
Chart 9: Volatility Index with VIX and combined signal markers, daily data

Up to this point only a visual representation of the signal1 has been shown, but next we shall look at the numerical changes that occur in the VIX following the methods previously discussed p outlined in the section above.

Table 1 shows the three week change in the VIX, utilizing the maximum and minimum average

Table 1: Maximum and minimum change is calculated using the highest high and lowest low relative to the close VIX reading on the day of signal over xl i wyfwiuyirx Ăjxiir xvehmrk he}w0 hemp} hexe

I feel very blessed in my position as the founder and architect of Optuma, that I get to travel the world speaking to traders, analysts, and portfolio managers at all levels. From those who evi xeomrk xlimv Ăvwx xirxexmzi wxitw mr xlimv xvehmrk pmji0 xs xli levhirih tvsjiwwmsrep erep}wx who has experienced all market conditions and is doing very well from their endeavors. In



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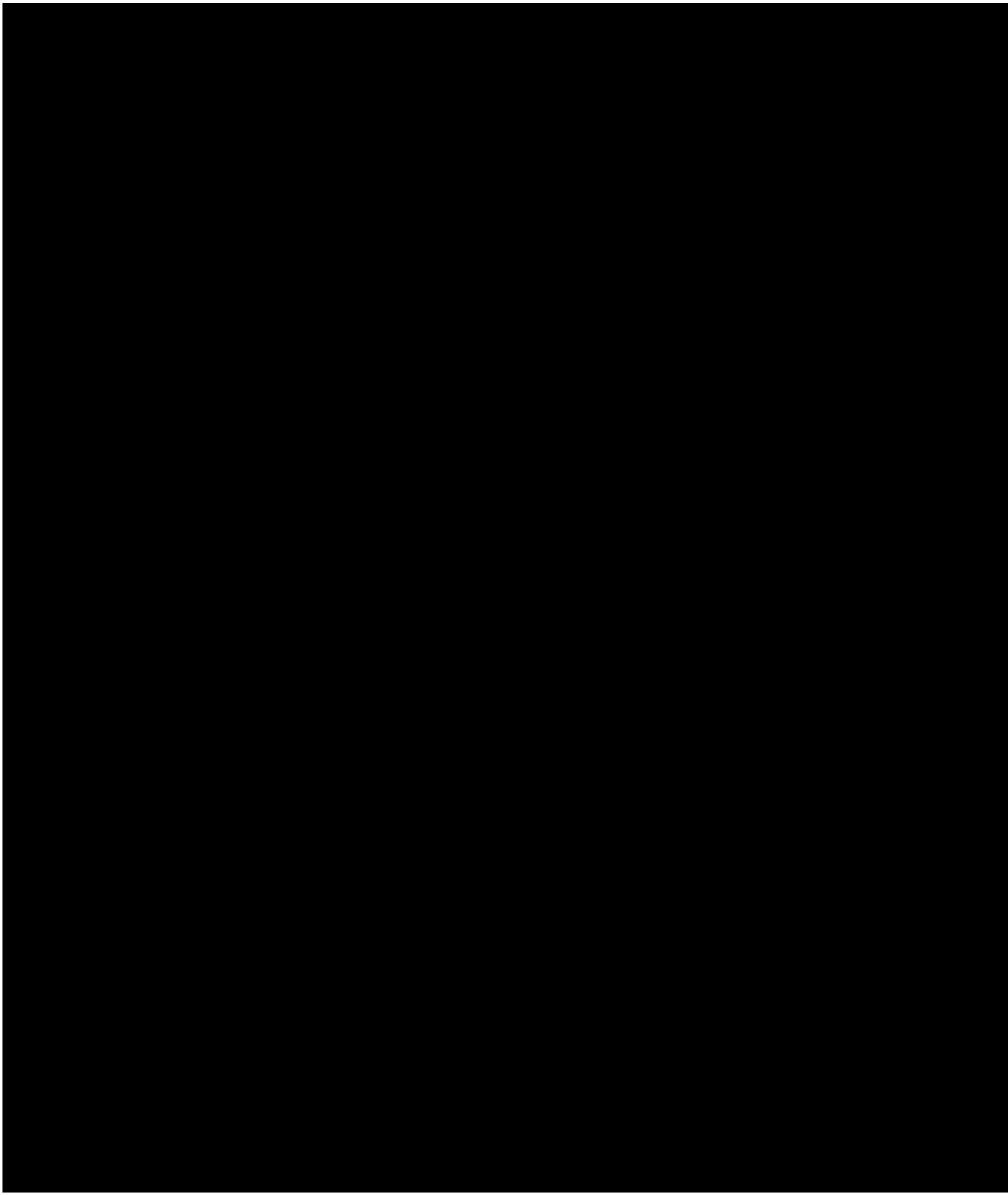
weigh heavily on the price.

a. See the persistent growth in inventories since the Chinese impact disappeared in 2009. Because specialists in oil like to focus on the weekly changes in this data, they seem to be completely oblivious to the obvious long term trend that has resulted in a



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Financial charting has long used alphanumerics as point indicators in charts. One of ti ysdest 1 09P3FUp3ŸPSLz9-À9$#6MYVT95À@PU9H8S9:LLpPP3Ÿ93pSP903ÀÀe0

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adjacent columns. For each price level he records the volume
Ăkyviw erh gsrrigxw xskixliv xli wiuyirgi {mxl e pmri2

F} xli 5=74ùw xliwi leh ih " ' ú " N. .` `

Other alphanumeric charts evolved along the way as well. Here's an interesting depression

Distribution Chart made oI stacked characters.
Rsxi ehhmxmsrepmrjsvqexmsr irgshihmr wlehmrk erh ehhih qevoivw2

Jewx jsv{evh xs xli 5=<4ùw0 erh {i lezi Tixiv Wximhpqe}ivùw Qevoix TvsĂpi ,V- glevxw xlex appear reminiscent to the alphanumeric distributions seen in the depression era chart. In these hmwxvmfyxmsrw0 xli epterylqivmg zepyi vitviwirxw xmqiw {lir e wigyvmx} xvehih ex e wtigmĂg tvmgi2 Hitirhmrk sr xli xmqijveqi sj xli glevx hm[ivirx qettmrkw qe} fi ywih2 Sri gsqqsr intraday convention is to use characters A-X and a-x to represent half hour intervals throughout

,KP[VY»Z UV[L! ;\JRLY)HSJO PZ HTVUN [OL WYLZLU[LYZ H[[OL
H YLWYPU[VM OPZ ^VYR MYVT OPZ ^LI ZP[L H[(\NTLU[LK;YHKL

> “A stop order is an order placed with a broker to sell a security when it reaches a certain price. A stop-loss order is designed to limit an investor’s loss on a position in a security” —investopedia.

0U [OPZ HY[PJSL ^L PU]LZ[PLU[•À0`P0[ Y ,K €@`P°0`PÐÀ•@•À°ð

The performance of our baseline strategy from January 2001 to early 2016 is illustrated below:

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As you can see, this strategy provides great cumulative returns (410%), but it is more volatile xler xli Hs{ ' ws wyfnigx xs wmkrmĂgerx (ve{hs{r ,199)-2 Ger wxst1psww svhivw ,iptC Let's see. Here's a chart of the same strategy, but now with a 5% stop-loss order applied at the beginning of each monthly trading cycle:

Weqi wxvexik}0 fyx {mxle 9) wxst1psww svhiv irxivih jsv iegl wxsgo ex xli fikmrrmrk sj iegl qsrxl2 Xli ehhmxmsr sj wxst1psww wmkrmĂgerxp} vihygiw gyqypexmzi vixyvr2

Ew }sy ger wii0 xli ehhmxmsr sj xli 9) wxst1pswww wmkrmĂgerxp} vihygiw gyqypexmzi vixyvr ,jvsq 854) xs 545)-2 Xlivi evi wsqi firiĂxw ls{izi0 mx pmqmxw hve{hs{r xs srp} 184275) 0erh mx oc0003}FJ/TT2 1 TfTDces daily volatility by about 40%. 0

A reasonable conclusion to draw here iT that to maximize cumulative return it iT best not to exit with stop-loss or stop-gain orders. That approach, however does expose the strategy to drawdown risk. So let'T take a look at drawdown.

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erh ehhmxmsrepp} {mxl wxst1kemr,vih-2 Hve{hs{r {mxl rs wxst svhivw mw wls{r mr kviir2

Drawdown iT a measure of peak to trough loss (remember the -55% drawdown during the great recession?). Smaller negative numberT are better. Figure 4 illustrates how drawdown iT e[igxihf}mrgviewmrk wxst1psww svhivpizipw2 Ew }sy ger wii hve{hs{r mrgviewiw wmkrmĂgerxp}

Figure 5:

VISUALIZING THE ANXIETY OF ACTIVE STRATEGIES

Ihmxsvùw rsxi› Gsv} Ls{wximr mw eqsrk xli tviwirxiww ex xli Errye W}qtswmyq mr Etvm2 Xlmw post was originally published at ThinkNewfound.com and is available as a PDF here.

- Prospect theory states that the pain of losses exceeds the pleasure of equivalent gains. An oft-quoted ratio for this pain-to-pleasure experience is 2-to-1.
- Evidence suggests a similar emotional experience is true for relati,e performance when investors compare their performance to common reference benchmarks.
- The anxiety of underperforming can cause investors to abandon approaches before they firiĂx jvsq xli psrk1xivq syxtivjsvqergi sttsvxyrmx}2
- We plot the “emotional” experience investors might ha,e based upon the acti,e approach they are employing as well as the frequency with which they review results. The more volatile the approach, the greater the emotional drag.
- Rsx wyvtvmwmrk}0 hmziwmj}mrk egvsww . What we particularly enjoyed about this post was a graphic found in the middle, which applied prospect theory to demonstrate actual results versus percei,ed investor results

There are a variety of reasons why this framework is not true in practice, but we feel it adequately captures the concept we are looking to explore in this commentary.

Xli psrk3wlsvx jegxsv tsvxjspmsw {i iqtps} gsqi jvsq EUVùw jegxsv pmfvev}2 Wtigmǎgepp}0 {i leverage their Size ("SMB"), Value ("HML Devil"), Momentum ("UMD"), Quality ("QMJ"), and anti-beta ("BAB") factors data.

Factor portfolio returns are only available on a monthly basis, so we will recreate the above Longboard graphic for investors that review their portfolio on a monthly, quarterly, and annual basis. Using monthly data allows us to go back as far as 1927 to evaluate performance for several factors.

Xs gviexi öi|tivmirgi÷ vixyvrw0 xli vixyvr sj xli psrk3wlsvx tsvxjspms mw gepgypexih szi v xli investor's evaluation period. If the return over the period is negative, then the loss is doubled, to account for the fact that investors are reported to experiences the pain of a loss twice as much as the pleasure of an equivalent gain.

The size factor is the relative performance between small capitalization stocks and large capitalization stocks, with the idea being that small should outperform large over the long run.

AQR. Calculations performed by Newfound ResearcB.
Tewx tivjsvqergi mw rsx e kyevervxii sj jyxyvi viwypxw2

What we can see is that while size has been a positive premium over the long run, even investors that only evaluate their portfolios on an annual basis have had a negative emotional experience.

Due to the asymmetric response to gaini versus losses, we can see the pain of “volatility drag” mr tivmshw pmoi xli 5=94w0 {livi xli wm~i jegxsv {ew pevkip} ăex mr vixyvr0 fyx xli i|tivmirgi jsv investors was largely negative.

Zepy i Jegxsv

The momentum factor captures the relative performance of prior winners versus prior losers: investing in those stocks that have relatively outperformed their peers and shorting those that have underperformed.

AQR. Calculations performed by Newfound Research.
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Gsvi} Lsçwxir mw gs1jsyrhiv erh Glmij Mrziwxqirx SŢgiv sj Ri{jsyrh Viwievgl0e uyerxmxexmzi ewwix qerekiv sçivmrk e wymxi of separately managed accounts and mutual funds. At Newfound,

WHY MULTIPLY BY SQRT (252) TO COMPUTE THE SHARP RATIO

Ihmxsvìw rsxi> xlmw evxmgpi {ew svmkmrepp} tswxih ex Eykq irxihXvehiv2gsq2

This question comes up every time I teach Computational Investing. Here's my attempt to create xli fiwx0 ,ĂrepC- erw{ iv xs xlmw uyiwxmsr2

In my courses I give the students the following equation to use when computing the Sharpe Ratio of a portfolio:

Wlevti Vexmss AO . ,eziveki vixyvr ô vmwo jviivexi- 3 wxerhevh hizmexmsr sjvixyvr

Controversy emerges around the value of K. As originally formulated, the Sharpe Ratio is an annual value. We use K as a scaling factor to adjust for the cases when our data is sampled more

evolved the same way. The trick is to be able to recognize our biases in our decision-making processes and work on countering them with the right behaviors.

[i epp pmoi xs xlmro xlex { i evi rsx ew mrăyirgih f} fmewiw ew sxliv tistpi evi0 { lmgl mw syv Ăvwx erh fmkkiwx mrziwxmrk qmwxeoi2 lzir tvsjiwwmsrepw mr xli Ărergmep mrhywxv} lezi fmewiw xlex pieh them to make less-than-optimal decisions. In fact, the more we know about a subject, the more gsrĂhirx { i evi xlex syv jsvigewxwMswn Î { i 3˜ T neoiiPxlwZsvxlex zf a xlwwmex%r Ćhi]exvwMwxwPe

You've likely heard the old adage, "past performance is not an indicator of future performance." So why do so many investors—even analysts—make the mistake of assuming that a good company with solid earnings over the past several years will continue to perform well? This belief stems rnueat typake obias knowven turs

CHART OF THE MONTH: CDS DATA OFTEN LEADS EQUITY PRICS

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