(Pause)
>> My Name is Scott Juds, and - I Am – a Heretic.
I admit my addiction to trend following algorithms.

>>And I believe we CAN break through the efficient frontier.
>>(Pause)

I used to be among the >> diversification faithful,...
>> I owned a little bit of everything.
One day I realized that owning a little bit of everything inherently
>> produces Precisely average performance.

I was trapped, with the masses, beneath the efficient frontier....
It weighed heavily on me, as though
>> it were made of hardened steel bars ....

My jailer, Modern Portfolio Theory, claimed the bars Were impenetrable....
And that we were all stuck beneath the efficient frontier....
But, when stuck in a box, it helps to think OUTSIDE the box...

Today ...

I'll show you
How I Got Hooked on Trends
>>2. I'll show you
Trends are Real ... (Markets are Not Efficient)
>>3. I'll show you that
Risk & Return are Not Mutually Exclusive
>>4. I'll show you the
There is an Optimum Trend Extraction Method
>>5. I'll show you that
Trend Periods and Algorithms do Matter
>>6. I'll show you
How to Build Great Strategies and Portfolios
>>7. I'll show you that
Backtesting & Optimization aren't Just Video Games
>>8 . I'll give you The Nickel Tour
of SectorSurfer's On-Line Resources.
>>9. AND then we'll Go Build a 401k Strategy.
We've got a lot to cover, so my pace will be fast...
But we should have plenty of time for questions at the end.

Here we go...

It all started when
I discovered I had a Problem.

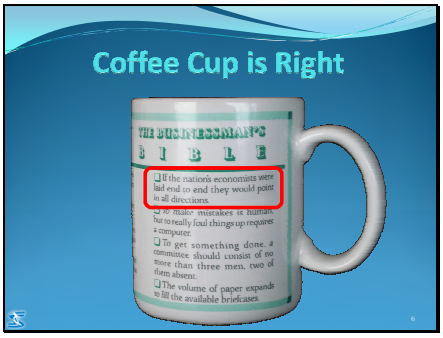
After what was called the Go-Go 80's Stock Market
I noticed that

>>It went up over 100%

>>But my IRA Funds were Flat

I read no shortage of news letters – each had great reasons why they were right – but there was certainly no consensus.

>> I watched the CNBC talking heads – and they managed to have 8 simultaneous different opinions.



It then occurred to me that my coffee cup really was right .

If the nation's economists were laid end to end, they would point in all directions.

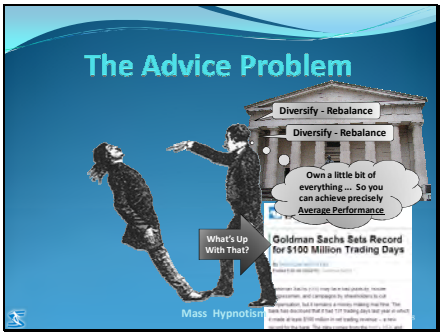
It turns out this is a fundamental truth. If there were not equal numbers pointing opposite directions, the market would quickly adjust to make it true.

Because Experts Do Point In All Directions
They ARE inherently only a 50-50 crap shoot for market prediction.

I didn't think 50-50 was going to help.

So I Concluded

>> These guys are all – Just a soap opera.



I listened carefully to my Financial Advisor who HYPNOTICALLY said:
DIVERSIFY & REBALANCE.

>> To me, that sounds like: Own a little bit of everything – and I can achieve precisely AVERAGE PERFORMANCE? Average? Was that my goal?

>> But I noticed that these same industry giants Don't' Achieve Average with their own money.

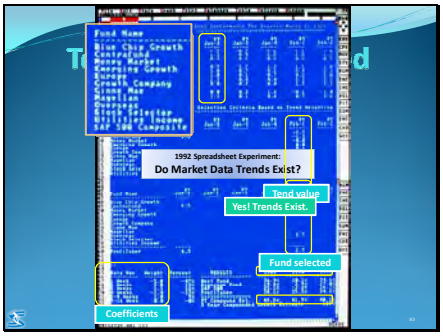
$100M Days? What's that about? How do you get some of that?

With no apparent value in newsletters and talking heads – I wondered… What about the data?

Does Recent Market Data Hold Clues for Future Prices?

>> In other words –
Do Price Trends Exist?"

I knew I could answer this question if I could get some data and do some experiments.



In 1992 I bumped into one of FastTrack ads in the Wall Street Journal and subscribed.

>>I exported 3 years of data for 11 Fidelity Mutual Funds to this Quattro Spreadsheet.

>> I set up a few coefficients to calculate monthly trend correlations

>> and used them to select the best fund to own for the next month.

>> and concluded TRENDS EXIST.

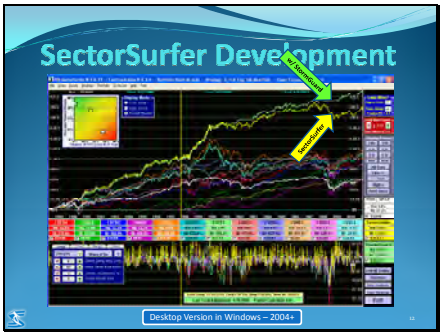
For 1989, 90, and 91 it was showing about a 40% return each year.

I was pumped !!

I was hooked on Trends.

I started development in the early 1990's with software written in DOS –

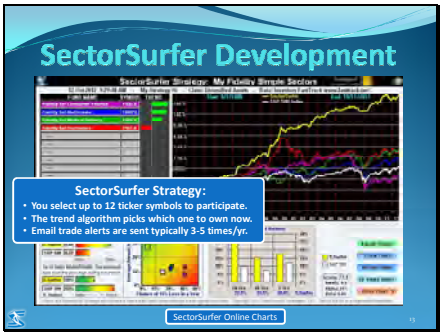
Then I called it ProfiTaker. Everyone needs a spare-time hobby....



In 2004 I started redesign for a Windows environment and re-named it SectorSurfer

Many features were added including....

>> In 2009 the StormGuard feature of SectorSurfer was developed to separately deal with moving to cash during major market downturns.



In 2011, SectorSurfer went live , as a Web delivered service.

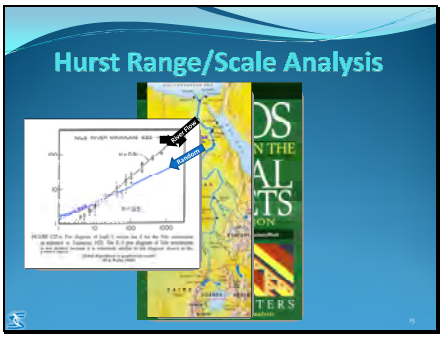
This chart is typical of what you see online today.

>> In short - in a SectorSurfer Strategy
You select up to 12 ticker symbols to participate.
>> The trend algorithm picks which one to own now.
>> Email trade alerts are sent typically 3-5 times/yr.

I said - I'll show you that
Trends Are Real – which means Markets are not efficient

>> Let's Review the Efficient Market Hypothesis.
Paraphrasing, it says:
-Prices already reflect all past publicly available information.
>> One cannot consistently achieve returns in excess of average.
>> Stock and other asset prices follow a random walk model.
>> If TRUE, Diversification is Best.
>> But If Trends are Real, then the Efficient Market Hypothesis is False.

Notably, we are all here because
>> we want to achieve returns in excess of average.
So, let's examine more proof that TRENDS ARE REAL

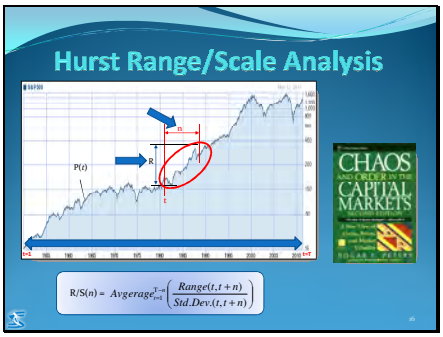


Shortly after I began development I ran into a fundamentally important book: --Chaos & Order in the Capital Markets – by Edgar Peters.

>> He discusses the rescaled range analysis. -- Developed by Edwin Hurst in 1907 –
>>For the Nile River Dam Project – for Water flow analysis. Hurst thought he should know the character of the Nile river flow before designing the dam. Fortunately, he was in Egypt, where there was 2,000 years of data.

>> Hurst showed in this plot of the rescaled range analysis that river flow statistics were much different from that of a
>>random walk – represented by this blue line – and that this difference was representative of its trend characteristics.

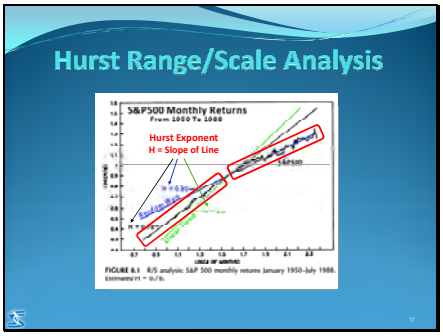
Apparently the way storms flow over the tributary collection basin makes river flow statistics non-Random.



Edgar Peters decided to apply this analysis to the capital markets.

For the math geeks among you:

The rescaled range is calculated as
>>the average over the entire time scale (left to right)
>>of the Maximum Range - R - in the interval n,
>>divided by the Standard deviation of the data
>>over each time interval "n".

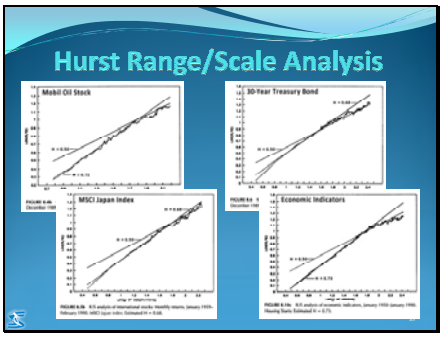


When plotted for the S&P 500 on a log-log scale it looks like the black line.
If that data was a totally random walk, it would be like the blue line.
If the data was a linear trend, it would be like the green line.

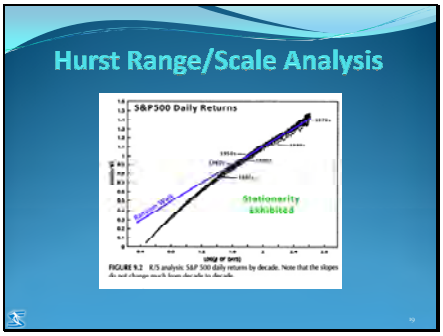
>> What we see is that for longer time intervals it is much more like a random walk,
>> but for shorter time intervals it clearly shows it contains trending characteristics in much the same way as the Nile river data.

>>The slope of the line is called the Hurst Exponent,

OK - That was lots of Geek Speak - But Here Is What to Remember.



The same trending properties are seen for individual stocks ...
>> Japanese stocks ...
>> US Treasuries ...
>> and even economic indicators.



Here the S&P 500 is shown decade by decade. One plot overlaying the next.

This stability in character over time is called Statistical Stationarity.

It's character remained stable in spite of depression, world war, politics and technology.

Market data reactions are really only about human reactions to new information.

-How long to believe, to buy in, to be afraid, to take action.

-As a population, this character is baked in our genes. Thus Stationarity should be expected.

Other evidence that trends exist can be found in this nice article in the Economist from January 2011 entitled "Momentum in Financial Markets – Why Newton was wrong.

>> The article contains these two charts.

The left one is a Credit Suiese study regarding British shares chosen for performance in the past 12 months...
and showing that the top 20% well outperform the other groups.

The right one is an AQR Capital Management Study for US shares, conducted in a similar manner, ...

showing a similar outperformance for the top 20% ranked stocks.

Further evidence that trends exist can be found in this industry White Paper from Columbine Capital.

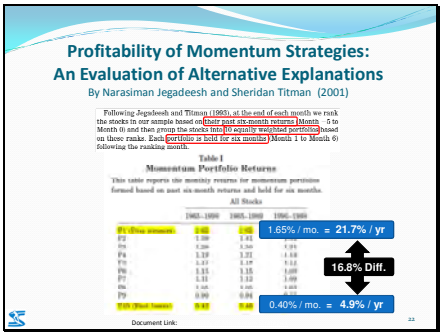
It cites prior work by a number of researchers, and of course, how Columbine further improved the algorithms with their own secret sauce.

>>Columbine publishes performance charts for a handful of models and sells data to capital management companies. .. this is their Combination model – starting in 1986

I have annotated this chart to show two lines of constant return to put them into perspective.

The GREEN line is the top 10% of the sorted stocks, and the RED line is the bottom 10% of the sorted stocks.

I'm told a subscription for their data is only about $20,000/yr. That would bust my budget for sure.

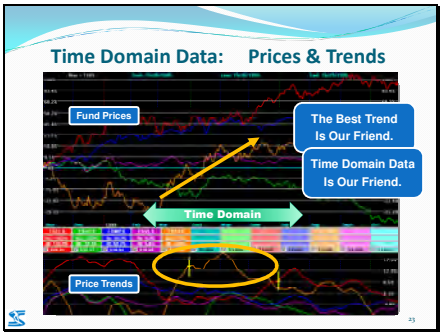


Finally, this peer reviewed academic paper by Jegadeesh and Titman from 2001 likewise demonstrates that trends exist in market data.

>> in their paper, they divided the stock market into 10 portfolios, grouped according to their prior 6 month return, then held those stocks for 6 months and repeated the process.

>>They found that portfolio P1, the upper 10% of the momentum sort produced an average return of 1.65% per month, while portfolio P10, the lower 10% of the sort, had only about 0.4% return per month.

>> That's a significant 16.8%/yr Difference!!



So, Trends Are Real – And this is what they look like.

Here, FUND PRICES are plotted on the top, and
their corresponding PRICE TRENDS are plotted below.

>> They are plotted against TIME, and thus they are Time Domain Data.

Remember that term : Time - Domain - Data.

>> When the price of the orange fund is rising the fastest,
>> the Value of its Trend is the highest.

>> Thus - The Best Trend is our Friend
>> and therefore Time Domain Data is also our friend.

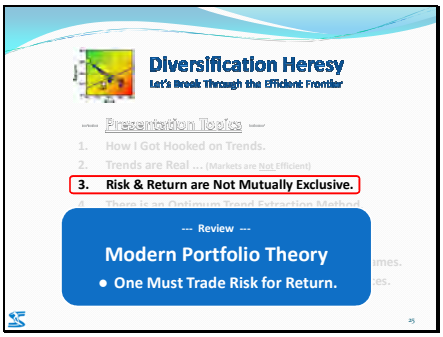
Yes, Trends Are Real

TRENDS are, by definition, a Portal to the Future...

>>Where something in the past ..
... tells us something about the future.

>> Thus, Trends in fact ARE…
the crystal ball we all hope to find –

In fact,
>> We're NOT limited by Average Performance



I said I'll show you that
Risk & Return are Not Mutually Exclusive

>> But Let's Review ...
-- Modern Portfolio Theory Says
-- One Must Trade Risk for Return

Let's check it out.

Modern Portfolio Theory SAYS

>> If you have a Risk free money market fund here in GREEN

>> and other available investments over here in BLUE

>> then the best you can do is to construct portfolios along this Efficient Frontier line in RED.

>> In fact MPT says you can't make long term portfolios in the upper left of this diagram! '

>> According to MPT principles… (Read From Screen)

According to Modern Portfolio Theory TENETS… (Read From Screen)

But SectorSurfer thinks otherwise… On this risk/return chart of an operating Strategy, it is the additional use of trend following algorithms that enables SectorSurfer to live comfortably in the forbidden corner.
---Lets revisit those MPT Tenets:
>>That Market prices are Gaussian distributed,- Fails to consider the tails are way to fat in the real world – this is why 30:1 leveraging by banks was not safe.
>>That Rational Investors Trade Risk for Return,- Fails to consider that new tools change the game. In a sword fight, Indiana Jones reduced his risk by bringing a gun.
>>That Risk is measured as Standard Deviation of Return,- Fails to consider that big returns aren't a Bad thing – and this misrepresents risk in the decision process.
>>That Risk is reduced by Owning Uncorrelated assets, – Fails to consider temporal avoidance as a method of risk reduction.
>> That The Efficient Frontier is the set of best Portfolios, - fails to consider that the Efficient Frontier might be an Artifact of unfortunate self-imposed constraints caused by discarding time domain trend information.

Our poor MPT guy on the left says…. Can you help a poor cripple?
I cut off my Time-Domain leg.
I don't know what to do next!

Statistics is the only leg he has to stand on.

MPT mathematics are completely statistically based
>>--Gaussian distributed
--Standard deviation
--Uncorrelated assets.

Without time domain information you have no trend information.
Without Trend information MPT is Limited to Buy & Hold.

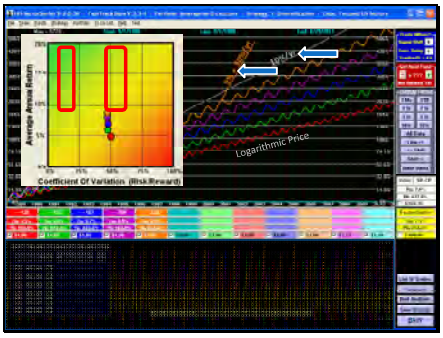
>> This is why MPT can't pick anything to own or avoid Next Month!
PAUSE…

Let's solve the problem ...
We want to know how to use the Blue Investment Options to create a Red Portfolio.

--to Simultaneously reduce risk – AND - improve return.

Modern Portfolio Theory says
We can't get there with "Diversify & Rebalance"

But Let's give it a try and see...



I'm going to use the Desktop version of SectorSurfer for this demonstration.

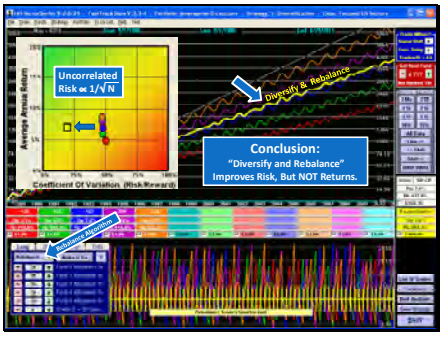
>>The vertical axis is logarithmic such that a fixed percentage return per year makes a straight line – as shown by the grey 10%-return line.

>>I've created 5 simple synthetic funds, each with a slightly different average return, and each with a slightly different sinusoidal undulation to simulate uncorrelated assets.

>>Their average returns vary from 5% to 9%,
>>and the sinusoidal undulation period varies from 135 days to 229 days.

>>The upward slope of each undulation is 30%/year plus the base level average return. So 39%/year for the orange fund.

>> the risk reward chart stacks the dots for these funds appropriately, like this. Risk here is measured as the coefficient of variation..



If we take these uncorrelated assets and Diversify and Rebalance as shown by the control in the lower left..
…using an equal 20% allocation for each and
>> rebalancing quarterly…
>> where these are the rebalance indicators and rebalance dates.

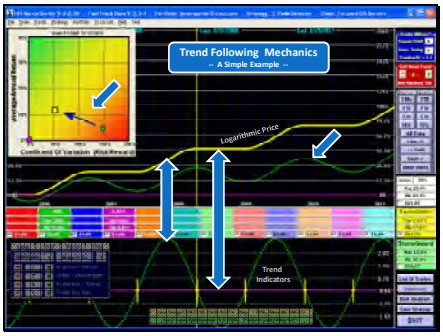
>>then it produces the results shown by the yellow line above.
With this concoction of uncorrelated signals, there are periods of times when they work together and other periods when they work against one another.

>> On the risk reward chart, the result shows we have achieved the average of the returns. And as expected for uncorrelated assets, the risk is

reduced by the square root of the number of participating funds.
>> Conclusion: Diversify and Rebalance" Improves Risk, But NOT Returns.

Diversification Didn't Cut it.

>> Lets Try Trends - and Own only the Trend Leader.



Let's first look at Trend Following Mechanics with a very Simple Example.

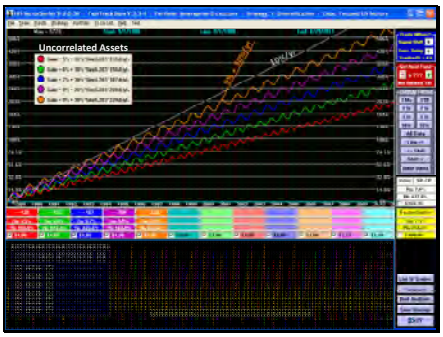
In the upper black-chart
>>we have a simple sinusoidal Fund in Green,
>>And a pretty flat Money Market fund charted in Purple,
>>and the Strategy results in yellow.

>>In the lower chart we see the short-term trend indicator for the Green and Purple funds– indicating whether the fund is making money or losing money.

A Trend Following algorithm says we should own the fund that has the most positive trend, and thus most likely to to well next month.

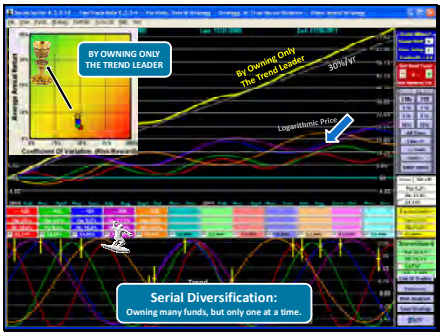
>>Thus the yellow line goes up when the green fund has a positive return and should be owned
>> and bails to cash and goes flat when the money market fund is doing better

>>On the Risk Reward chart note that we have moved left and up at the same time.



Now let's do Trend Following with ALL of those sinusoidal funds we saw before.

First we'll zoom in to a two-year interval ...



..where
>>we see the synthetic sinusoidal funds above
>> and their corresponding trend indicators below
>> where each yellow hash mark indicates a trade to a new fund when it becomes the trend leader
>> and producing This Result - BY OWNING ONLY THE TREND LEADER

If you Think of these funds as Market Sectors
>> We are literally surfing from one sector to the next. Hence the name - SectorSurfer

>> This is called Serial Diversification: Owning many funds, but only one at a time.

>> As this chart shows – one CAN simultaneously
achieve higher returns and lower risk ...
BY OWNING ONLY THE TREND LEADER.

>> Yes – this is the Holy Grail.

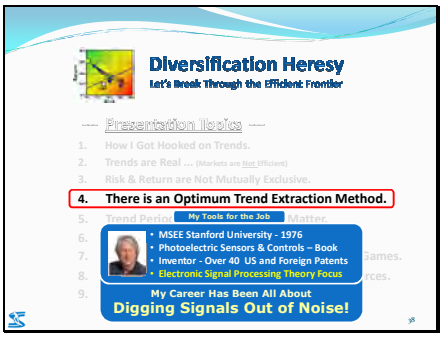
(PAUSE) -- But something is missing….

Real Markets Have Noise.

>>And Market noise makes our crystal ball foggy.

>>Thus the Game is to Extract Trend Signals from Noisy Data.

This is the hard part of the job.

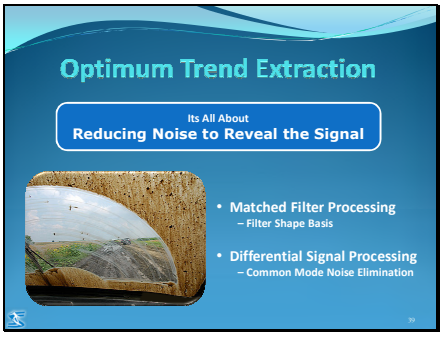


I said - I'll show you that
There is an Optimum Trend Extraction Method.

>> Fortunately I went to engineering school at Stanford –
Where I studied Signal processing theory
Had a long electronics design career
Have numerous issued patents,
and even authored an optical sensors book.

>> My Career has been all about
Digging Signals Out of Noise!

And that's the problem we have before us.



Its all about –
Reducing the Noise to better Reveal the Signal.

>>Seeing even a little of the road ahead is a good thing.

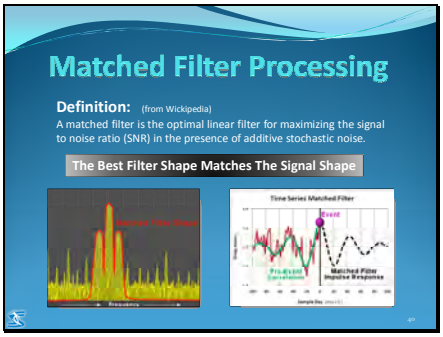
There are 2 primary tools that a good signal processing engineer would use:

>> 1st - Matched Filter Processing - to optimally shape a noise filter.

>> 2nd - Differential Signal Processing - to eliminate common mode noise

WARNING – There is a bit of Geek Speak ahead - consider it entertaining

background material ...
that you DO NOT have to remember..



We'll start with Matched Filter Processing ...

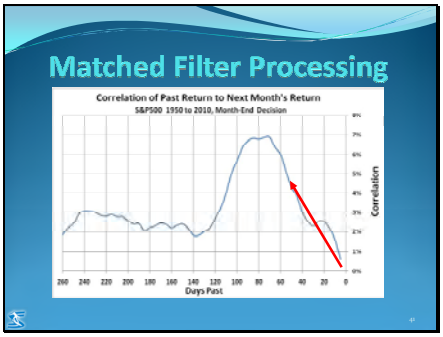
And its Definition...

A matched filter is the optimal linear filter for maximizing the signal to noise ratio (SNR) in the presence of additive stochastic noise.

>>This Means: The Best Filter Shape Matches The Signal Shape

>> Consider this Radio spectrum signal in the frequency domain. A Matched filter…
>> would be shaped to match the spectrum of the signal, like this…
To cut out the sideband noise.

>> consider this time domain signal leading to an event
>> if we have many such examples we might find a correlation signal before the event. (like what happens before an earthquake)
>> In the time domain, a matched filter has an impulse response, that is the Mirror image shape, of the correlation signal.



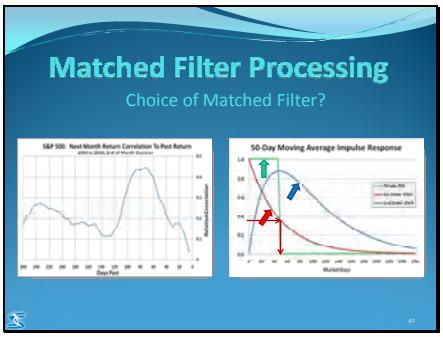
So--What is the event?
Let's say the problem is wanting to know: … Should we move to the safety of cash?
We want to estimate market performance for next month.

>> The method will use the S&P 500 Index to represent overall market health. Negative returns are, off course, indicative of poor market health.

>> So then, the EVENT is Next Month's Return.
Thus we must Find the correlation between next month's return and the returns from the series of days prior to next month.

>> This is that correlation. The horizontal axis is the number of days preceding the event, and the vertical axis is the correlation of the data to the event … with recent past days on the right and far past days on the left.

>> It has near zero correlation for days immediately preceding the event, and grows to a peak a few months back in time.



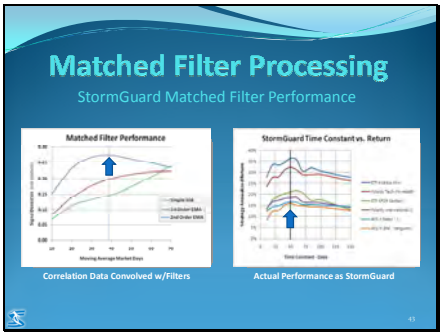
So, again, we're looking for a filter with an impulse response that looks like a mirror image … of the correlation between then event - and pre-event data.

>>This is the correlation between the event (which is next months return) and pre-event market data.

>> Let's look at three candidate filters - two well known, and one not so well known.

>> In Green is a 50 day Simple Moving Average filter. Its impulse response is flat for 50 days and then goes to zero.
>> In Red is a 50 day Exponential Moving Average filter… quite popular in market data analysis…
>>declining exponentially to its 1/e point at 50 days.

>> And, In Blue is a 50 day … 2nd order Exponential Moving Average filter … with a humped impulse response. It clearly looks the most like the mirror image of the correlation data …. LET'S check it out.



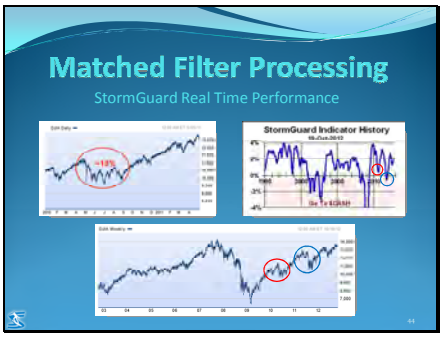
When you run the correlation data through these filters with different time constants

>>we see that it is true that the 2nd order exponential moving average filter – in blue - performs much better.

>>StormGuard uses the 50 day 2nd order exponential moving average to decide when it is time to move to cash

These plots show the returns of numerous SectorSurfer Strategies versus different time constants for the filter.

>>Their performance peak at about 50 days is not an accident.

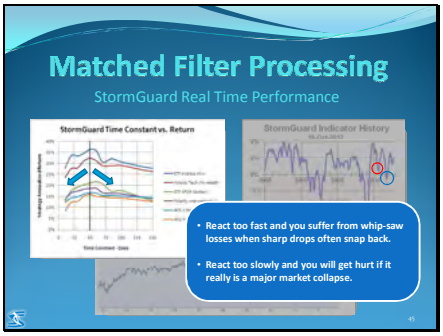


The market pull back in the summer of 2,010 was StormGuard's first "real-time" test since its creation.

>>The StormGuard Indicator chart on the right shows that StormGuard came close to triggering a move to CASH, but did not.

>>The bottom chart shows that in the larger perspective, when compared to serious market downturns, StormGuard made the appropriate decision.

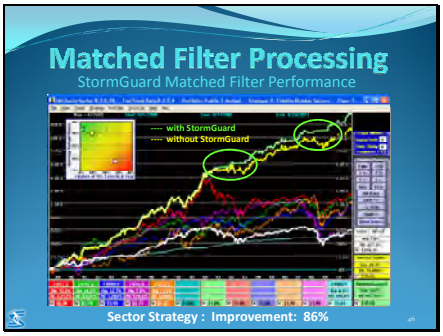
However,
>> one year later, in 2011, the US Debt Downgrade and a threat of collapse of Greek Debt scared the market a bit more, and for just a short time, StormGuard did trigger a move to cash.



Although the natural instincts of many people is to want to pull the trigger to go to cash much quicker, it's important to remember that there is an optimum balance.

>>React too fast and you suffer from whip-saw losses when sharp drops often snap back.

>>React too slowly and you will get hurt if it really is a major market collapse.

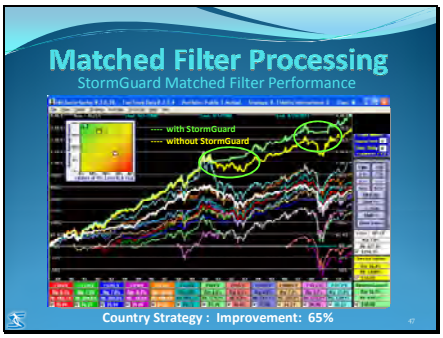


Let's look specifically at how StormGuard affects Strategy Performance:

This is a Fidelity Sector Fund Strategy. The green line includes StormGuard, the Yellow line does not.

>> The benefit of StormGuard comes exclusively during the two major down-market periods in this 23-year chart.

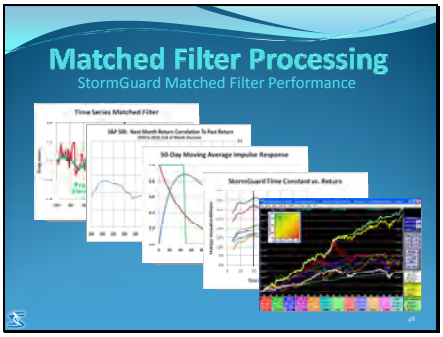
>> The cumulative Strategy improvement achieved by including StormGuard is 86%.



This second example is a Fidelity Country Fund Strategy. Again, the green line includes StormGuard, the Yellow line does not.

>> Again, the benefit of StormGuard comes exclusively during the two major down-market periods in this 23-year chart.

>> The cumulative Strategy improvement achieved by including StormGuard here is 65%.



In Summary – one can use matched filter theory

>> to first identify the signal leading to the event

>> identify a filter having a mirror image impulse response

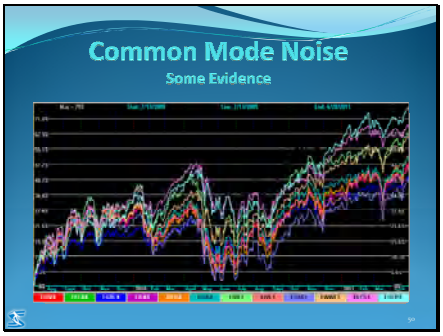
>> which optimizes the algorithm response

>> and actually produces results worthy of our attention.

PAUSE

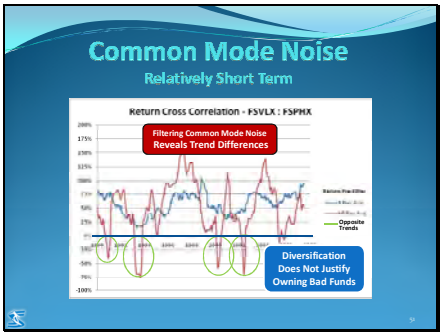
Next, lets address Differential Signal Processing…

to eliminate common mode noise.



This chart has a dozen broadly diversified funds, each of them with a slightly different focus.

It's pretty clear that there's a lot of common mode market noise within each off them.



If we take two mutual funds – a Finance Sector fund - and a Healthcare Sector fund

And do the usual correlation calculations over time we see this blue line telling us they have a lot in common.

>> However, when a 60-day moving average filter is applied to the data to remove short-term common mode noise, and we see something entirely different.

>> These negative correlation spikes are periods when longer term fund trends are opposite one another….

…one fund is increasing while the other is decreasing.
… there's no good reason to own both funds …

>>Diversification – Does NOT Justify – Owning Bad Funds.

I'll say it again....
Diversification – Does NOT Justify – Owning Bad Funds.
Detecting Trends is what it is all about.

Let's take a step back and first examine Solo signal processing – which means making a decision by looking only at a single fund.

>>In this case, Fidelity Medical Delivery, FSHCX, is plotted in green above.

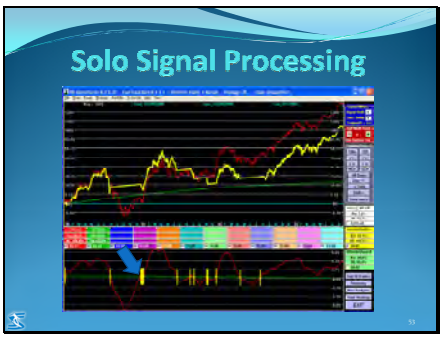
>>The red line is a money market fund

Here, our investment rule is that we will own FSHCX whenever
>>the trend for its daily return is higher than that of the money market fund trend,
>>and own the money market fund otherwise.

>> There are 10 little yellow lines on the bottom chart, each indicating a trade from one to the other.

The results of these trades are shown on the top chart
>> by the yellow line.

Clearly performance is poor … primarily because it is too often the victim of whip-saw losses.

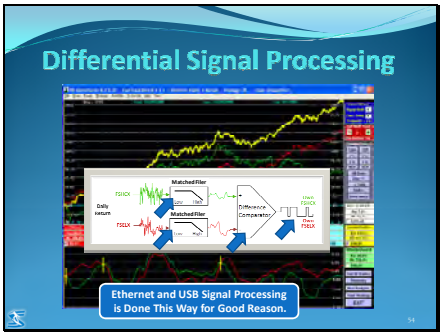


We need a second sector fund to do differential signal processing. Let's use Fidelity Electronics – FSELX, shown in red...

But first, let's look at the same solo signal processing treatment

It too suffers whip-saw losses and has at least 10 trades,

>>including this burst of indecision trades.



However, when FSELX and FSHCX, are played against one another to eliminate their common mode noise from the decision process, the results are completely different.

Now there are only three trades.

Now whip-saw losses have disappeared and the trade decision results are spectacular.

>> An electronics engineer would diagram it this way.:

>>First you apply a matched filter designed to optimally extract the trend signal.

>>Then you apply a difference comparator to eliminate common mode noise.

>>The result is a decision of what to own right now.

>> High performance Ethernet and USB signal processing is done this way for good reason.

In Summary – It's not a Solo Contest.

>>It's a horse Race. Change horses to stay on the fastest horse.

>> Its fine to change horses in the middle of the stream…

Don't Get whip-sawed .

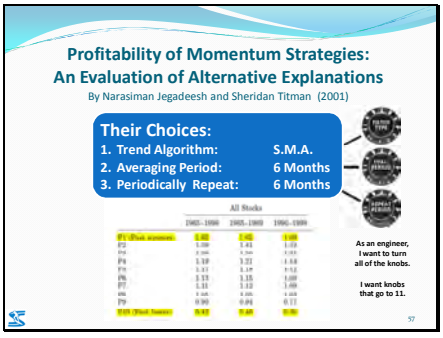
PAUSE

I said - I'll show you that

Trend Periods and Algorithms do Matter

>> But Which Trend, is my Friend?

>> There are lots of time periods
>> and there are lots of algorithms



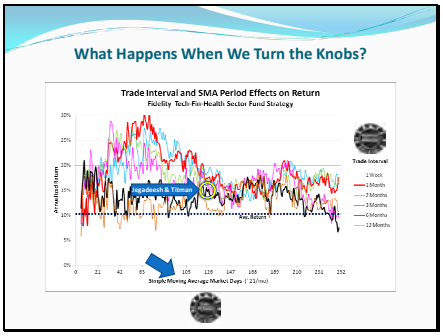
Let's Revisit the Jagadeesh & Titman academic paper and ask Which Trend is My Friend.

Their choices were...
For Trend Algorithm: – the Simple Moving Average
For Averaging Period: - 6 Months
For Repeat Interval: - 6 Months

That sounds pretty constrained to me...

As an engineer, I want knobs.
>> I want to Turn all of the Knobs, and

I want knobs that go to 11.



What happens when we turn the knobs?

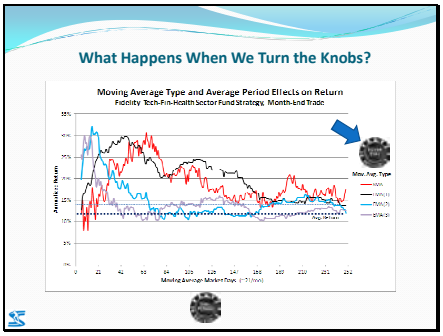
I picked a Fidelity Sector Fund Strategy and plotted what happens when turning of two of the knobs.

>>On the bottom is the Simple Moving Average Time Constant

>>On the right is the Trade Interval

>> and this circle in the center is where Jagadeesh and Titman focused in their academic paper.

>> One might conclude that this red-line hump for
One-Month trade intervals -- and a shorter SMA time constant ,would be a better choice.



On this chart, we'll keep that red line from the prior chart, and we'll turn a different knob.

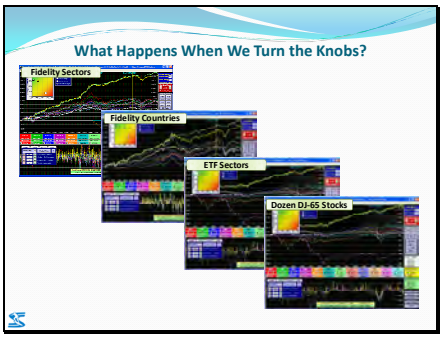
We will keep the one-month trade interval, but
>> On the right we can try different kinds of moving averages.

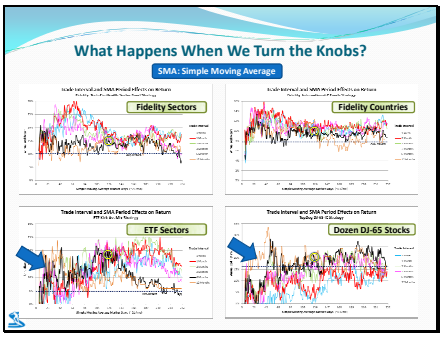
with the SMA Simple Moving Average in Red
The EMA Exponential Moving Average in Black
The 2nd Order EMA in Blue
And the 3rd Order EMA in Purple

>>It kind of looks like they all have a pretty good zone of performance.

But not so fast...

Let's expand our scope and see if
Stocks, ETFs, Sector Funds and Country Funds all behave the same.

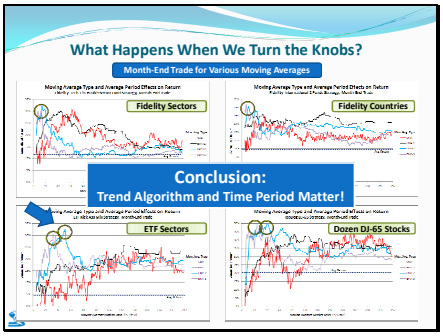




The charts for these four Strategies all use the SMA Simple Moving Average

>> Particularly, when looking at what happened to the red line in these two places...

It Wouldn't seem to give much hope that the SMA can be relied upon.



But now, let's again keep that red lines from the prior charts, and keep the one-month trade interval,

but again we'll try different kinds of moving averages.

>> In every case, the 2nd order and 3rd order EMA produces a nice peak. (PAUSE)

>>Yes - Trend Algorithm and Time Period do Matter!

I said – I'll show you
How to Build Great Strategies and Portfolios

>> This involves Serial Diversification --
Which applies to True Sector Rotation and Asset Class Rotation...

>> and it involves Post-Surfing Diversification –
Which applies to Individual Stocks & Commodities

SEE, I actually LOVE Diversification – Particularly, exotic diversification.

One occasionally sees charts such as this that tie market cycles to economic cycles.

Along the top are market sectors that are said to benefit at various stages of an economic cycle.

The stages of an economic cycle are identified along the bottom.

This, of course, speaks to the concept of Sector Rotation.

If we draw a wave cycle for each of the market sectors, a Sector Rotation model might look something like this.

If one then makes an analogy to an engine

>> where each Sector Wave is analogous to a piston in an engine,

>>Then the smoothest and most powerful ride from the engine will be when

all pistons are sequentially firing, and
There are No missing power strokes

That's exactly why this Strategy with only 5 Fidelity Sector funds performs so well.

>> The sector pistons it contains are Medical Delivery, Energy Services, Electronics, Multimedia, and Consumer Finance.

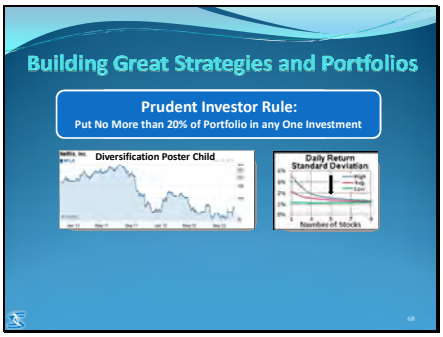
>> True Sector Rotation is the practice of Serial Diversification:

Owning only, the one best sector fund at any time.

This Federal Thrift Savings Plan Strategy inherently practices Asset Class Rotation because of the nature of its funds .

>> For its pistons it has
The US Common Stock Index, International Stock Index, Small Cap Stocks, Fixed Income Index, Government Securities, and a handful of balanced Lifepath funds.

>> Asset Class Rotation is the practice of Serial Diversification:
Owning only, the one best asset class at any time.

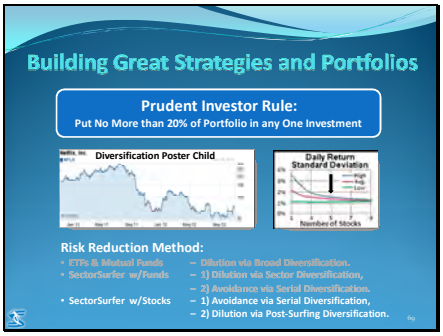


Before I address Post-Surfing diversification for individual stocks ,
>>I would like to review the Prudent Investor Rule:

Which basically says to ...
Put No More than 20% of your Portfolio in any One Investment...
Seems like a pretty reasonable guide.

>> Netflix is The Poster Child for why this is important.
Its Scarier than any ride at Six Flags!

>> The top-blue-line on this chart, clearly shows the risk reduction value of owning at least five stocks at a time.



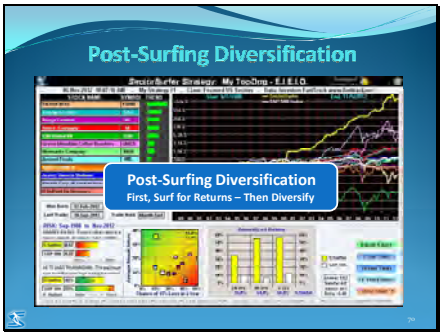
I want to contrast methods for risk reduction:

ETFs & Mutual Funds use Dilution via Broad Diversification.

>> SectorSurfer Strategies with Funds
-- use Dilution via Sector Diversification,
-- and they use Avoidance via Serial Diversification.

>> SectorSurfer Strategies with Stocks
-- use Avoidance via Serial Diversification.
-- and they use Dilution via Post-Surfing Diversification

But, what does Post-Surfing Diversification mean?



I've picked 4 SectorSurfer Stock Strategies:

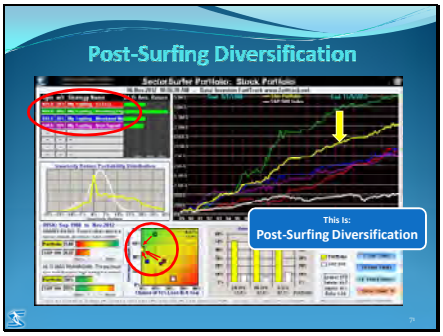
The first is called Vice Squad - and contains stocks from companies trafficking in Alcohol, tobacco, firearms, and gaming.

>> The second one is called Bleeding Edge - and contains stocks of Internet, bio-tech, and electronics companies.

>> The third one is called Weekend Warrior - and contains stocks of home repair, recreational vehicles, and sporting goods companies.

>> and the fourth one is called E.I.E.I.O. and contains farm equipment, farm products, fertilizer, and seed companies.

>> With post-surfing diversification we Surf First - to capture the returns, then diversify to reduce volatility.



This is the portfolio performance chart

>> for those four Strategies, each weighted at 25%

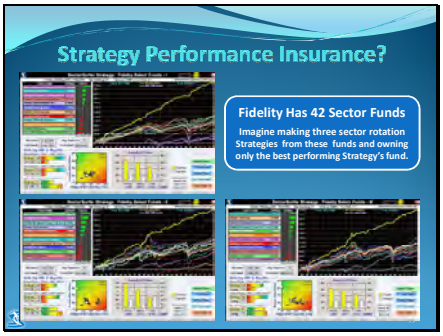
>> The yellow Portfolio line is visually smoother than for the constituent Strategies

>> And the yellow Portfolio spot has moved farther left.

>> This is Post-Surfing Diversification.

In Summary There are many kinds of diversification
The type used and the order in which it is applied - Matters Significantly

What If Your Selection of Sectors, Countries, or Asset Classes Gets a Flat Tire for a While in the Future?



Fidelity Has 42 Sector Funds

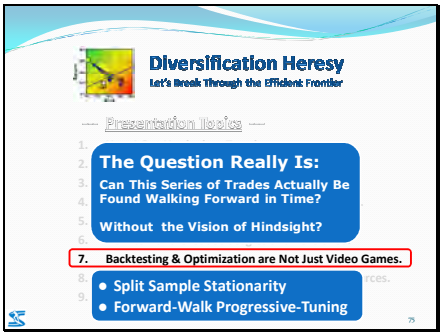
What if you made three sector rotation Strategies from these funds and owned only the best performing Strategy's fund?

This is a Strategy-of-Strategies designed to select only the best performing Strategy
>>of three Fidelity sector rotation Strategies. .. And then own only the one fund of that best performing Strategy.

>> The color of the equity performance line represents the Strategy owned at that particular time period.

This optional display feature is called the Painted Path.

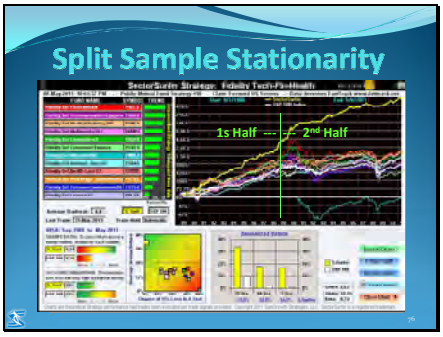
The Strategy-of-Strategies functionality primarily provides additional risk reduction by avoiding Strategies that may occasionally fail to perform well in the future.



I said
I'll show you that
Backtesting & Optimization aren't Just Video Games

>>The Question Really Is:...
Can This Series of Trades Actually Be Found Walking Forward in Time?
Without the Vision of Hindsight?

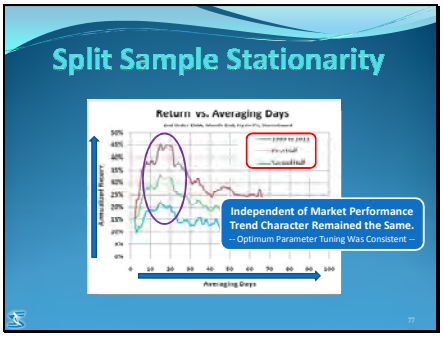
>> Let's Examine that in Two Ways:
Split Sample Stationarity and...
Progressive-Tune Stationarity.



We'll Start with Split Sample Stationarity.

In this Strategy, clearly the 1st half and the 2nd half of the 23-year time interval have dramatically different price performance of the constituent funds.

However, ..IF.. the character of the trend data that SectorSurfer uses to make its decisions actually does have Stationarity, then we should find that the optimum parameters for each half are the same.



Plotted here is the

>>annualized return ... versus

>> the 2nd order exponential moving average days

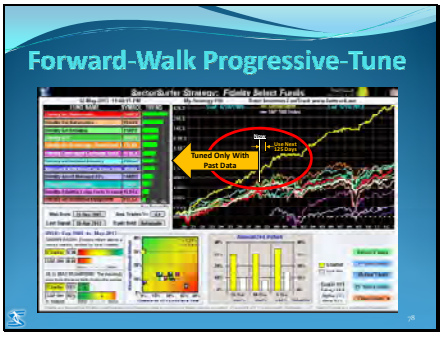
>> for the full 23-year period in green, the first half of the period in red, and the second half of the period in blue.

While it is understood that the returns during the first half and second half would be different,

>>the important take away from this chart is that the location of the peak in each period is roughly at 17 days.

>>Independent of Market Performance, Trend Character Remained the Same.

-- Hence – we have Split Sample Stationarity.
-- BECAUSE– optimum parameter tuning was consistent over time



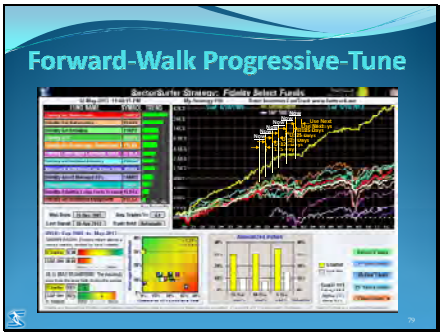
Next, we'll examine Progressive Tune Stationarity – A More Rigorous Test

This new advanced feature will go live online later in May.

As illustrated here, at some point in time labled NOW, the algorithm looks back over Past Data and determines how best to tune the Strategy.

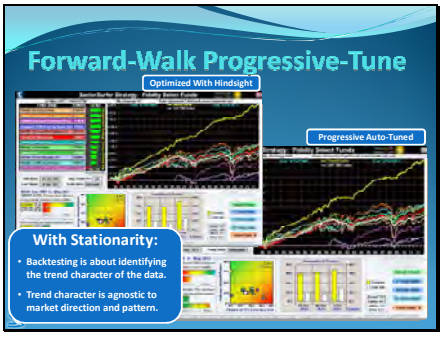
Then it uses these parameters for the next 125 days and pauses again to repeat the procedure

<< and so on across the time span.



(and so on across the time span. Wait for it...)

Progressive tuning produced the nice results shown on this chart.



Here is a comparison of the Strategy using

Progressive Auto-tuning on the left and ...
the same strategy tuned by hand in hindsight, on the right
– showing remarkably similar performance.

Here's the takeaway about Stationarity…

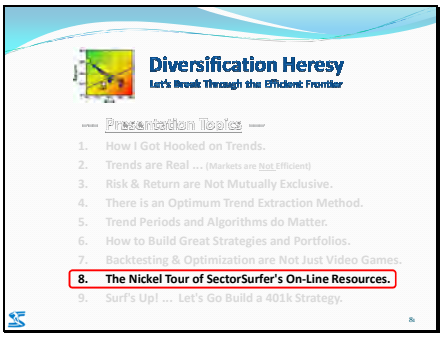
>>With Stationarity:
Backtesting is about identifying the trend character of the data.

>>Trend character is agnostic to market direction and pattern.

>>If you Tune your strategy well today, tomorrow it will still be tuned.

PAUSE

I said - I'll show you that



Stock Screening and Analysis Still Play a Role

>> But Remember
It's not a solo contest, It's a horse Race.

>> So, We need a Set of Horses for the Strategy
That's where a screener might help.

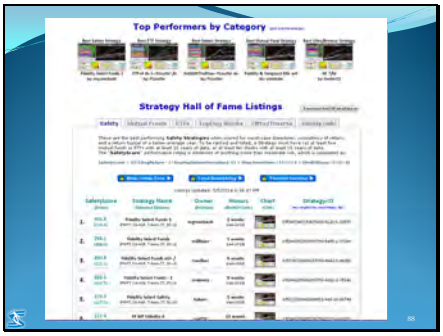
SectorSurfer
What is True Sector Rotation?

SectorSurfer
Using SectorSurfer
Online SectorSurfer User Guide

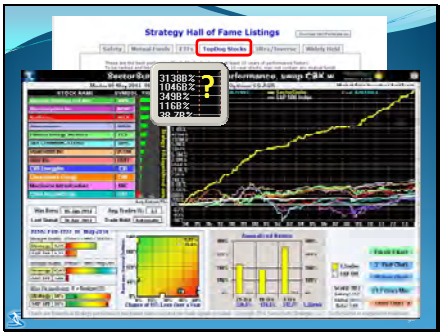
SectorSurfer
Advanced Topics
Take SectorSurfer to the Next Level

SectorSurfer
True Sector Rotation Theory
Modern Portfolio Theory Teaches "Diversity and Rebalance" Which
Inherently Produces Average Performance. Its Time to Change the Game.
Introduction

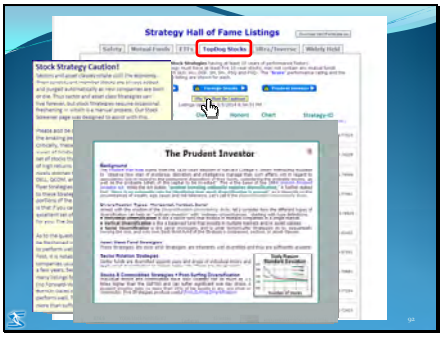
SectorSurfer
Strategy Hall Of Fame


Top Performers by Category
Strategy Hall of Fame Listings

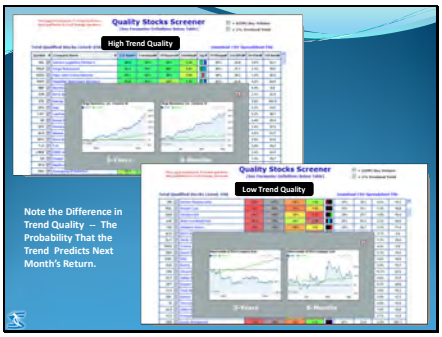
Strategy Hall Of Fame


Strategy Hall of Fame Listings
3138B%
1046B%
348B%
116B%
38.7B%

Strategy Hall of Fame Listings
Stock Strategy Caution!

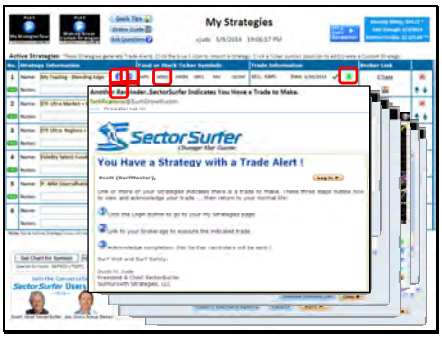

Strategy Hall of Fame Listings
Stock Strategy Caution!
The Prudent Investor

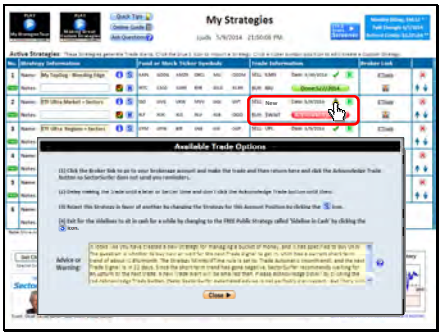
Quality Stocks Momentum Screener


Quality Stocks Screener
High Trend Quality
Quality Stocks Screener
Low Trend Quality
Note the Difference in Trend Quality -- The Probability That the Trend Predicts Next Month's Return.

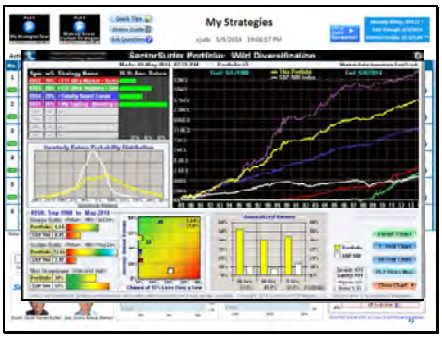
My Strategies

My Strategies
Watch This !!
Join the Conversation
SectorSurfer Users Group


My Strategies
SectorSurfer
You Have a Strategy with a Trade Alert !

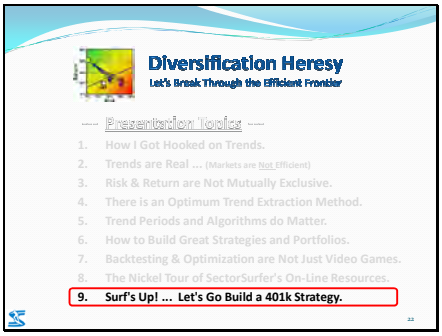

My Strategies
Available Trade Options

My Strategies


My Strategies

Master Strategy &
Strategy-of-Strategies
Select A Strategy

SectorSurfer Member Plans
Totally FREE Plan
Most Popular Free Strategies



Indeed, Surf's Up! ... Let's Go Build a 401k Strategy.

The first thing to do is to Get Your Fund List

- If you don't have your 401k Plan fund list, your HR Manager can provide it to you.
- If the fund ticker symbols are not provided on the list, you can determine what they are by searching for the fund name on Yahoo Finance, or when entering them into your Strategy in the SectorSurfer Find-A-Fund popup window in the next step.

Click the Empty Symbol Field to Add Each Fund to the Strategy.

Then enter the Fund's Name or Ticker Symbol and Click the Orange "Use Selected" Button at the bottom of the Popup to Insert the Fund.

Click the blue information icon to change the name of the Strategy.

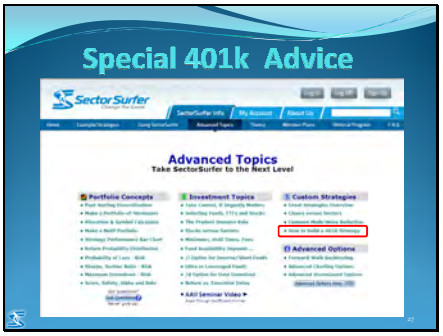
After adding all of the funds, we find that

Strategy Performance is Terrible!

The Strategy (yellow) Fails to Beat the S&P500 (white)

The Score = 28.9 and Safety = 0.0 are Quite Pathetic.

... Perhaps We Should Read the Rules



There is a link for special advice for building a 401k Strategy found on the Advanced Topics page.

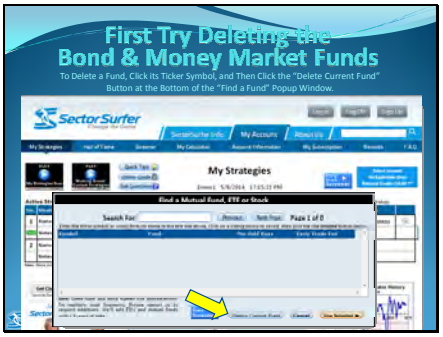
Here are the 8 Simple Rules for building a 401K Strategy

(see list on screen)

... and the term "chaotic and disruptive" means what?

Market noise is both Chaotic & Disruptive

- FDCPX, FSHCX, FSVLX, FBMPX and FSTCX have "common mode noise."
- The gold miner fund bounces differently, and the bond fund is very flat.
- It is more difficult to judge relative trend w/o common noise to subtract.



First Try Deleting the Bond & Money Market Funds

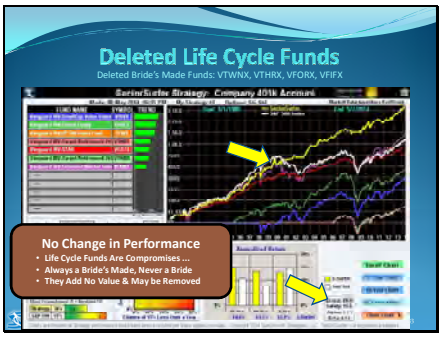
To Delete a Fund, Click its Ticker Symbol, and Then Click the "Delete Current Fund" Button at the Bottom of the "Find a Fund" Popup Window.

By Deleting the Bond & Money Market Funds

VBMFX, and VMFXX the

Annualized Return is up from 8.5% to 11.8%

... Now Try Getting Rid of Company Stock MMM

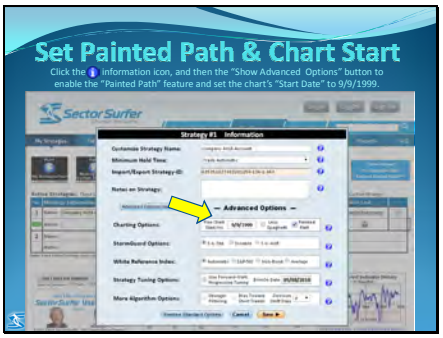


Try Deleting the Life Cycle Funds

(The Funds are: VTWNX, VTHRX, VFORX, VFIFX)

No Change in Performance

- Life Cycle Funds Are Compromises ...
- Always a Bride's Made, Never a Bride
- They Add No Value & May be Removed

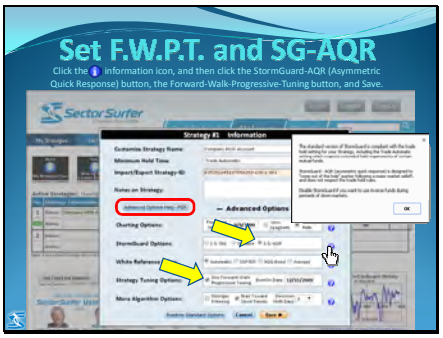


To Set the Painted Path & Chart Start Date

Click the blue information icon, and then click the "Show Advanced Options" button to enable the "Painted Path" feature and set the chart's "Start Date" to 9/9/1999.

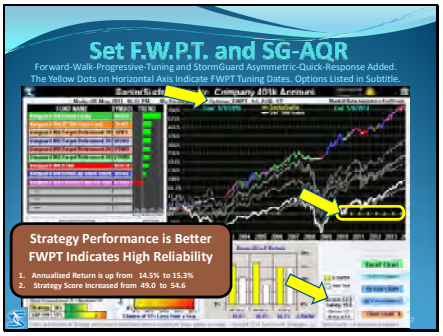
Painted Path and 9/9/1999 Start

The Painted Path Color Designates the Fund Owned at That Time.
The New Start Date is Executed by the Chart's Top Time Span Button.



Set F.W.P.T. and SG-AQR

Click the blue information icon, and then click the StormGuard-AQR (Asymmetric Quick Response) button, the Forward-Walk-Progressive-Tuning button, and Save.



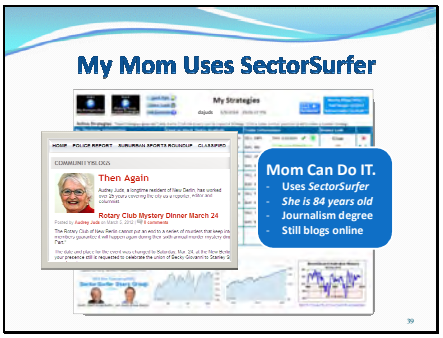
Set F.W.P.T. and SG-AQR

Forward-Walk-Progressive-Tuning and StormGuard Asymmetric-Quick-Response Added. The Yellow Dots on Horizontal Axis Indicate FWPT Tuning Dates. Options Listed in Subtitle.

Strategy Performance is Better FWPT Indicates High Reliability

- Annualized Return is up from 14.5% to 15.3%
- Strategy Score Increased from 49.0 to 54.6

Contrasted Improvements



Let me introduce you to my mom.
-- She Uses SectorSurfer.
-- She is 84 years old
-- has a Journalism degree and
-- Still blogs online for the community newspaper

Some have said – WOW if your mom must be really smart if she can do this (and of course she is).

My mom can also drive a car – but doesn't know how to design or build one.

She is smart enough to know she doesn't have todesign Strategies, she just need to pick some and respond to trade alerts.

Let's Review.
I showed you That Trends are Real. >>
..... That You don't have to trade risk for return.. . >>
..... That There is an Optimum Trend Extraction Method. . >>
..... That Trend Algorithms do Matter. . >>
..... How to Build Great Strategies . >>
..... That Trend Stationarity exists for backtesting. >>
..... That Its Easy to Build a 401k Strategy. >>
..... and that My mom can drive this car, and so can you. >>
Its Automated, And its easy.
(PAUSE)

So, Break though the Efficient Frontier

Our servers will do the hard work ...
... While you go have a life.