

The History, Mechanics, and Application of Time-Cycle Forecasting

A Special Presentation for
Market Technicians Association

By Thomas Meyer

May 18, 2016

Thomas Meyer

- Registered in 1993 with Dean Witter Reynolds
- Manager, Morgan Stanley 1999 – 2001
- Became involved in Financial Data in 2006
- “Discovered” Time-Cycle Forecasting in Summer, 2009
- Instrumental in Developing Time-Cycle Forecasting App
- Began Publishing Time-Cycle Research on Bloomberg in 2013
- Developed Dynamic Long/Short Commodity Index in 2014
- Setting Up CTA to Begin Trading Time-Cycle Signals

...and there was evening, and there was morning,
the first day.

Genesis 1:5

To everything there is a season, and a time for every
purpose under heaven.

Ecclesiastes 3:1

Crude Oil Daily



SELECT	CYCLE	% WINS	B/H %	B/S %	Buy %	Sell %	Phase	SIG	PhaseAdj	Amplitude
<input checked="" type="checkbox"/>	9.62	56.16%	47.37%	4546.27%	1247.07%	244.92%	3.77	99.87	0	11.7791
<input checked="" type="checkbox"/>	12.25	52.33%	47.61%	1762.39%	695.72%	134.05%	3.31	99.89	0	14.8792
<input checked="" type="checkbox"/>	43.70	61.81%	22.32%	1235.76%	519.88%	115.49%	30.26	99.67	0	45.6217
<input checked="" type="checkbox"/>	111.00	62.50%	4.85%	973.96%	601.81%	53.03%	39.86	99.81	0	122.6986
<input checked="" type="checkbox"/>	225.00	62.96%	29.61%	668.59%	407.50%	51.45%	66.57	94.98	0	243.1415
<input type="checkbox"/>	57.60	55.05%	3.68%	623.43%	295.12%	83.09%	42.14	98.83	0	53.4761
<input type="checkbox"/>	34.90	56.11%	13.67%	585.55%	324.82%	61.37%	14.02	99.74	0	34.1864
<input type="checkbox"/>	26.90	55.13%	37.67%	574.54%	343.94%	51.95%	19.42	96.60	0	24.387
<input type="checkbox"/>	12.91	51.74%	33.44%	489.16%	332.82%	36.12%	9.05	96.79	0	12.3047
<input type="checkbox"/>	11.20	55.32%	42.67%	351.62%	284.41%	17.49%	2.85	99.85	0	14.277
<input type="checkbox"/>	29.60	53.52%	39.41%	332.32%	266.34%	18.01%	18.04	97.01	0	22.8064
<input type="checkbox"/>	31.00	54.90%	45.45%	316.77%	288.29%	7.34%	14.2	94.53	0	22.7642
<input type="checkbox"/>	8.95	52.05%	48.77%	259.60%	288.15%	-7.35%	5.01	95.89	0	7.9445
<input type="checkbox"/>	49.00	55.17%	9.89%	160.18%	162.32%	0.82%	17.96	96.59	0	38.1361

Plot Style

- Overlapping
- Non-Overlapping

AutoSync Cycle

- B/S %
- B %
- S %
- Win %

Cycle Plots

- Synthesis
- Individual
- Both

Data to Plot

- Transformed
- Raw

Select All Cycles

Unselect All Cycles

AutoSync Cycle Phases

AutoStop

Export Turns Data

Export Cycle Data

Years to Plot:

Summary [?](#)

Grid Column Options

- Basic
- Stop %

Crude Oil Daily



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<input checked="" type="checkbox"/>	111.00	62.50%	4.85%	973.96%	601.81%	53.03%	39.86	99.81	0	122.6986
<input checked="" type="checkbox"/>	225.00	62.96%	29.61%	668.59%	407.50%	51.45%	66.57	94.98	0	243.1415
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<input type="checkbox"/>	26.90	55.13%	37.67%	574.54%	343.94%	51.95%	19.42	96.60	0	24.387
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<input type="checkbox"/>	29.60	53.52%	39.41%	332.32%	266.34%	18.01%	18.04	97.01	0	22.8064
<input type="checkbox"/>	31.00	54.90%	45.45%	316.77%	288.29%	7.34%	14.2	94.53	0	22.7642
<input type="checkbox"/>	8.95	52.05%	48.77%	259.60%	288.15%	-7.35%	5.01	95.89	0	7.9445
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Select All Cycles

Unselect All Cycles

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AutoStop

Export Turns Data

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Years to Plot:

Summary

Grid Column Options
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 Stop %

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The Beginning of Time-Cycle Forecasting

Joseph Fourier

French Mathematician and Scientist

1768 – 1830

Postulated that seemingly random events could be predicted using waves of time (cycles)

Also, generally credited with the discovery of the “greenhouse effect”

The Beginning of Time-Cycle Forecasting

Nikolai Kondratiev

Russian Economist 1892 – 1938

Capitalist Business Cycles Last 50-60 Years

Cycles of Boom Followed by Depression

Commonly Called Kondratiev Waves

The Beginning of Time-Cycle Forecasting

W.D. Gann

American Financial Trader 1878 – 1955

Believed That Time-Cycles Were the Most Important
Element in Trading

“Time is the most important factor in determining market movements because the future is a repetition of the past and each market movement is working out time in relation to some previous time cycle.”

The Beginning of Time-Cycle Forecasting

Edward R. Dewey

American Economist 1895 – 1978

The Father of Modern Time-Cycle Forecasting

Chief Economic Analyst in Department of Commerce in
Early 1930s

“...everything that has been studied has been found to
have cycles present.”

The Beginning of Time-Cycle Forecasting

Edward R. Dewey

Co-Founder – Foundation for the Study of Cycles (1941)

FSC and MTA have a shared history

More information available at

cycles.memberlodge.com

[Home](#)

[2016 "Taking it to the Street" Global Tour](#)

[FSC Memberlodge Membership Application](#)

[The Foundation's Origins, History, and Documents](#)

[Trading Methods](#)

[FSC Software](#)

[FSC Premium Member Services](#)

[Long Term Dow Jones](#)

[FSCL3C](#)

Email

Password

Remember me

[Forgot password](#)



Our Scientific and Social Legacy From 1920

[The National Bureau of Economic Research](#)

[Founded 1920 with Wesley C Mitchell](#)

[The Matamek Conference - July 23rd 1931](#)

[Ellsworth Huntington \(Yale University\) Science Magazine -1931](#)

[Foundation for the Study of Cycles, Inc.](#)

[Founded in Connecticut - January 10th 1941](#)

[Birth of the FSC](#)

[Formation, History, and Leadership](#)

[1941-1991](#)

Modern Time-Cycle Forecasting

Juglar Wave – 9.25 year stock market cycle

Kitchen Wave – 4 year bank, wholesale prices, interest rate cycles

Cyclical cycles – usually 4 years in length

Secular cycles – considered to be 20-30 years in length

Kondratiev Wave – 50-60 year business cycle

Modern Time-Cycle Forecasting

Seasonality and Calendar Patterns

Agriculture Prices Affected By Harvest at One Time

Gasoline Prices Affected By Summer Driving Trips

Important to Note: Seasonality and Cyclicity are not the same, Seasonality is based on calendar movements; Cyclicity is not based on a set period of time that can be discerned easily

Modern Time-Cycle Forecasting

Creating A Forecast

1. De-trend the data
2. Apply Fourier Transform to find candidate cycles
3. Determine statistical reliability of found cycles
4. Measure the strength of found cycles
5. Sort the outcome by strength
6. Combine strongest into single forecast

DJIA - DIA ETF

Daily



Best Cycles

SELECT	CYCLE	% WINS	B/H %	B/S %	Buy %	Sell %	Phase	SIG	PhaseAdj	Amplitude
<input type="checkbox"/>	78.40	37.50%	134.56%	-86.73%	-38.54%	-78.41%	35.4	99.93	0	44.7692
<input type="checkbox"/>	13.65	51.84%	152.02%	382.53%	282.27%	26.23%	4.16	99.85	0	7.5253
<input type="checkbox"/>	9.24	46.35%	153.45%	-86.94%	-37.61%	-79.06%	4.7	99.82	0	5.5954
<input type="checkbox"/>	10.72	47.12%	158.75%	-73.71%	-11.88%	-70.17%	5.95	99.81	0	6.2735
<input type="checkbox"/>	35.90	40.00%	136.33%	-78.45%	-23.76%	-71.73%	13.99	99.65	0	16.9992
<input type="checkbox"/>	19.58	54.66%	150.57%	153.20%	170.23%	-6.30%	13.72	99.63	0	9.6524
<input type="checkbox"/>	82.40	43.42%	121.90%	-75.96%	-18.23%	-70.61%	49.76	99.60	0	42.37
<input type="checkbox"/>	25.10	44.22%	149.04%	-76.86%	-18.77%	-71.51%	17.97	99.42	0	11.9525
<input type="checkbox"/>	16.67	56.73%	153.96%	365.81%	280.43%	22.44%	11.34	99.42	0	8.208
<input type="checkbox"/>	37.00	41.18%	138.96%	-78.23%	-21.96%	-72.10%	10.09	99.20	0	17.0614
<input type="checkbox"/>	9.93	51.33%	157.31%	157.25%	180.01%	-8.13%	1.55	98.86	0	4.4063
<input type="checkbox"/>	101.50	36.07%	146.15%	-65.48%	-7.76%	-62.57%	71.98	98.65	0	45.0225
<input type="checkbox"/>	12.73	46.98%	154.34%	-73.54%	-12.22%	-69.86%	8.56	98.59	0	6.115
<input type="checkbox"/>	8.63	48.36%	156.57%	-67.99%	-1.05%	-67.65%	2.91	97.98	0	1.0695

Plot Style

Overlapping
 Non-Overlapping

AutoSync Cycle

B/S % B %
 S % Win %

Cycle Plots

Synthesis
 Individual
 Both

Data to Plot

Transformed
 Raw

Select All Cycles

Unselect All Cycles

AutoSync Cycle Phases

AutoStop

Export Turns Data

Export Cycle Data

Years to Plot:

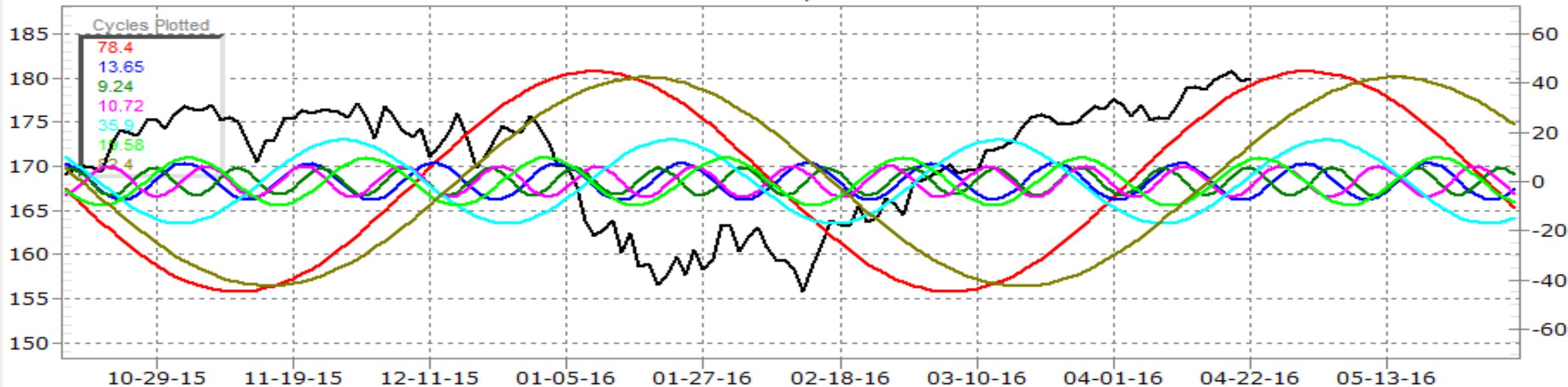
Summary [?](#)

Grid Column Options

Basic
 Stop %

DJIA - DIA ETF

Daily



SELECT	CYCLE	% WINS	B/H %	B/S %	Buy %	Sell %	Phase	SIG	PhaseAdj	Amplitude
<input checked="" type="checkbox"/>	78.40	37.50%	134.56%	-86.73%	-38.54%	-78.41%	35.4	99.93	0	44.7692
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<input checked="" type="checkbox"/>	9.24	46.35%	153.45%	-86.94%	-37.61%	-79.06%	4.7	99.82	0	5.5954
<input checked="" type="checkbox"/>	10.72	47.12%	158.75%	-73.71%	-11.88%	-70.17%	5.95	99.81	0	6.2735
<input checked="" type="checkbox"/>	35.90	40.00%	136.33%	-78.45%	-23.76%	-71.73%	13.99	99.65	0	16.9992
<input checked="" type="checkbox"/>	19.58	54.66%	150.57%	153.20%	170.23%	-6.30%	13.72	99.63	0	9.6524
<input checked="" type="checkbox"/>	82.40	43.42%	121.90%	-75.96%	-18.23%	-70.61%	49.76	99.60	0	42.37
<input type="checkbox"/>	25.10	44.22%	149.04%	-76.86%	-18.77%	-71.51%	17.97	99.42	0	11.9525
<input type="checkbox"/>	16.67	56.73%	153.96%	365.81%	280.43%	22.44%	11.34	99.42	0	8.208
<input type="checkbox"/>	37.00	41.18%	138.96%	-78.23%	-21.96%	-72.10%	10.09	99.20	0	17.0614
<input type="checkbox"/>	9.93	51.33%	157.31%	157.25%	180.01%	-8.13%	1.55	98.86	0	4.4063
<input type="checkbox"/>	101.50	36.07%	146.15%	-65.48%	-7.76%	-62.57%	71.98	98.65	0	45.0225
<input type="checkbox"/>	12.73	46.98%	154.34%	-73.54%	-12.22%	-69.86%	8.56	98.59	0	6.115
<input type="checkbox"/>	8.63	48.36%	156.57%	-67.99%	-1.05%	-67.65%	2.91	97.98	0	4.0695

Plot Style

Overlapping

Non-Overlapping

AutoSync Cycle

B/S % B %

S % Win %

Cycle Plots

Synthesis

Individual

Both

Data to Plot

Transformed

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Select All Cycles

Unselect All Cycles

AutoSync Cycle Phases

AutoStop

Export Turns Data

Export Cycle Data

Years to Plot:

Summary [?](#)

Grid Column Options

Basic

Stop %

DJIA - DIA ETF

Daily



SELECT	CYCLE	% WINS	B/H %	B/S %	Buy %	Sell %	Phase	SIG	PhaseAdj	Amplitude
<input checked="" type="checkbox"/>	78.40	53.75%	124.16%	-6.22%	58.09%	-40.68%	35.4	99.93	14.4	44.7692
<input checked="" type="checkbox"/>	13.65	46.87%	152.02%	-79.58%	-20.53%	-74.30%	4.16	99.85	10.46	7.5253
<input checked="" type="checkbox"/>	9.24	52.78%	157.04%	24.67%	92.81%	-35.34%	4.7	99.82	2.18	5.5954
<input checked="" type="checkbox"/>	10.72	46.95%	158.75%	-81.18%	-25.94%	-74.59%	5.95	99.81	6.39	6.2735
<input checked="" type="checkbox"/>	35.90	58.86%	135.29%	229.80%	204.59%	8.28%	13.99	99.65	28.89	16.9992
<input checked="" type="checkbox"/>	19.58	56.04%	154.49%	467.28%	319.56%	35.21%	13.72	99.63	12.3	9.6524
<input checked="" type="checkbox"/>	82.40	47.37%	124.18%	-7.01%	58.47%	-41.32%	49.76	99.60	28.76	42.37
<input type="checkbox"/>	25.10	44.22%	149.04%	-76.86%	-18.77%	-71.51%	17.97	99.42	0	11.9525
<input type="checkbox"/>	16.67	56.73%	153.96%	365.81%	280.43%	22.44%	11.34	99.42	0	8.208
<input type="checkbox"/>	37.00	41.18%	138.96%	-78.23%	-21.96%	-72.10%	10.09	99.20	0	17.0614
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<input type="checkbox"/>	101.50	36.07%	146.15%	-65.48%	-7.76%	-62.57%	71.98	98.65	0	45.0225
<input type="checkbox"/>	12.73	46.98%	154.34%	-73.54%	-12.22%	-69.86%	8.56	98.59	0	6.115
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Plot Style

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AutoSync Cycle

- B/S %
- B %
- S %
- Win %

Cycle Plots

- Synthesis
- Individual
- Both

Data to Plot

- Transformed
- Raw

Select All Cycles

Unselect All Cycles

AutoSync Cycle Phases

AutoStop

Export Turns Data

Export Cycle Data

Years to Plot:

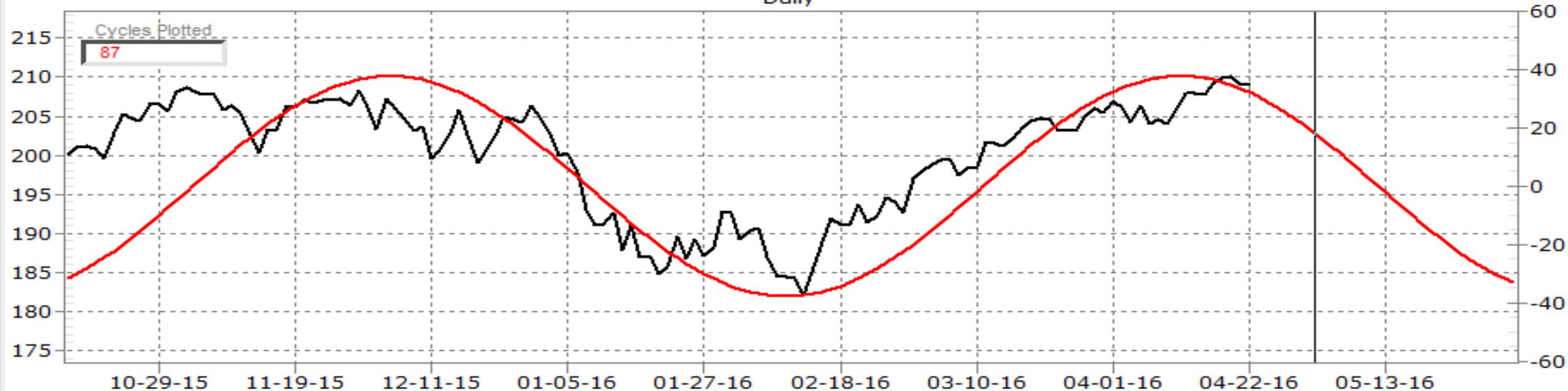
Summary [?](#)

Grid Column Options

- Basic
- Stop %

S&P 500 - SPY ETF

Daily



SELECT	CYCLE	% WINS	B/H %	B/S %	Buy %	Sell %	Phase	SIG	PhaseAdj	Amplitude
<input type="checkbox"/>	102.00	40.98%	155.65%	-70.51%	-10.29%	-67.13%	60.79	98.69	0	44.2241
<input type="checkbox"/>	33.80	49.73%	159.53%	-63.73%	4.59%	-65.32%	21	98.53	0	14.3051
<input type="checkbox"/>	31.10	52.97%	147.12%	120.29%	158.24%	-14.70%	13.17	98.39	0	14.1133
<input type="checkbox"/>	8.63	47.81%	164.93%	-80.15%	-19.93%	-75.21%	3.04	98.23	0	4.4666
<input type="checkbox"/>	12.72	52.72%	167.61%	279.77%	255.74%	6.76%	3.4	98.12	0	6.2558
<input type="checkbox"/>	151.00	36.59%	138.74%	-49.95%	19.77%	-58.21%	79.17	97.97	0	42.641
<input type="checkbox"/>	24.30	41.31%	150.59%	-80.23%	-22.15%	-74.61%	9.66	97.61	0	10.3406
<input type="checkbox"/>	11.54	50.64%	156.92%	100.19%	150.18%	-19.98%	4	97.39	0	5.1833
<input type="checkbox"/>	14.54	54.48%	167.61%	297.73%	253.48%	12.52%	10.07	97.25	0	6.9976
<input type="checkbox"/>	21.45	46.44%	162.40%	-57.58%	14.30%	-62.89%	11.24	96.53	0	9.4116
<input checked="" type="checkbox"/>	87.00	55.56%	125.08%	191.22%	192.71%	-0.51%	25.46	96.29	0	37.7348
<input type="checkbox"/>	227.00	51.85%	128.50%	61.69%	123.07%	-27.52%	92.33	96.19	0	71.7999
<input type="checkbox"/>	64.20	61.22%	141.41%	163.11%	184.60%	-7.55%	46.21	95.20	0	22.1887

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Modern Time-Cycle Forecasting

Creating A Forecast

Caveat Emptor

It's easy to create a forecast that matches the past, but that doesn't mean the future forecast will be perfect.

Modern Time-Cycle Forecasting

Elements of a Time-Cycle Forecast

1. Trend Direction – Is the price forecast to increase or decrease
2. Turns – When does the Trend Direction change
3. Amplitude – How high or how low is the forecast?

Modern Time-Cycle Forecasting

Don't Read These Charts The Same Way!

1. Trend Direction – The most important element
2. Turns – The next most important element
3. Amplitude – Not an important element

Market Technicians Association

Key Points for CMT Candidates

Elliott Wave Principle

Elements of Elliott Wave – 5 waves followed by 3 waves

Impulsive Waves (moving higher)

Corrective Waves (moving lower)

Identify the count of a given wave

Market Technicians Association

Key Points for CMT Candidates

Cycle Analysis

Identify potential opportunity and risk based on seasonals

Define methods for applying cycle studies

How to identify a cycle by removing the trend

Identify entry and exit signals given by standard forms of the following: Hilbert Transform, Fisher Transform, Cycle Channel Index, Short Cycle Indicator

Thomas Meyer

Current Cycle Trading Methodology

Time-Cycle Forecasting has historically been seen as a “Crystal Ball”it’s not!

“Inversions” – The reasons the forecasts were not correct

Where is more money spent on forecasting around the world.....weather!

How accurate are long-term weather forecasts?

Thomas Meyer

Current Cycle Trading Methodology

Cycle Analysis

Use time-cycle forecasting algorithms developed for Bloomberg App Store

90 day forecast is generated for any ticker

Similar cycle discovery engine, but...

Once cycles are discovered, a second test is initiated to find the best cycles in the most recent time-frame

Thomas Meyer

Current Cycle Trading Methodology

Cycle Analysis

Final output has normally 3-7 cycles

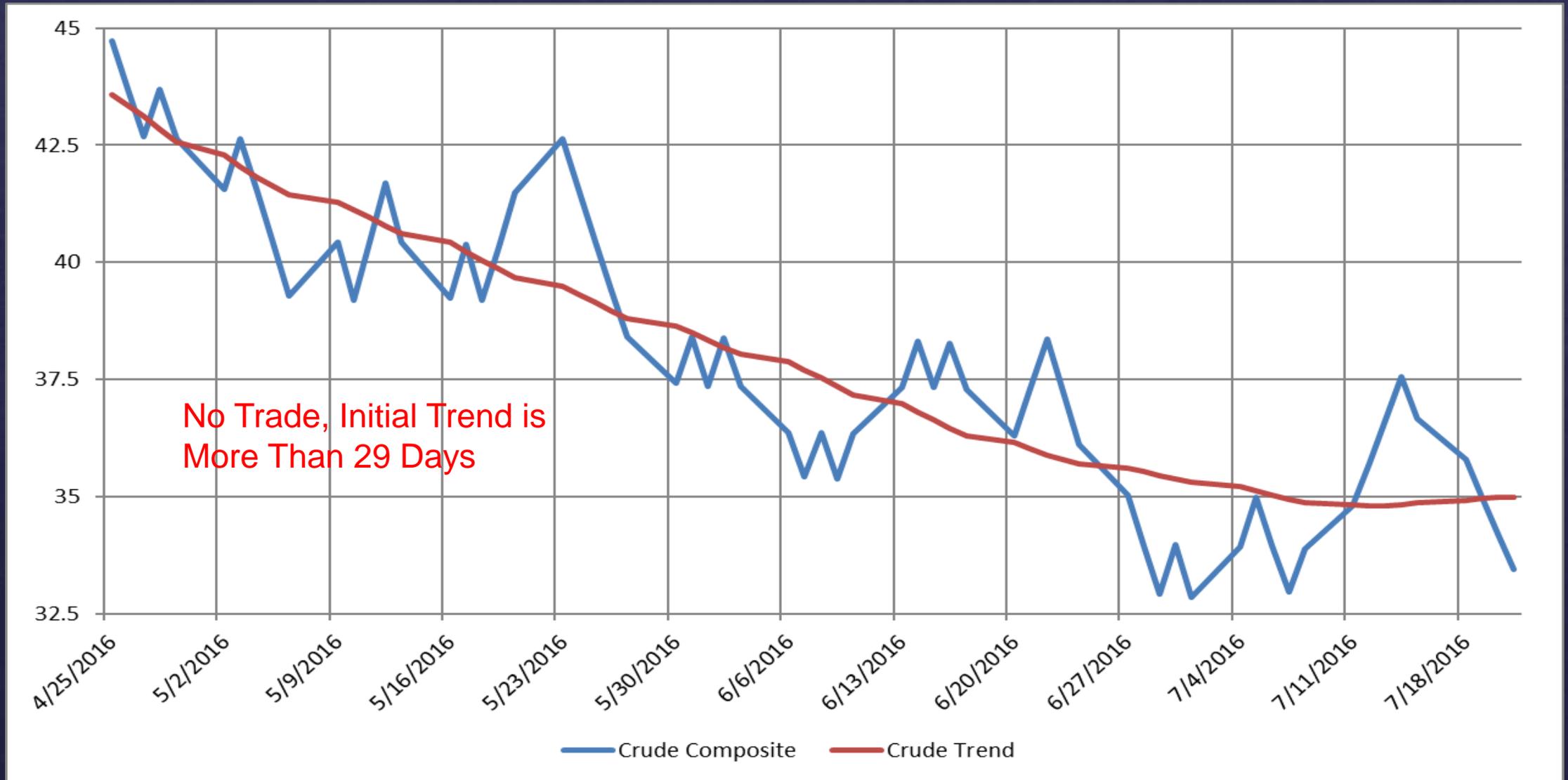
Take the normal ups and downs of the forecast and smooth them using a 21 day centered moving average

Look for initial trends only between 9-29 days

Use a 5 day standard deviation for downside risk protection

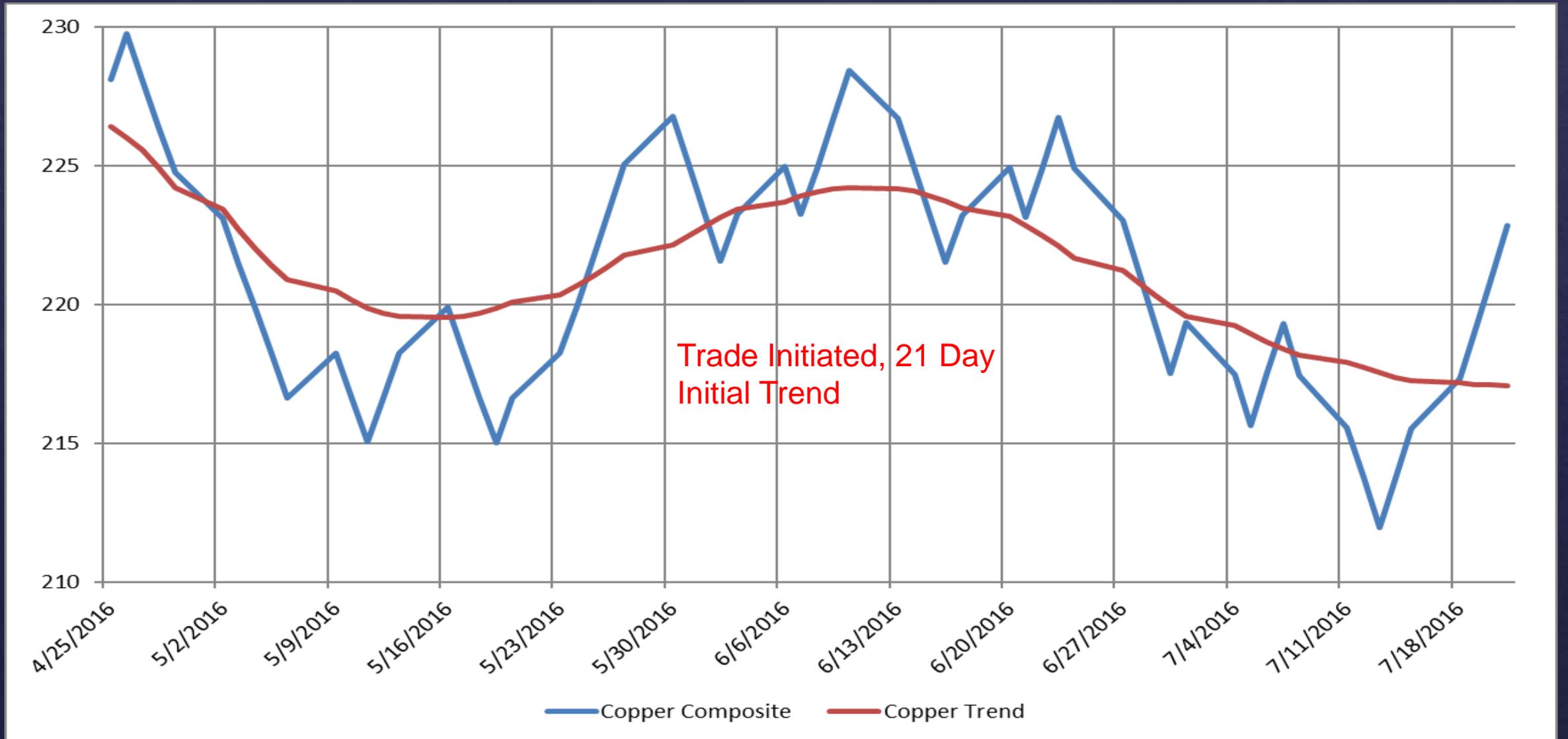
Thomas Meyer

Current Cycle Trading Methodology



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Current Cycle Trading Methodology



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Dynamic Long/Short Commodity Index

Incorporates 13 of the most active tickers

Weekly determination of trades

Approximately 1 trade per month per ticker

Backtesting prior to 2013 initiation of research showed about 54% winning trades across indices, equities, commodities, bonds, forex

Thomas Meyer

Dynamic Long/Short Commodity Index

Actual Results from July, 2013 through April, 2016

396 trades, 200 winning trades (50.41%)

Avg. winning trade +4.79%

Avg. losing trade -3.18%

Biggest winning trade +29.41% in 18 trading days

Biggest losing trade -11.32% in 9 trading days

Thomas Meyer

Dynamic Long/Short Commodity Index

Actual Results from July, 2013 through April, 2016

2014 +18.79% vs. Bloomberg Index -17.04%

2015 +3.86% vs. Bloomberg Index -24.36%

Since Initiation +22.79% vs. Bloomberg -37.50%

2016 YTD +8.96% vs. Bloomberg +5.72%

Market Technicians Association

Thank you to:

Alvin Kressler

Gordon Scott

Shane Skwarek

David Perales, CEO

Foundation for the Study of Cycles

Mike Turner, Turner Capital Investments

Dr. Richard Smith, TradeStops.com

Thomas Meyer

Contact Information

Website to be live 7/1/2016

www.timecycletraders.com

Newsletters giving buy/sell trades on highly-liquid
stocks, options, and commodities

CTA to be live 10/1/2016

thomas.h.meyer@gmail.com

512-351-6133