Michael Gayed's Market Regime Signal Analysis

Key Research Papers and Findings

1. Utilities/S&P 500 Beta Rotation Strategy (2014 Charles H. Dow Award Winner)

Core Thesis: - Utilities sector has unique characteristics: higher yield, lower beta, relative insensitivity to cyclical behavior - Utilities tend to lead broad market tops and bottoms due to their bond-like characteristics - Strategy positions into either broad market or Utilities based on lead-lag dynamics

Historical Foundation: - John Murphy (2002 MTA Award): "Prior to a stock market top, interest rate sensitive stocks like utilities usually start to break down" - Martin Pring (2004 MTA Award): Utilities "put on their best performance relative to the market on either side of bear market low" - Edson Gould (1975 MTA Award): Called Dow Jones Utilities Average "one of the best early indicators of the stock market"

Key Insights: - Utilities reflect investment demand for stocks more than industrials - Utilities are money-sensitive due to huge capital investment requirements - Strategy significantly outperforms buy-and-hold through multiple market cycles - Strength in Utilities increases probability of fat tail events and higher market volatility - "Sell in May and go away" strategy may be explained through beta rotation during summer/fall

Momentum Characteristics: - Industry momentum is strongest at one-month horizon (Moskowitz and Grinblatt, 1999) - Weekly portfolio returns are strongly positively autocorrelated - Information diffuses from large-cap to small-cap stocks within sectors with lag

2. Lumber/Gold Ratio Strategy (2015 NAAIM Founders Award Winner)

Core Thesis: - Lumber and Gold provide information on economic growth and inflation expectations - Lumber's sensitivity to housing makes it a unique cyclical leading indicator - Gold exhibits safe-haven properties during volatility and stress - Relative movement helps determine when to "play offense" vs "play defense"

Lumber as Cyclical Indicator: - Housing contributes 15-18% of GDP (NAHB) - Housing permits rank ahead of S&P 500 as leading economic indicator - Average new home contains 16,000+ board feet of lumber - Lumber futures react quickly to housing starts data - Supply constrained by Endangered Species Act (1/3 of US forestland withdrawn from production)

Gold as Defensive Asset: - No statistically significant correlation with GDP, inflation, interest rates - Monthly correlation with bonds: 0.12, with S&P 500: 0.01 (since 1976) - Acts as hedge against stocks and safe haven in extreme conditions - Positive relationship with implied volatility

Trading Rule (13-week lookback): - Lumber outperforming Gold = Risk-On (more aggressive stance) - Gold outperforming Lumber = Risk-Off (more defensive stance) - Re-evaluate weekly, change only when leadership switches

Volatility Signal Power: - When Lumber leads: Average S&P 500 volatility = 12.5% - When Gold leads: Average S&P 500 volatility = 17% - VXO Index: 18.3 (Lumber leading) vs 22.1 (Gold leading) - In worst 5% of weeks: Gold was leading 73% of time - In worst 1% of weeks: Gold was leading 89% of time

3. Treasury Duration Tactical Risk Rotation Strategy (2014 Wagner Award 3rd Place)

Core Thesis: - Relationship between 10-year and 30-year Treasury total returns provides volatility signals - When 30-year outperforms 10-year: Risk-Off (higher volatility expected) - When 10-year outperforms 30-year: Risk-On (lower volatility expected) - Strategy anticipates expansionary/contractionary conditions before NBER declarations

Mechanism: - Longer-duration Treasuries react favorably during "risk-off" periods - Investors position into longer duration bonds in advance of higher volatility -

Intermediate-term Treasuries outperform when confidence grows - Relative behavior serves as anticipatory gauge of economic conditions

4. S&P 500 200-Day Moving Average Leverage Strategy (2016 Charles H. Dow Award Winner)

Core Thesis: - Volatility is the enemy of leverage; streaks in performance benefit margin usage - Moving averages identify low volatility environments suitable for leverage - Above moving average: Lower volatility, higher daily returns, longer positive streaks - Below moving average: Higher volatility, lower returns, fewer positive streaks

Key Findings: - Daily re-leveraging doesn't have natural decay over long term - 3x leveraged S&P 500 returned 681x vs 1x since 1928 - Volatility creates "constant leverage trap" during seesawing markets - Strategy employs leverage above MA, deleverages to T-bills below MA

5. VIX-Based Sector Allocation Strategy (2020 NAAIM Founders Award Winner)

Core Thesis: - Mean reversion approach using VIX levels for sector allocation - Low VIX: Position into defensive sectors (anticipating volatility increase) - High VIX: Position into cyclical sectors (anticipating volatility decrease) - Exploits behavioral biases during extreme market stress

Behavioral Foundation: - Loss aversion creates stronger emotional response to declines than gains - Panic selling during volatility spikes creates mispricings - Overreactions during fear present exploitable opportunities - Momentum crashes occur in panic states following market declines

Intermarket Analysis Foundation

Core Principles: 1. **Lead-Lag Relationships:** Certain assets/sectors lead others in market cycles 2. **Information Diffusion:** Information gradually spreads across markets with lag 3. **Volatility Regimes:** Different market conditions favor different strategies 4. **Behavioral Inefficiencies:** Human biases create exploitable patterns

Signal Integration: - Short-term: Utilities/S&P 500 (momentum-based) - Intermediate-term: Lumber/Gold (cyclical vs defensive) - Long-term: S&P 500 200-day MA (trend-

based) - Volatility-based: VIX levels (mean reversion) - Duration: 10yr/30yr Treasury (anticipatory)

Risk Management Philosophy: - "What matters isn't being up more, but rather being down less" - Avoid major drawdowns and volatile periods - Position defensively before volatility spikes - Increase exposure during oversold conditions