

## Strategy Snapshot



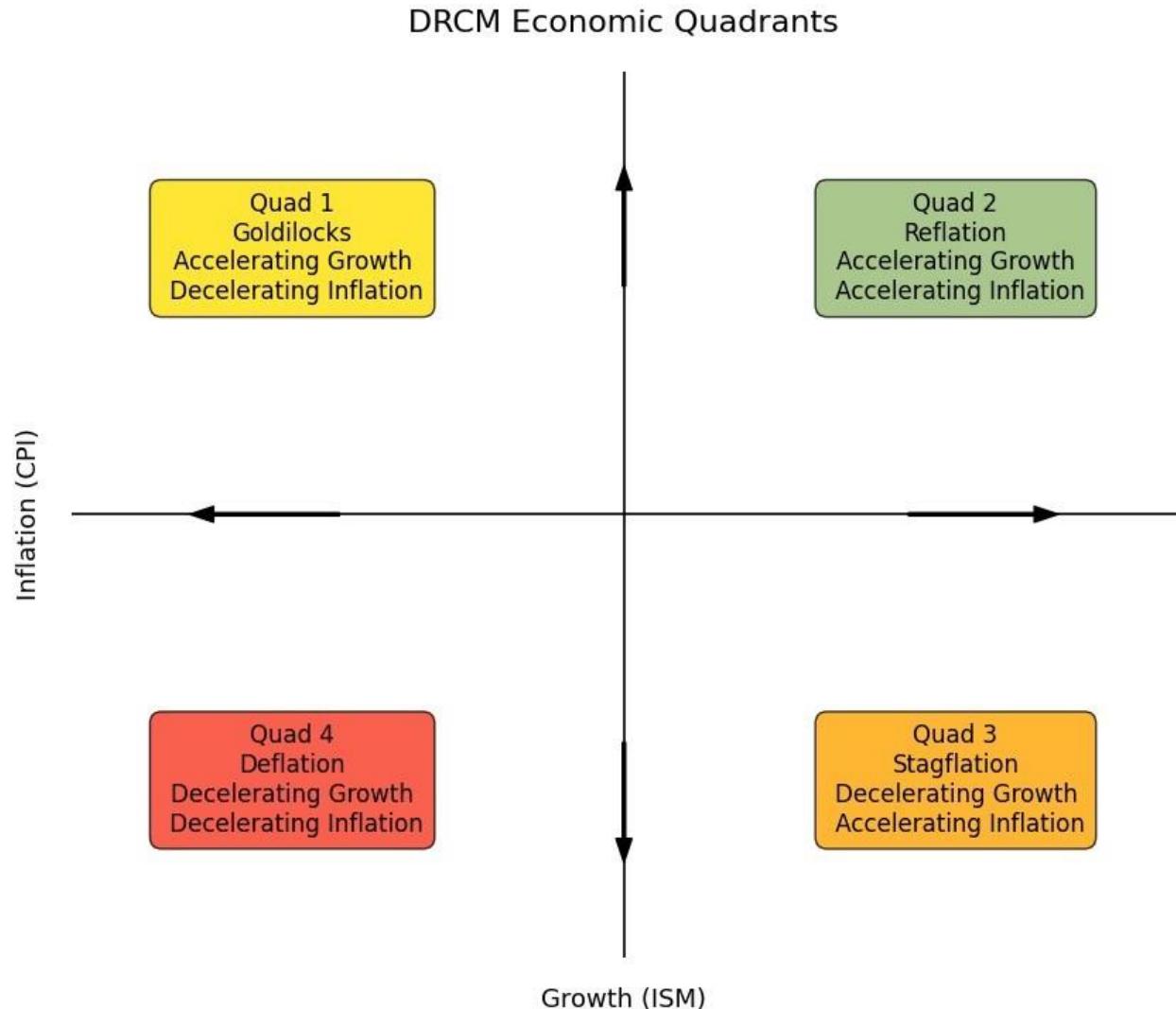
# QUADRANT FRAMEWORK

## How economic regimes are defined:

- Identify the directional momentum of growth and inflation using internally constructed signals built from market-based and economic indicators
- By evaluating whether these signals are accelerating or decelerating, classify the current macro environment into one of four economic quadrants; this economic quadrant framework then guides asset allocation

## For example:

- If growth remains strong while inflation momentum fades, it's identified as Quad 1 (Goldilocks)
- When the direction of both growth and inflation is rising, the environment is Quad 2 (Reflation)
- When growth is falling and inflation is rising, the regime shifts to Quad 3 (Stagflation)
- If both growth and inflation are decelerating, we enter Quad 4 (Deflation)



# HOW ASSET CLASSES PERFORM ACROSS ECONOMIC REGIMES

- Backtested historical asset performance across the four economic quadrants
- Regimes are labeled based on directional shifts in inflation and growth momentum; using peak-to-trough and trough-to-peak inflections in ISM and CPI
- This approach captures how markets experience macro cycles in real time, rather than relying on lagging economic reports
- The analysis spans 30+ years of data, covering multiple business cycles, inflationary shocks, disinflationary drawdowns, and policy regimes

## Each Quad segment includes asset-level quad specific metrics:

- Number of monthly datapoints, CAGR, annualized volatility, and its Sharpe ratio (not adjusted for the risk-free rate)
- The backtest covers a wide range of exposures: equities (US and global), sectors, factors, commodities, currencies, crypto, and fixed income
- The following slides break down performance by quad (highlighting which asset classes historically outperformed or lagged in each macro environment)

Quad	Growth	Inflation	Macro Label
1	↑	↓	Goldilocks
2	↑	↑	Reflation
3	↓	↑	Stagflation
4	↓	↓	Deflation

# QUAD 1 – GOLDILOCKS: STRONG GROWTH, DISINFLATION

- Equities outperform as improving growth lifts earnings expectations, while falling inflation keeps interest rates low
- Tech, discretionary, and growth stocks benefit most from lower discount rates and improving consumer demand
- Momentum and quality factors thrive as strong earnings trends dominate. Mid and small caps also perform well in early-cycle recoveries
- Crypto performs exceptionally in this regime, likely due to risk-on sentiment, liquidity, and momentum flows
- Commodities struggle, especially energy and natural gas, as cooling inflation softens pricing power and demand expectations
- Fixed income is mixed: risk-on credit (HY, convertibles, BDCs) does well, while long-duration Treasuries lag as investors rotate into equities

## Sharpe Highlights:

- Top: Momentum (MTUM 2.70), Loans (BKLN 2.54), Quality (QUAL 1.99)
- Bottom: Nat Gas (UNG -0.81), Crude (USO -0.44), Long Bonds (EDV -0.52)

Quad 1 Performance					
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
S&P 500	SPY	1,635	12.4%	16.8%	0.74
All Country World Index	ACWI	752	18.4%	20.5%	0.90
Broad Commodities	DBC	809	-0.9%	18.6%	-0.05
Aggregate US Bonds	AGG	940	4.0%	4.9%	0.81
Gold	GLD	843	11.3%	15.8%	0.71
Bitcoin Trust	GBTC	305	665.6%	84.1%	7.92
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
Consumer Discretionary	XLY	1,343	17.8%	21.1%	0.84
Technology	XLK	1,343	8.1%	24.4%	0.33
Telecom	VOX	837	20.5%	19.2%	1.06
Health Care	XLV	1,343	11.6%	16.5%	0.70
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
Utilities	XLU	1,343	-1.0%	18.8%	-0.05
Energy	XLE	1,343	3.3%	24.7%	0.13
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
Momentum	MTUM	428	35.9%	12.9%	2.77
Quality	QUAL	407	28.3%	11.1%	2.54
S&P Midcap 400	MDY	1,400	24.2%	20.4%	1.18
Russell 2000	IWM	1,320	19.7%	23.6%	0.84
S&P 500 Equal Weight	RSP	1,044	24.6%	20.6%	1.20
S&P 500 High Beta	SPHB	499	30.0%	20.2%	1.48
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
Dividend Aristocrats	SDY	804	13.2%	21.2%	0.62
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
Precious Metals	DBP	811	9.6%	17.8%	0.54
Copper	CPER	492	11.7%	16.6%	0.70
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
Natural Gas	UNG	760	-48.2%	45.6%	-1.06
US Oil	USO	807	5.0%	34.4%	0.14
Brent Oil	BNO	502	28.7%	25.9%	1.11
US Dollar	UUP	793	1.7%	8.0%	0.22
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
Senior Loans	BKLN	502	7.3%	2.8%	2.62
Business Development Companies	BIZD	431	21.5%	12.8%	1.68
Convertible Bonds	CWB	658	17.0%	10.6%	1.60
High Yield Corporate Bonds	HYG	765	12.3%	12.0%	1.03
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
Extended Duration Treasuries	EDV	754	-9.2%	24.3%	-0.38
20+ Year Treasuries	TLT	1,067	-2.8%	14.6%	-0.19
7-10 Year Treasuries	IEF	1,067	2.7%	7.4%	0.36
Mortgage Backed Securities	MBB	782	4.1%	4.9%	0.85

# QUAD 2 – REFLATION: GROWTH & INFLATION ACCELERATING

- Cyclicals and commodities surge as rising demand and inflation expectations lift real asset prices
- Energy, materials, and industrials outperform thanks to pricing power, capital expenditures, and global growth
- High beta, value, and small/mid-caps benefit from strong economic momentum and reflation trades
- Crypto does well, but increased inflation risk starts to raise volatility
- Long-duration Treasuries underperform as higher inflation drives yields up
- Convertibles and high-yield bonds hold up, driven by growth optimism and credit spread tightening

## Sharpe Highlights:

- Top: Convertibles (CWB 2.39), Equal-Weight Cyclical (RSP 1.93), Base Metals (DBB 1.61)
- Bottom: USD (UUP -0.91), Nat Gas (UNG -0.69), EDV (-0.39)

Quad 2 Performance					
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
S&P 500	SPY	2,061	21.0%	14.7%	1.43
All Country World Index	ACWI	1,138	22.6%	15.0%	1.51
Broad Commodities	DBC	1,157	28.9%	16.2%	1.78
Aggregate US Bonds	AGG	1,286	-0.5%	3.4%	-0.15
Gold	GLD	1,222	5.3%	15.4%	0.34
Bitcoin Trust	GBTC	754	198.6%	96.3%	2.06
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
Technology	XLK	1,578	29.6%	19.8%	1.50
Energy	XLE	1,578	36.1%	24.6%	1.47
Consumer Discretionary	XLY	1,578	22.7%	17.7%	1.29
Industrials	XLI	1,578	28.5%	17.1%	1.66
Materials	XLB	1,578	24.9%	19.6%	1.27
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
Consumer Staples	XLP	1,578	9.4%	13.4%	0.70
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
S&P 500 High Beta	SPHB	862	37.5%	25.3%	1.48
Russell 1000 Value	IWD	1,388	22.1%	15.1%	1.47
S&P Midcap 400	MDY	1,954	23.1%	16.4%	1.41
Russell 2000	IWM	1,388	28.3%	19.3%	1.47
S&P 500 Equal Weight	RSP	1,286	28.6%	15.2%	1.89
Russell 1000 Growth	IWF	1,388	24.7%	15.5%	1.59
Momentum	MTUM	840	23.2%	17.1%	1.36
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
S&P 500 Low Volatility	SPLV	862	14.7%	11.3%	1.30
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
Brent Oil	BNO	1,010	54.8%	30.3%	1.81
Industrial Metals	DBB	1,157	31.5%	20.3%	1.55
US Oil	USO	1,157	37.2%	31.1%	1.20
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
US Dollar	UUP	1,138	-3.1%	7.4%	-0.41
Natural Gas	UNG	1,138	-26.2%	41.8%	-0.63
Precious Metals	DBP	1,157	5.8%	17.9%	0.32
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
Convertible Bonds	CWB	1,138	24.3%	12.1%	2.01
High Yield Corporate Bonds	HYG	1,138	11.0%	7.0%	1.57
Senior Loans	BKLN	862	5.5%	3.4%	1.61
Preferred Stock	PFF	1,138	8.6%	7.1%	1.21
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
Extended Duration Treasuries	EDV	1,138	-13.0%	19.1%	-0.68
20+ Year Treasuries	TLT	1,388	-7.6%	12.6%	-0.60
7-10 Year Treasuries	IEF	1,388	-2.6%	5.9%	-0.44
Emerging Market Local Currency Bonds	EMLC	967	-2.5%	10.5%	-0.24
Taxable Municipal Bonds	BAB	1,032	0.1%	7.0%	0.02

## QUAD 3 – STAGFLATION: WEAK GROWTH, STICKY INFLATION

- Commodities and gold are top performers as inflation stays high despite deteriorating growth, leading to real asset outperformance
- Equities face headwinds, especially cyclicals, as slowing activity reduces earnings while inflation erodes margins
- Low beta and quality offer shelter from rising macro uncertainty and earnings volatility
- Crypto performance weakens but remains positive as investors seek alternative stores of value
- TIPS and short-duration Treasuries are favored, as they protect against inflation while minimizing rates risk

### Sharpe Highlights:

- Top: Short TIPS (STIP 1.53), Long TIPS (TIP 1.22), BDCs (BIZD 1.30)
- Bottom: Copper (CPER -0.27), Base Metals (DBB -0.20), EM FX (CEW -0.31)

Quad 3 Performance					
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
S&P 500	SPY	2,146	6.0%	20.4%	0.30
All Country World Index	ACWI	1,136	-7.9%	21.2%	-0.37
Broad Commodities	DBC	1,427	2.6%	20.7%	0.13
Aggregate US Bonds	AGG	1,533	3.3%	5.4%	0.62
Gold	GLD	1,427	13.6%	18.1%	0.75
Bitcoin Trust	GBTC	780	-4.5%	85.1%	-0.05
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
Energy	XLE	1,703	-1.8%	32.3%	-0.06
US Real Estate	IYR	1,620	0.4%	25.0%	0.02
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
Financials	XLF	1,703	-10.0%	29.4%	-0.34
Consumer Discretionary	XLY	1,703	-3.1%	24.6%	-0.13
Industrials	XLI	1,703	-4.7%	23.2%	-0.20
Telecom	VOX	1,448	-7.7%	21.9%	-0.35
Materials	XLB	1,703	-2.2%	25.9%	-0.09
Health Care	XLV	1,703	4.1%	19.9%	0.21
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
S&P 500 Low Volatility	SPLV	988	4.5%	20.7%	0.22
Quality	QUAL	923	3.1%	21.9%	0.14
Defensive Equity	DEF	1,071	1.4%	19.4%	0.07
Nasdaq 100	QQQ	1,703	10.2%	26.8%	0.38
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
Russell 2000	IWM	1,620	-9.2%	25.6%	-0.36
S&P 500 High Beta	SPHB	988	-14.4%	32.2%	-0.45
Russell 1000 Value	IWD	1,620	-3.4%	21.3%	-0.16
Russell 1000 Growth	IWF	1,620	0.1%	22.3%	0.00
S&P 100	OEF	1,620	-0.1%	21.2%	-0.00
Dividend Aristocrats	SDY	1,427	-3.2%	20.7%	-0.16
S&P 500 Equal Weight	RSP	1,533	-4.2%	21.5%	-0.20
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
Precious Metals	DBP	1,302	9.2%	19.5%	0.47
Agriculture	DBA	1,302	4.1%	17.9%	0.23
Natural Gas	UNG	1,302	-0.2%	46.3%	-0.00
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
Emerging Currencies	CEW	1,071	-7.4%	7.8%	-0.95
Copper	CPER	923	-17.9%	22.9%	-0.78
Industrial Metals	DBB	1,302	-15.2%	21.8%	-0.70
US Dollar	UUP	1,302	2.0%	7.8%	0.26
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
Business Development Companies	BIZD	923	-7.5%	28.6%	-0.26
Treasury Inflation-Protected Securities	TIP	1,533	5.3%	6.9%	0.77
Short-Term TIPS	STIP	1,071	1.9%	2.8%	0.68
1-3 Year Treasuries	SHY	1,598	1.9%	1.6%	1.15
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
Convertible Bonds	CWB	1,071	-4.9%	16.6%	-0.30
Emerging Market Local Currency Bonds	EMLC	1,071	-8.7%	11.4%	-0.77
Senior Loans	BKLN	1,029	-4.1%	9.1%	-0.45
Preferred Stock	PFF	1,302	-3.6%	18.9%	-0.19

## QUAD 4 – DEFLATION: RISK-OFF REGIME

- Equities suffer, especially growth and cyclical names, as falling earnings and declining inflation crush valuations
- Technology, small-caps, and high beta struggle the most due to falling demand and tightening financial conditions
- The USD strengthens, reflecting global flight-to-safety and tighter domestic liquidity
- Treasuries (especially long duration) outperform, benefiting from falling inflation and growth expectations
- Commodities collapse, particularly energy, as demand evaporates and inflation rolls over
- Best equity protection comes from low beta, staples, and utilities, which offer stable cash flows and defensive pricing power

### Sharpe Highlights:

- Top: USD (UUP 1.31), 10Y Treasuries (IEF 1.03), 20Y+ Treasuries (TLT 0.92)
- Bottom: Energy (USO -1.18), Natural Gas (UNG -0.91), Commodities (DBC -1.36)

Quad 4 Performance					
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
S&P 500	SPY	2,111	3.6%	21.5%	0.17
All Country World Index	ACWI	1,109	1.5%	24.5%	0.06
Broad Commodities	DBC	1,280	-20.0%	20.8%	-0.97
Aggregate US Bonds	AGG	1,507	5.7%	6.4%	0.90
Gold	GLD	1,486	6.7%	19.5%	0.34
Bitcoin Trust	GBTC	504	-20.7%	71.0%	-0.29
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
Consumer Staples	XLP	1,839	10.6%	15.6%	0.68
Utilities	XLU	1,839	9.6%	20.4%	0.47
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
Technology	XLK	1,839	-6.4%	30.9%	-0.21
Energy	XLE	1,839	0.9%	31.7%	0.03
US Real Estate	IYR	1,733	4.1%	29.9%	0.14
Materials	XLB	1,839	-1.2%	26.5%	-0.04
Industrials	XLI	1,839	3.6%	22.6%	0.16
Financials	XLF	1,839	1.5%	31.0%	0.05
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
S&P 500 Low Volatility	SPLV	1,003	14.0%	12.2%	1.14
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
Nasdaq 100	QQQ	1,839	-8.6%	33.5%	-0.26
Russell 2000	IWM	1,775	1.1%	26.0%	0.04
Russell 1000 Growth	IWF	1,775	-1.3%	24.3%	-0.05
S&P 500 Equal Weight	RSP	1,507	4.1%	21.9%	0.19
S&P 500 High Beta	SPHB	1,003	13.5%	26.4%	0.51
S&P Midcap 400	MDY	2,028	4.8%	24.3%	0.20
Russell 1000 Value	IWD	1,775	4.9%	20.7%	0.24
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
US Dollar	UUP	1,173	5.1%	9.3%	0.55
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
US Oil	USO	1,280	-36.7%	36.1%	-1.02
Natural Gas	UNG	1,173	-43.7%	55.9%	-0.78
Brent Oil	BNO	1,003	-20.3%	31.1%	-0.65
Agriculture	DBA	1,173	-10.5%	18.8%	-0.56
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
Extended Duration Treasuries	EDV	1,109	17.6%	24.2%	0.73
20+ Year Treasuries	TLT	1,507	13.4%	14.7%	0.91
7-10 Year Treasuries	IEF	1,507	8.1%	7.1%	1.15
Mortgage Backed Securities	MBB	1,173	4.6%	5.7%	0.82
Exposure	ETF	# of observations	CAGR	Annual Vol	Sharpe (no RF)
Business Development Companies	BIZD	691	5.7%	16.6%	0.34
Preferred Stock	PFF	1,173	0.3%	22.3%	0.01
High Yield Corporate Bonds	HYG	1,173	4.0%	14.7%	0.27
Emerging Market Local Currency Bonds	EMLC	1,003	7.3%	9.8%	0.74
Emerging Bond Markets	EMB	1,109	8.6%	13.6%	0.63
Convertible Bonds	CWB	1,003	9.8%	11.0%	0.89

## TURNING REGIME INSIGHTS INTO ALLOCATION DECISIONS

- Identifying the current economic quad isn't just academic; it directly informs how to allocate risk across the portfolio
- Tilt toward asset classes with favorable risk/reward profiles in each regime, based on both backtest data and real-time signals
- During transitions between quads, it's important to emphasize capital preservation, reducing exposure to assets most vulnerable to macro shifts
- This regime-aware approach helps to capture upside early in new cycles and avoid drawdowns when the macro turns
- But positioning after the quad shift is only half the game; the real edge comes from anticipating those shifts before consensus

Quad	Growth	Inflation	Exposure
1	↑	↓	Tech, Consumer Discretionary, Momentum, Gold, Crypto
2	↑	↑	Tech, Energy, High Beta, Convertibles, High Yield
3	↓	↑	Low Beta, Gold, BDCs, Short-term Treasuries
4	↓	↓	Non-cyclicals, USD, TLT