

Technical Analysis

Charts and Chart Patterns

1. Principles of TA
2. Types of Charts
3. Trends
4. Patterns

What is Technical Analysis?

Use of **PRICE** and **VOLUME** data to aid in investment decisions

The supply and demand from sellers and buyers determine prices

Changes in supply and demand causes changes in prices

Prices can be projected with charts and other tools

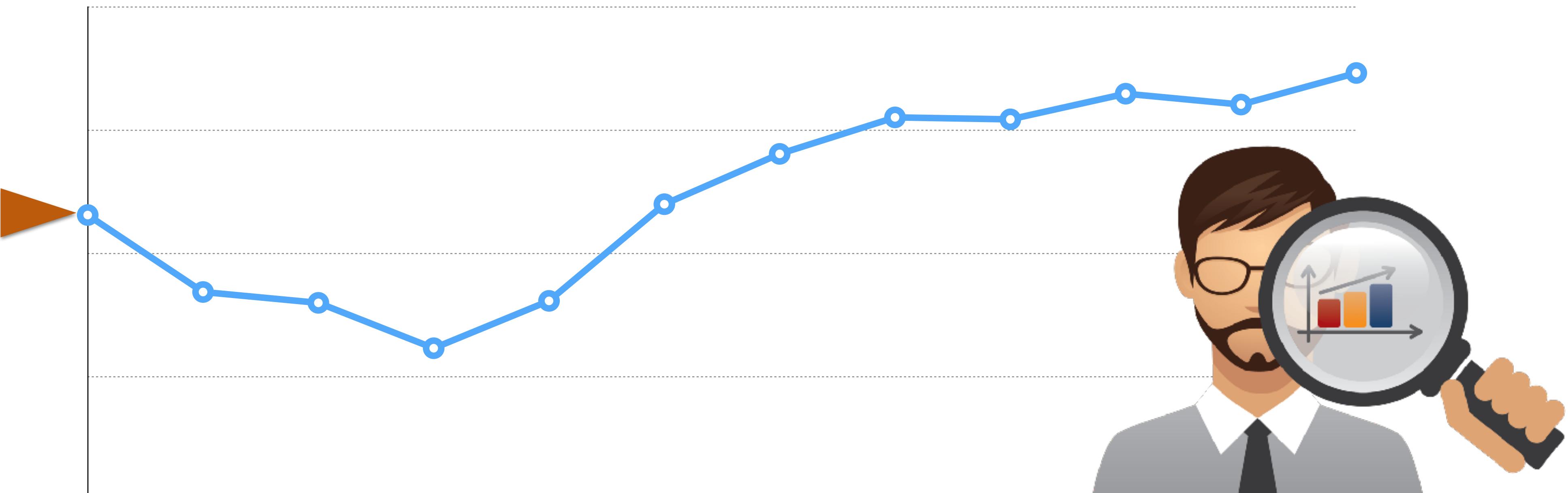


Sellers



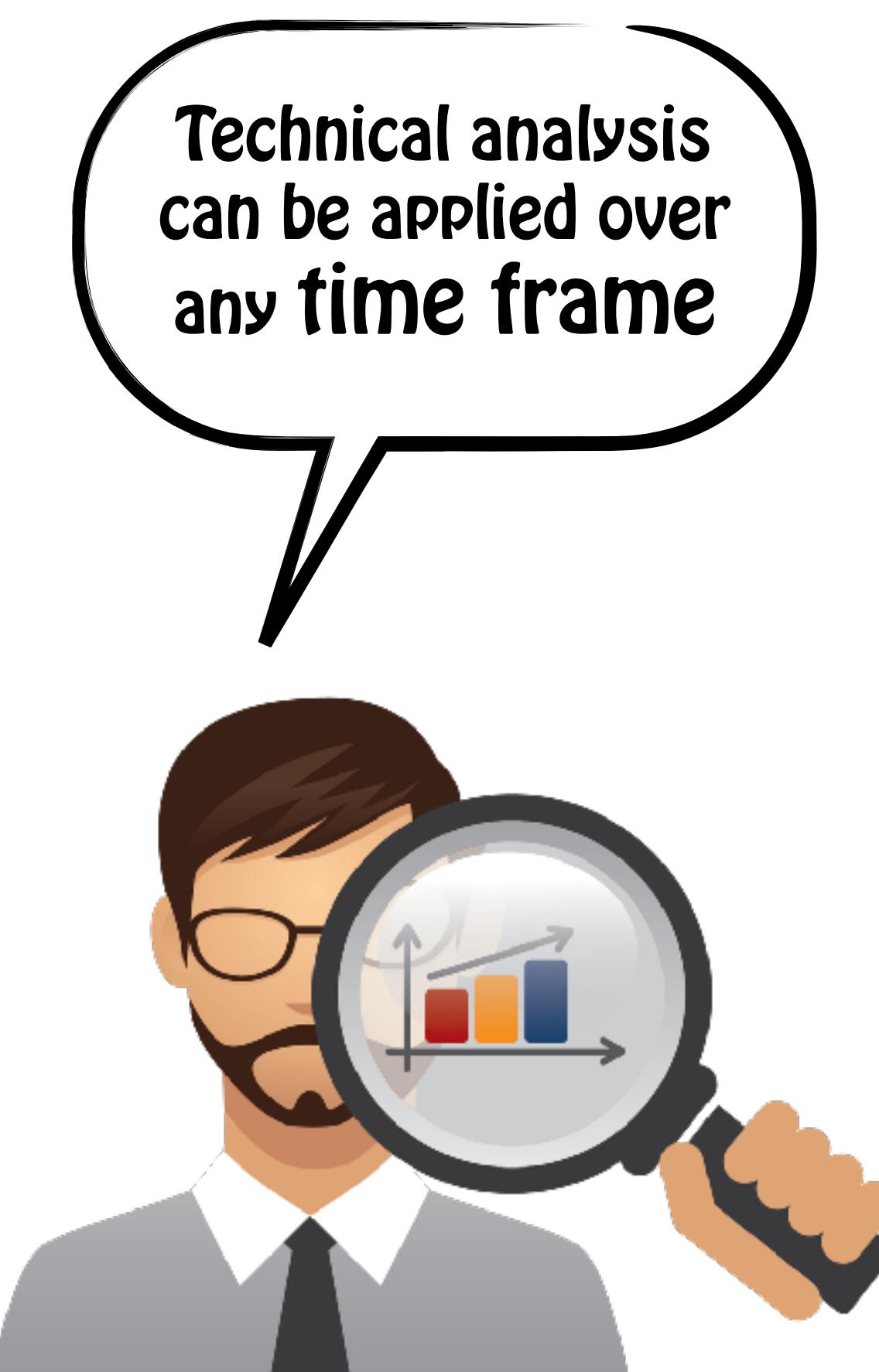
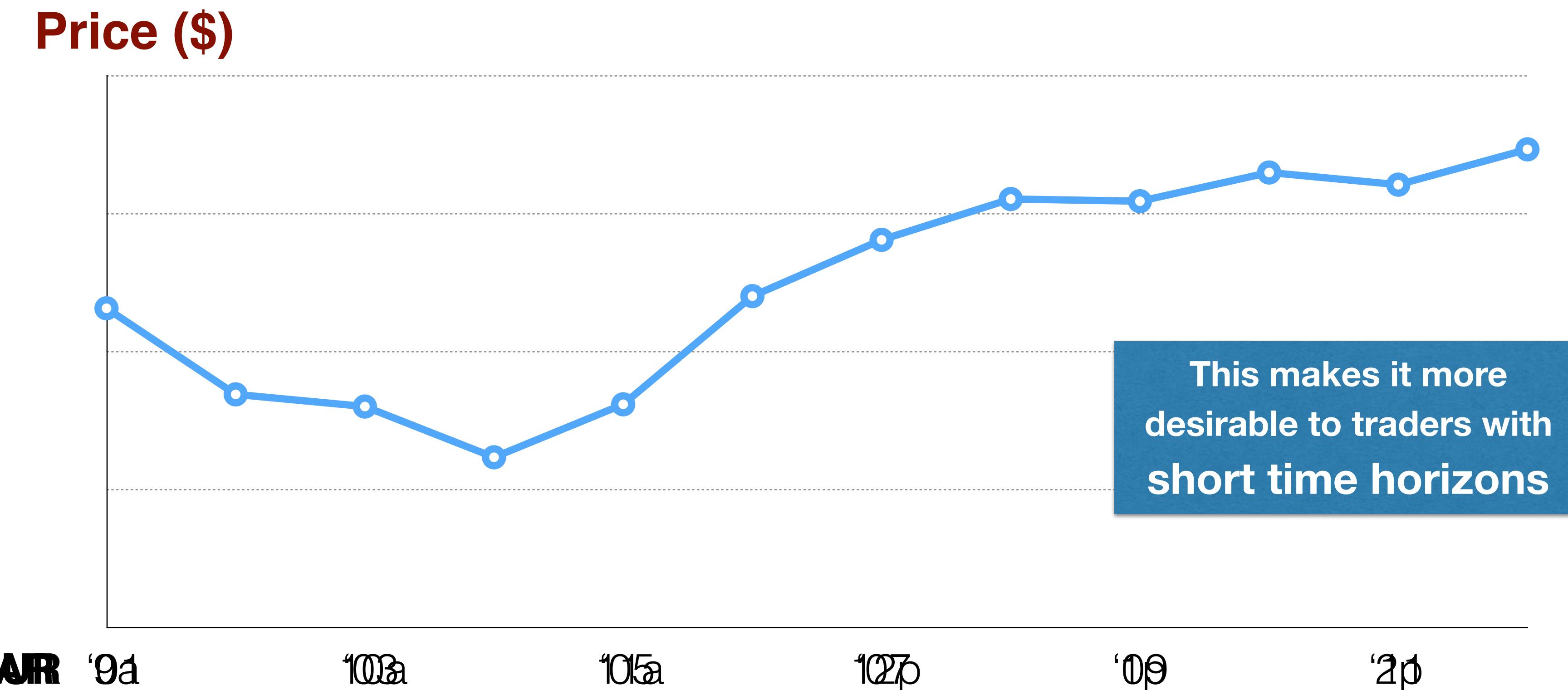
Buyers

Price (\$)



What is Technical Analysis?

Use of **PRICE** and **VOLUME** data to aid in investment decisions



Fundamental Analysis

Technical Analysis

More Theoretical Approach

More Practical Approach



Charts and Chart Patterns

PREP
nuggets

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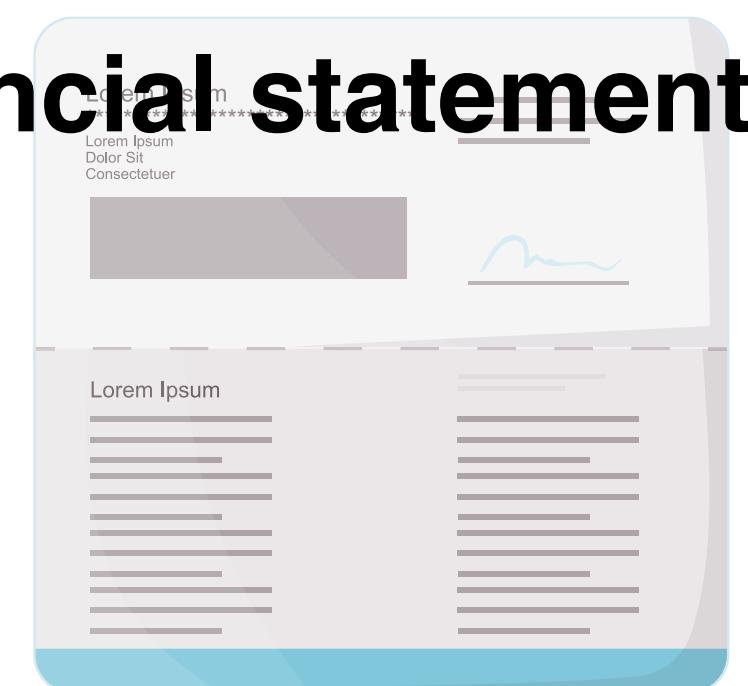
Fundamental Analysis

Technical Analysis

Analyse wide range of data

Analyse just price and volume data

Financial statements



Economic data



Market research

PREP
nuggets

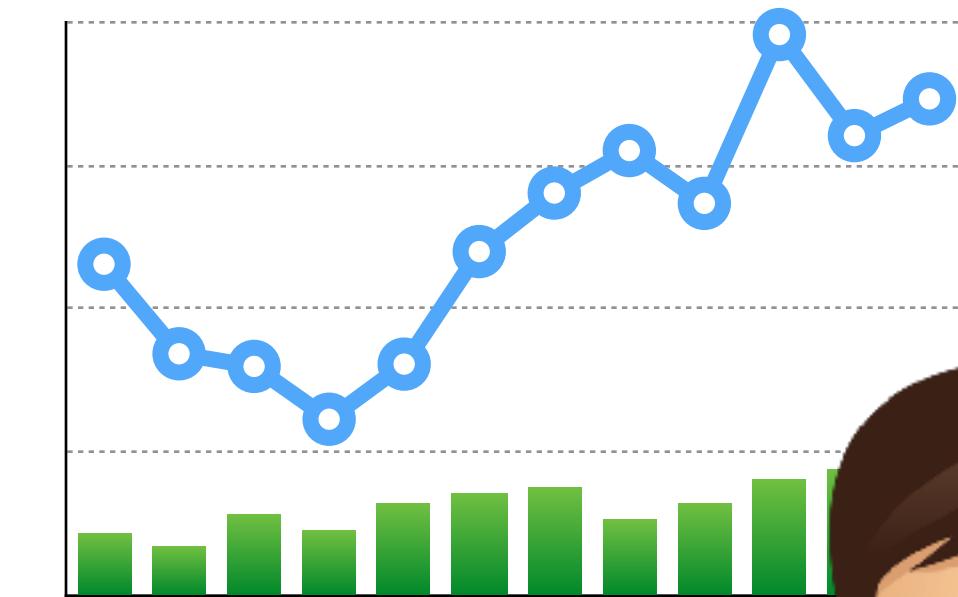
Charts and Chart Patterns

1. Principles of TA

2. Types of Charts

3. Trends

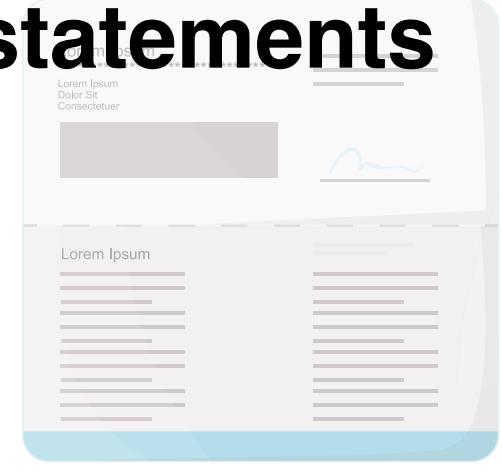
4. Patterns



Fundamental Analysis

Data is often delayed and subject to assumptions, restatements, even fraud.

Financial statements



Economic data



Market research



PREP
nuggets

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Technical Analysis

Data is instantaneous and more concrete



Fundamental Analysis



PREP
nuggets

Charts and Chart Patterns

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Technical Analysis



Fundamental Analysis

Does not analyse trends



PREP
nuggets

Charts and Chart Patterns

1. Principles of TA

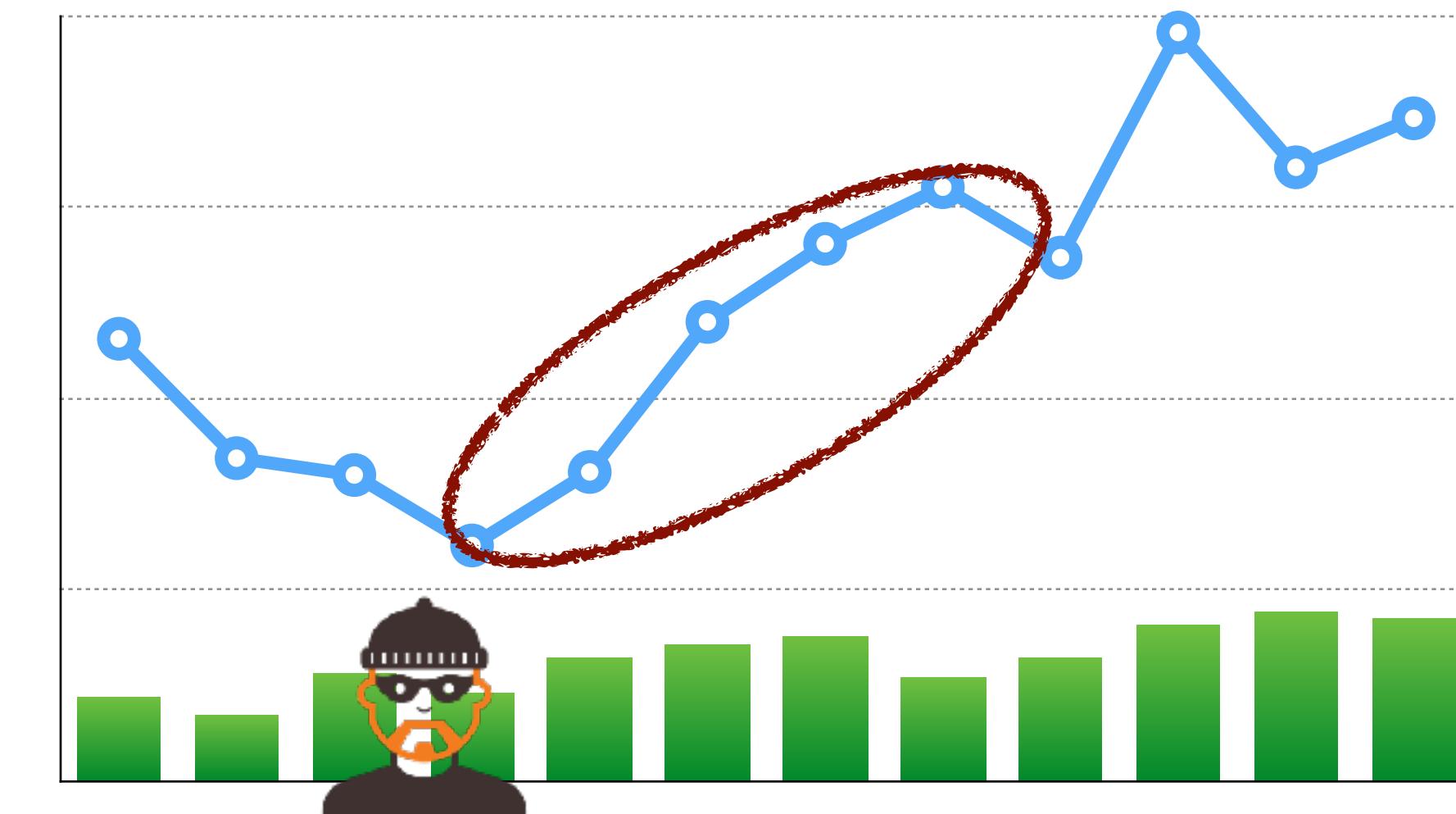
2. Types of Charts

3. Trends

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Technical Analysis

May pick up trends caused by
insider trading



Insider



Fundamental Analysis

Valuation models cannot be applied to such securities

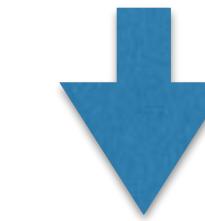


Stocks

(Dividends)



Valuation
Model



Intrinsic price

Technical Analysis

Can apply to securities without income stream

Commodities

(No income)



Charts and Chart Patterns

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Fundamental Analysis

Prices can often overshoot or undershoot the intrinsic value.



Charts and Chart Patterns

1. Principles of TA

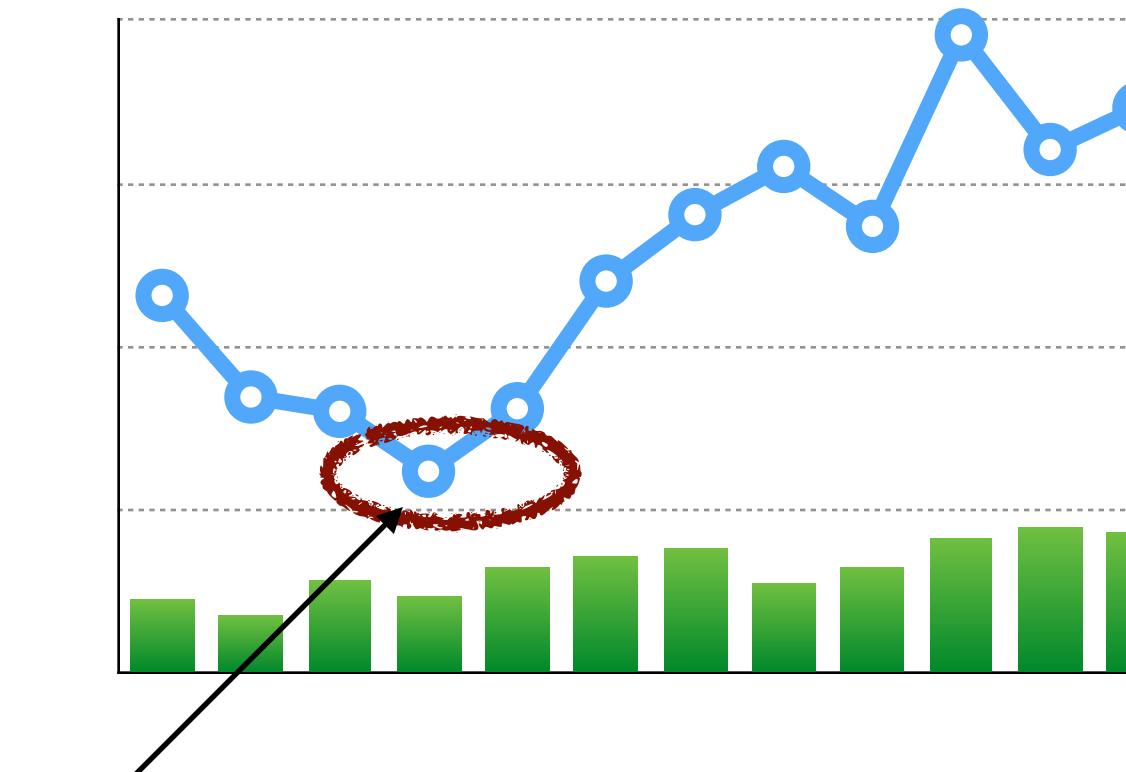
2. Types of Charts

3. Trends

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Technical Analysis

Can be slow to identify changes in trend



Trend can change without warning



Line Charts



Charts and Chart Patterns

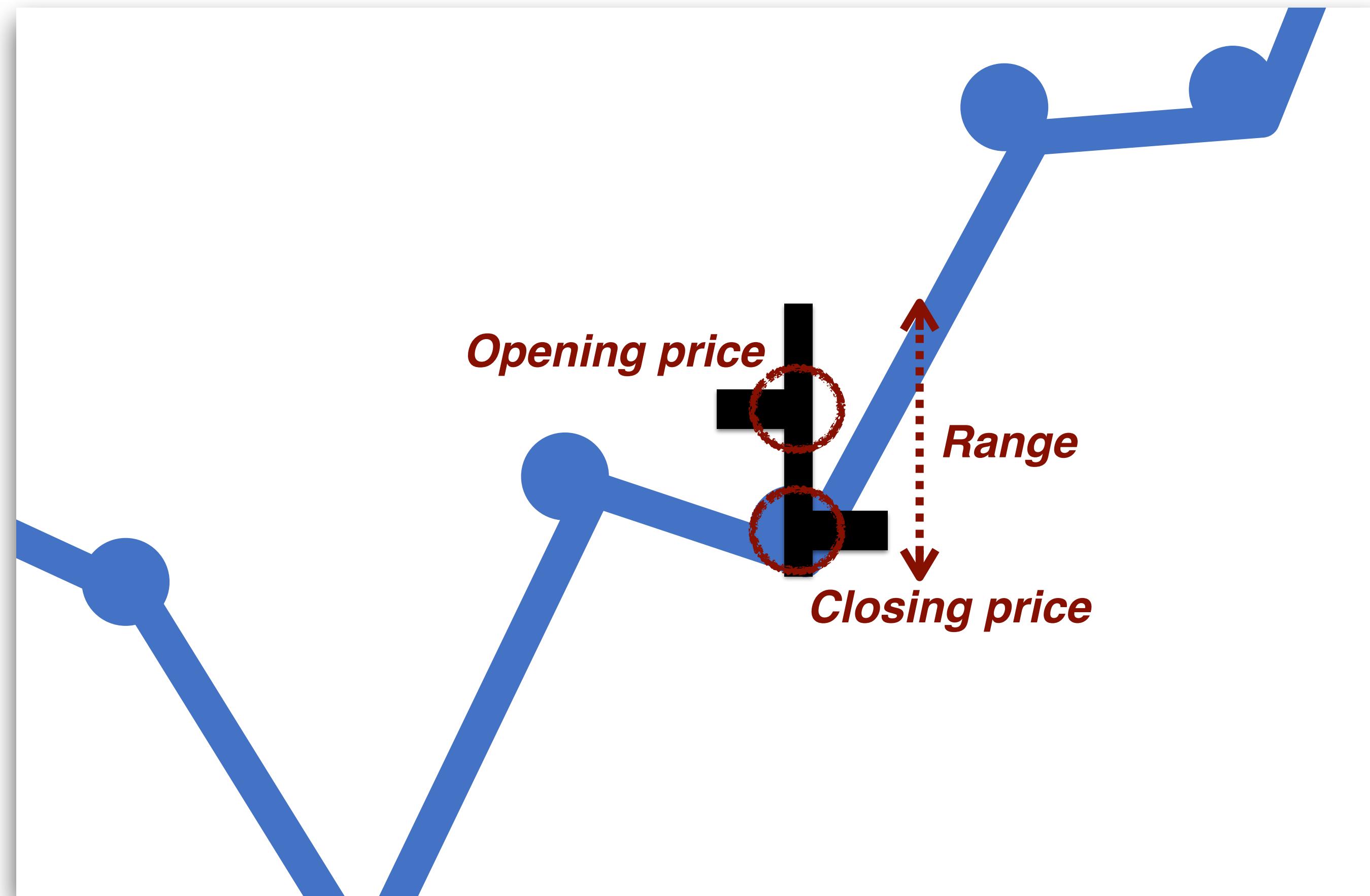
1. Principles of TA

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Bar Charts



Charts and Chart Patterns

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Bar Charts



Charts and Chart Patterns

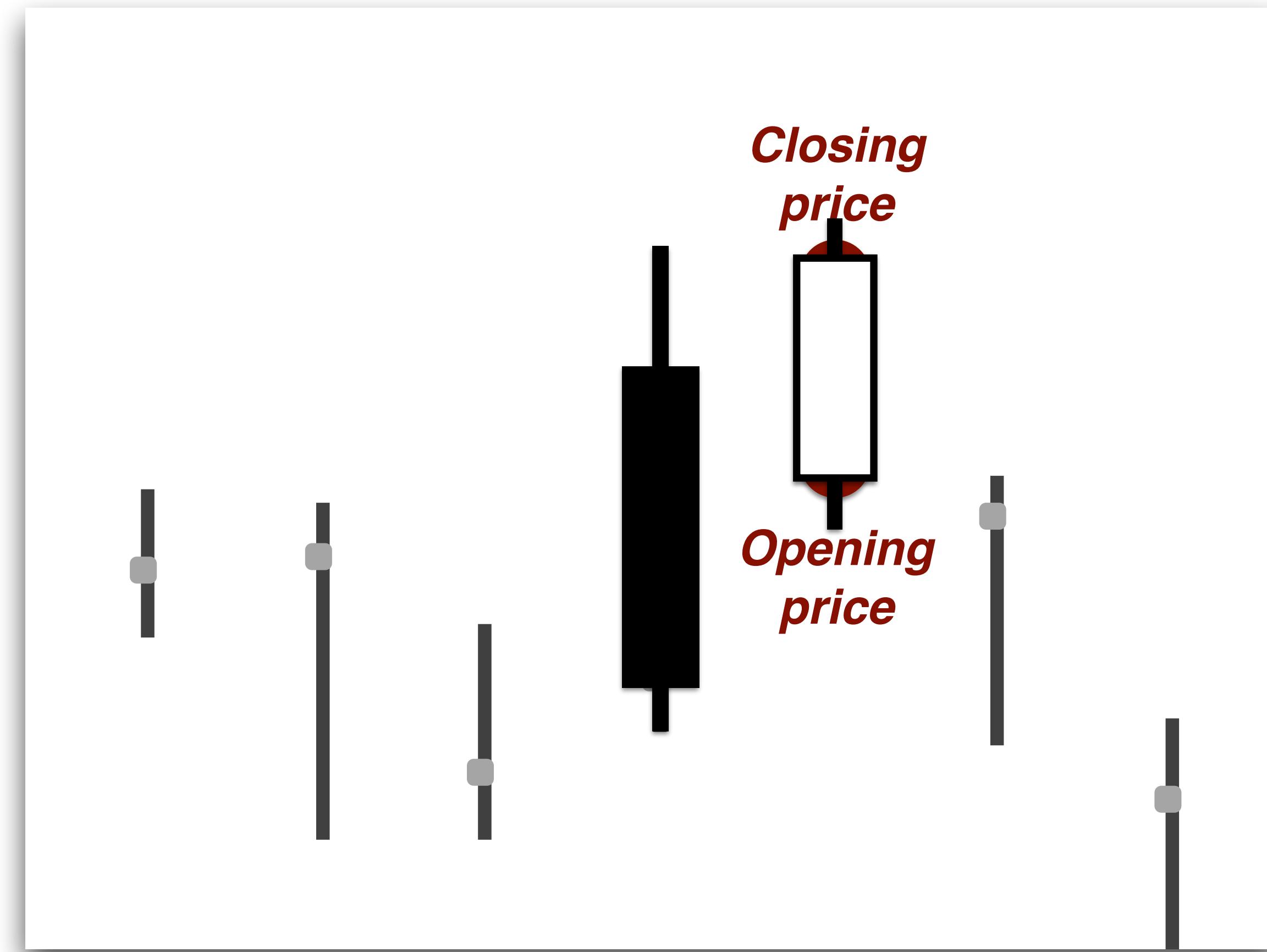
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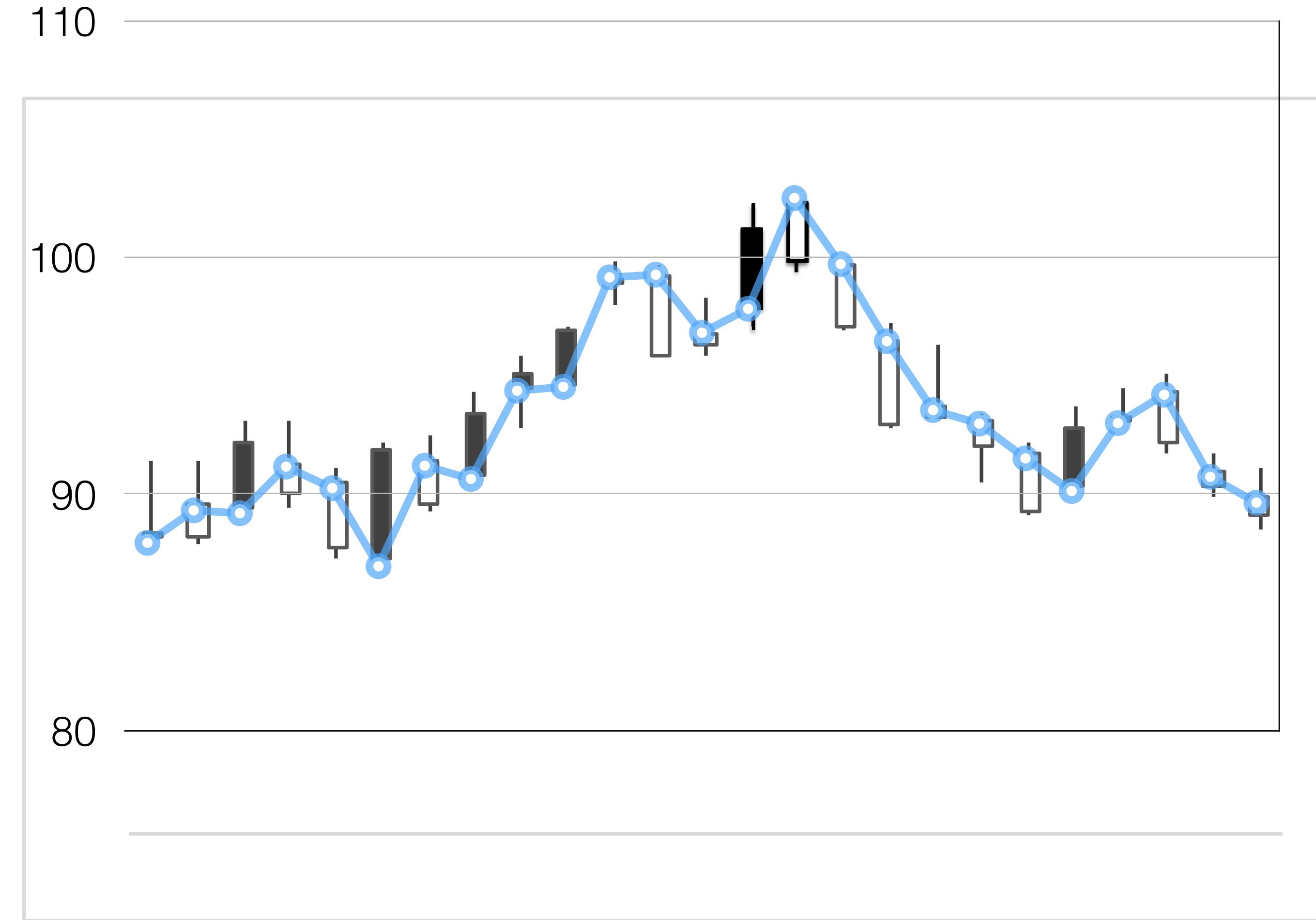
Candlestick Charts



Charts and Chart Patterns

- # 1. Principles of TA 2. Types of Charts 3. Trends 4. Patterns

Candlestick Charts



Charts and Chart Patterns



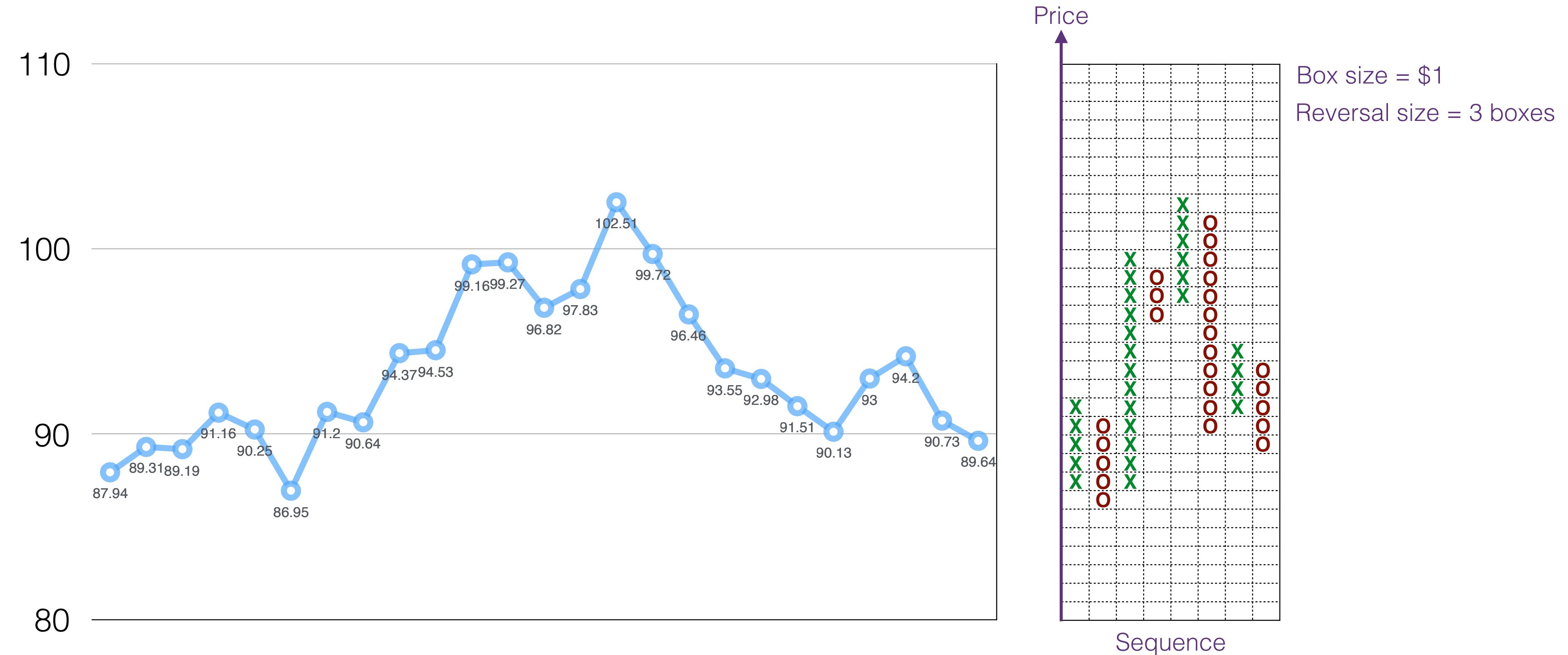
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Point and Figure Charts



Volume Charts

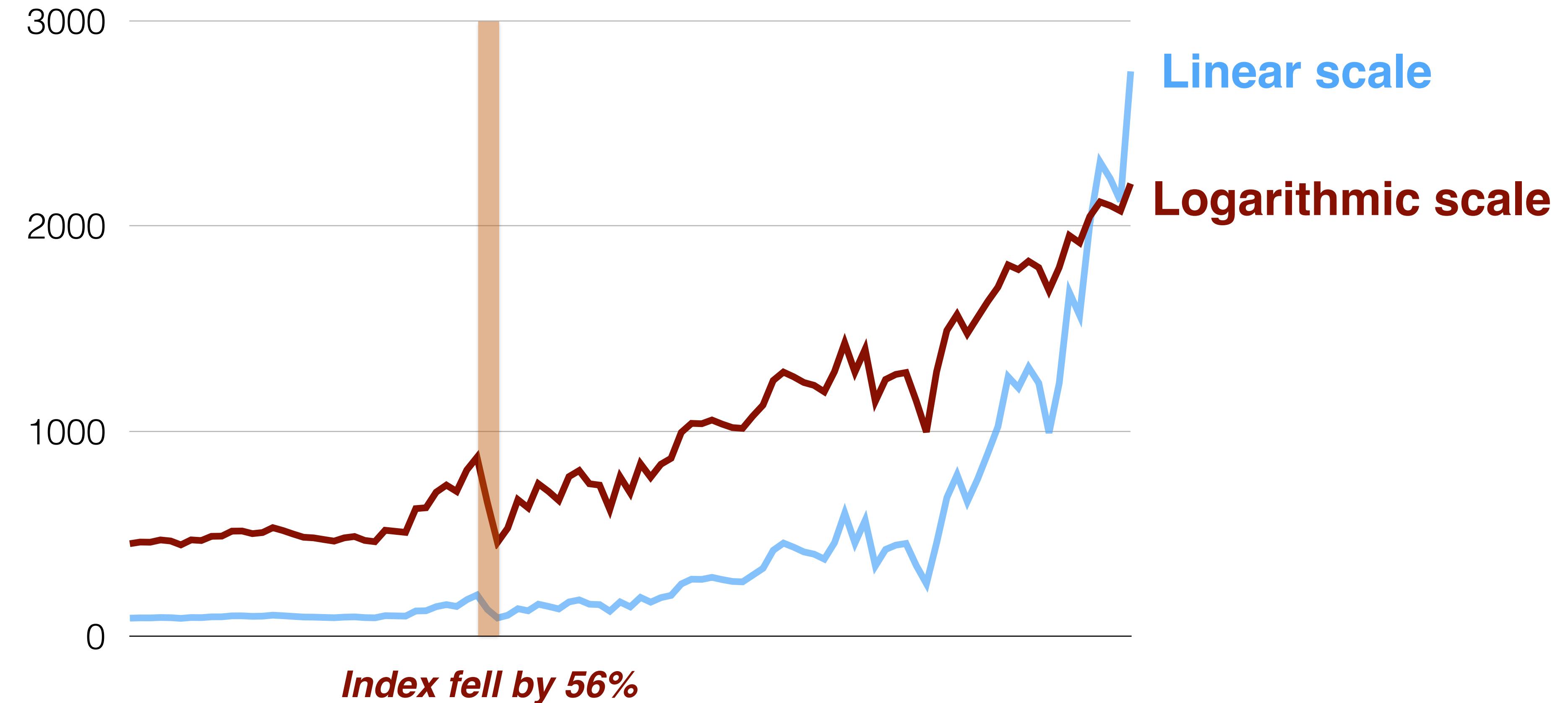


Charts and Chart Patterns



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Linear vs Log Scale



Charts and Chart Patterns

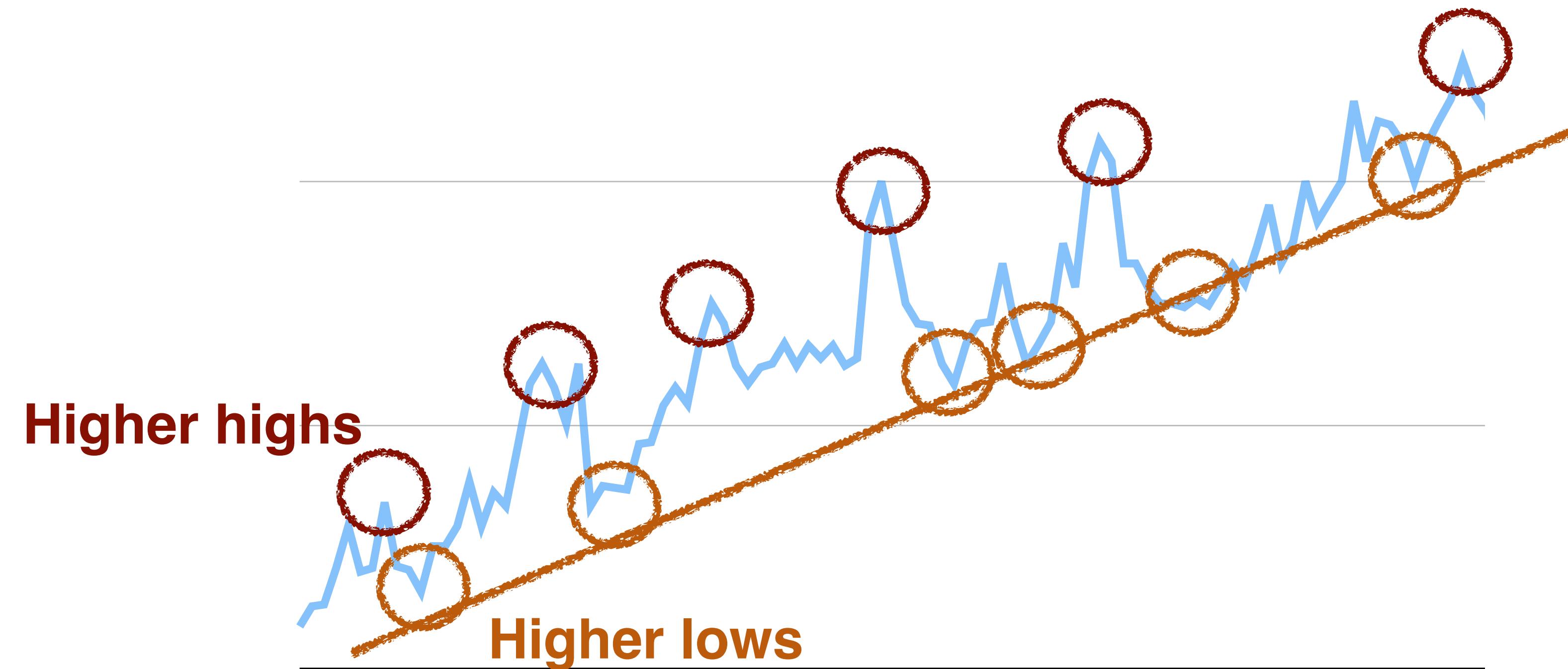
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2. Types of Charts

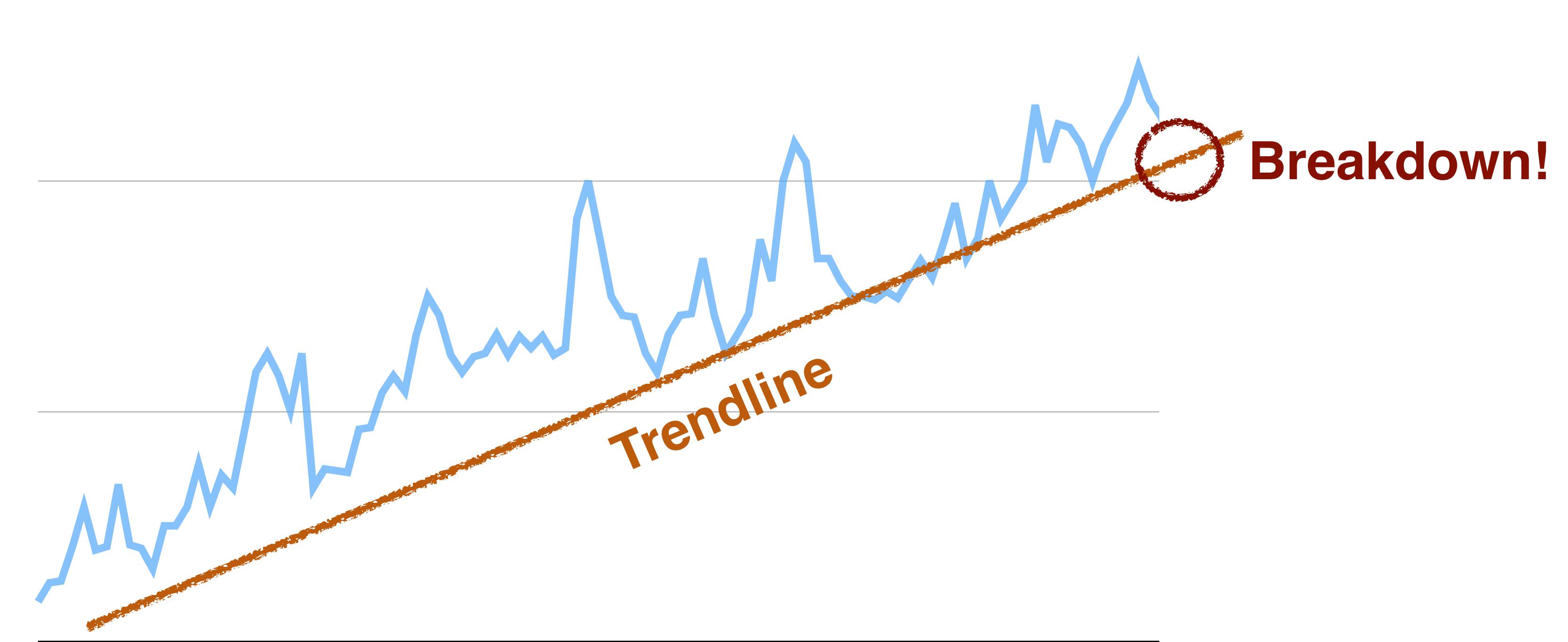
3. Trends

4. Patterns

Uptrend



Uptrend



Charts and Chart Patterns

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2. Types of Charts

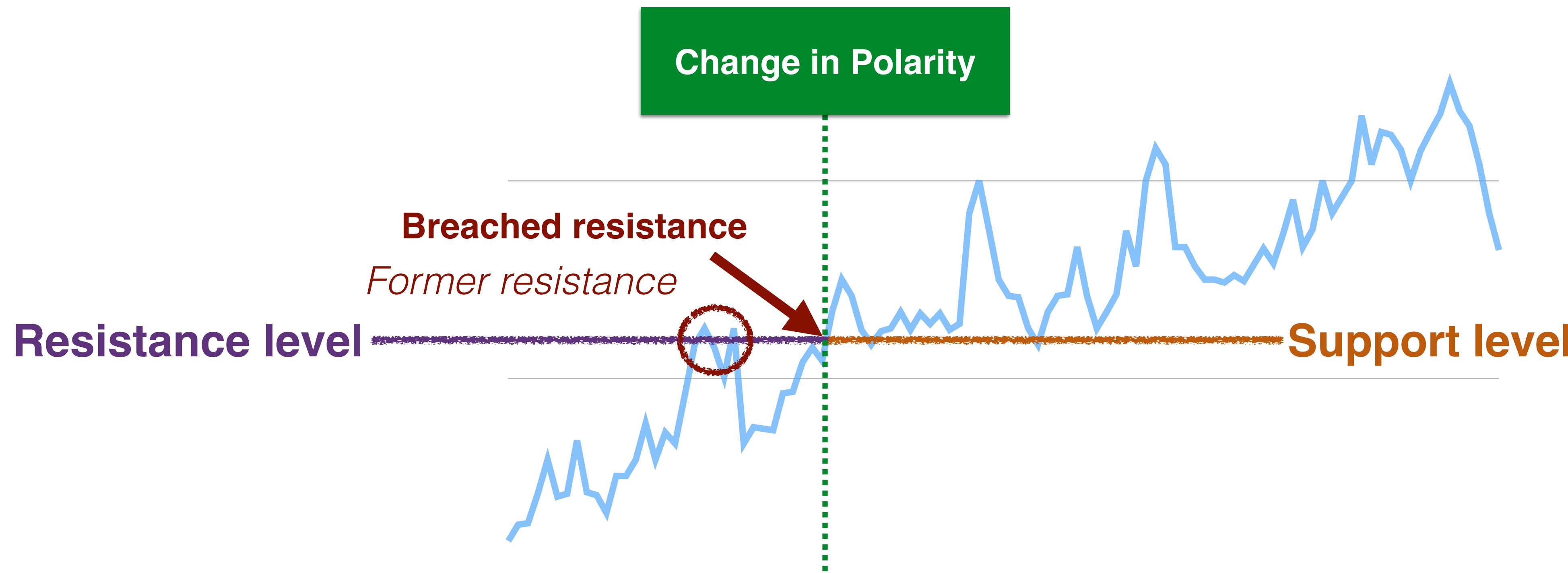
3. Trends

4. Patterns

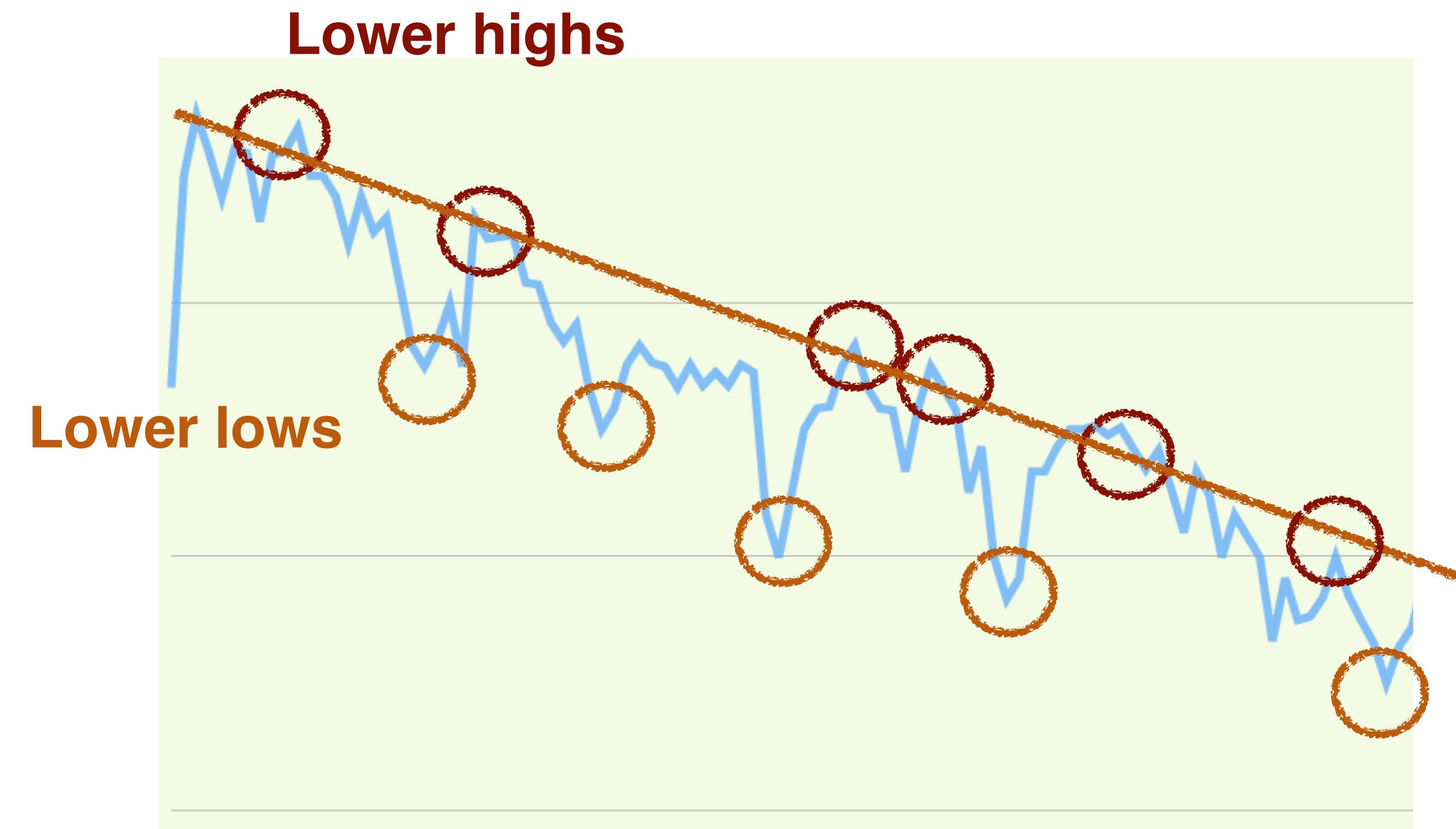
Uptrend



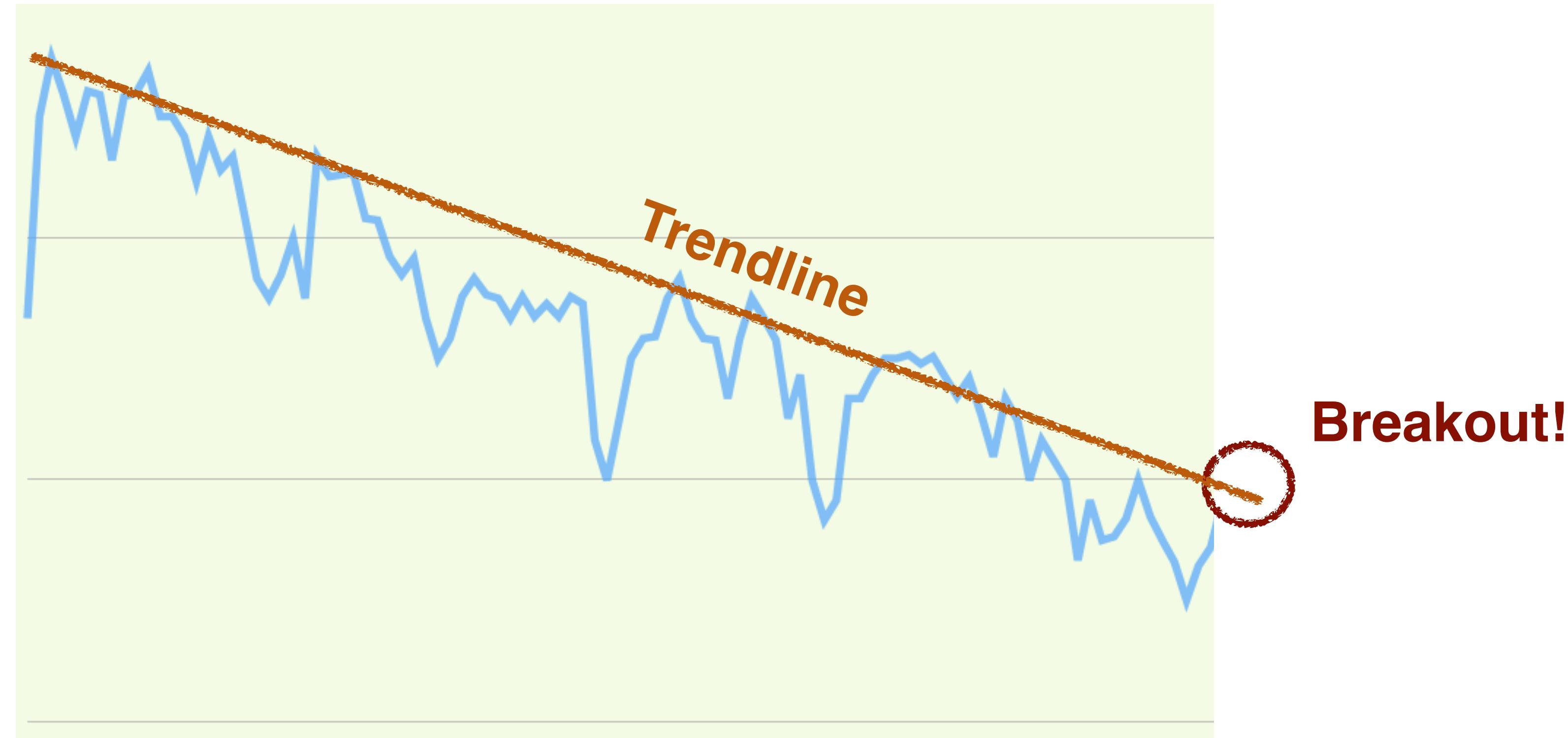
Uptrend



Downtrend



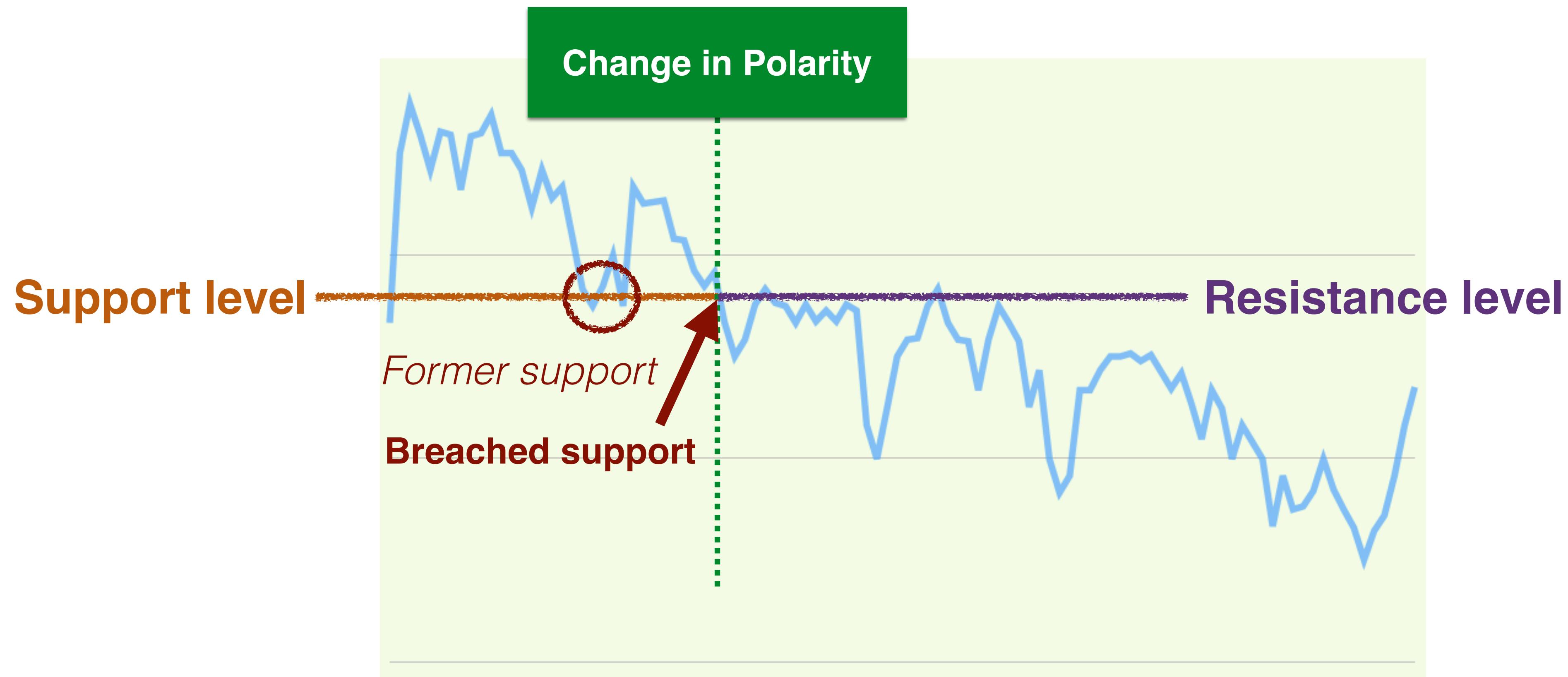
Downtrend



Downtrend



Downtrend

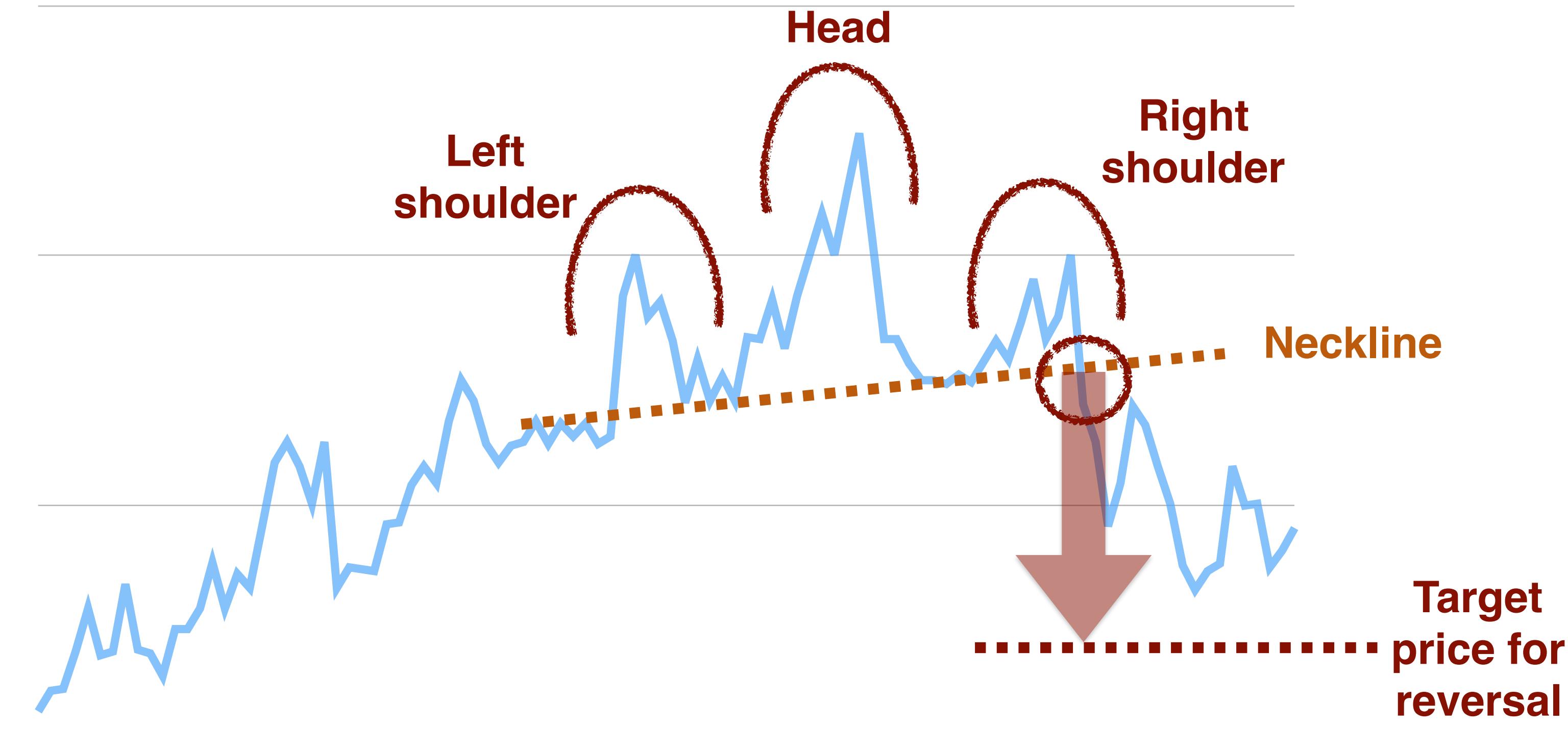


Reversal Patterns



Reversal Patterns

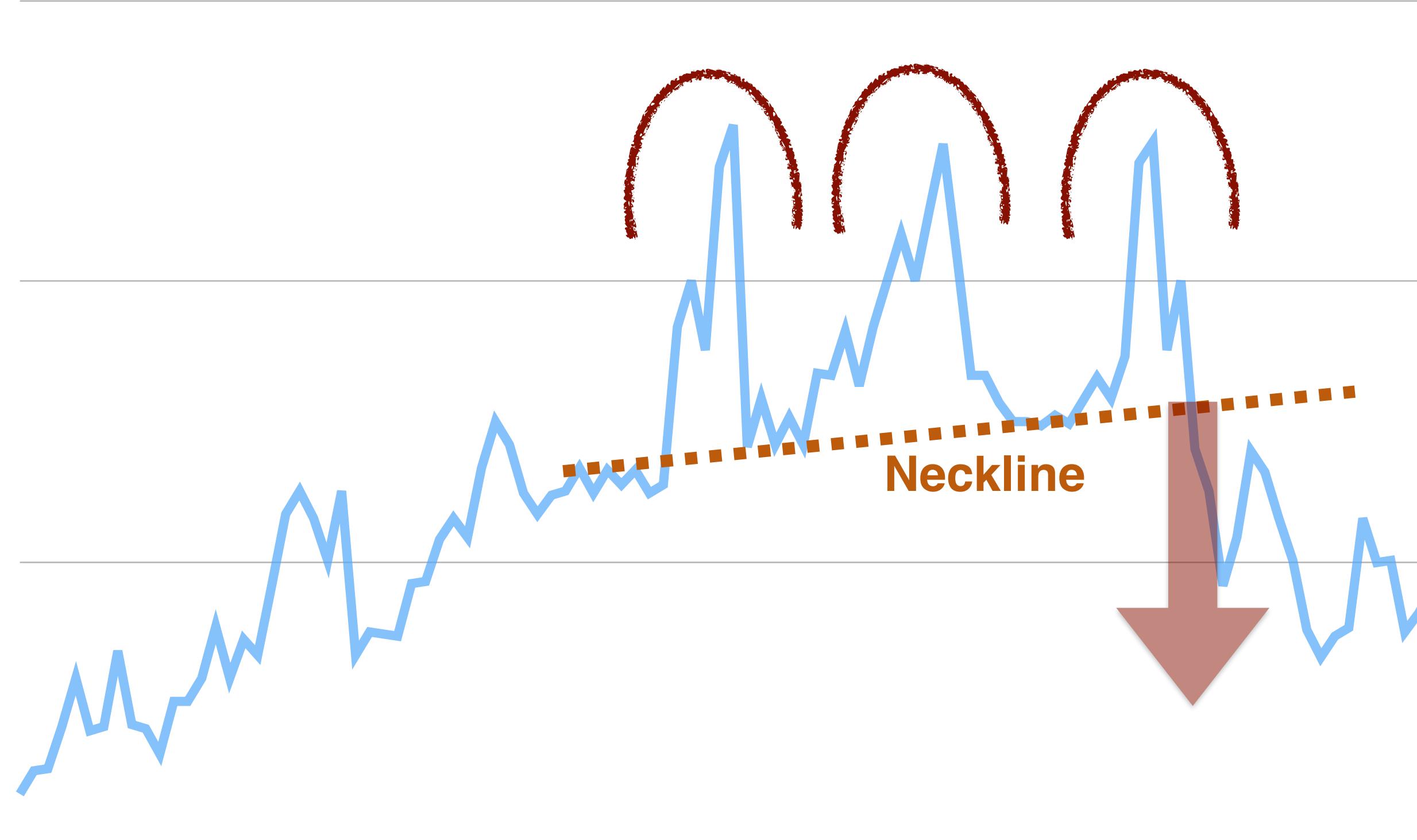
Head-and-Shoulder Pattern



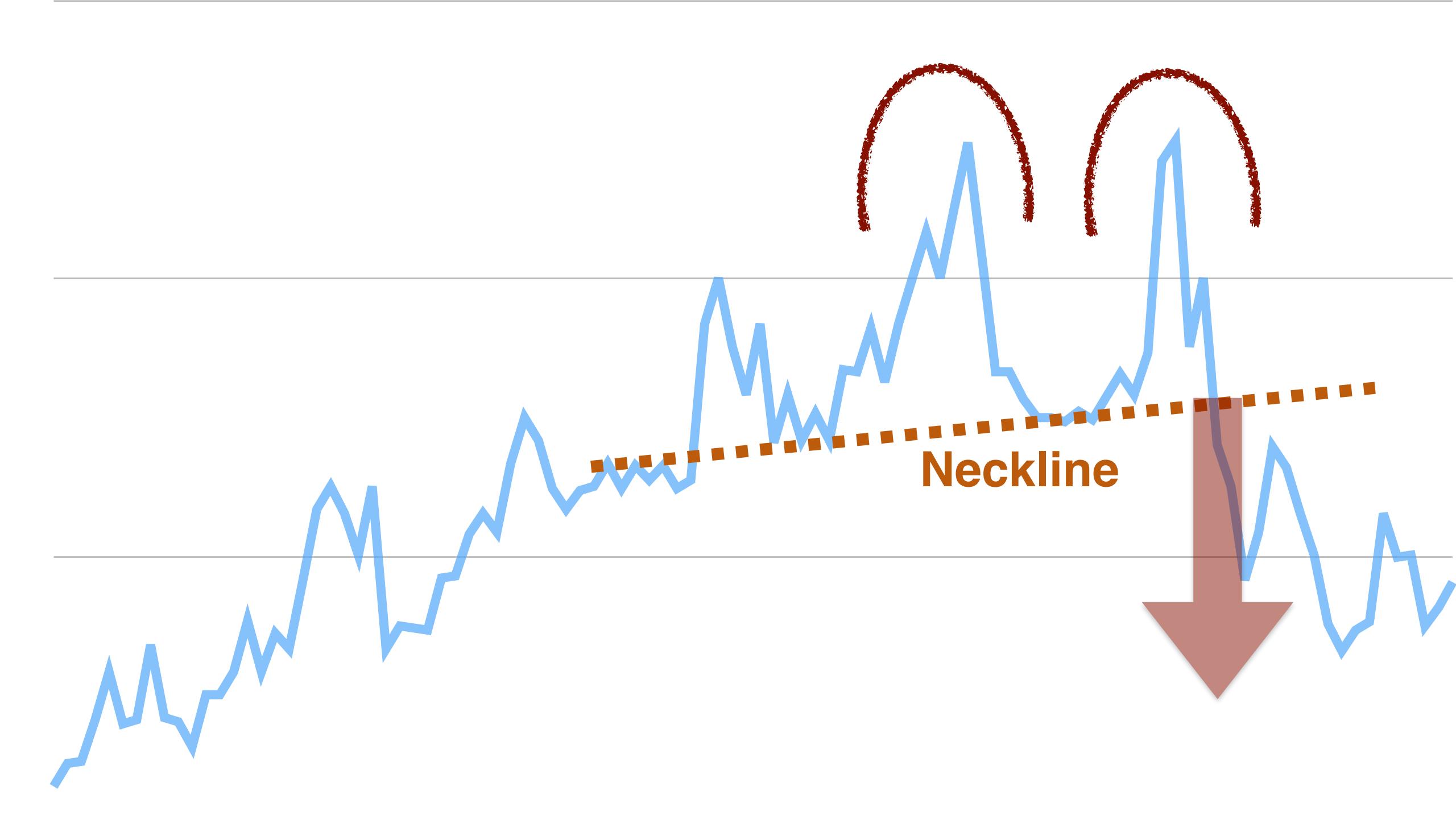
Charts and Chart Patterns

Reversal Patterns

Triple top



Double top



Charts and Chart Patterns

1. Principles of TA

2. Types of Charts

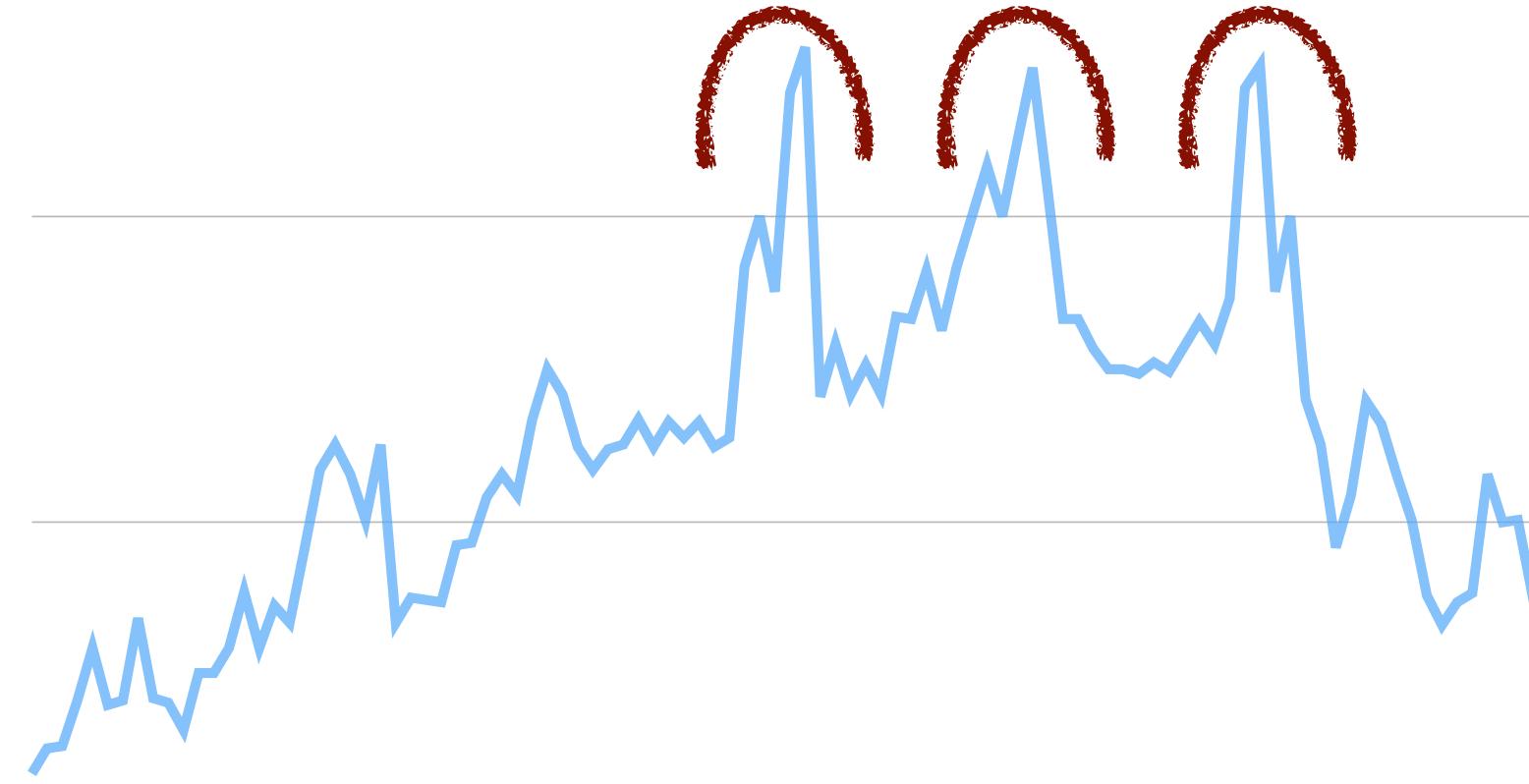
3. Trends

4. Patterns

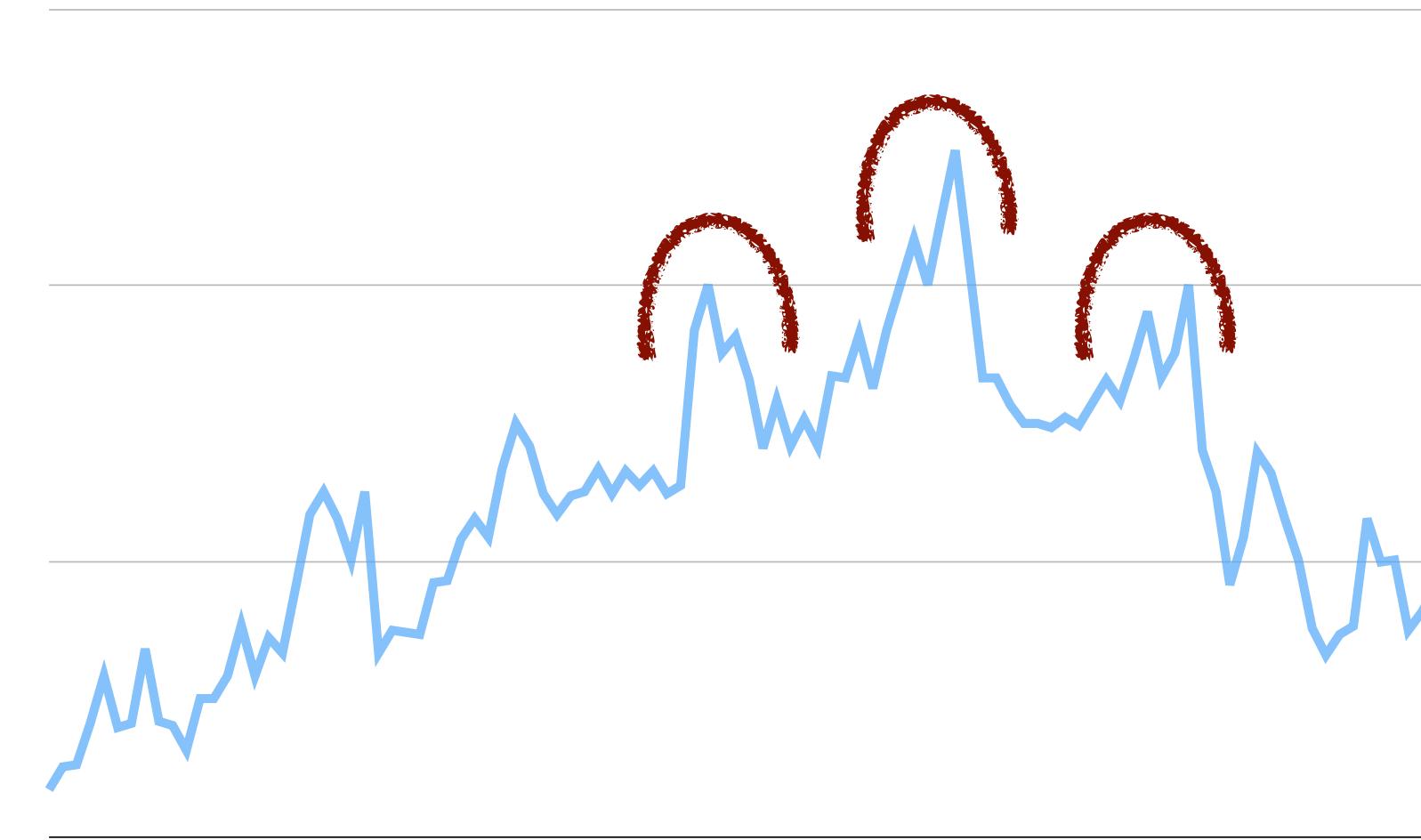
Reversal Patterns

Reversal of Uptrends

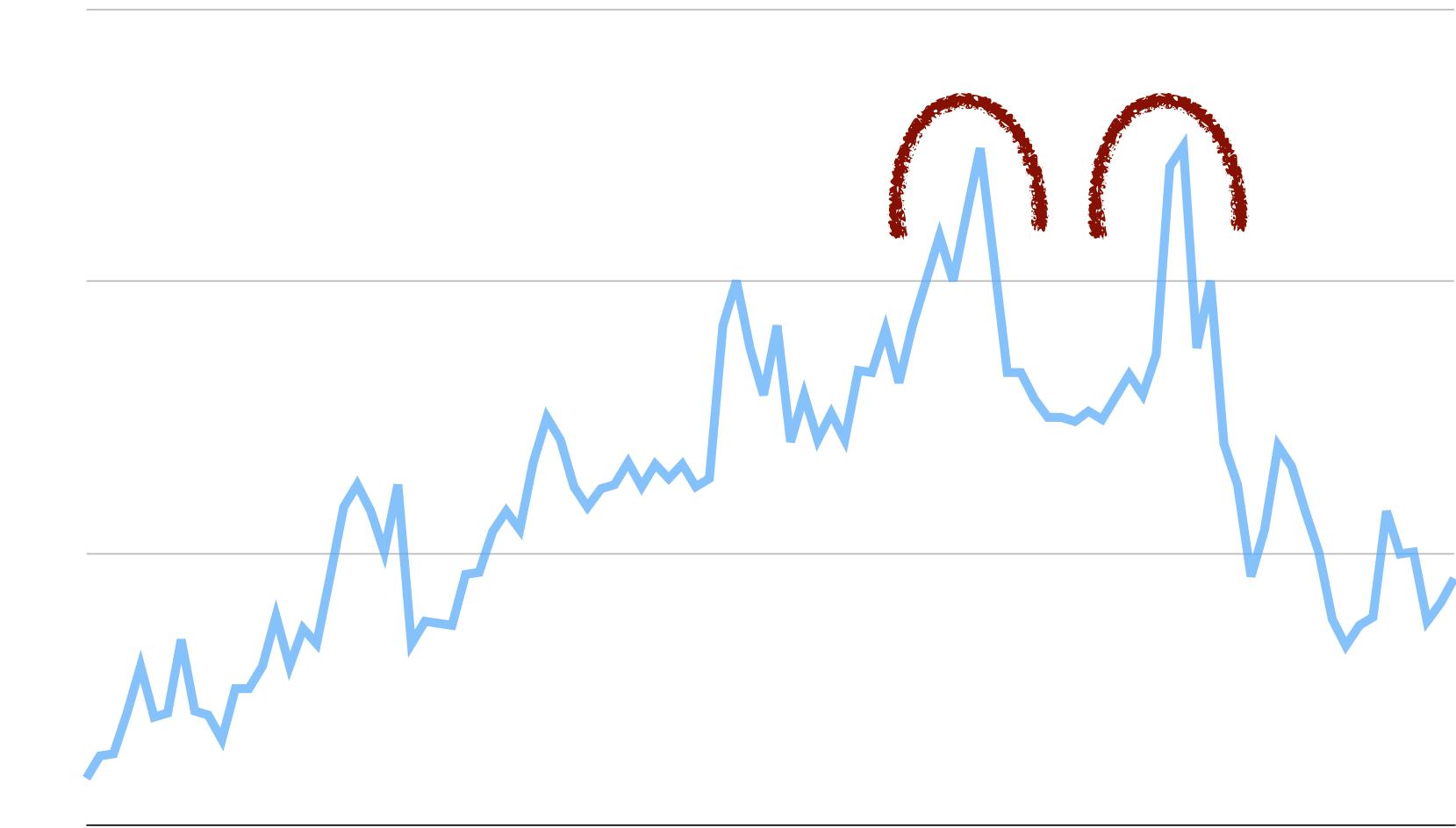
Triple top



Head-and-Shoulders



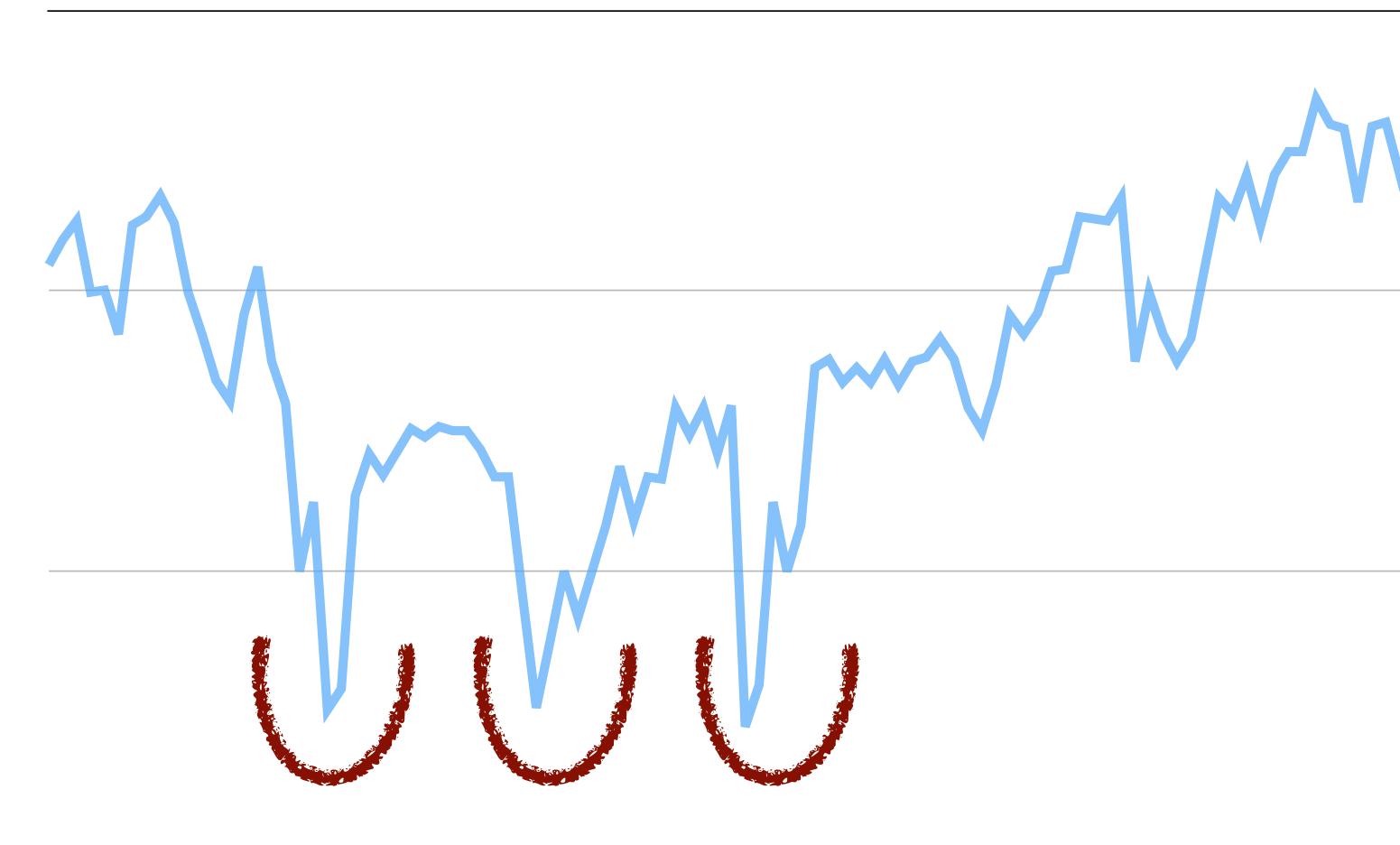
Double top



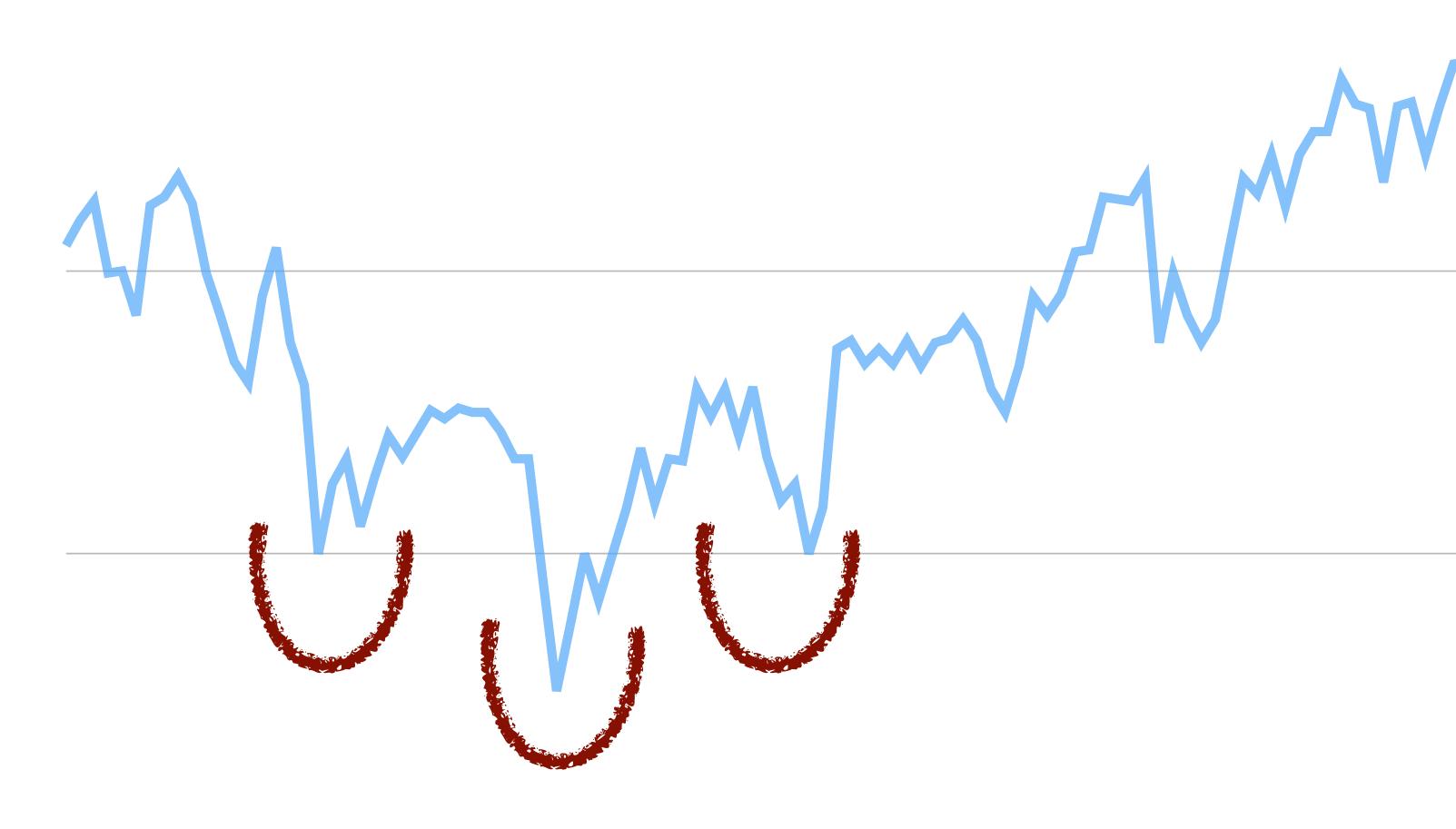
Reversal Patterns

Reversal of Downtrends

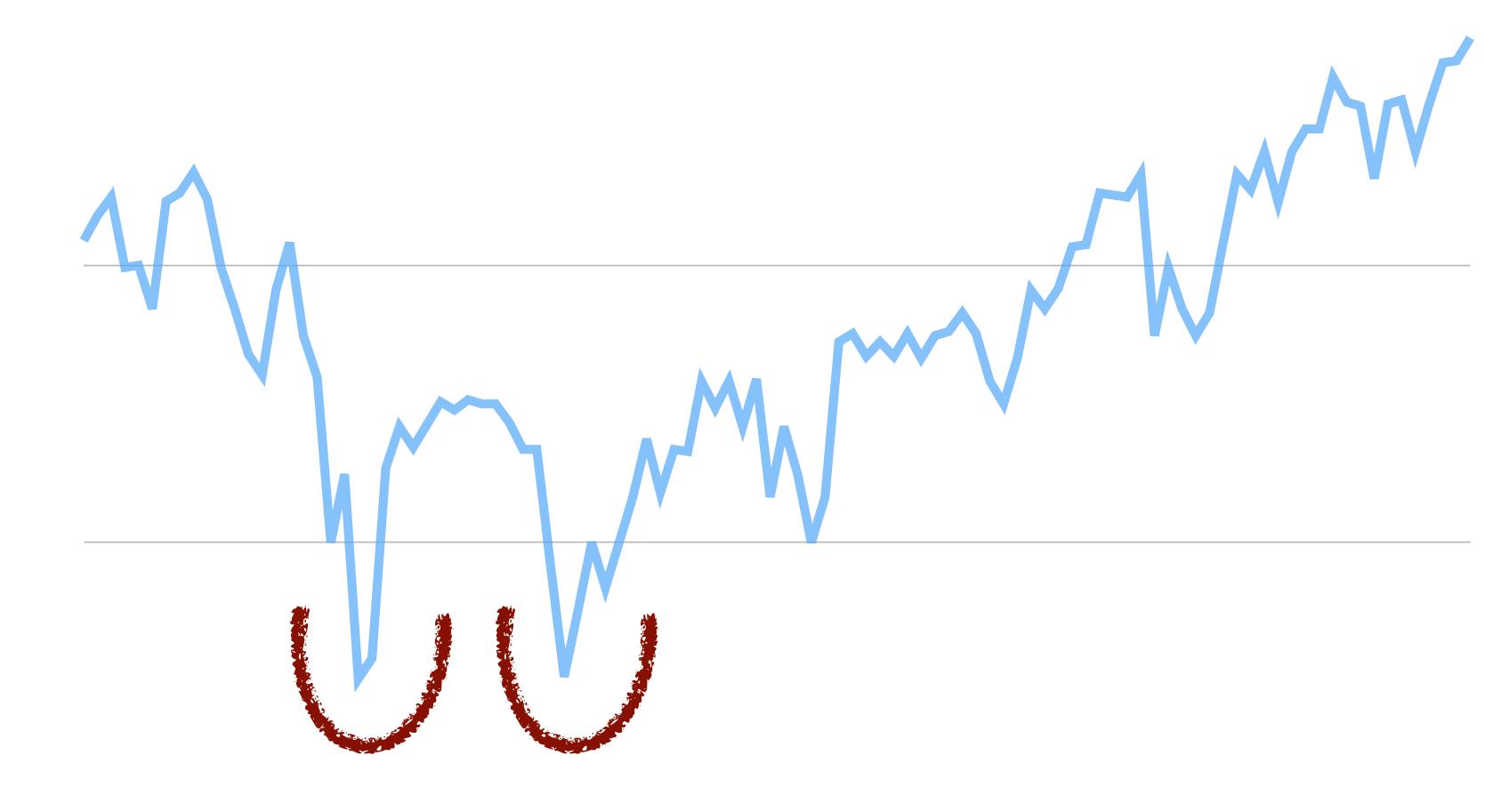
Triple bottom



Inverse Head-and-Shoulders



Double bottom

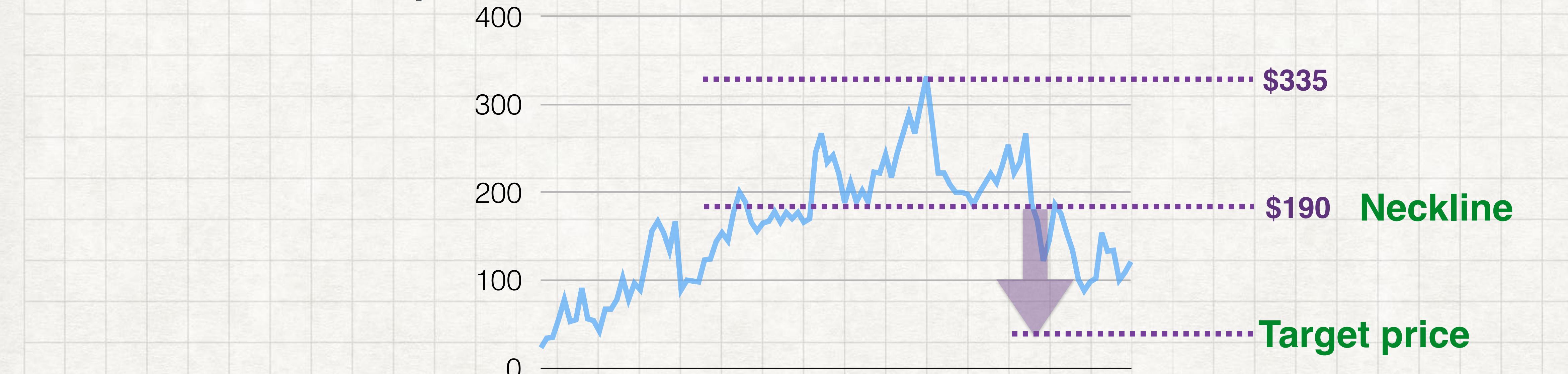


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Given the following chart, calculate the target price after the breakdown of the head-and-shoulders pattern.



Size of pattern = \$335-\$190 = \$145

Target price = \$190-\$145 = \$45

Continuation Patterns

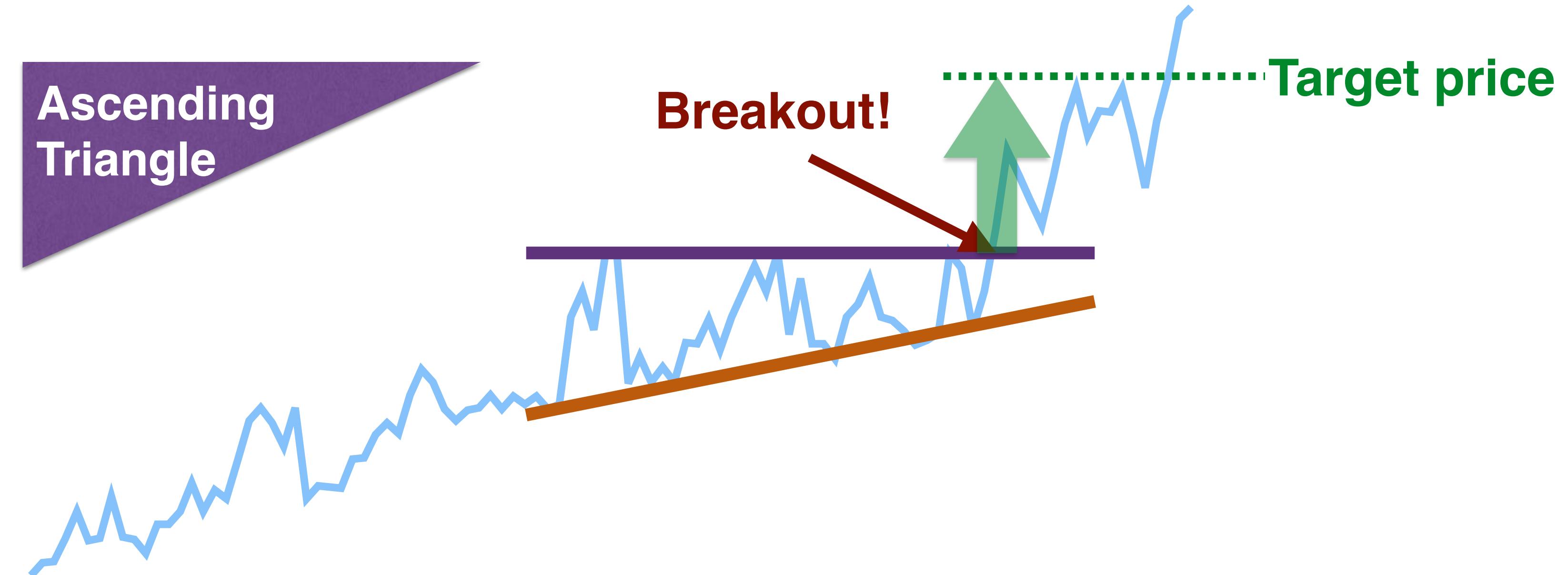
Pause in trend. Buying ≈ Selling



Charts and Chart Patterns

Continuation Patterns

Pause in trend. Buying ≈ Selling



Continuation Patterns

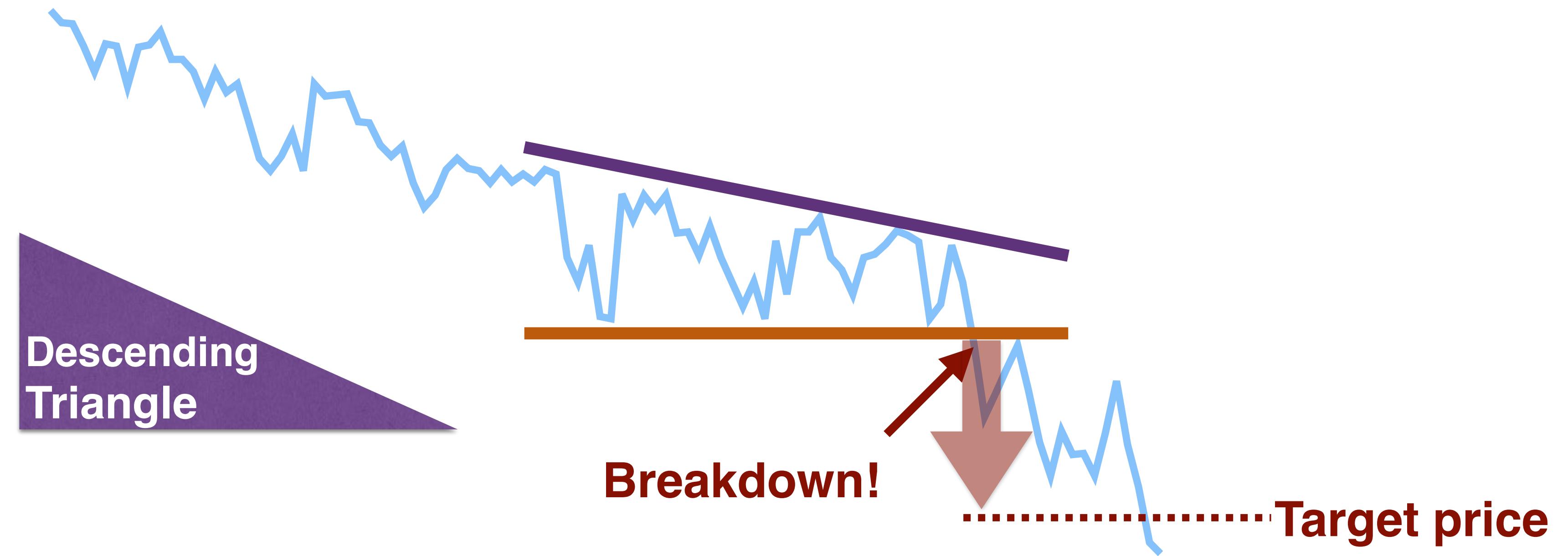
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Charts and Chart Patterns

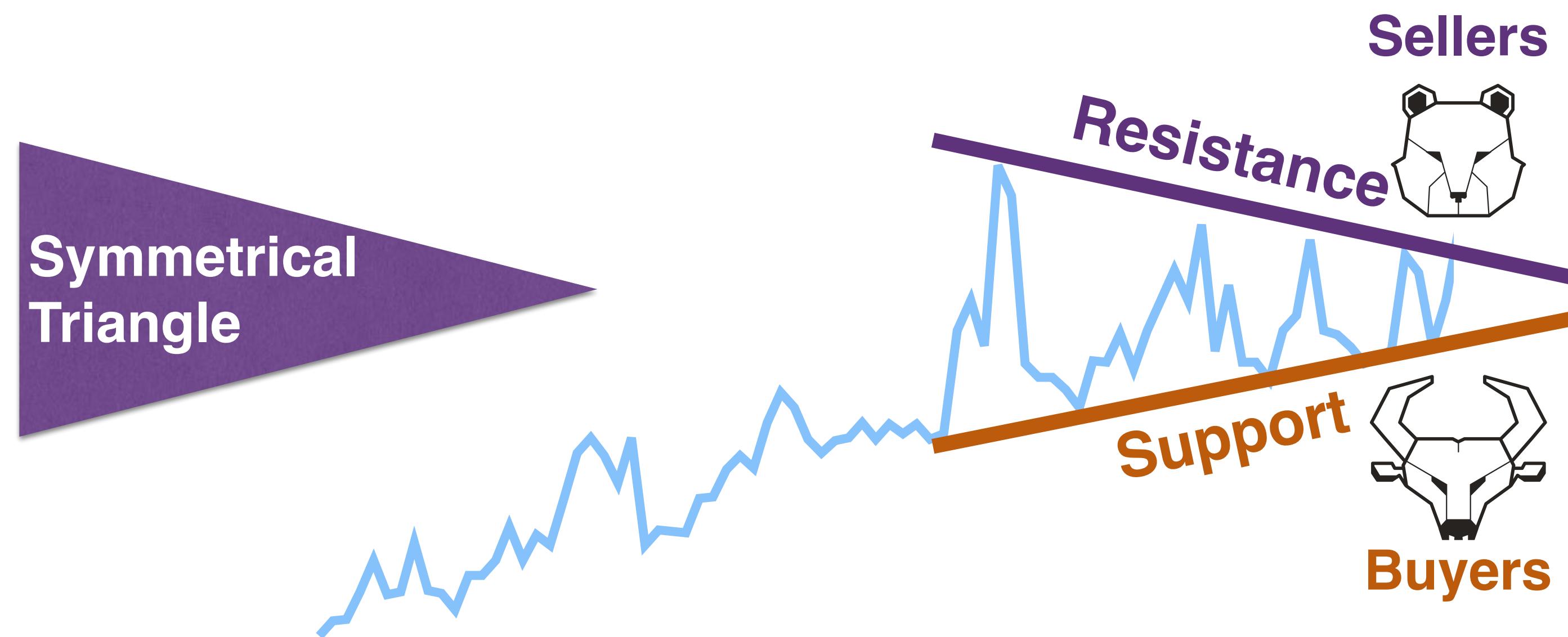
Continuation Patterns

Pause in trend. Buying ≈ Selling



Continuation Patterns

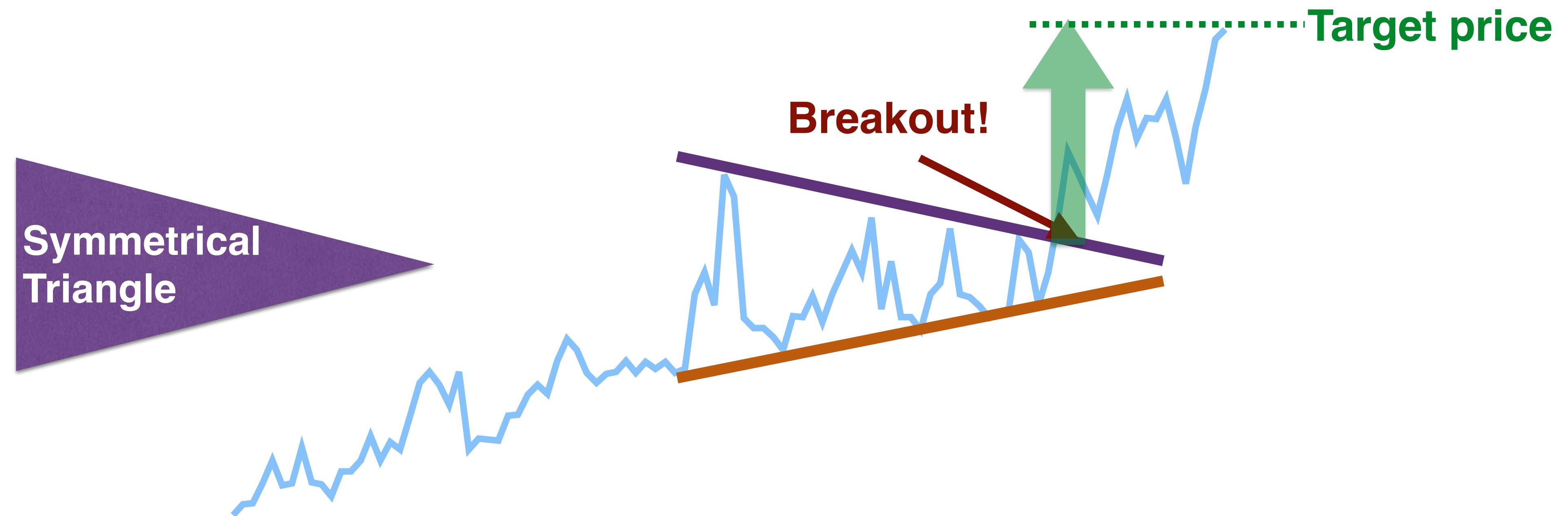
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Charts and Chart Patterns

Continuation Patterns

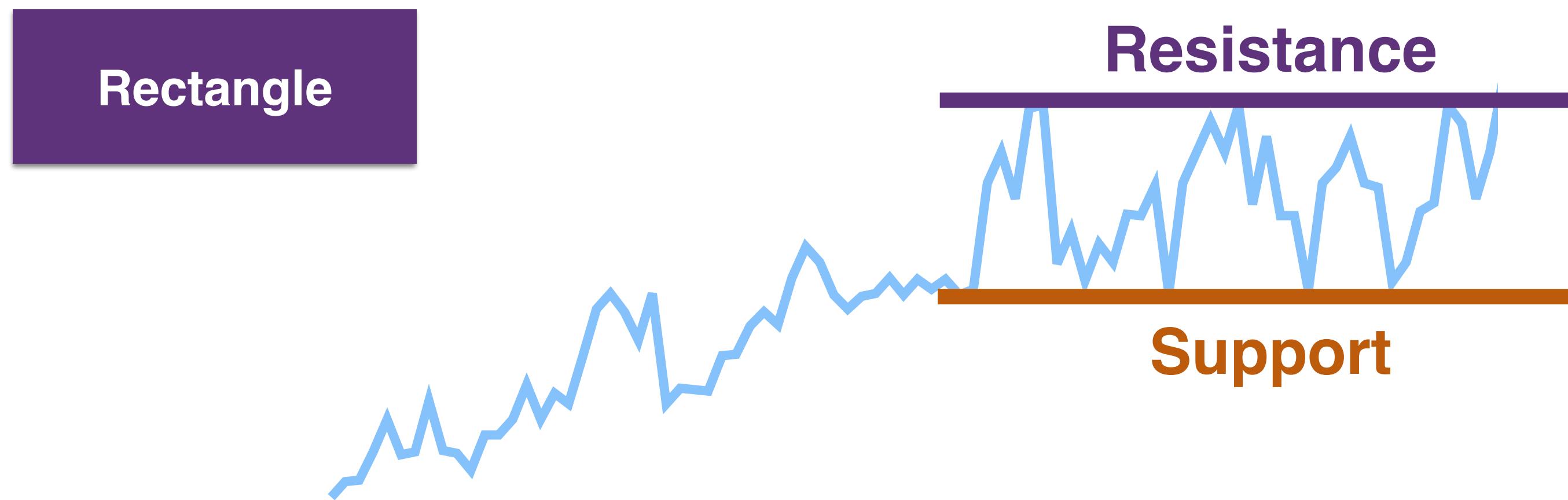
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Charts and Chart Patterns

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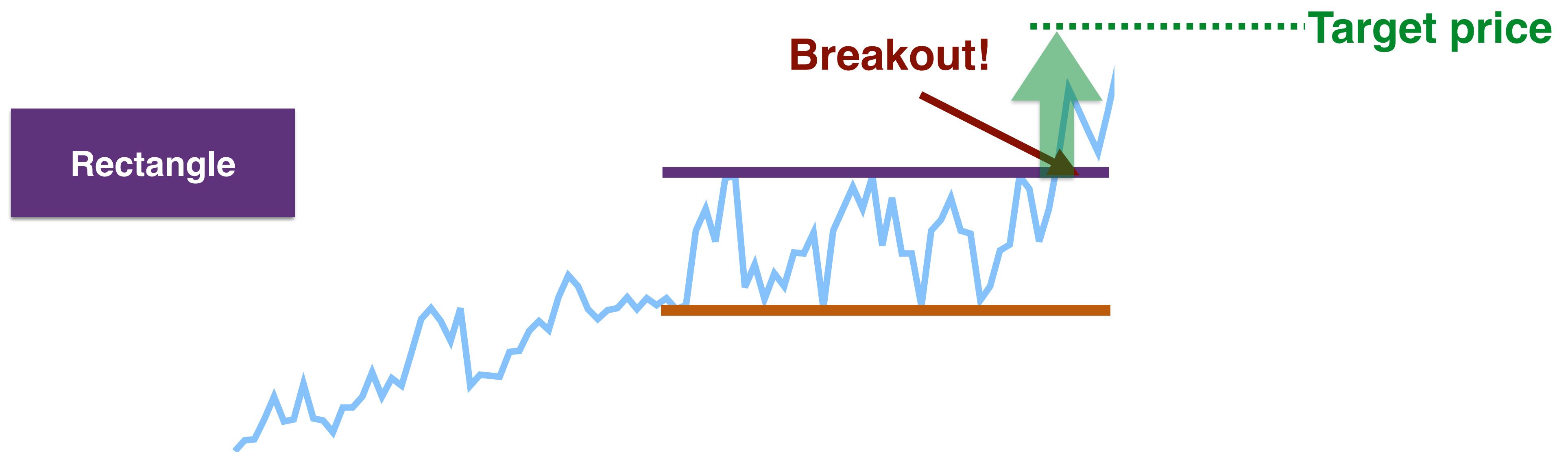
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Charts and Chart Patterns

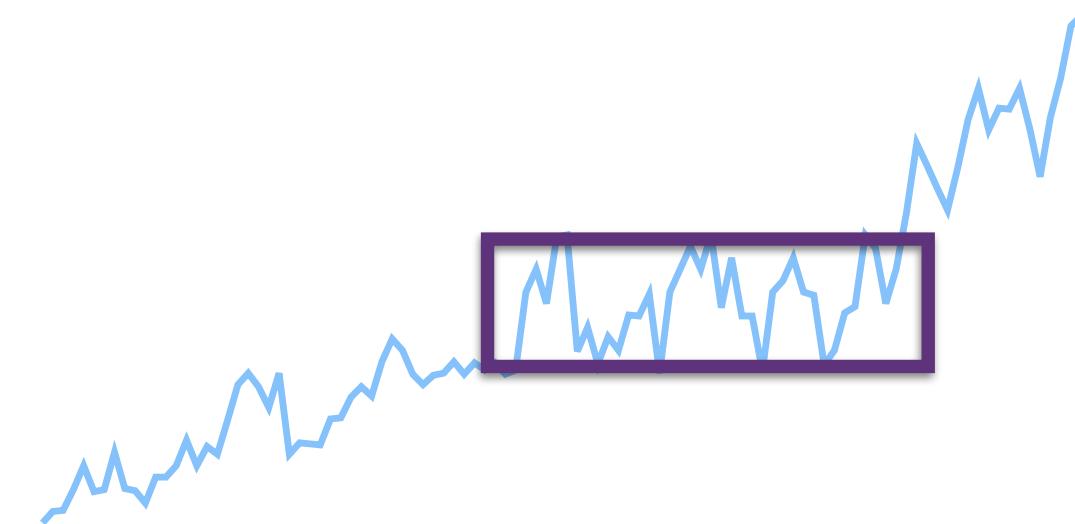
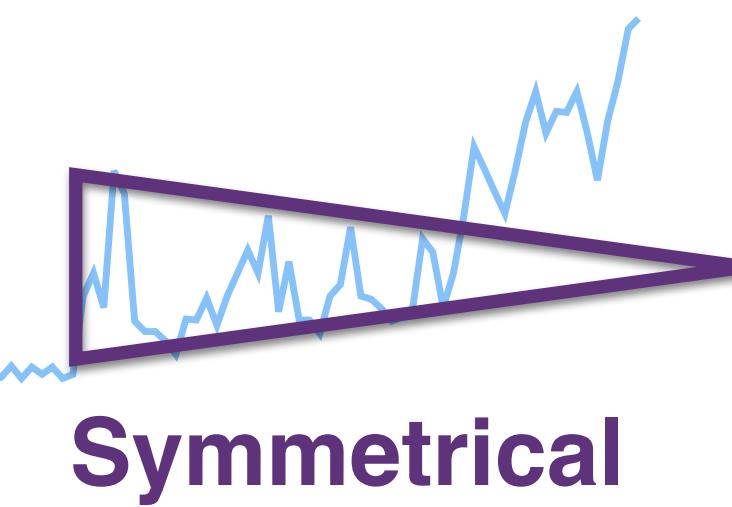
Continuation Patterns

Pause in trend. Buying ≈ Selling

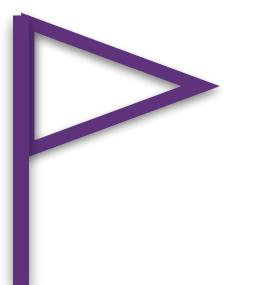


Continuation Patterns

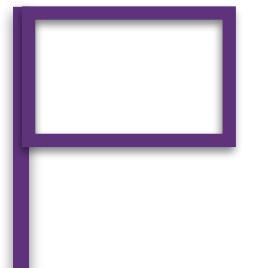
Pause in trend. Buying ≈ Selling



Minor Patterns



Pennant



Flag

Charts and Chart Patterns

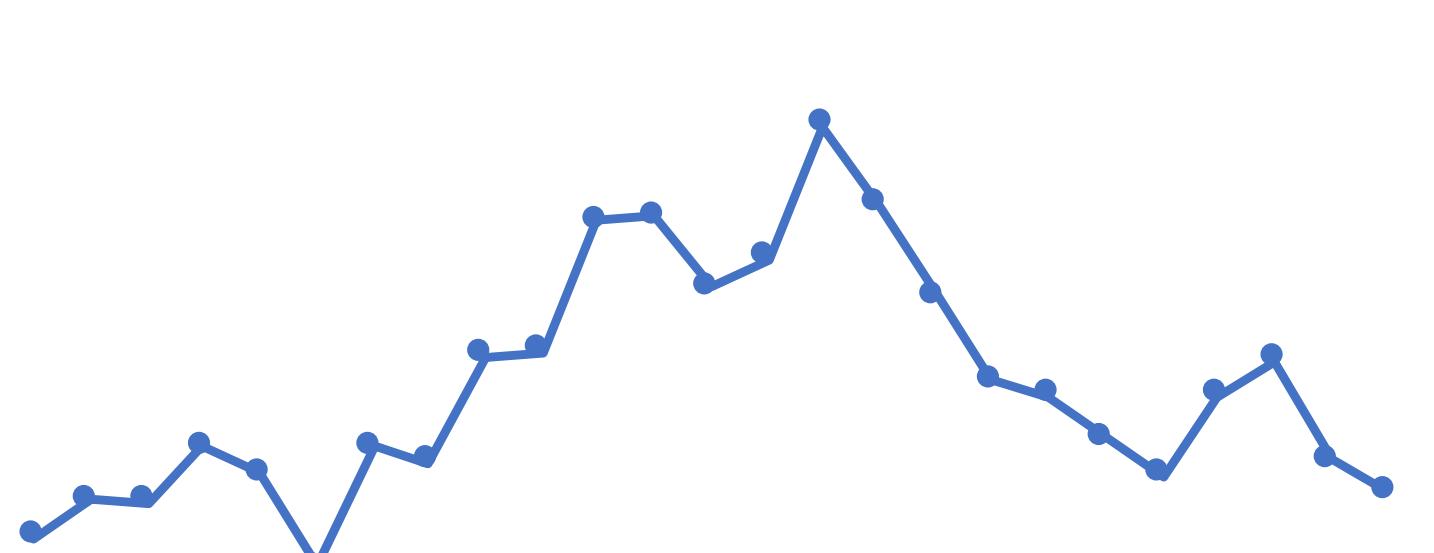


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Fundamental Analysis vs Technical Analysis

Fundamental Analysis	Technical Analysis
More suited for long-term investments	Applied over any time frame
More theoretical. Predict what the price <i>should be</i> .	More practical. Predict what the price <i>will be</i> .
Analyse wide range of data (financial statements, economic data, market research)	Analyse just price and volume data
Data is often delayed and subject to assumptions, restatements, even fraud.	Data is instantaneous and more concrete.
Based on rationale that markets are efficient and rational.	Based on rationale that market participants are emotional and irrational.
Does not analyse trends	May pick up trends caused by insider trading
Valuation models cannot be applied to such securities	Can apply to securities without income stream
Prices can often overshoot or undershoot the intrinsic value.	Can be slow to identify changes in trend

Charts



Line Chart



Bar Chart



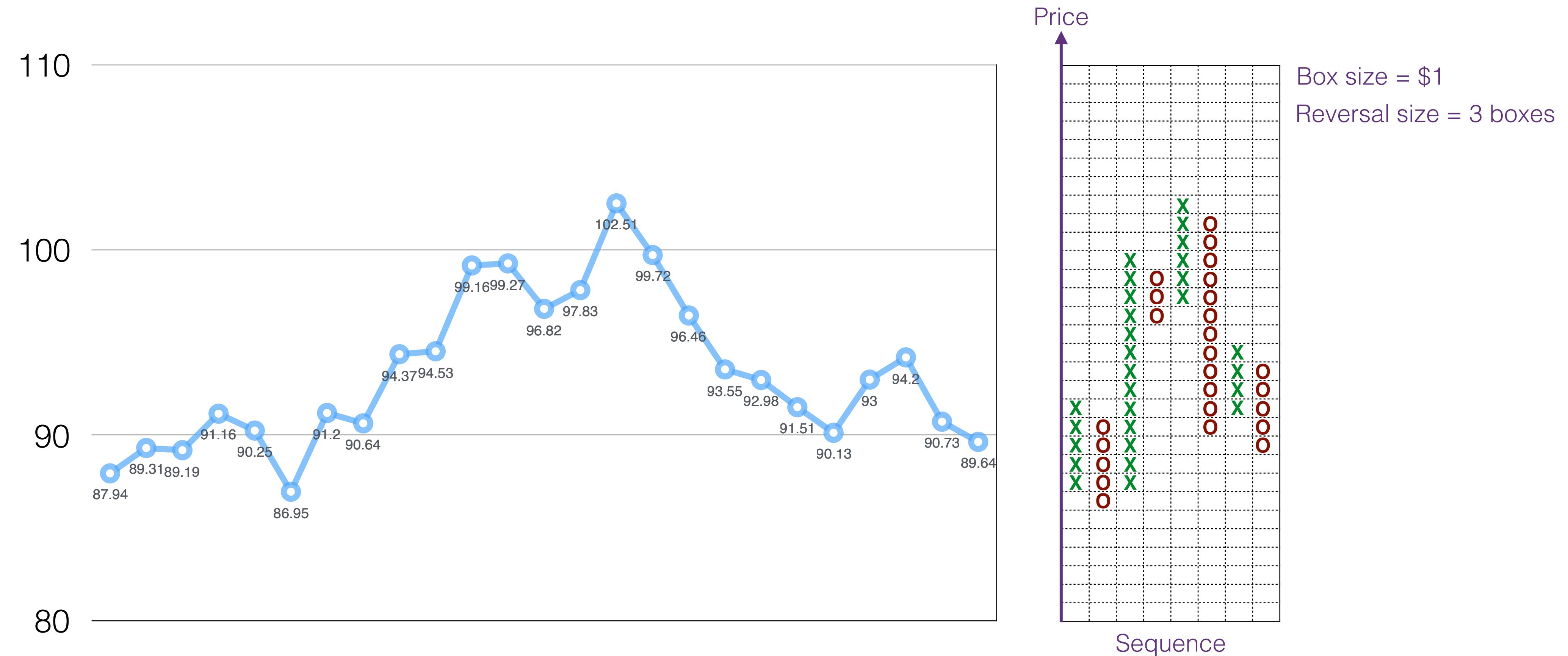
Candlestick Chart

■ Closing value

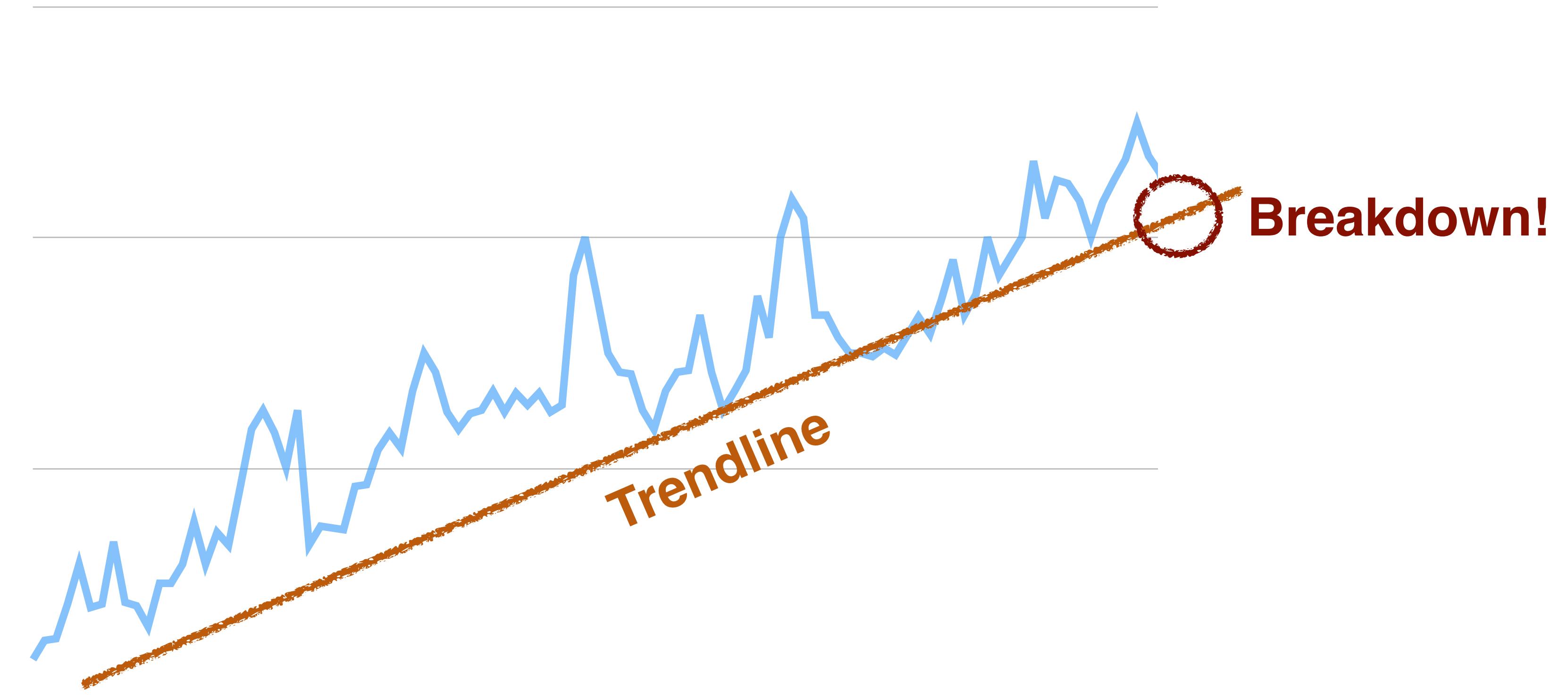
■ Opening value
■ Closing value
■ Range

■ Opening value
■ Closing value
■ Range
■ Polarity

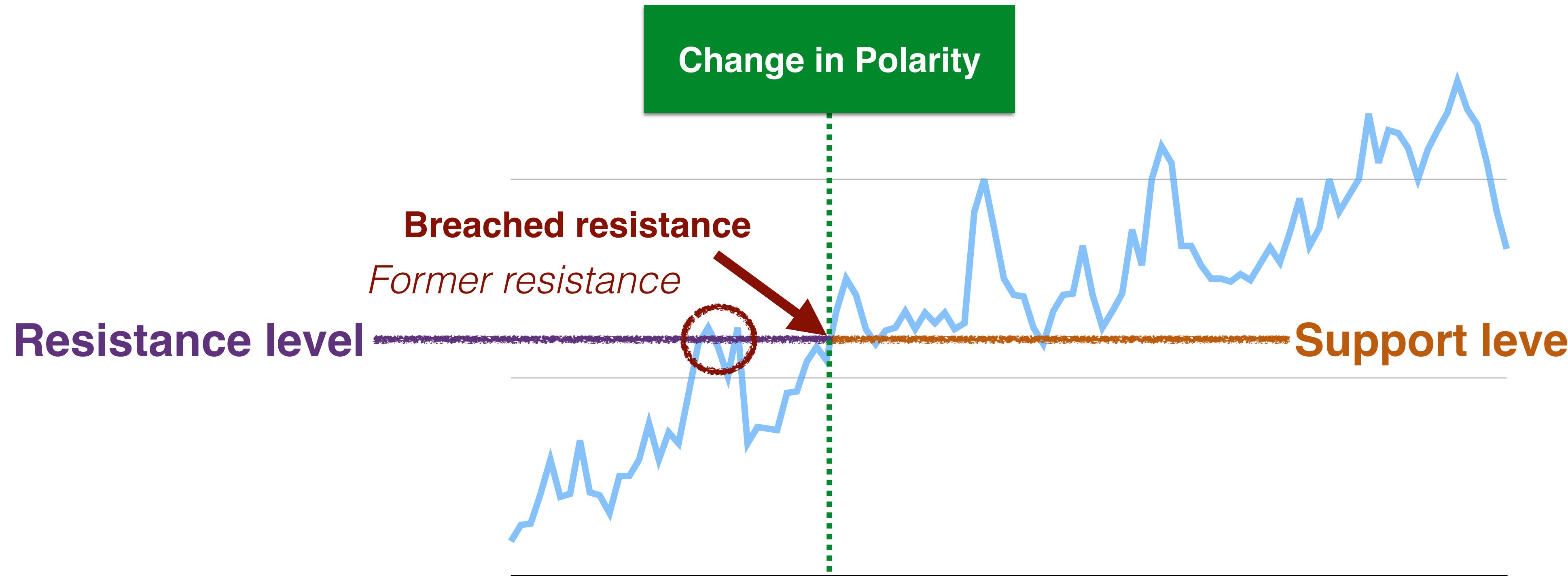
Point and Figure Charts



Uptrend



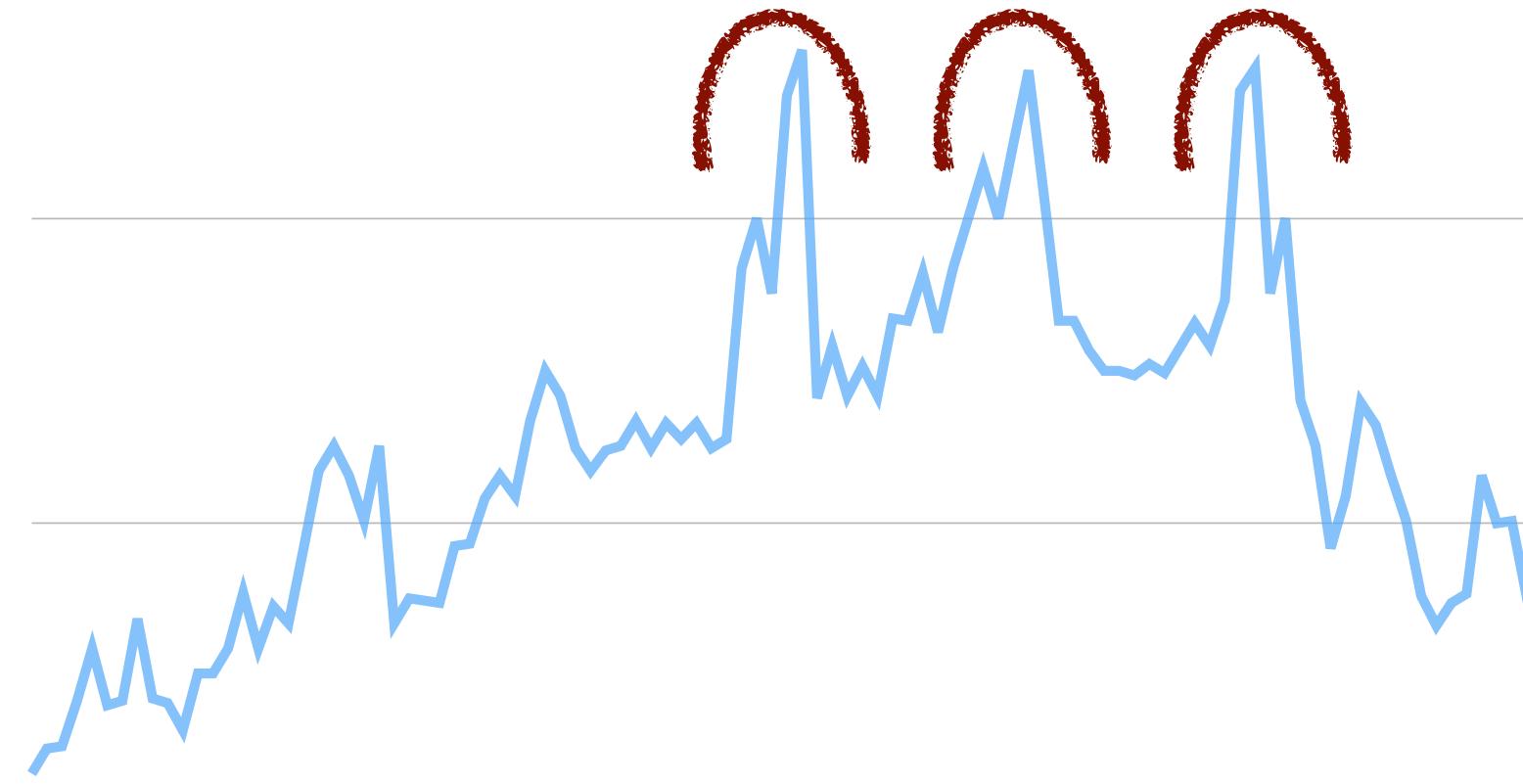
Uptrend



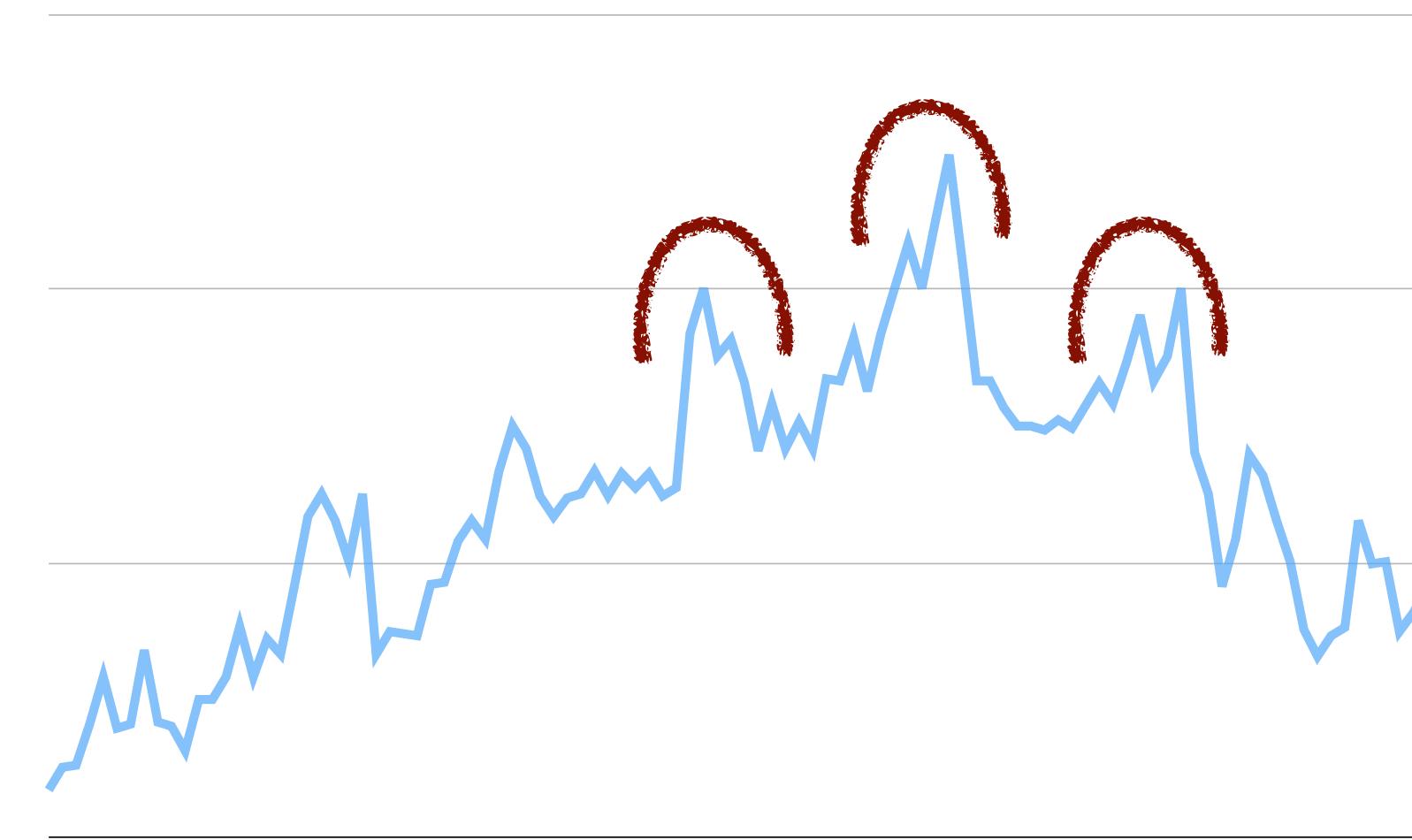
Reversal Patterns

Reversal of Uptrends

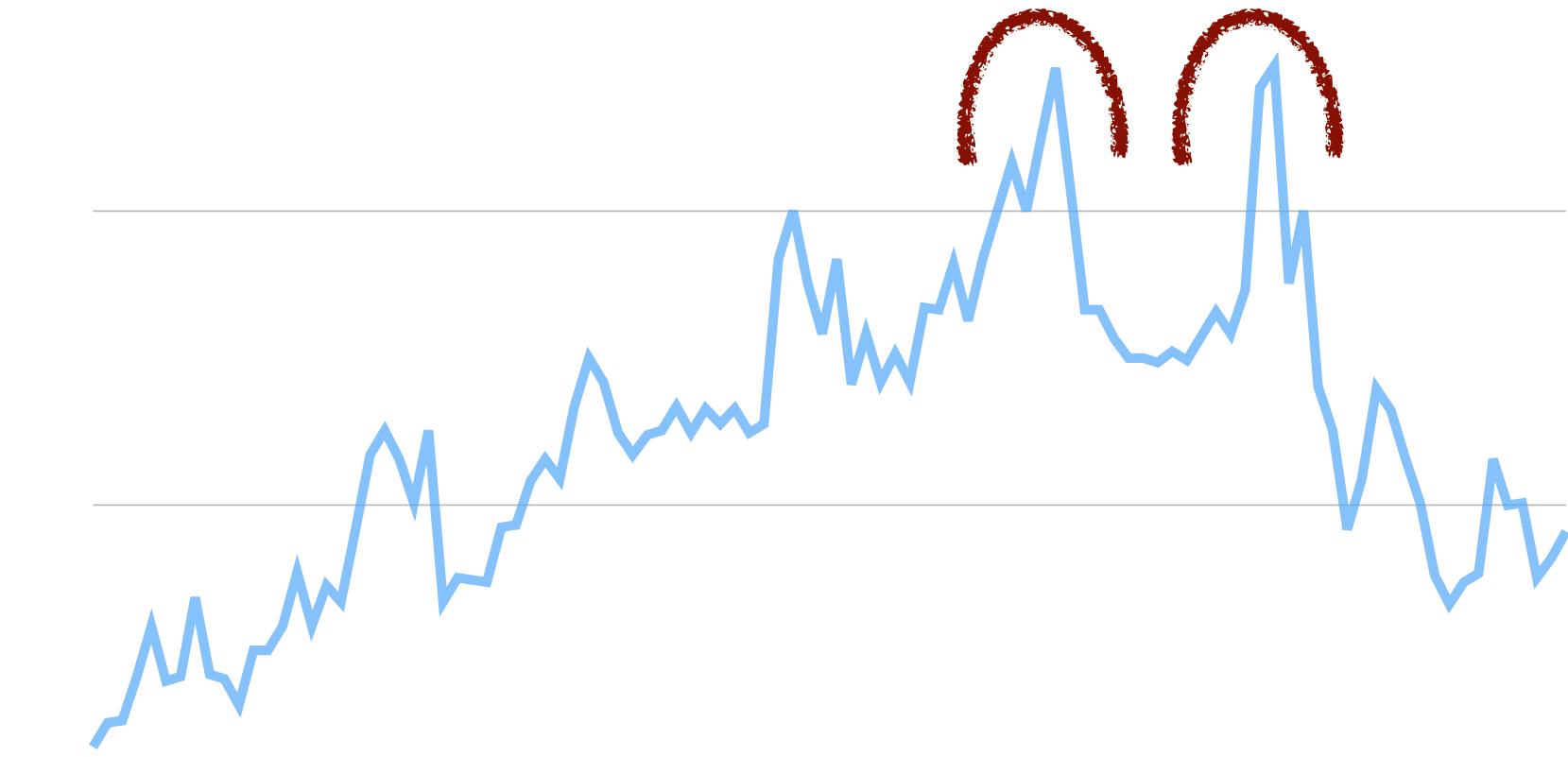
Triple top



Head-and-Shoulders



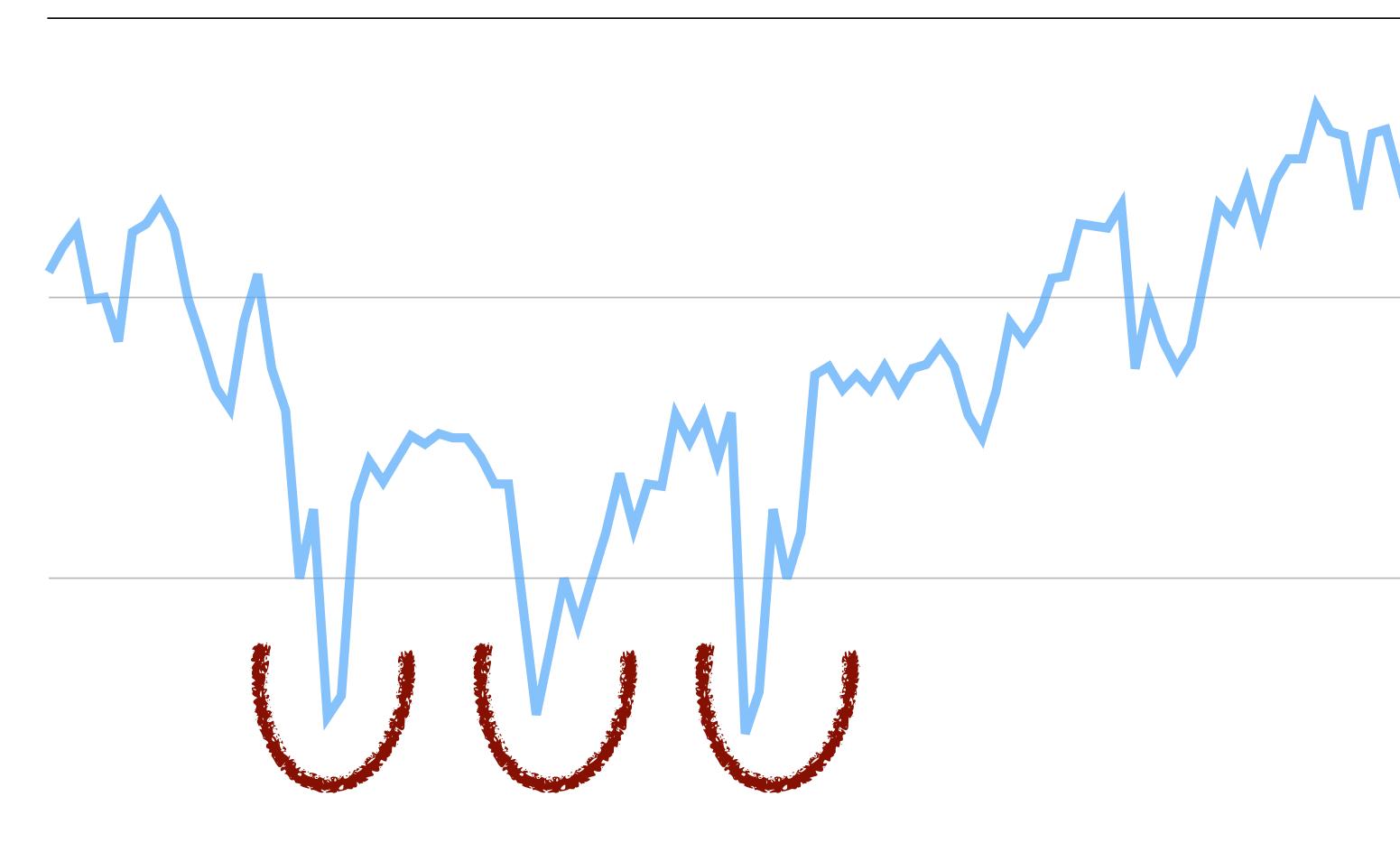
Double top



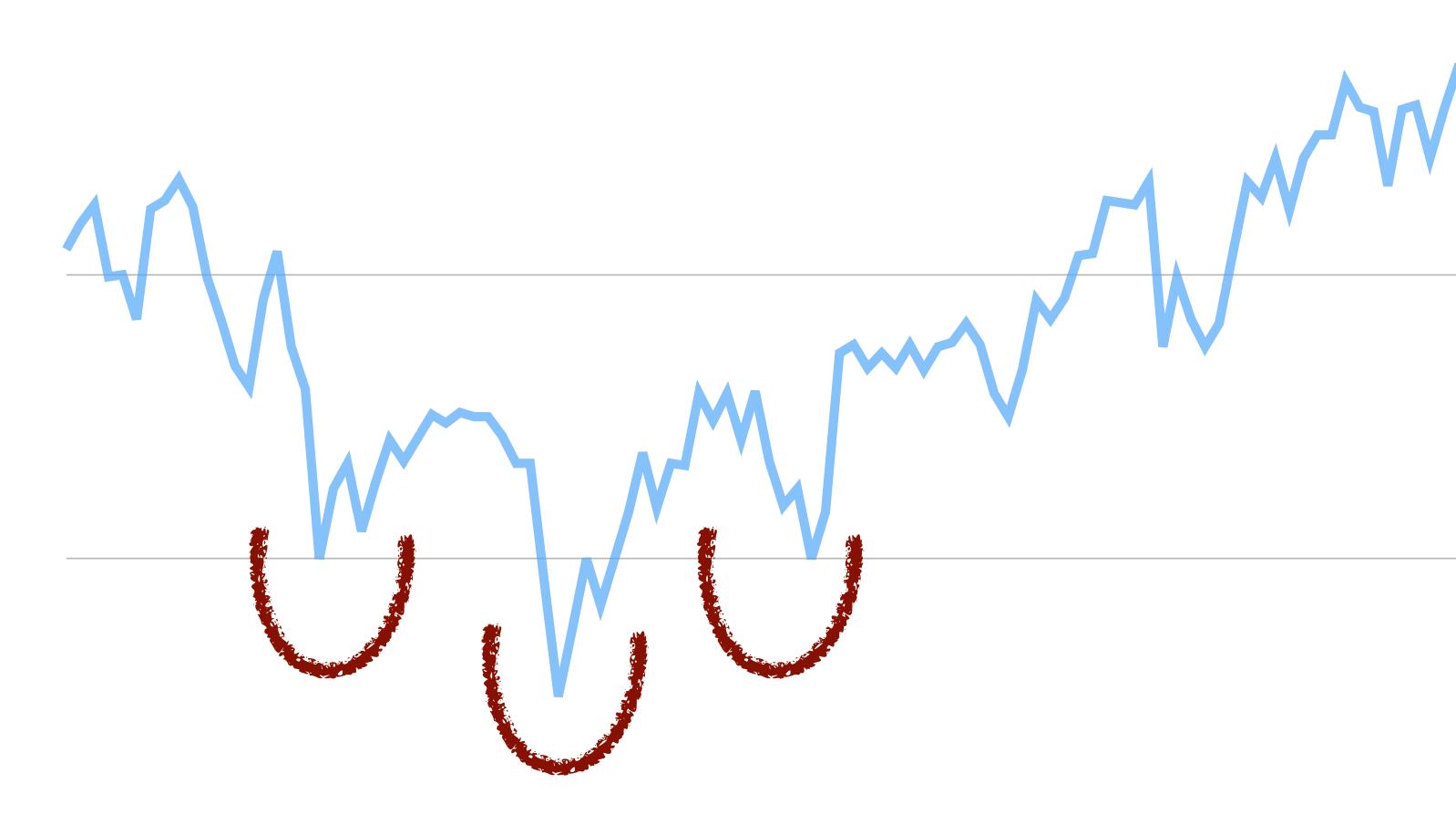
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Reversal of Downtrends

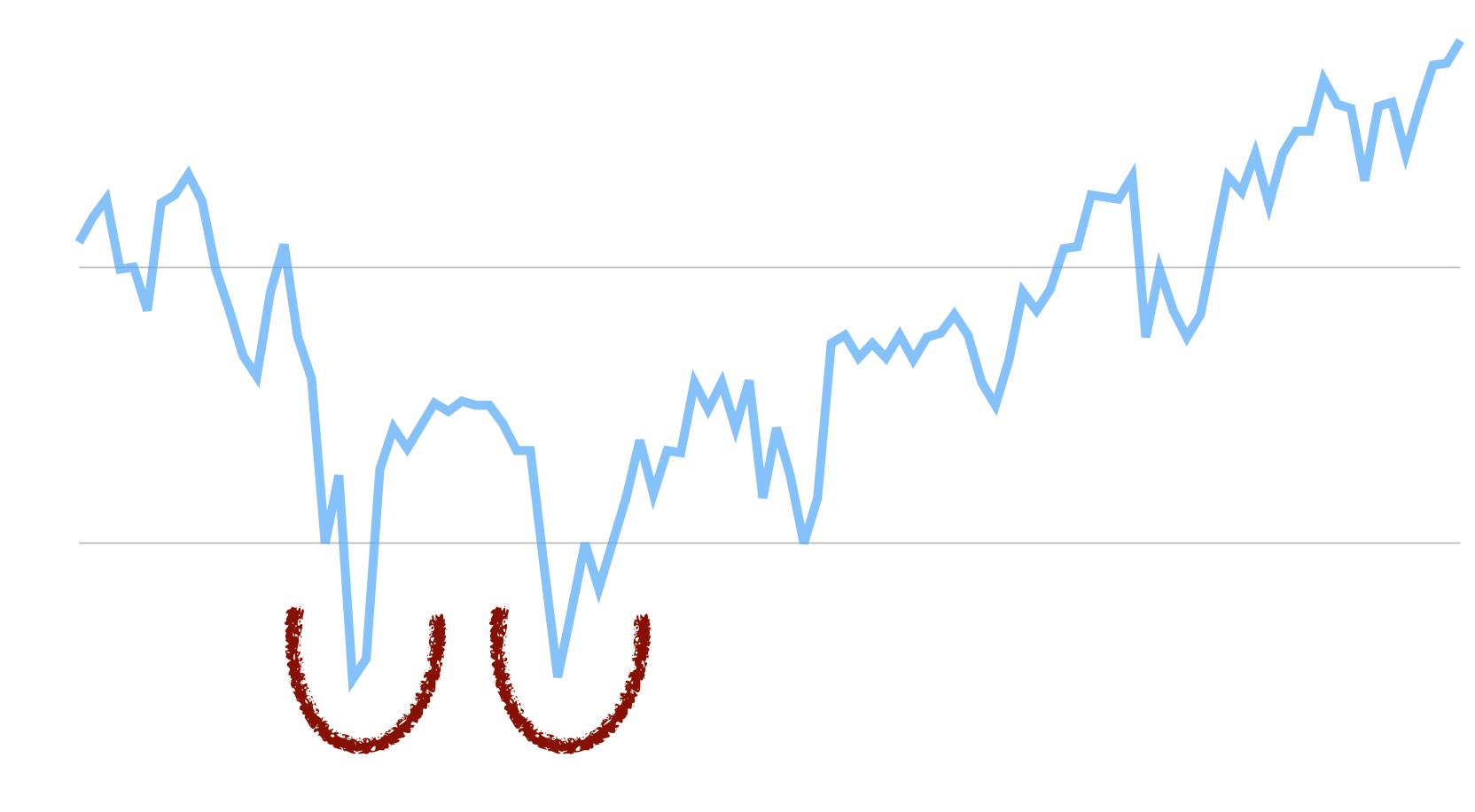
Triple bottom



Inverse Head-and-Shoulders



Double bottom



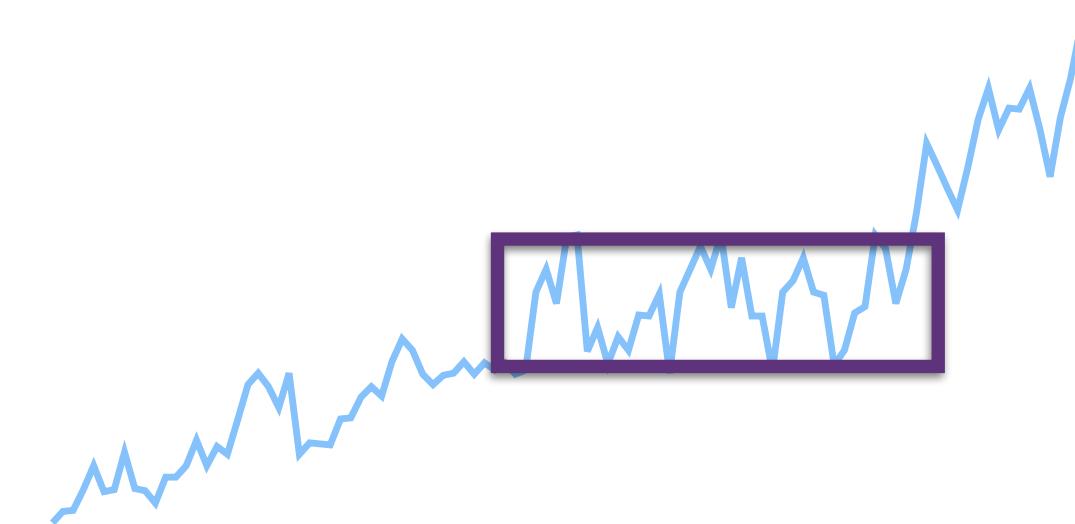
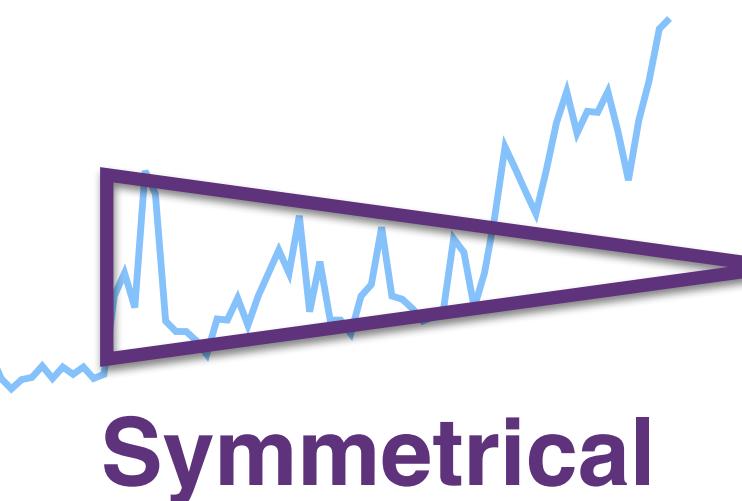
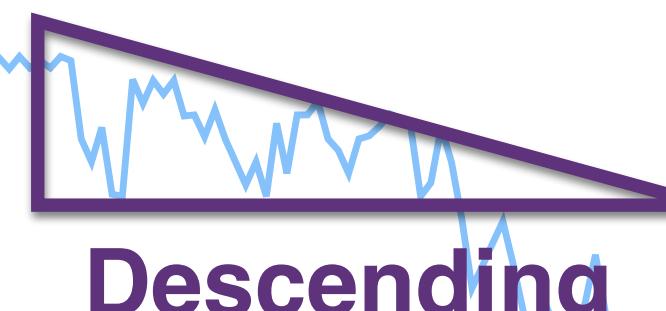
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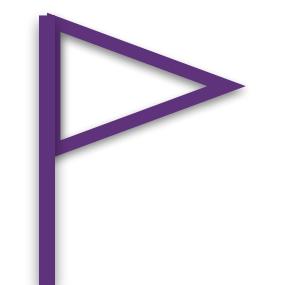
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Continuation Patterns

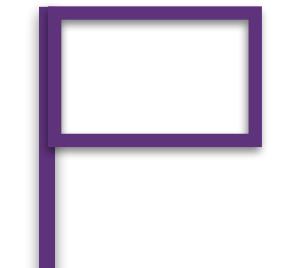
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Pennant



Flag