



CANADIAN INVESTORS' COURSE

Session 4 – Finding Equities



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Bear Markets EAT Your Wealth





Session 4: Finding Stocks to Buy (or Sell)

- Balance Sheet and You
- Fundamental Analysis
- Technical Analysis



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Tool Corp. (balance sheet) and You

Personal Household Budget, or Cash Flow Statement (family of four)

Family Income		
Salaries	\$100,000	
Interest Income	\$10,000	
Dividends	<u>\$5,000</u>	
Total Income	\$115,000	\$115,000

Less

Mortgage	\$15,000	
Food	\$11,000	
Clothing	\$5,000	
Utilities	\$6,000	
Auto/ Transportation	\$10,000	
Property Tax	\$5,000	
Vacation	\$5,000	
Miscellaneous	<u>\$3,000</u>	
Subtotal (1)		<u>-\$60,000</u>
		\$55,000
RESP	\$4,000	
RRSP	\$15,000	
Income taxes	<u>\$36,000</u>	
Subtotal (2)		<u>-\$50,000</u>
		\$5,000

goes to
savings
account or
to pay
down debt



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Tool Corp Income or Cash flow Statement

Net Sales		\$500
Cost of Goods Sold	-380	<u> </u>
Gross Profit		\$120
Less: Operating costs	-15	
Selling costs	-10	
Salaries	-15	
Depreciation	-10	<u> </u>
Operating Profit		70
Less: Interest Expense	-20	<u> </u>
Income before tax		50
Less: Tax		<u>-10</u>
Earning after taxes		40
Extraordinary items *	+ 5	<u> </u>
Net Income		\$45

**Net income goes to
Shareholder's Equity**

*** can be positive or
negative, in this case - sold
used machinery and land**

What about EBITDA?
(defined on page 14)

(all numbers in millions)



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Personal Household Net Worth Statement

Assets

Short Term

cash	\$5000
\$ mmkt, t-bills	\$20,000

Long Term

bonds, GICs	\$100,000
mutual funds	\$50,000
equities	\$100,000
house	\$500,000

Other Assets

cars	\$40,000
jewelry	<u>\$10,000</u>
Total Assets	\$825,000

Liabilities

Short Term

credit cards	\$10,000
home equity loan	\$45,000
car loan	\$20,000

Long Term

Mortgage	\$200,000
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Total Liabilities	\$275,000
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Net Worth = Assets – Liabilities

= \$825,000 – 275,000

= \$550,000



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Tool Corp – Balance Sheet (all numbers in millions)

Assets		Liabilities	
<u>Current Assets</u>		<u>Current Liabilities</u>	
cash	10	accounts payable	20
short term investments	5	<u>Short term debt</u>	<u>30</u>
net receivables	75	Total Current Liabilities	50
<u>inventory</u>	<u>20</u>		
Total Current Assets	110		
		Long Term Debt	120
Long Term Investment	95	Other Liabilities	20
property, plant, equipment	240	<u>Deferred LT liability charge (taxes etc)</u>	<u>10</u>
goodwill	150		
intangible assets (eg patents etc)	20	Total Liabilities	200
deferred LT asset (pre-paid exp)	30		
<u>Other assets</u>	<u>0</u>	Total Shareholder Equity	<u>445</u>
	645		645

(Assets – Liabilities = Shareholder Equity is the “Accounting Equation”)

Shareholder Equity

common stock	400
retained earnings	45 (from earnings statement)
Total Shareholder Equity	445 (assets – liabilities)
Net Tangible Assets	275 assets – (liabilities + intangibles + goodwill)

40 million shares outstanding – last trade = \$24.50/share



Fundamental Analysis

- Must find out if a company is a good buy or not
- In order to compare whether a company is a better buy than another, you need to use financial ratios as measurements
- Types of Financial number ratios
 1. Liquidity Ratios
 2. Profitability Ratios
 3. Leverage Ratios



Ratios used in Equity Investing

Liquidity ratio tells you how easily a company can pay its debt over the next 12 months.

Use Current Ratio:

Current Ratio

$$\frac{\text{Current Assets}}{\text{Current Liabilities}} = \text{short term liquidity} \quad (2:1 \text{ is good})$$
$$= \frac{110}{50} = 2.2x$$

Debt To Equity – total debt is taken into account here:

$$\frac{\text{Total Liabilities} \times 100}{\text{Shareholder Equity}} = \frac{200 \times 100}{445} = 44.9\%$$



Ratios used in Equity Investing Cont'd

- Profitability Ratios tells how good a company is at making money:
- Operating Profit ratio =
$$\text{operating income} \times 100 / \text{net sales}$$
$$= 70 \times 100 / 500 = 14\%$$
- Net Profit Ratio =
$$\text{Net income after taxes} \times 100 / \text{net sales}$$
$$= 40 \times 100 / 500 = 8\%$$
- Generally; the higher the number, the better
- Must compare to previous years returns and other companies in the same industry



Ratios Used in Equity Investing Cont'd

Return on Equity – very good profitability measure

$$\frac{\text{Net Profit Margin}}{\text{Shareholder's Equity}} \times 100 = \frac{45}{445} \times 100 = 10.11\%$$

Price to Book Value (liquidation value):

$$\frac{\text{Share price}}{(\text{Total Shareholder Equity} - \text{Preferred Equity}) / \text{Total Outstanding Shares}}$$

$$\frac{24.50}{(445 - 0) / 40} = \frac{24.50}{11.13} = 2.2x$$

(considers only public float)



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Ratios Used in Equity Investing Cont'd

Most popular ratios used by investors:

Earnings Per Share

$$\frac{\text{Net Profit}}{\text{\# of shares outstanding}} = \frac{45}{40} = \$1.125/\text{share}$$

Price to Earnings Ratio (P/E)

$$\frac{\text{Price of stock}}{\text{earnings per share}} = \frac{\$24.50}{1.125} = 21.77x$$

Dividend Yield

$$\frac{\text{dividend}}{\text{share price}} \times 100 = \frac{0}{24.50} \times 100 = 0\%$$



EBITDA

- EBITDA is “Operating Profits”: (**E**arnings **B**efore **I**nterest, **T**axes, **D**epreciation & **A**mortization)
- Watch out for this: where to use properly?



What Investors Watch

Ratios are use to monitor the overall market :

- Historical PEs on the S&P 500
- The S&P 500 before and after inflation
- Dividend Yield for markets
- Market index price to Sales
- Market capitalization to economy GDP



Technical Analysis

Technical analysis is a trading tool employed to evaluate securities and attempt to forecast their future movement by analyzing statistics gathered from trading activity, such as price movement and volume. Price movement is the most popular form used.

A technician assumes that price discounts everything, this essentially means the market price of a security at any given point in time accurately reflects all available information, and therefore represents the true fair value of the security. This assumption is based on the idea that the market price always reflects the sum total knowledge of all market participants.

The second basic assumption underlying technical analysis is the notion that price changes are not random, leads to the belief of technical analysts that market trends, both short term and long term, can be identified, enabling market traders to profit from investing according to the existing trend.



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There are many forms of Technical Analysis and tools available. Below is a list of different types. Please note there are more as well.

- Technical Indicators
- Market Sentiment Indicators
- Trend and Trendlines
- Bar Chart Analysis
- Candlestick Chart Analysis
- Point-and-Figure Charts
- Moving Averages
- Price Channels, Envelopes and Bands
- Momentum & Momentum Indicators
- Ralph Nelson Elliot and the Elliot Wave Theory



One Form of Technical Analysis:

Using Simple Moving Averages

1. Single moving average approach
2. Moving average 'CROSS' approach (our favourite)



Definition: Simple Moving Average Calculation 1

A simple moving average is formed by computing the average price of a security over a specific number of periods. Most moving averages are based on closing prices. A 5-day simple moving average is the five day sum of closing prices divided by five. As its name implies, a moving average is an average that moves. Old data is dropped as new data becomes available. This causes the average to move along the time scale. Below is an example of a 5-day moving average evolving over three days.

Daily Closing Prices: 11,12,13,14,15,16,17

First day of 5-day SMA: $(11 + 12 + 13 + 14 + 15) / 5 = 13$

Second day of 5-day SMA: $(12 + 13 + 14 + 15 + 16) / 5 = 14$

Third day of 5-day SMA: $(13 + 14 + 15 + 16 + 17) / 5 = 15$



Definition: Simple Moving Average Calculation 2

Daily Closing Prices: 11,12,13,14,15,16,17

First day of 5-day SMA: $(11 + 12 + 13 + 14 + 15) / 5 = 13$

Second day of 5-day SMA: $(12 + 13 + 14 + 15 + 16) / 5 = 14$

Third day of 5-day SMA: $(13 + 14 + 15 + 16 + 17) / 5 = 15$

The first day of the moving average simply covers the first five days. The second day of the moving average drops the first data point (11) and adds the new data point (16). The third day of the moving average continues by dropping the first data point (12) and adding the new data point (17). In the example above, prices gradually increase from 11 to 17 over a total of seven days. Notice that the moving average also rises from 13 to 15 over a three day calculation period. Also notice that each moving average value is below the last price. For example, the moving average for day one equals 13 and the last price is 15. Prices the prior four days were lower and this causes the moving average to lag.

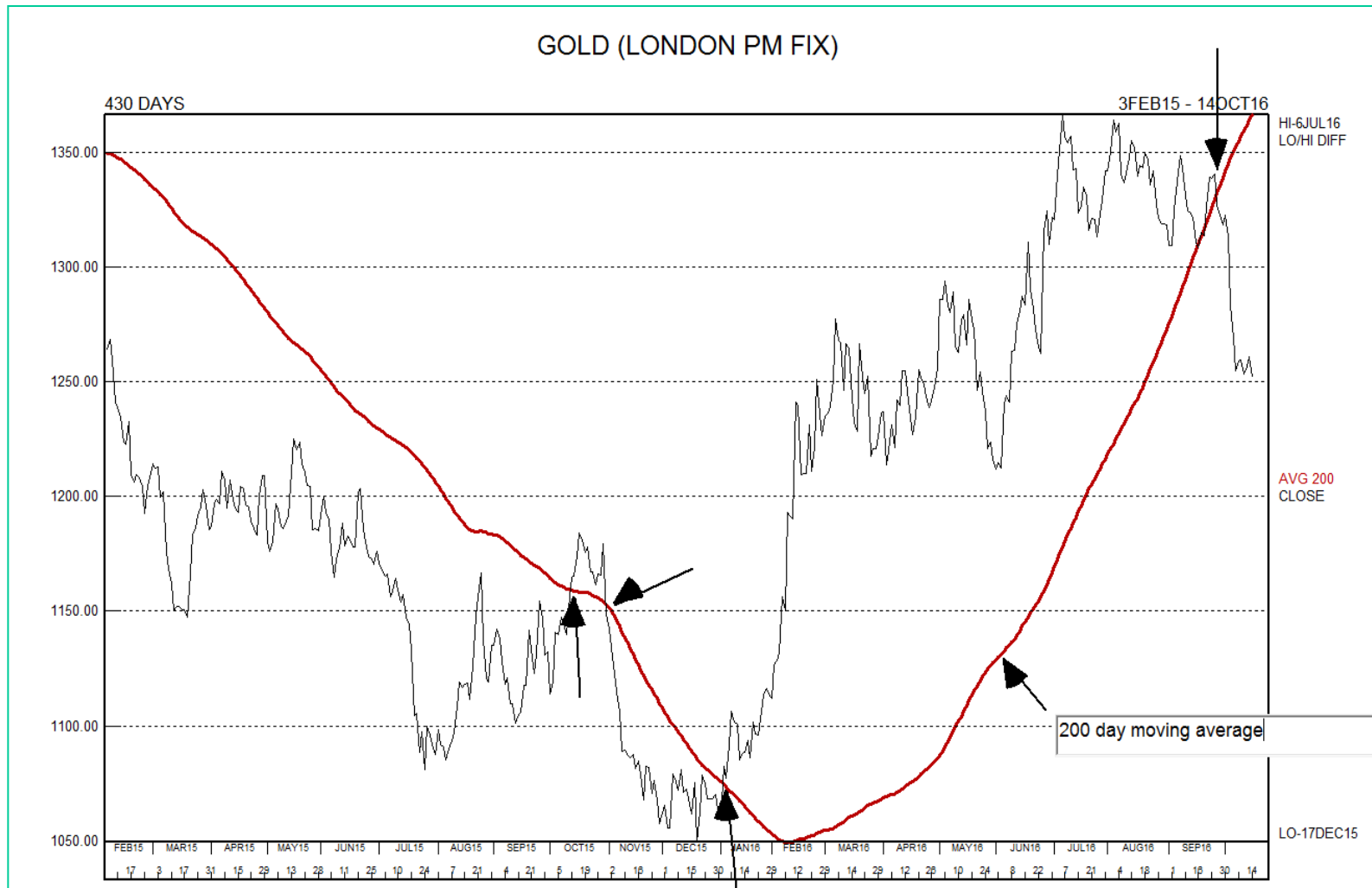


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Using a 50 or 200 day Moving Average

(follow these charts to learn about Moving Averages)





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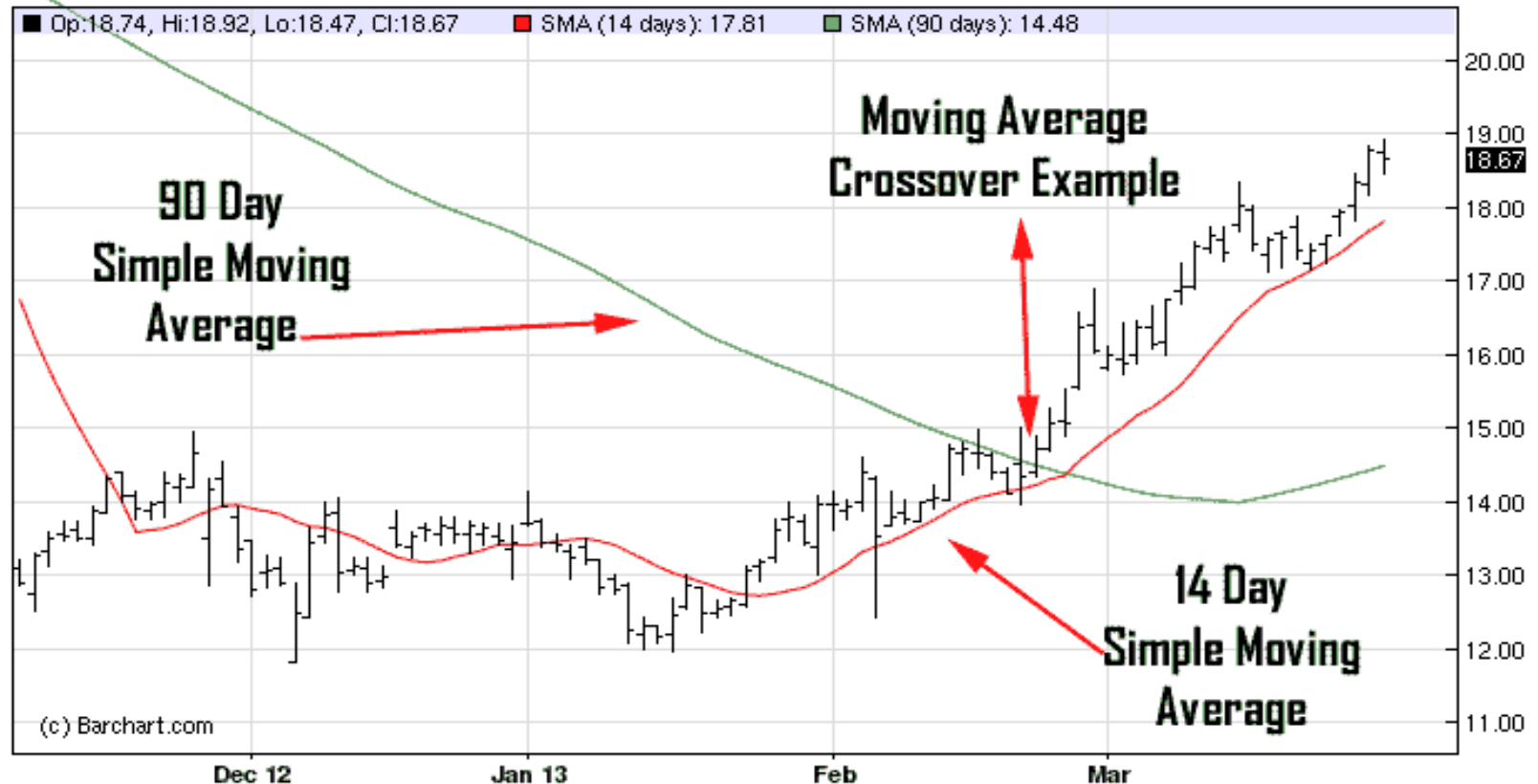


In this Session we will concentrate on a simple, yet effective form of Technical analysis:
Dual Moving Average Crossover.

How To Use The Dual Moving Average Crossover

The Moving Average Crossover uses two simple moving average time frames. The first time frame is 90 days and the second time frame is 14 days. Using a combination of these two time frames produces a good mix between the short term time frame and the long term time frame.

ABMD - Abiomed - Daily OHLC Chart

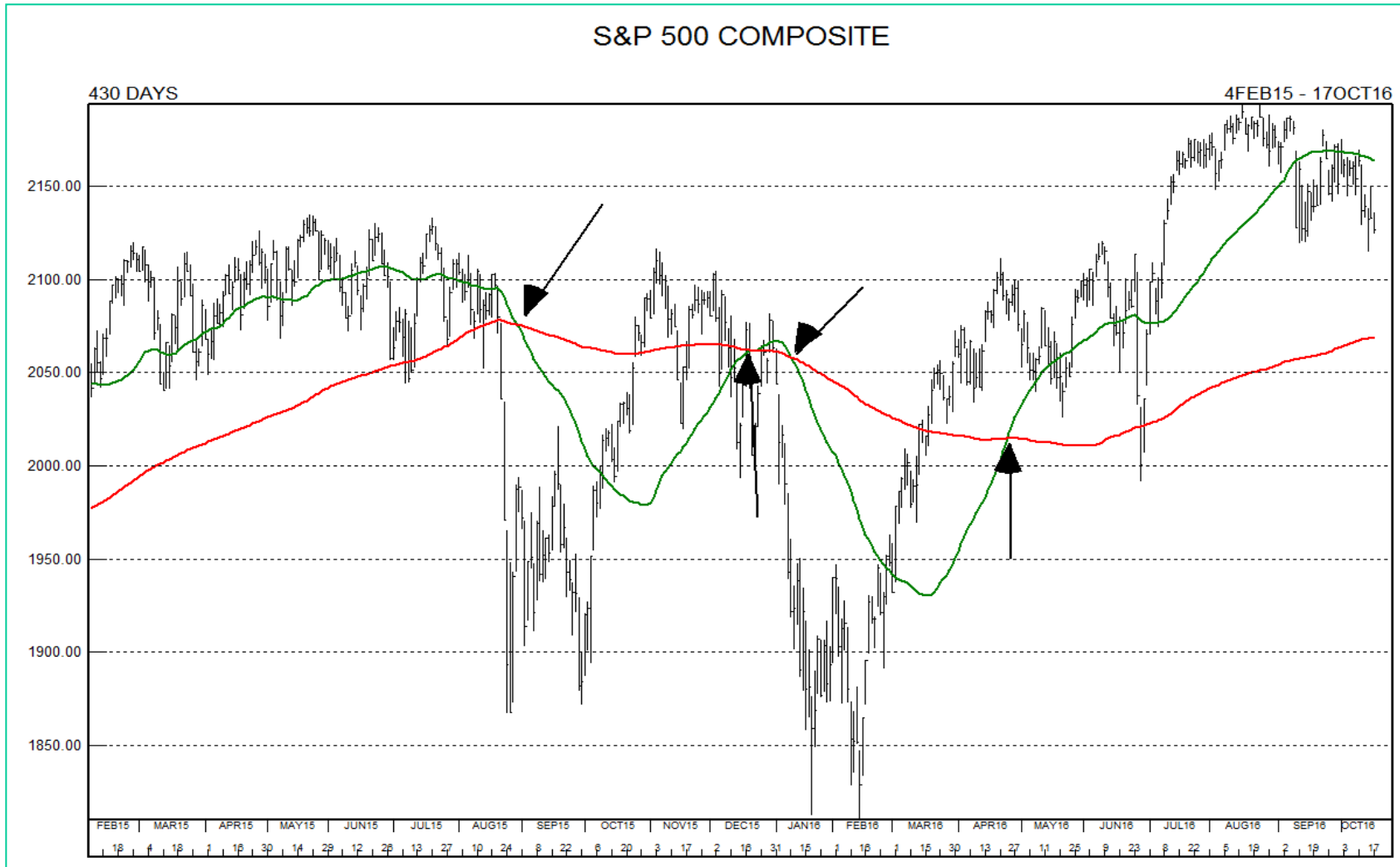




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Example using 50 day and 200 day Moving Average Crosses





Technical Analysis

Using 'Monthly' time frame charts give fewer, but more accurate, crosses or signals. This is a very important tool for a 'Rules Based' Investment approach that will be discussed in a later session.

The next few slides go back to 1929 and assume that an investor buys at the top of the market, the start of the Great Depression, in 1929. If you 'Bought and Held' during the next decade, would have lost a major portion of your wealth.

But Rules Based Investing gave you a profit during 1930-1940 and every subsequent decade. Amazing results, yes? Note: This is covered in the Session 4 Commentary. But sadly not practiced today by the majority of Canadian financial firms/individuals.

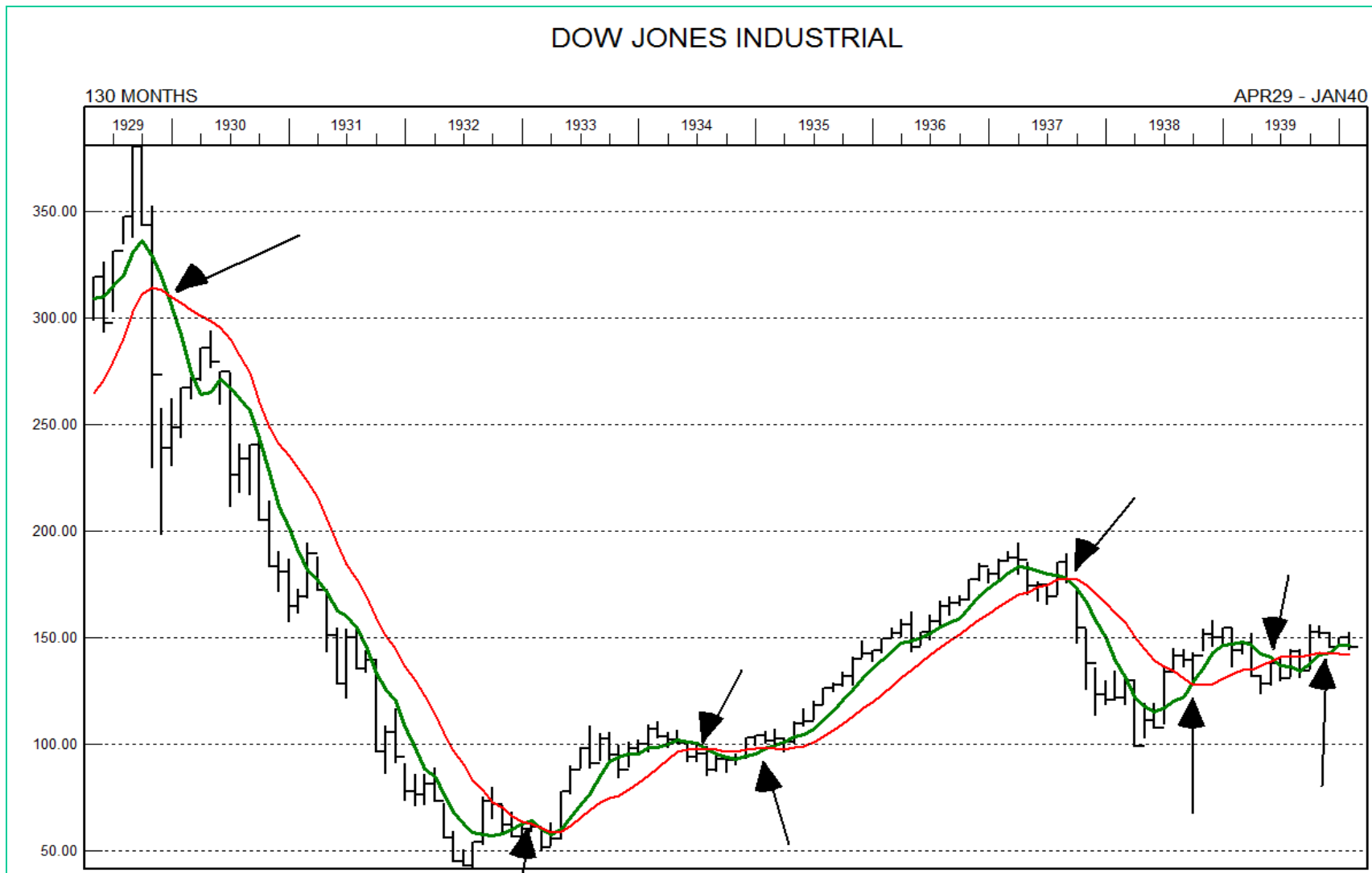
Please Note: The following charts use 6 and 13 month Moving Averages for the DJIA since September 1929 onwards to present time.



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1929-1940

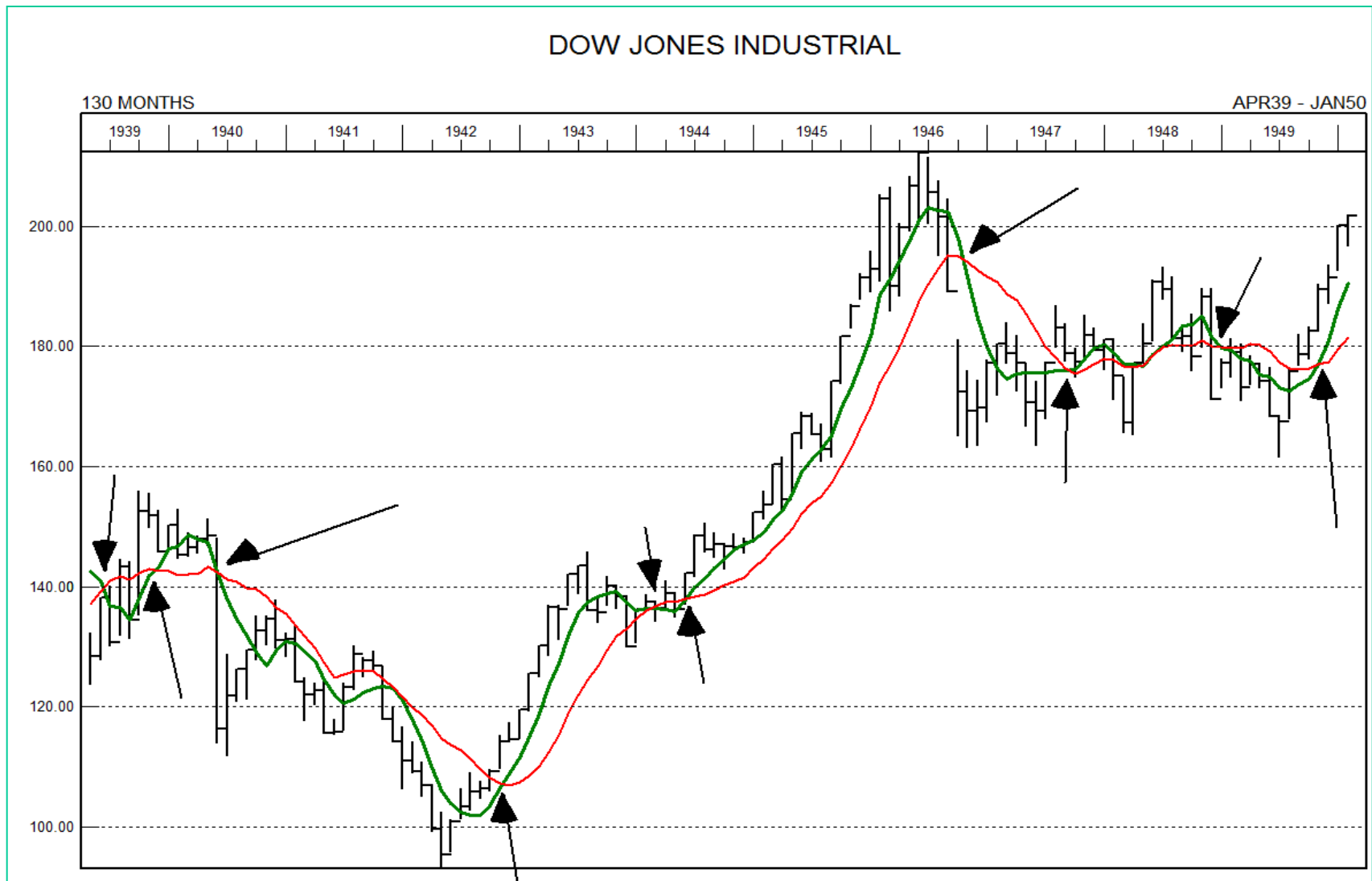




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1939-1950

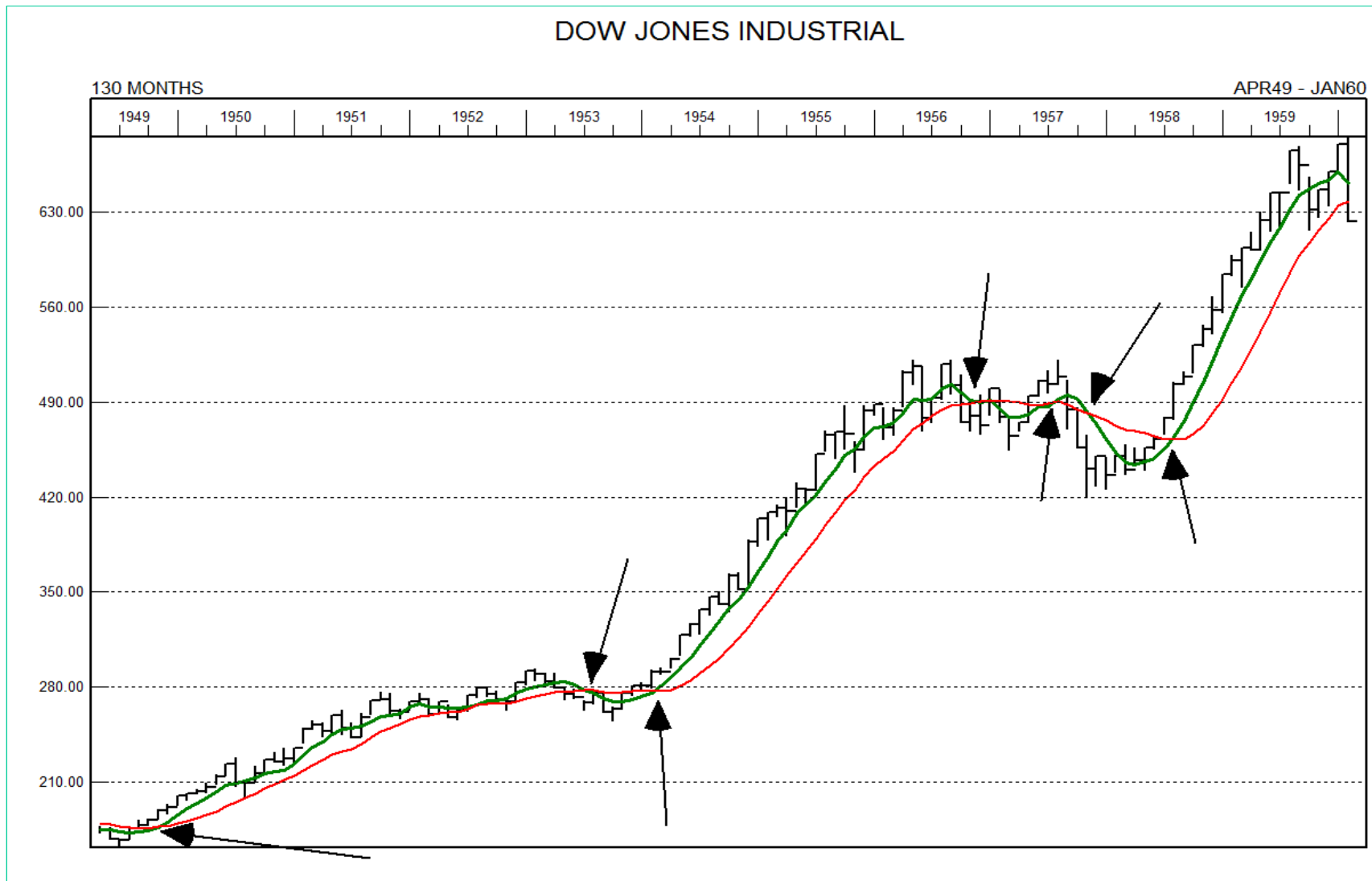




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1949-1960

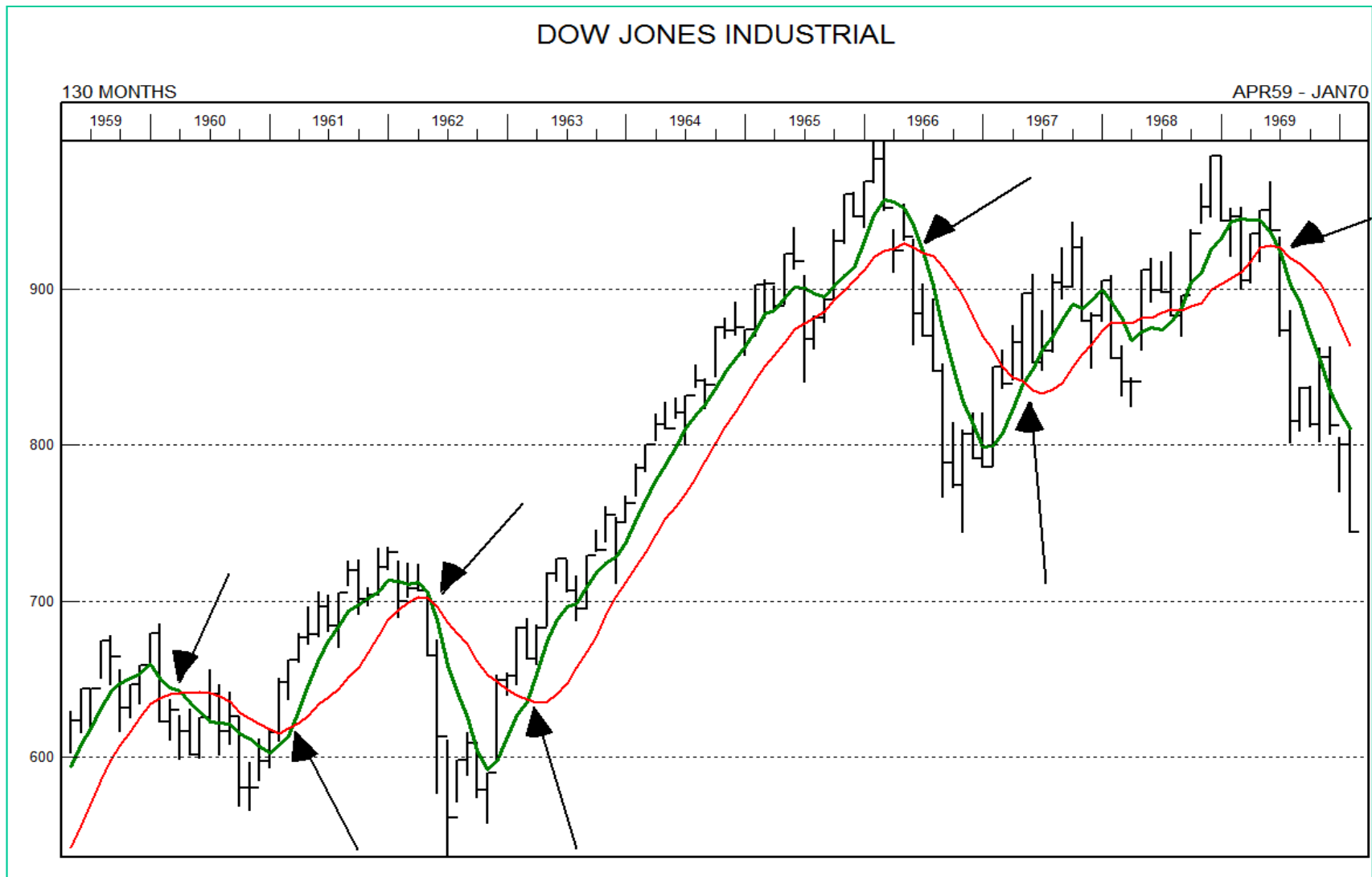




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1959-1970

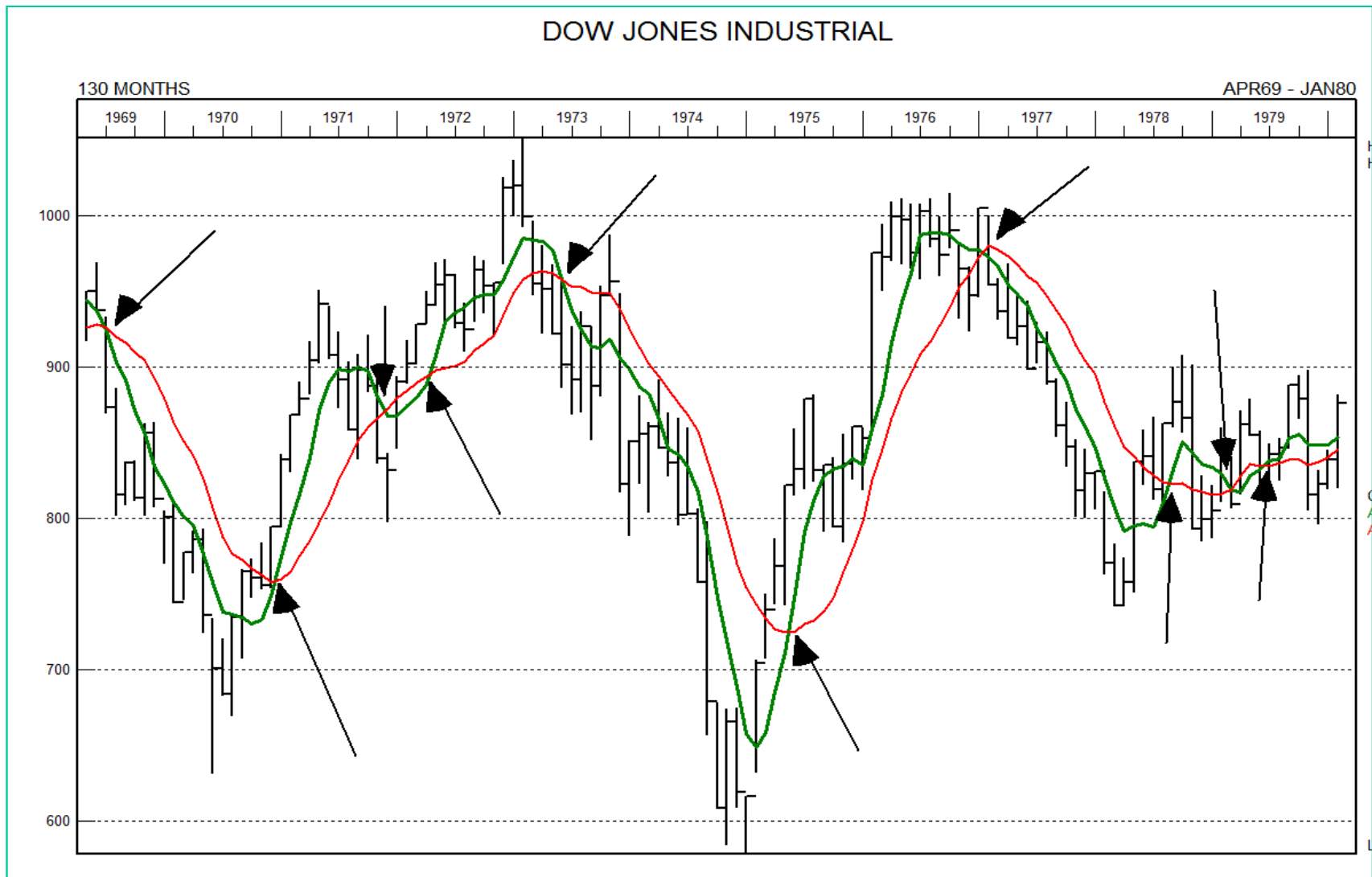




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1969-1980

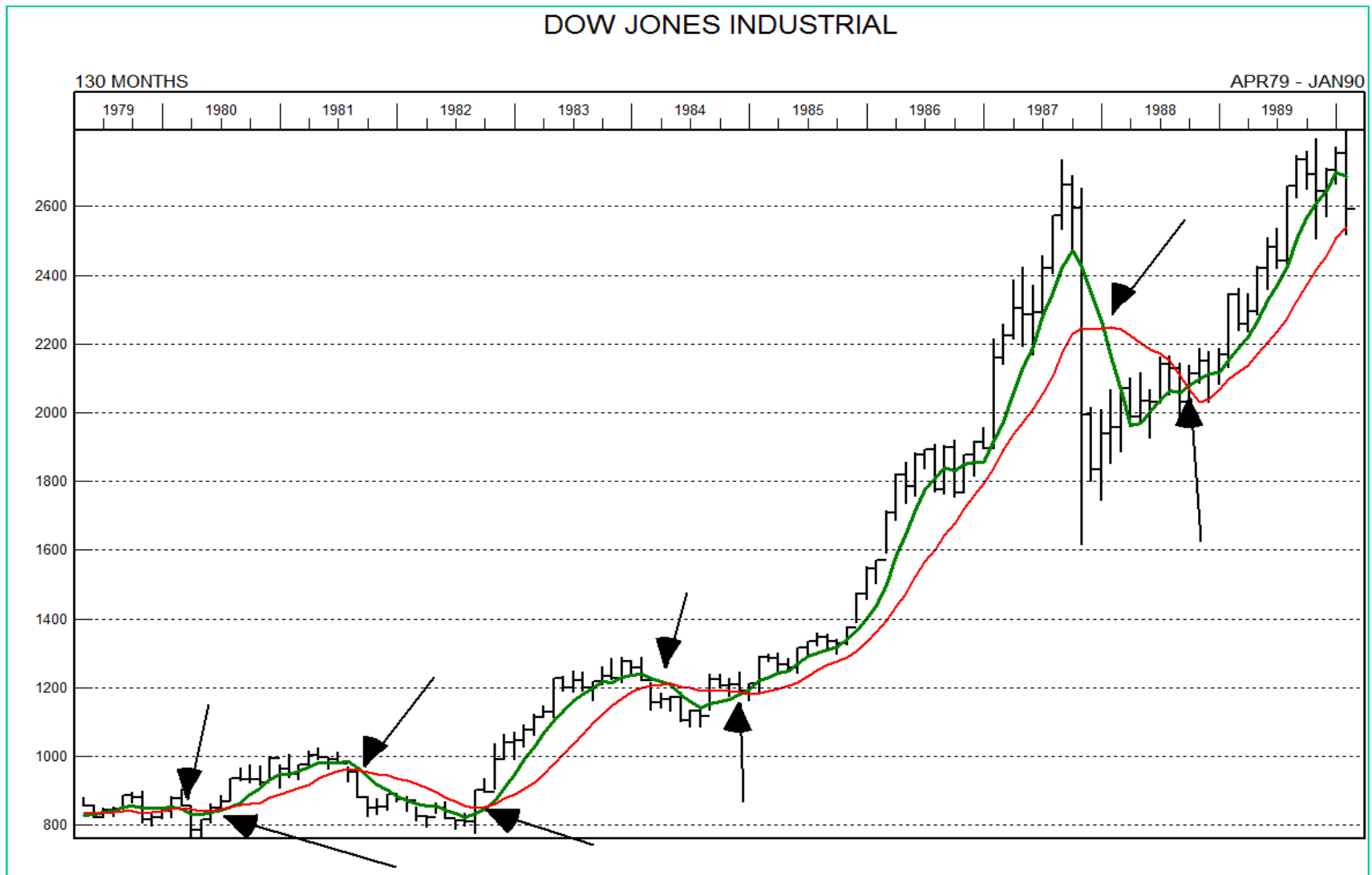




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1979-1990

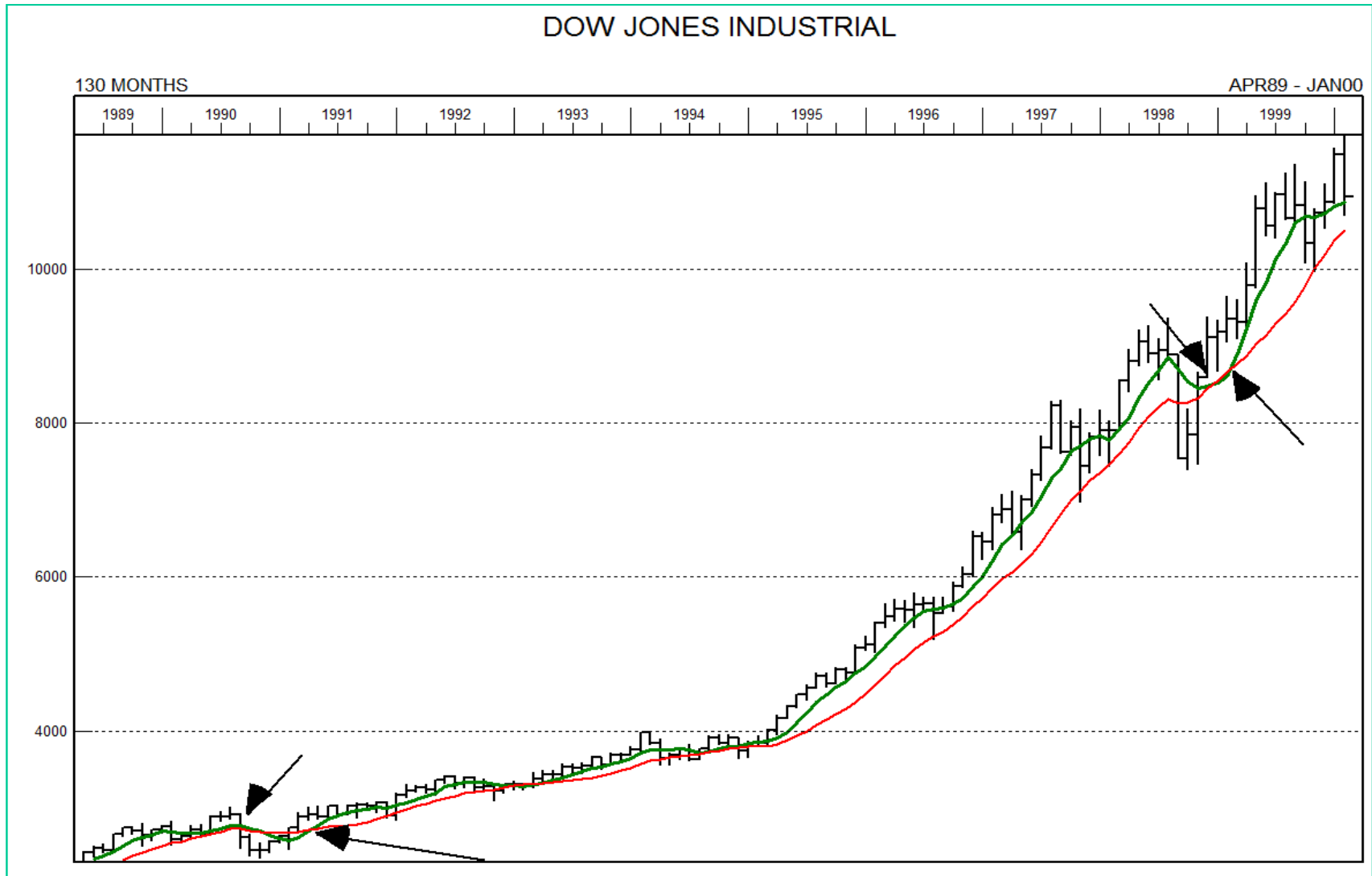




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1989-2000

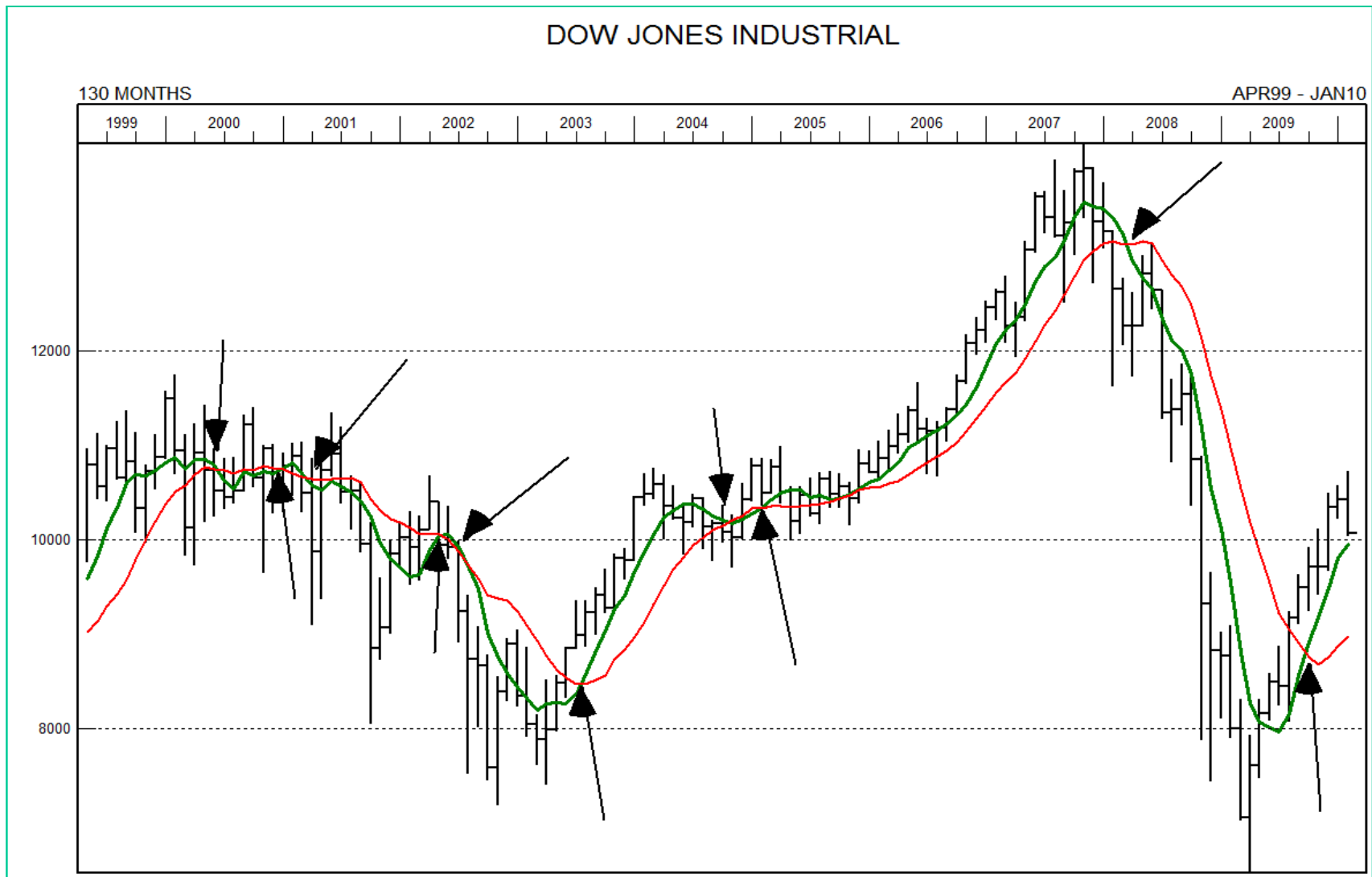




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1999-2010

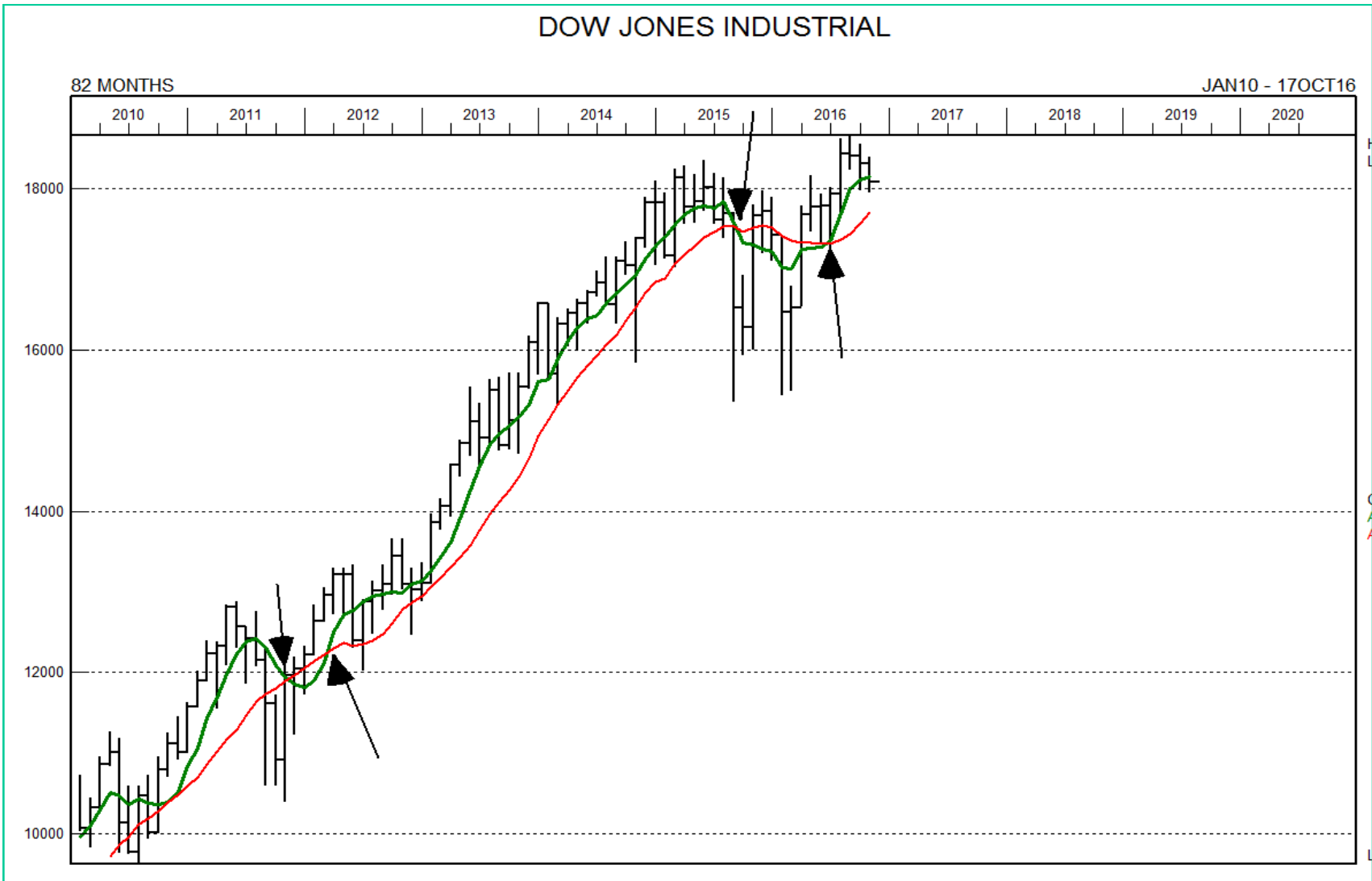




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2010-2016

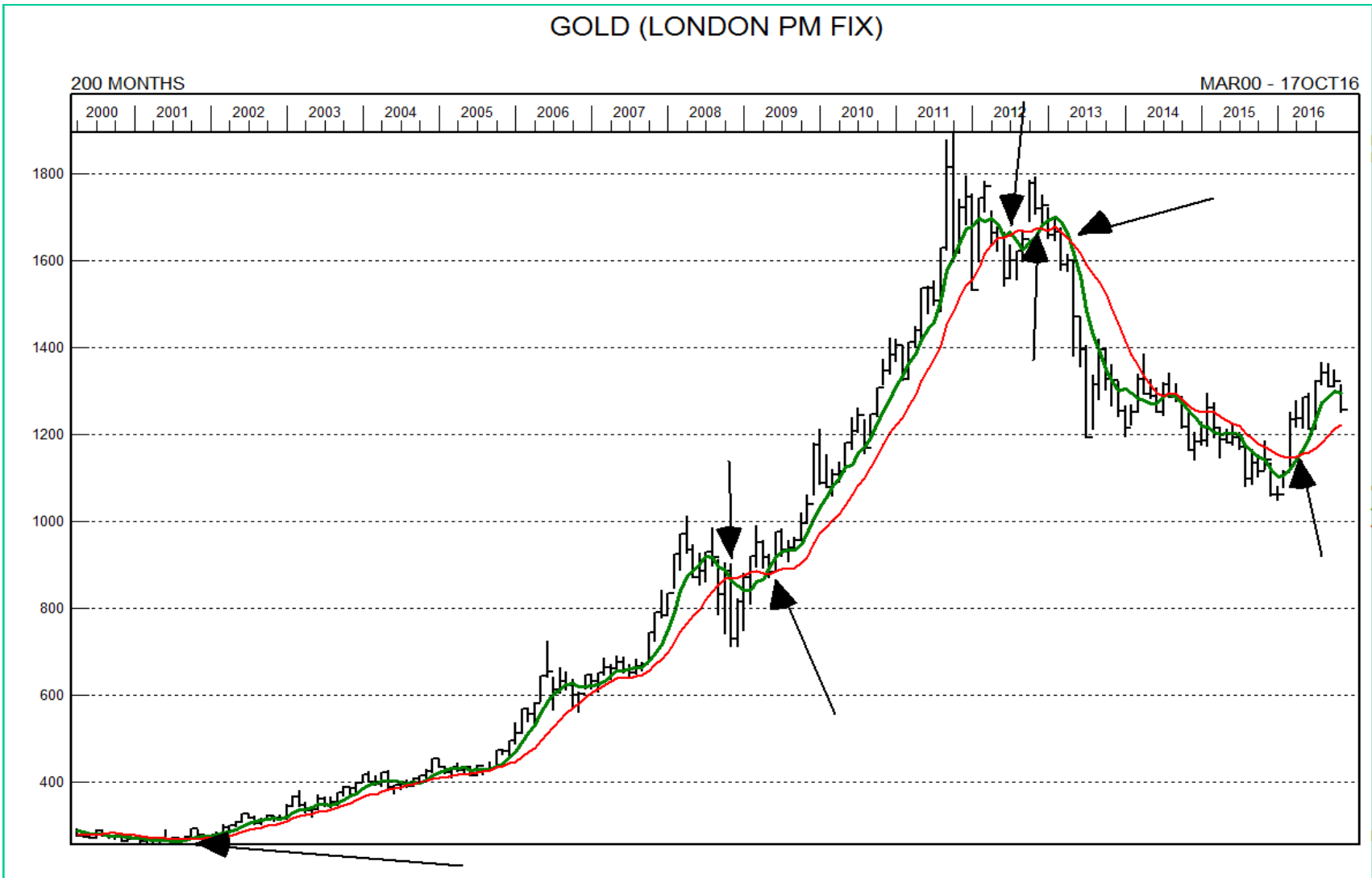




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2000-2016





Technical Analysis Summary

Rules Based Investing is a Safety First approach to preserving your wealth.

If capital preservation is key to you, feel free to discuss this with a Trusted Wealth Professional, that is local to you, by entering your postal code into the Wealth Professional Locator on our website.

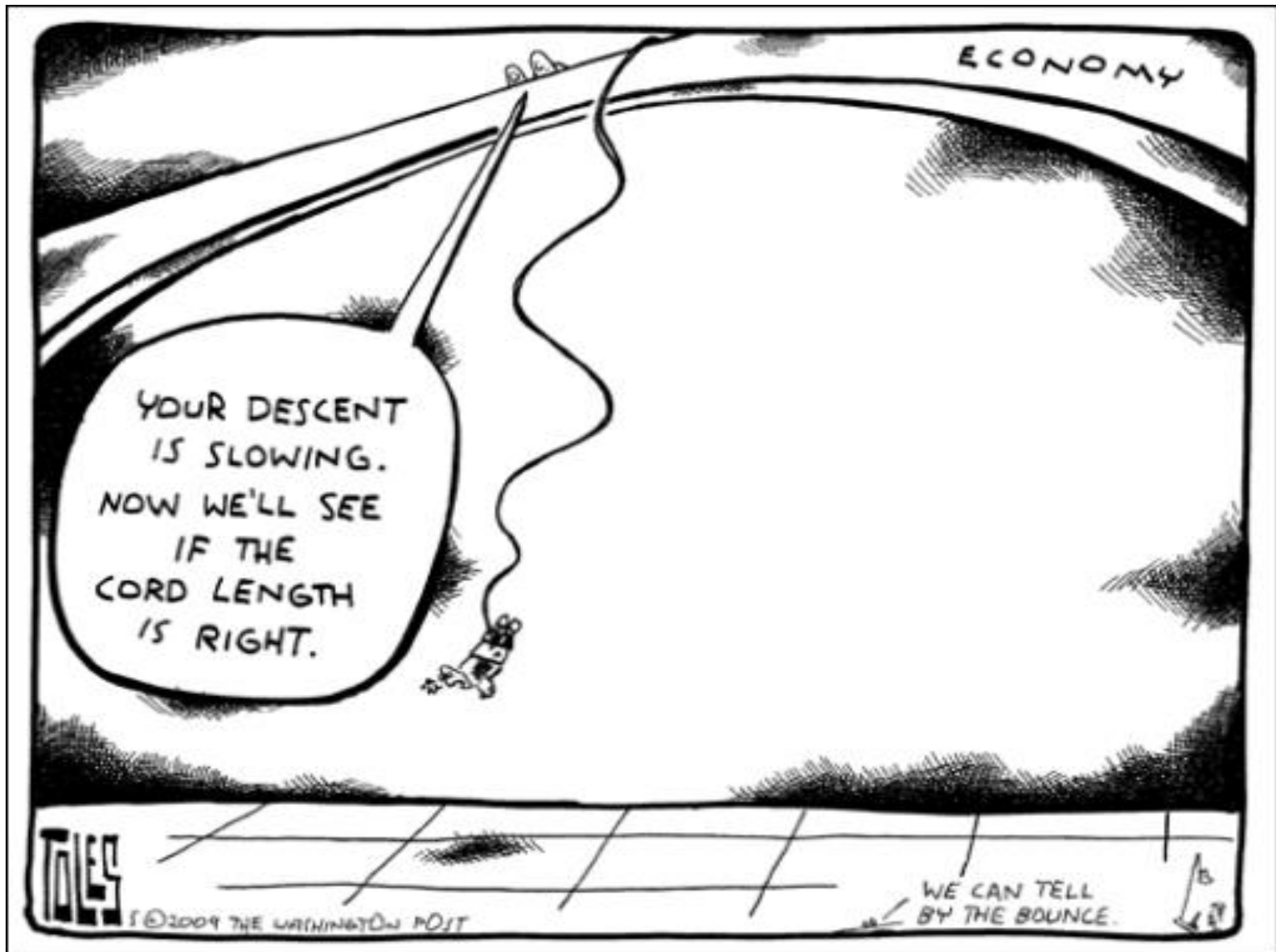
Finding Stocks to Buy and/or Sell involves both Fundamental and Technical Analysis.



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We will revisit Fundamental and Technical Analysis in our session titled Rules Based Investing.





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