Integral Investment Measures

A Tutorial Presentation

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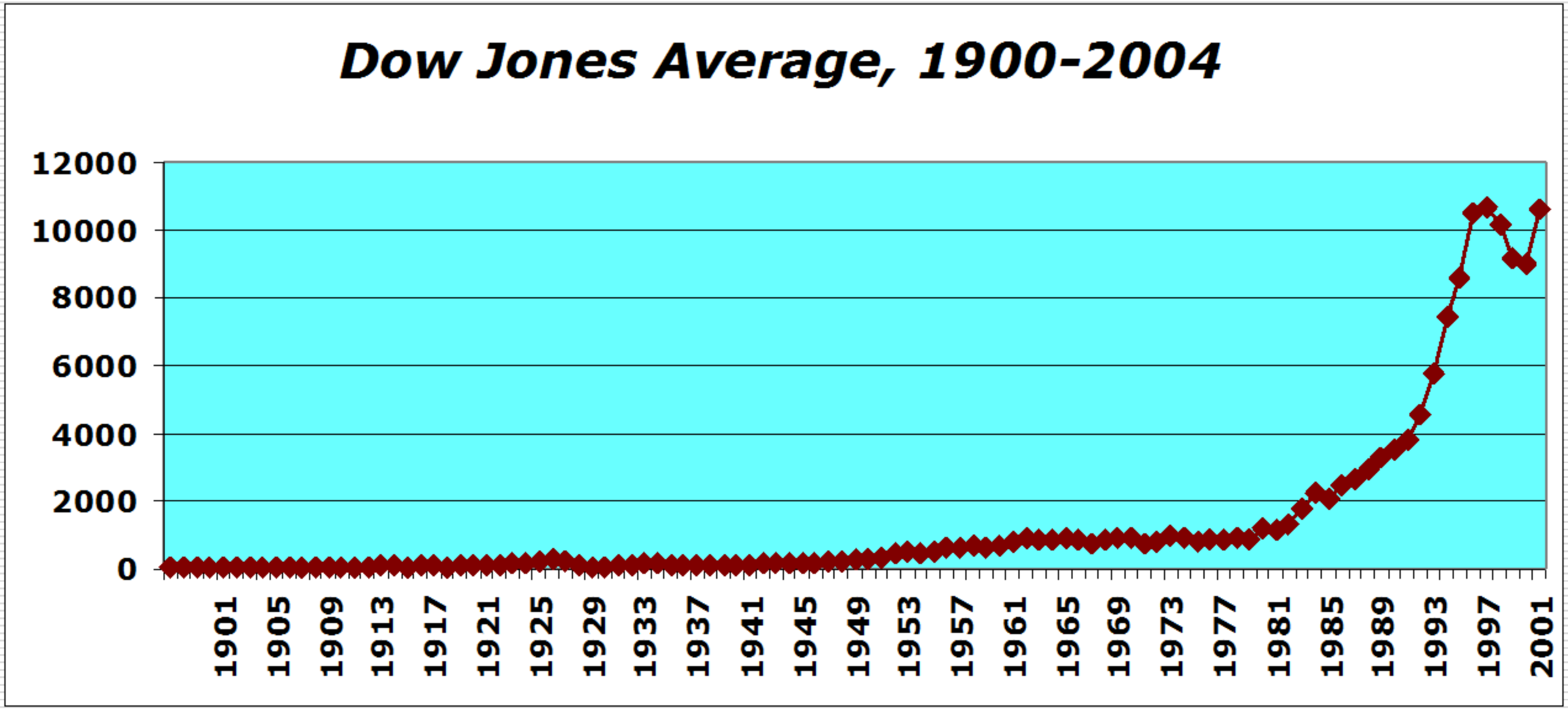
Read, learn and enjoy!

Investing is good, but has dangers!

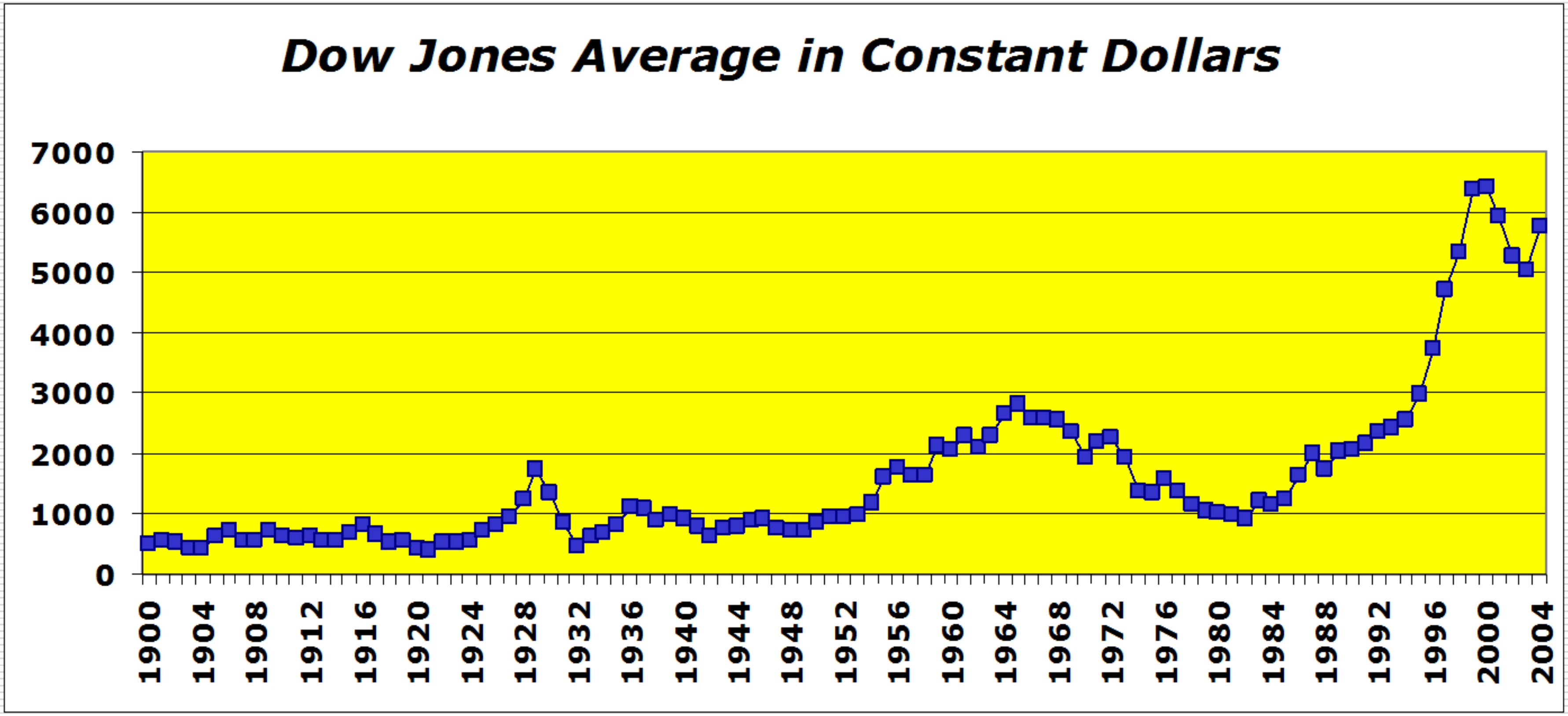
The stock market, for example, looks very good



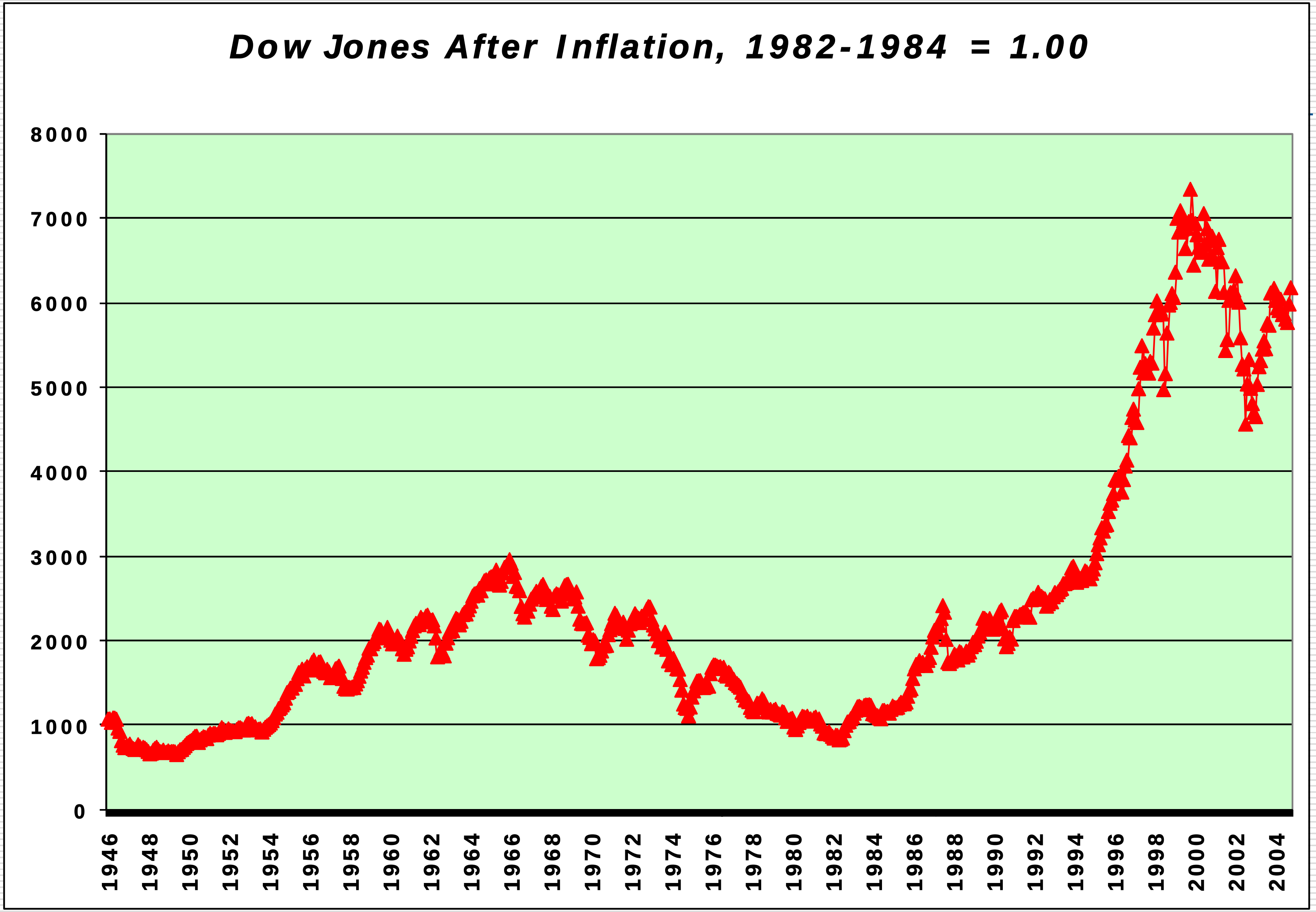
Long-term gain 1.5% to 2% after inflation

Dividends are on top of that…

But the market still has its ups and downs!



Looks good, but it can be a wild ride



Long-term trend is up, with bull/bear cycles

- But the cycles are irregular in size, length, shape, form, and driving factors
- There are booms, recessions, times of inflation
- There is a tendency to come back to the trend
- Can you get high, safe returns in the long run –
  - ✓ Without perfect foresight?
  - ✓ Without having to time the market?
  - ✓ Without having to be a genius – or lucky?
  - ✓ A plan that works no matter when you begin?
  - ✓ A reliable adopt-and-forget strategy?

Buy-and-hold <u>isn't</u> the answer!

It depends far too much on timing –
even if you buy to hold for 30 years!

- Invest $1,000 in 1966, get back $1,400 in 1996 in constant dollars = 1.1% yearly after inflation
  - ✓ Not impressive, not what most people hope for
- Invest $1,000 in 1929, get $790 in 1959 after inflation
  - ✓ Ouch! Wait 30 years, only to come out 21% down?
- Invest $1,000 in 1932, get back $4,695 in 1962 in constant dollars = about 5% over inflation
  - ✓ Great return, but required perfect timing
  - ✓ Not many had the guts to buy in 1932!
- Invest $1,000 in 1912, wait SEVENTY YEARS, sell in 1982, get back $1,442 after inflation = only 0.5% per year
  - ✓ Extremely disappointing for your old age – or your heirs

For long-term and retirement investing,

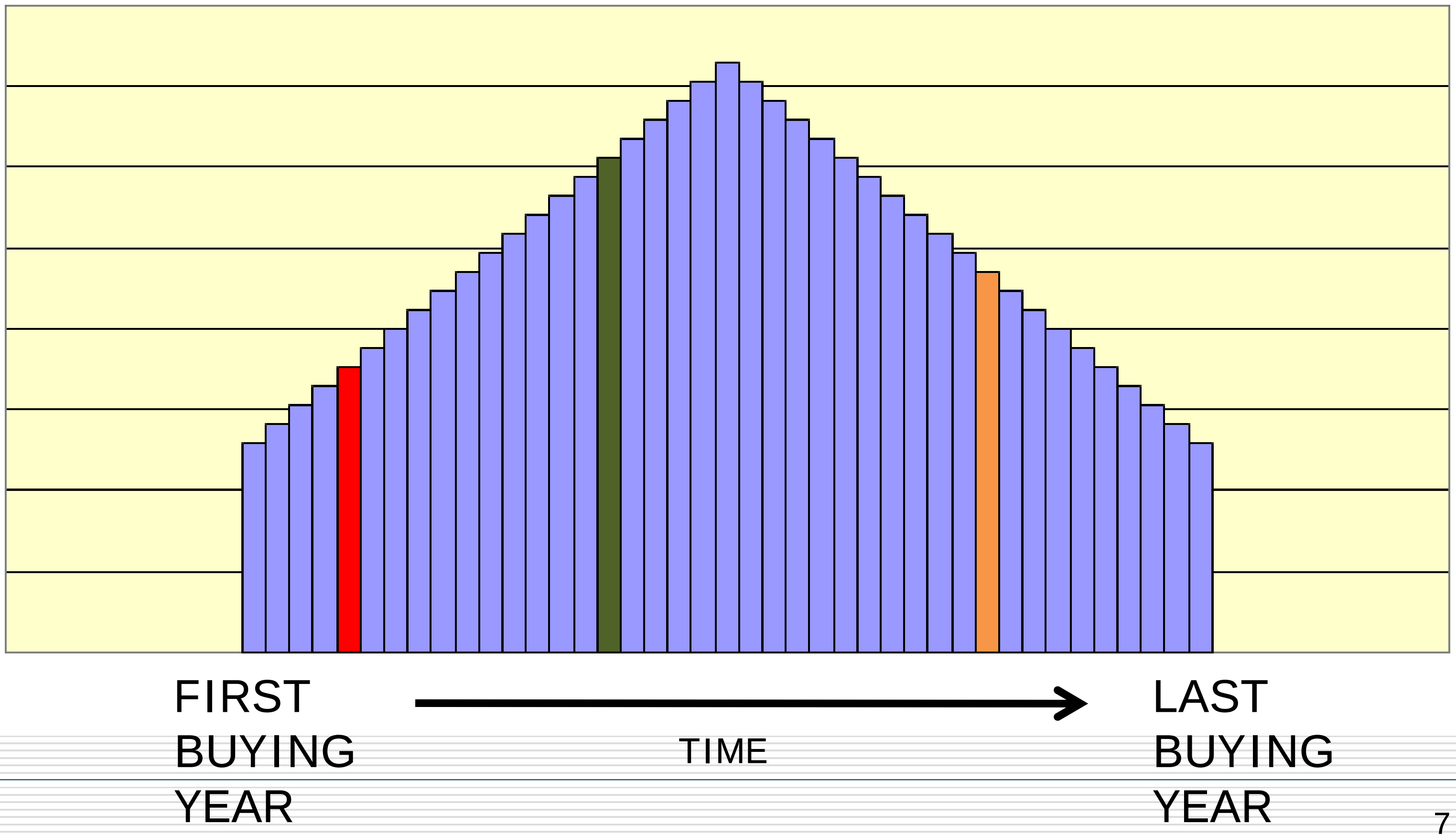
we need a reliable adopt-and-forget method that:

- Gets a good long-term gain – no matter when you begin!
  - ✓ **Median** return about **2% plus inflation plus dividends** – which makes about 5% to 8% compounded annually – excellent for retirement investing!)
  - ✓ **Minimum** return **at least 1% plus inflation plus dividends** – if you happen to start at the worst possible time – that is, you can expect a robust, not unstable, return
  - ✓ Works well across booms, recessions, and inflation
  - ✓ Does not require any special training, insight, or timing
  - ✓ Can be put in place and left alone with confidence
  - ✓ The answer is…

Integral Investment Measures

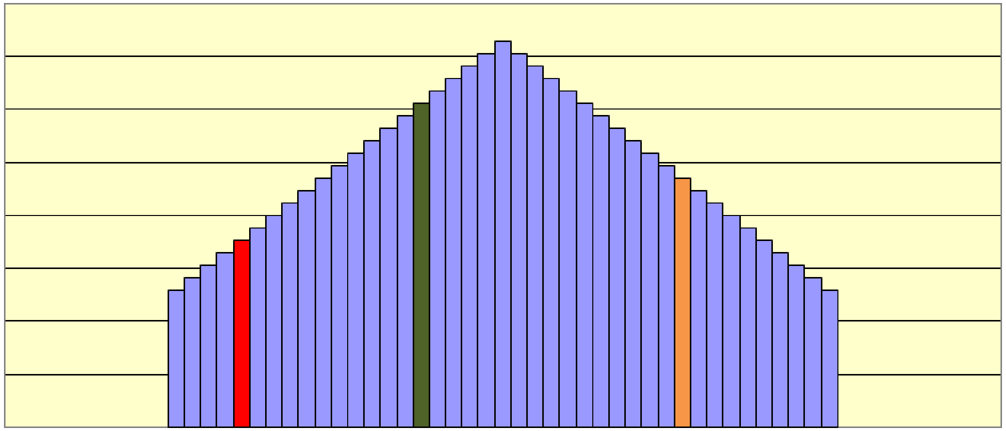
Integral Investment Measures

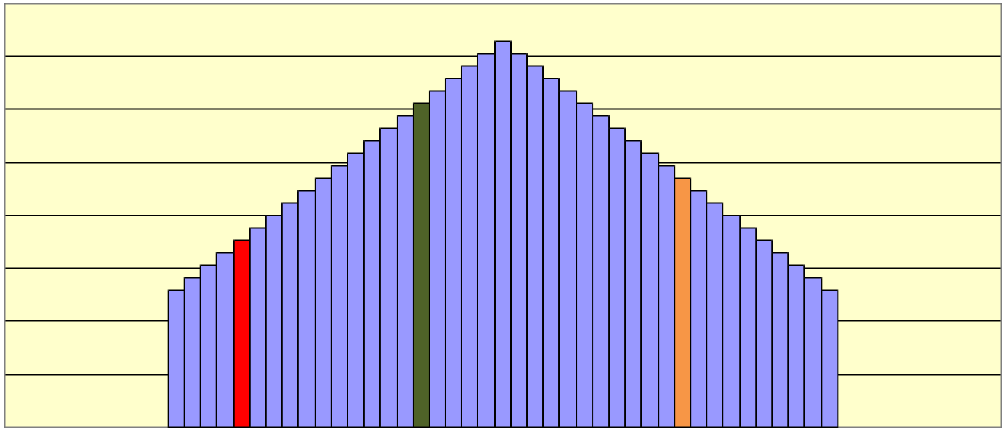
Make purchases over time according to a pattern or "measure" – in share units of the market, not dollar units



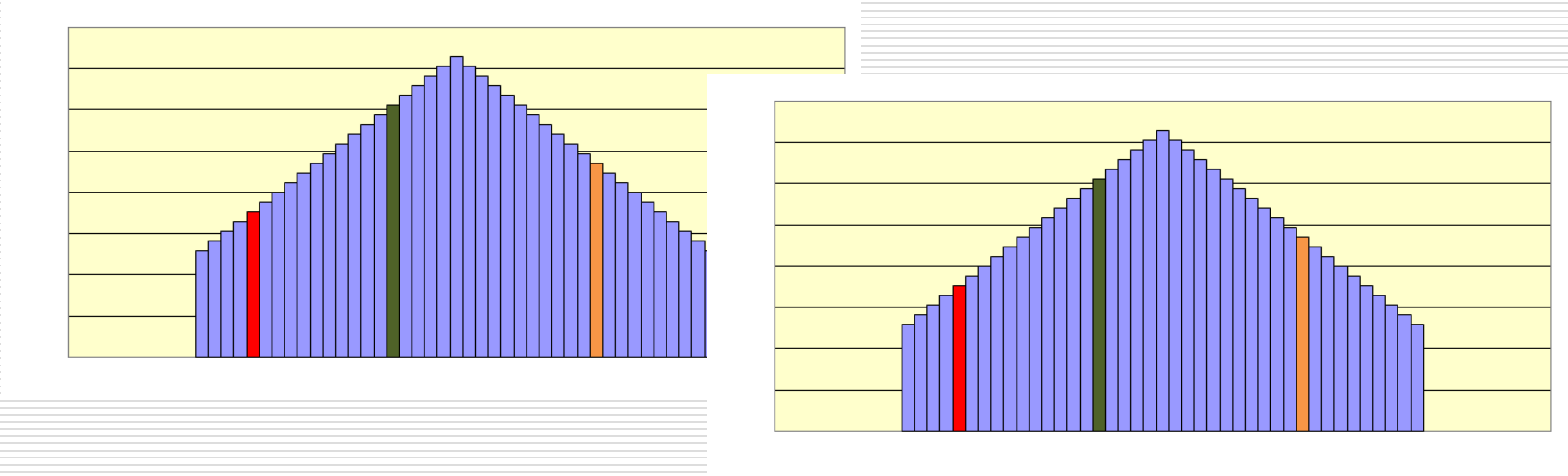
Sell each piece individually after a predetermined fixed time.

The selling pattern is the same as the buying pattern, but shifted forward in time. The red-to-red, green-to-green, and orange-to-orange holding times are the same.





Sure, it looks like it ought to work…



The yearly pieces will perform differently, of course.

- The red piece may lose money after the holding time
- The green piece may get a very high return
- The orange piece may get a typical, middle return

It looks like it "should" average out. Putting all the buy-and-sell pieces together should average out to the long-term rate of return.

The devil is in the details

❖ How wide should the pattern be? How long between the start and end years of the buying and selling patterns?

❖ How long should the hold time be? How far is the selling pattern shifted forward in time from the buying pattern?

❖ What is the best shape of the pattern? How should the weights – the ***measure*** – be defined?

- One single bar bought, held, and sold? (This is buy-and-hold)
- Flat? (This is buy-and-hold strung out over time)
- Triangular? (Starting slow, building up, tapering off)
- Curved – and if so, how should the shape go?
- Irregular – and if so, how is the measure determined?
- Should the ends of a triangle or curve be cut off?
- Should there be large transactions at the beginning and end?

These details make all the difference.

What defines a good pattern?

- ✓ Try to make the **median** annualized return high
  - ➢ If – depending on what year the plan began – there was a 50% likelihood of an annualized overall return of more than 2% per year after inflation (plus dividends) and a 50% chance of making less, then the median annualized return is 2%.
  - ➢ If inflation averages 2% and dividends another 2%, the total return is 6% per year, which is excellent for retirement – multiplies the investment by 8 in 36 years.
- ✓ Much more important, make the **minimum** annualized return high
  - ➢ What if the worst possible thing happens? What if you start the plan in the worst possible year without knowing it?
  - ➢ If the worst possible annualized return is 1%, then the minimum annualized return is 1% - still making 5% per year with inflation and dividends, which is still excellent for retirement.
  - ➢ The worst that can happen is still pretty good!

Good and bad patterns

- ✓ If the **minimum** annualized return is negative or low, the plan is useless or worse
  - ➢ To get a good return depends on genius market timing – getting in and out at the right time
  - ➢ If you enter or leave at the wrong time, you could get a poor return or even lose money – no improvement here!
- ✓ If the **minimum** annualized return is high, the plan is excellent
  - ➢ There is no necessity for market timing or special insight.
  - ➢ Just start the plan and follow it mechanically. You will be tempted to abandon the plan, but don't do it.
  - ➢ Don't worry too much about recessions, inflation, or market cycles. In the end you will come out very well.
  - ➢ Excellent for retirement and long-term planning.

How to build an Integral Measure?

- Find the right width – how many years of buying?
- Find the right hold time – how long before you sell?
- Find the right shape and weighting of the plan
- Adjust everything in a systematic manner that goes through all mathematical possibilities until the best plan is built.

This is done by using a special mathematical sonar, described in the technical paper "Integral Investment Measures," available on InvestmentMeasures.com.

What are Integral Measures like?

- Have you ever **jumped into the crest of an ocean wave** as it flowed past you – so it hardly moved you at all?
- It's like a **radar dish** – gathering radio waves from all over and focusing them on a single place
- **Noise-canceling** headphones and other devices produce "anti-noise" so you can hear voices and music more clearly
- **Weather** is what it is like outside hourly or daily
- **Climate** is what it is like over weeks or months
- **Over time, weather sums up – "integrates" – into climate**
- Investment Measures **"integrate" the weather of market motions and cycles to yield the long-term climate**

What are Integral Measures like?

- A **mutual fund** consists of a group or “basket” of different weights of stocks, bonds, or other assets. It sums up or **integrates** across the set, group, or space of financial assets.

- An Integral Investment Measure integrates one step further, taking an entire market and **integrating over time**.

- Just as mutual funds are more stable than individual stocks, so Integral Investment Measures are **more stable** in their long-term return **than the total market itself**.

- Integral Investment Measures are the **antidote to the instability of derivatives,** which have caused so much damage
  - They are **more, not less, stable than the market**
  - The use of calculus terminology (integral vs. derivative) is intentional, and describes what is going on

How well do they work?

One good pattern I found yields (with a century of test data)

1.18% minimum, worst-case annual return
plus dividends, plus inflation
1.97% median, middle-case annual return
plus dividends, plus inflation

Adding 2-3% for dividends and 2-3% for inflation produces a minimum annual return of 5% to 7% and a median annual return of 6% to 8%. This is what many hope to get from the market!

Carried over 30 to 40 years this is more than excellent for retirement investment or any long-term plan.

How good can these plans get?

Using the Phase Method of analyzing economic cycles to add just a little contrarianism (going against the crowd) will make an “informed” plan yielding:

2.34% minimum, worst-case annual return plus dividends, plus inflation
2.96% median, middle-case annual return plus dividends, plus inflation

This can be seven to nine percent per year in current dollars – which over a working lifetime produces a fine retirement.

The Phase Method is my invention and intellectual property. See the tutorial presentation for the Phase Method on Investment Measures.com.

Published predictions from the past

"A Dow of 4000 to 6000 (before allowing for inflation) would not be impossible by 1994 to 1996."

(Cagan, "The Phase Method of Analyzing Economic Cycles," ***Cycles*** Magazine, July/August 1991, p. 214. Written 1990, published 1991).

Published predictions from the past

"Much of the rise over the last few years has been due to large inflows of money invested in the market, often for retirement purposes...What will happen in the period from 2010 to 2030, when the large Baby Boom generation is expected to withdraw its money from the market for their retirement needs?…This could create a downdraft on the market as powerful as the updraft that was created when they put their money in….Further, younger generations and foreign investors might be reluctant to take up the slack by investing trillions of dollars in the market in the face of this downward influence….Many Baby Boomers would wind up receiving much less for retirement than they expected. The looming entitlement crisis associated with 2010-30 may well lead to large government deficits and a rekindling of inflation. In such a case, everyone could receive their retirement money in nominal terms, but with its actual buying power severely reduced."

(Cagan, "The Phase Method: 1998," ***Technical Analysis of Stocks and Commodities*** Magazine, May 1998, p. 211).

What are Integral Measures useful for?

To get a solid minimum return, they need:

A start to finish span over 25 to 45 years (a working lifetime)

A hold time of 20 to 25 years (selling into a long retirement)

Integral Investment Measures are **not useful for short term trading**

They are not a get rich quick, market timing scheme or miracle trading plan

They do not produce “sexy” returns such as the Nasdaq’s 86% gain in 1999 before the tech bubble burst

They are not “exciting,” but they do steadily grind out solid gains!

Integral Investment Measures are **very useful for long term and large scale planning**

- ✓ ***Retirement investment accounts***
- ✓ ***Pension funds***
- ✓ ***Large financial firms***
- ✓ ***Sovereign wealth funds***

What are the key achievements?

The major gain is in **robustness and stability**

✓ Integral Investment Measures **reliably extract the long-term gain already implicit** in the market
✓ They integrate **across recessions, inflation, business cycles, and market irregularities**
✓ They are the **natural antidote to the dangerous instability of derivatives**
✓ They are actually **more, not less, stable than the market** itself
✓ They **eliminate the need** for market timing, expert knowledge and skills, special analysis and equipment, and simple good fortune

✓ They provide confidence for ordinary people and large organizations to do well in the long run without worry – set up the plan and let it go. It will grow just as the economy grows in the long term, producing long term returns in an unexciting but reliable way.

Go for it!

Read the technical paper on Integral Investment Measures – here on InvestmentMeasures.com.

Download the supporting Excel files and experiment with your own integral measure studies

Warning: all formulas are "live," so save backup copies of the files before experimenting!

Read the tutorial presentation on the Phase Method

Carry the work farther yourself – as many people and firms as possible. Go for it!

And…I'd be glad to hear from you.

For further inquiries, please contact

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