
A PRACTICAL SYSTEM OF THE ECONOMICS/INVESTMENTS WORLD

by John M. Bragg F.S.A.

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When I went to school in Scotland in 1928, everything was stable: the political world; the social world; and the economics world. There was no inflation; all things were looking up. Now it is 1989 and everything is different! Uncertainty abounds in all these worlds.

Of the intervening 61 years, I have spent nearly 50 in the actuarial profession, or trying to get into it, or perhaps at times trying to get out of it! The actuarial world has also undergone a vast shift from stability to uncertainty. Perhaps that is not all bad, because actuaries are called upon to be experts about those uncertainties.

We are not full-time professional experts in the economics/investments world. Yet we are called upon to be practical experts concerning the uncertainties which occur in that world. We are called upon to have views about such questions as the following, and to see such views put into practice:-

How should pension funds be invested?

What will happen to inflation?

What will happen to investment yields?

What will happen to the stock market?

Are we in a recession?

When I went to school in Scotland in 1928, most of the World War I statesmen were still alive. They had all learned one thing: war is too important to leave to the generals. Today, we realize something parallel: investment yields are too important to leave to the fund managers. We must get involved, even though we are not full-time professionals in economics and investments.

What we need is a practical system of the economics/investments world. I might add that we are not the only ones needing it. The employers of fund managers need it. Investment committees and boards need it. Buyers of mutual funds and variable plans need it. Financial counsellors and insurance agents need it. Anyone with funds to invest needs it.

Like most actuaries, I am not a professional in the economics/investments world. But this is not a self-degrading remark. Somehow, the actuarial profession has equipped me with an all-encompassing analytical view; and for many years I have been called upon to have opinions about that world. I therefore feel qualified to develop a practical system of the economics/investments world, and have spent a good part of the past ten years doing so. The results are in chapter 2 of my book: Protecting Against Inflation -- And Maximizing Yield. The purposes of this paper are to describe the essence of the system and to say something about this question: How has it worked out? Before describing the system let me say this: The mind is greatly clarified by having a system-- any system-- and following it.

My system is known as The Theory of the Economic Series. I'm glad I used the word "series" rather than "cycle", because an economic series is turning out to be much more refined and defined than its gross and vague cousin, the business cycle.

I arbitrarily divided the economic series into four economic periods. I know that the changes from one period to the next occur gradually, but it helps my practical frame of mind if I think of just four distinct periods. They are defined as follows:

- A Period: Pessimism prevails
- B Period: Optimism gains
- C Period: Optimism prevails
- D Period: Pessimism gains

Obviously, different economic and investment things happen in each period, and the differences are very important; we will get to that subject. But what I call "underlying mood" really defines the periods. Some academics have criticized the underlying mood theory, but I take comfort in being a non-academic. Other academics have highly endorsed the theory. Also, I have been encouraged by professional investment counsellors, who say: "Hey, this is just what I say to my clients! I ask my client what is his/her gut feeling about the state of things. We take the investment program from there." Because underlying mood is a flighty thing, the economic series and the changes across the four periods which it contains are not pre-ordained, mathematical, or necessarily predictable. But that's the way of the real world!

Measured over the past 100 years, the series have averaged 5 years in length. However, the longest on record was 10 years (1920-1929), and the shortest was 2 years (1892-1893). Each series contained the requisite 4 economic periods. The economic periods also vary in length. The typical lengths are:

A Periods: 1.3 years

B Periods: 1.0 years

C Periods: 1.8 years

D Periods: .9 years

When I went to school in Scotland in 1928, I didn't realize that I was in the midst of the longest optimistic C Period on record (seven and one-half years) and that this record would probably never be beaten. It was no wonder that all things were looking up; that is a prime attribute of any self-respecting C Period. When I went to school in Canada just three years later (1931)--in the dust bowl of Canada-- I didn't realize that I was in the midst of the longest pessimistic A Period on record--three years. Everything was looking down-- permanently down; that is a prime attribute of any self-respecting A Period.

At the time of writing (August 1989) we are again in an a pessimistic A Period; it has lasted about seven months. The economic series which we are in has lasted four and one-half years so far; it is valid to measure series over any pattern, and we can say that it started with a B Period at the beginning of 1985, went through C and D, and has reached the A stage.

But getting to the nitty gritty: What is supposed to happen in each economic period? This is the key to understanding those uncertainties to which we referred, and to confer upon us a practical system of the economics/investments world. But don't expect the system to be pre-ordained or set in stone. It also is flighty, but so is the real world. Like the real world, it's the best we've got.

The details are in the book, but here are some highlights. Illustrations shown are based on averages for the years 1890-1985. Percentage changes shown are from the preceding economic period.

In an A Period

- . Inflation is high. (up 39%)
- . Real GNP growth is very low. (down 85%)
- . Real interest rates are negative. (-2.5% from a balanced portfolio)
- . Three month bills are the best investment. (yield up 14%)
- . Reverse yield curve may exist.
- . Long term bond coupon may be up slightly. (up 5%)
- . Long term bond total yield is very low. (down 63%)
- . Common stocks have negative total yield. (-4%)

The last completed A Period was in the second half of 1984; it was short and mild. At the time of writing, we are again in an A Period.

In a B Period

- . Inflation is low. (down 68%)
- . Real GNP growth is negative.
- . Real interest rate is very high. (perhaps 10% from a balanced portfolio)
- . Reverse yield curve has dramatically corrected.
- . Best investment is a toss-up, but long-term bonds do as well as they ever do on a total yield basis. (perhaps 9%)
- . Long term bond coupon may be up 12% and is as high as it gets during a complete economic series.
- . Three month bills do not do well. (yield down 14%)
- . Commons have a very good total yield. (perhaps 18%)

The last completed B Period was 1985.

In a C Period

- . Inflation is low. (down another 6%)
- . Real GNP growth is unusually high. (perhaps 7%)
- . Real interest rate is remarkably high. (perhaps 14% from a balanced portfolio)
- . Yield curve is very positive.
- . Commons are the best investment (total yield perhaps 18%)
- . Three month bills do poorly. (yield down 28%)
- . Long term bond coupon may be down 27%.
- . Long term bond total yield is only fair. (down 46%)

The last completed C Period was 1986 plus the first half of 1987.

In a D Period

- . Inflation heats up. (up 140%)
- . Real GNP growth is high. (but down 24%)
- . Real interest rate drops drastically. (only 1.5% from a balanced portfolio)
- . Yield curve flattens.
- . Best investment is a toss-up.
- . Three month bills yield is good. (up 41%)
- . Long term bond coupon may be up 17%.
- . Long term bond total yield is poor. (down 50%)
- . Commons are lackluster. (total yield perhaps 6%)

The last completed D Period was the second half of 1987 and most of 1988.

I developed the Theory of the Economic Series in the early 80's. How has it worked out? It has certainly given me insight and confidence in addressing the economics/investment uncertainties which we have had to confront since that time. Several people who own the book, and have been following the theory, have stated that it saved them money during the "Crash" in October 1987; they were able to read the arrival of the D Period; this called for a reduction in commons.

The Theory leads to investment strategy, particularly the Prudent Mixture Strategy (PMS). This is an ideal strategy designed to maximize total real yield over a period of time. In the actual world, the best we can expect is an approximation to the Prudent Mixture Strategy.

Furthermore, we are well aware of some constraints which might force other strategies: laws dictating portfolio distribution; efforts to match assets and liabilities; etc. The Theory can give insight into loss of yield which is inherent in such constraints; it can also lead to a "best we can do despite the constraint" investment strategy. The Theory can also give a framework for addressing other problems, such as sales trends, persistency, and even political developments.

In the process of doing this work I have accumulated economic/investment data over a 99-year period; it is in the book; I believe it is unmatched anywhere. I update it annually by an Addendum to the book, which is sent to all subscribers to an Update service. I am including the latest Addendum as an Appendix 1 to this paper.

What does the Prudent Mixture Strategy say about investment strategy today (August 1989)? It says that in this A Period we should be 60% in shorts, 25% in long bonds, and 15% in commons. But be on the lookout for the arrival of the B Period! When that happens, we should switch dramatically--to only 5% shorts, 35% long bonds, and 60% commons. I am including the complete PMS portfolio distribution as Appendix 2 to this paper.

I recommend the Theory of the Economic Series as a Practical System of the Economics/Investments World. We can use it to face those uncertainties with which we are faced. It is a practical system for producing answers.

Atlanta, Georgia. August 8, 1989

APPENDIX 1

**Addendum Showing 1986-88 Data
for
Protecting Against Inflation—and Maximizing Yield**

by John M. Bragg

(Please insert following page 24)

Exhibit 2-2—(Continued)

Year	Economic Period	CPI increase	Real GNP increase	Money supply growth	Three- month bills	Yields				
						Long-term bonds		Common stocks		Best strategy
						Coupon	Total*	Dividend	Total	
1985	B	3.6%	2.3%	8.1%	7.49%	10.97%	31.8 %	4.6 %	31.6 %	LT
1986	C	1.9	3.6	9.0	5.97	7.85	25.0	3.7	18.6	LT
1987	C-D	3.6	3.4	3.9	5.83	8.59	-3.3	3.2	5.2	ST
1988	D	4.1	4.1	5.5	6.67	8.96	9.0	4.4	17.1	CS

Averages:

(Update for last two lines of Exhibit 2-3, page 25, and Exhibit 2-4, page 26)

1983-1988 (6 years)	3.4	4.0	7.8	7.36	10.03	12.57	4.23	16.83	
1890-1988 (99 years)	2.8	3.6	6.5	3.83	4.73	4.56	4.64	10.13	

* In 1988, basis changed to Shearson Lehman Long-term Treasury Index.

Appendix 2

Portfolio Distribution
According to the Prudent Mixture Strategy

Economic Period	Average Length	Three- month bills	Long- term bonds	Common stocks
A	1.3 years	60%	25%	15%
B	1.0 years	5	35	60
C	1.8 years	0	15	85
D	.9 years	30	15	55
Mean PMS		22%	22%	56%

Bibliography

Protecting Against Inflation --And Maximizing Yield

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