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The Truth About the Crisis or a Crisis of Truth

The Possible Misdiagnosis of a Crisis

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Forewarning

- The views expressed hereafter are unorthodox; they are solely attributable to the speaker and are not necessarily the views of anyone else
- Much of what I have to conclude about the underlying causes of the current global economic crisis will undoubtedly strike many of you as radical, perhaps even nonsense
- There is not much empirical proof, mainly conclusions based on a few basic principles
- However implausible the conclusions may seem, please hold open at least a small possibility that they may be reasonable



Diagnosis and Treatment

- The patient is still ill
- Step 1: Correct diagnosis of the underlying cause
- Step 2: Proper treatment for the diagnosed illness
- Danger: An incorrect diagnosis could result in a treatment that causes positive harm, even more harm than doing nothing
- My theme today: There is a reasonable case to be made that the underlying cause of the current global crisis has been misdiagnosed
- The current treatment might be doing more harm than good



What is the current diagnosis?

- The attending physicians occasionally announce conflicting diagnoses, but the most prominent include
 - The sub-prime mortgage meltdown
 - Too much leverage in financial institutions
 - Inadequate regulation
 - Excessive use of complex derivatives
 - Excessive risk-taking induced by agency conflicts
 - Easy money; low interest rates that triggered a housing bubble



The current treatment

- United States
 - Bailouts of distressed financial institutions
 - Acceleration of monetary growth
 - Massive federal borrowing and spending
 - Higher taxes
 - Additional regulation
- Elsewhere
 - One or more of the above treatments, though in different amounts
 - Nothing



Three Diagnostic Principles

- 1. The aggregate value of debt is zero. The aggregate value of derivative contracts is zero.
- 2. Financial markets are forward looking
- 3. Prosperity in a country follows economic liberalization and vice versa
 - Economic liberalization implies an increase in the fraction of GDP in the private sector relative to the public sector
 - The response of aggregate wealth is large; e.g., permanently reducing the private fraction by 20% reduces aggregate wealth by at least 50%

Would a wealth transfer cause a market crash?

- Suppose Warren Buffet gave Bill Gates \$20 billion
- What's the net change in aggregate wealth?
- Would markets crash?
- Would total human capital be worth less?
- Would real estate values fall? (except in Omaha and in Seattle they might rise)
- Would there be any direct impact on existing stocks of productive machinery, goodwill, or any other real asset?



Principle #1:

Debt and derivatives are in zero net supply

- Globally, there is a lender for every borrower and a seller for every buyer of a derivatives contract
- A liability on the balance sheet of some entity, whether it's a person, a business, or a government, is matched exactly by an asset on the balance sheet of some other entity or entities. The same is true for derivatives
- Adding together all balance sheets, liabilities and their corresponding assets cancel out. So do derivatives.
- This leaves only real assets on the aggregate balance sheet: real estate, machinery and equipment, intangibles (e.g., goodwill), and human capital
- Hence: aggregate real wealth does not include any debt whatsoever, either as an asset or a liability, nor does it include any derivatives contract



The aggregate amounts of debt & derivatives are both zero -- implications

- Any change in the quantity of outstanding debt or of derivative contracts has no direct impact on aggregate real wealth
- Every default is simply a wealth transfer from lender to borrower. This is true of all “credit” events; e.g.,
 - Delinquencies in mortgages
 - Insolvencies in banks
 - Bankruptcies
- Every derivative contract exercise event is a wealth transfer from seller to buyer



Example: Sub-Prime Mortgages

- Their defaults are often spot-lighted as the triggering event in the current crisis, but some have doubted that they are large enough in total to have been fully responsible. Regardless of their size, consider the following:
- Between the following two events, there is no difference in real wealth or in the wealth level of either borrower and lender :
 - 1. The borrower defaults on a \$300,000 sub-prime mortgage and the recovery value of the foreclosed property is \$200,000
 - 2. The lender makes a \$100,000 cash gift to the sub-prime borrower
- In both cases the borrower's wealth increases and the lender's wealth decreases by \$100,000
 - (this abstracts from taxes and transaction costs, which are wealth transfers to third parties)



Implications of Sub-Prime Defaults

- Although there is no direct impact on real wealth of a sub-prime default, but merely a wealth transfer, there are associated tertiary events
- The default itself was probably triggered by a reduction in the value of real estate; what caused this reduction? I'll return to this question later
- The lender's wealth reduction, induced by a transfer to the borrower, might trigger defaults on debt liabilities that the lender has with others; these would entail wealth transfers from entities that were not participants in the original sub-prime mortgage contract
- The decline in the mortgaged property's value is the sole loss in aggregate real wealth, but wealth transfers can be propagated throughout the debt market. Could this propagation itself lead to perceived declines in real asset values?



Excessive leverage: another culprit?

- Many have pointed to very high leverage levels, particularly in financial institutions, as an underlying cause
- There's no doubt that higher leverage increases the probability of default; but again, default itself has no influence on aggregate real wealth. It's simply a wealth transfer
- Like the sub-prime mortgage, the underlying triggering event was undoubtedly a value reduction somewhere in a real asset, perhaps subsequently propagated through intervening debt contracts



Credit Derivatives?

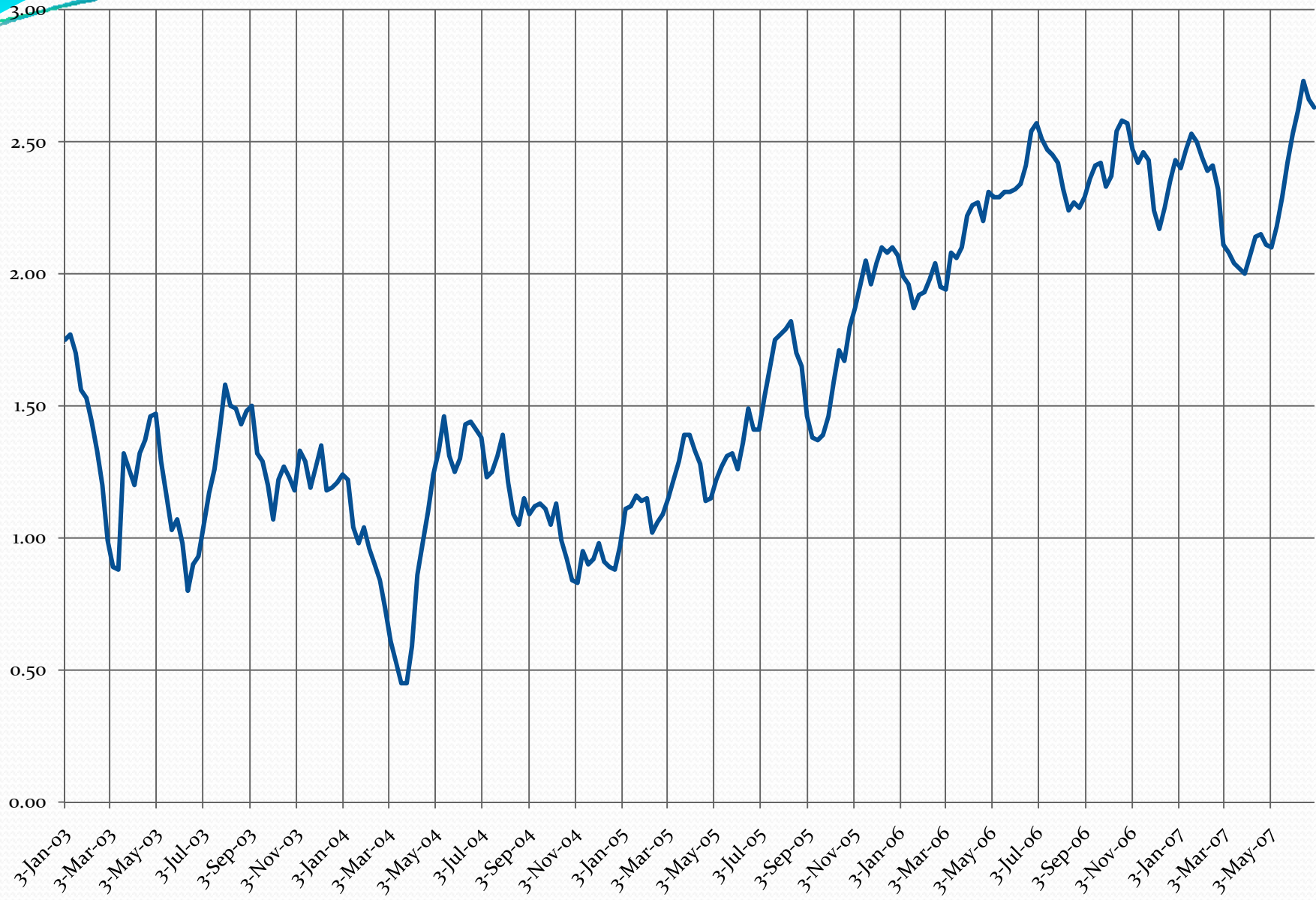
- CDOs, MBSs, and similar derivatives are often mentioned as underlying causes of the crisis
- Like all other debt contracts and derivatives, they are assets to some and liabilities to others but their aggregate market value is zero; they are not part of aggregate real wealth



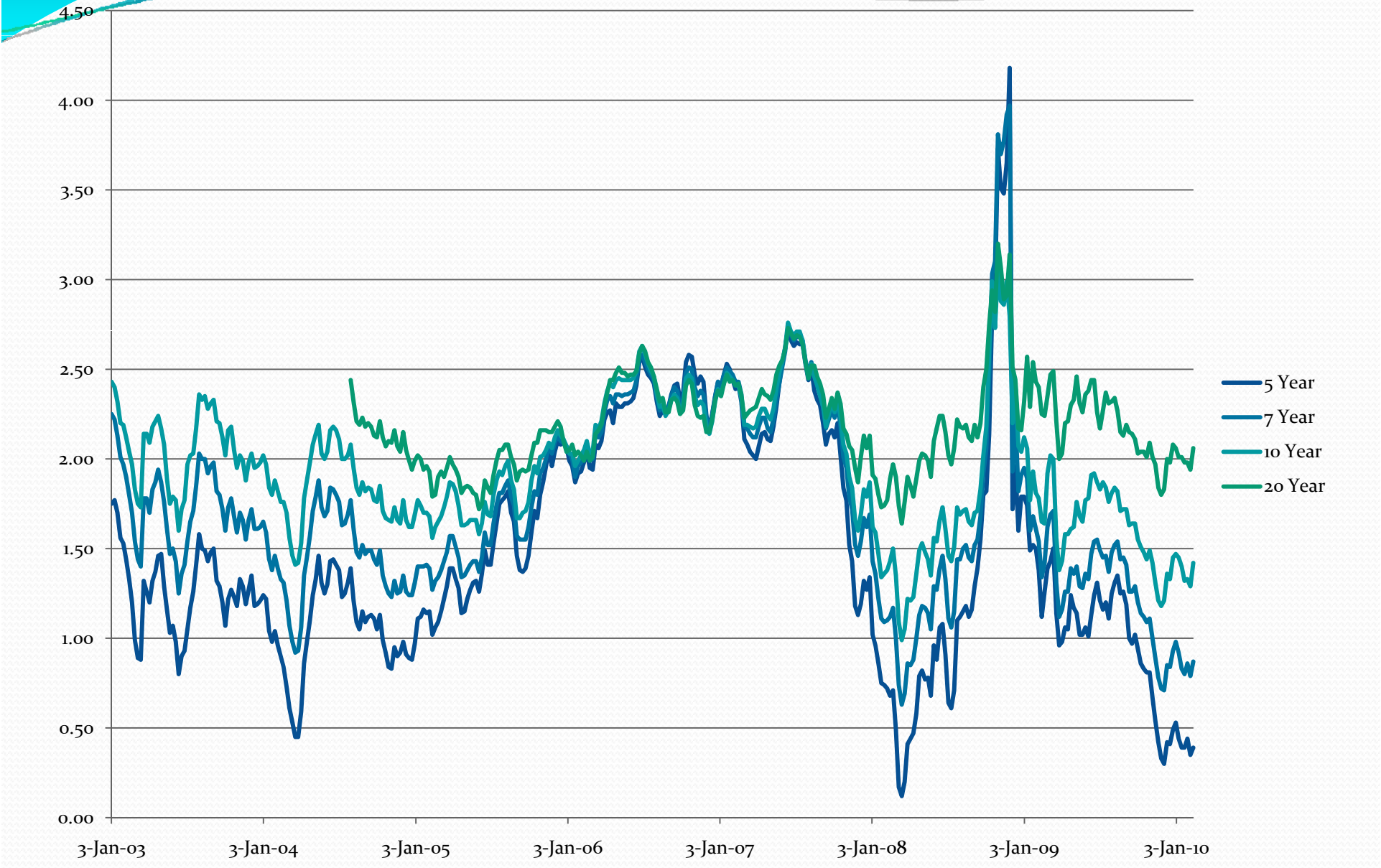
Low interest rates/housing bubble

- Were interest rates leading up to the crash really low by historical standards?
 - Yes, nominal interest rates were indeed low, but
 - Real interest rates were not, as we'll see in a moment
- Unless money illusion is endemic, housing prices should respond to real rates, not nominal rates

Five-Year TIPs Yield



TIPs Yields, 2003-2010





Can wealth transfers alone cause reductions in aggregate real wealth?

- At first glance, this seems preposterous; imagine that some entities simply handed over part of their wealth to other entities. Would that cause a reduction in total wealth?
- But, it is argued, a deterioration in the credit markets can have a psychological impact, causing reassessments of future cash flows; this essentially constitutes a behavioral theory of the crisis
- This diagnosis: the patient is only psychosomatically ill
- Psychosomatic illnesses are notoriously difficult to treat
- It's very risky to conclude that the patient is only mentally ill if there is some possibility of a genuine physical cause
- Moreover, a non-psychosomatic diagnosis is available and is perhaps even plausible; viz., reductions in real asset values are inducing wealth transfers across participants in debt and derivatives contracts



Principle #2:

Financial markets are forward looking

- Under the rubric of “financial market,” I wish to include any market that establishes a “value” based on the capitalization of future cash inflows
 - Equity markets capitalize future dividends
 - Real estate markets capitalize future implicit rents
 - Human capital markets capitalize future labor incomes
- A fundamental and pervasive principle is that current values depend on anticipations about the future. Anything in the past is “sunk costs” and has no direct influence on current value



Real estate values began to decline in late 2007 – early 2008

- Some people (e.g., Alan Greenspan) attribute the real estate crash to the collapse of a bubble, the bubble being induced by low mortgage interest rates over the previous decade, but
 - There was no increase in aggregate debt over the previous decade and there could not have been, since it aggregates to zero at all times
 - Real interest rates actually increased in the decade of the 2000's until the middle of 2007, when real estate started to decline in value
 - Mortgage rates became even lower during the crash and have remained low



The real estate crash: Why?

- If interest rates were not responsible, then what did cause housing prices to fall?
- What is the other main driving factor behind housing prices other than interest rates? Answer: human capital.
- Perhaps there was a sudden negative shock in the value of human capital, which is part of aggregate real wealth



A digression about the observing of real asset values

- Machinery, equipment, and intangibles can be observed daily, at least in part, through equity market values
- Real estate values are only partially observable and then rather infrequently, monthly at best even for well-developed markets such as US residential, and hardly at all for many foreign markets
- Human capital is not observable at all until long afterward when labor income is ultimately reported



An unorthodox chronology

- Human capital value declined precipitously from mid to late 2007 through 2008 because anticipated growth rates in labor income declined
 - This value reduction was not observed (and could not have been)
 - If the anticipated growth rate in labor income is relatively close to the discount rate, even a small decrease in growth can have a large impact on value
- Real estate values declined either concurrently or with a short lag (which is hard to measure)
- Equities fell concurrently with the declines in human capital and real estate as soon as these poorly observable assets became clearly less valuable; because anticipated consumption and future corporate earnings declined



Validity?

- If the preceding chronology has any validity, we may have collectively misdiagnosed the debt markets as the underlying cause of the crisis, whereas they are simply the sneeze caused by the virus
- But if the chronology is valid, why did human capital fall in value, thereby precipitating the cascade of declines in other real assets? There are two possibilities that are not mutually exclusive:
 - 1. The market for human capital is as irrational as the stock market is sometimes alleged to be
 - 2. Human capital values fell because the anticipated growth rate in labor income actually did decline
- There is no proof, but there is plenty of reason to suspect the second possibility



Conjecture:

The markets got it right!

- Markets are forward looking and in 2007 they began to suspect a major restructuring of the planet's largest economy
- They turned out to be right. The US private sector's fraction of GDP is clearly declining relative to the public sector's fraction
- The bailouts started in the previous administration and continued by the current administration brought the largest deficit in history and this doesn't even count the anticipated expansion in public sectors such as health
- This is also the trend in many other countries, particularly Europe (though perhaps not in Brazil, China, India)



Principle #3:

Prosperity depends on economic liberalism

- It works both ways
 - There have been numerous recent examples of countries whose real wealth increased by a factor of four after economic liberalization; e.g., Chile, China, India, Ireland (until they reversed the trend this past year)
 - There have been numerous examples of countries whose real wealth declined by a factor of four (and even more) after economic de-liberalization; e.g., Argentina, Cuba, Zimbabwe
- In the US, the equity markets declined “only” fifty percent in 2008. Real estate and human capital values also declined, perhaps as much, but they’re hard to measure.



2009

- In some countries, e.g., India and China, 2009 was a good year
 - Their public sectors are not growing relatively
 - They were hurt by other countries in 2008 but they have recovered well
- In the U.S., why did the stock market (partly) recover in 2009?
 - An enhance probability of reversal in the anticipated public/private sector mix
 - This likely caused a recovery in the expected growth rate of labor incomes, which has led to other asset rebounds



However, thus far in 2010

- The patient is still sick, as revealed by the stubbornly high rate of unemployment and languorous consumer spending
- What if the current treatment is exacerbating the symptoms and delaying recovery?
- What if very anticipation of the current treatment is actually leading to more severe symptoms?
- Are elected and appointed economic diagnosticians essentially advising the extraction of blood from a feverish patient?



Alternative Treatment Protocol

- Change the relative sizes of the public and private sectors to increase the latter
- Reduce taxes and government spending
- Is this feasible, given the current composition of the attending physicians? Perhaps, but perhaps not.
- Prognostication: If there is not change in treatment, we'll have a decades-long and highly resistant period of economic stagnation, analogous to that endured by Great Britain after World War II, until the arrival of a new diagnostician, Mrs. Thatcher (1946 until May 1979). We can look to relief around the year 2040.

