

Accelerating economic growth and opportunity

Yaneer Bar-Yam

New England Complex Systems Institute and MIT, Cambridge, MA 02139, USA

Dated: November 24, 2017

The past decades have seen a series of economic recessions, the financial crisis, weak recoveries and increasing household debt. According to the New England Complex Systems Institute's recent analysis of the US economy [1], policies for rapid and consistent economic growth, with widespread prosperity, are possible.

We separated the savings/debt of households to that of two groups: consumers and investors. Lower income workers spend most or all of what they earn and dominate consumer households. This group had net savings until 1980 and subsequently fell into increasing debt. By contrast, investors were in debt until 1980 and then increasingly accumulated savings (Fig. 1). This is consistent with increasing income inequality and the progressive concentration of wealth.

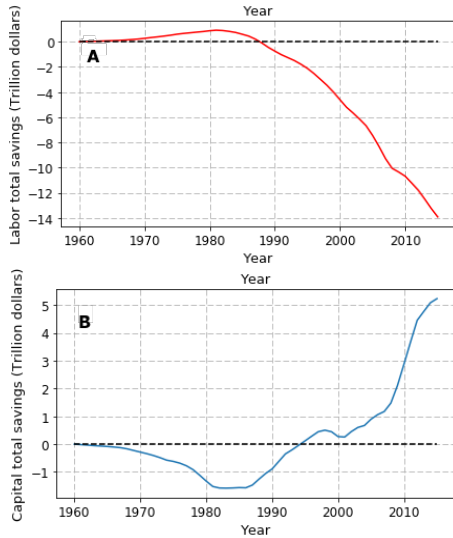


FIG. 1: Savings (or debt) for Labor and Capital. A. Labor total savings since 1960 and B. Capital total savings since 1960. Before 1980 Labor was saving and Capital was borrowing. After 1980 the opposite, Labor was borrowing and Capital was saving.

The switch in savings and debt in the early 1980s was likely a result of tax policy, which changed during Reagan's presidency to promote investment for job creation (supply-side economics). This provided relatively greater money flows to investors/owners (Capital) compared to wage-earners/consumers (Labor).

If we look at the overall consumption and investment as a function of time (Fig. 2), the underlying rate of growth of investment exceeds the growth of consumption until a recession occurs. Recessions (red dots) occur at the time when the ratio of investment to consumption reaches a certain proportion. This is consistent with the high rate at which money is going to investors. Investing too much doesn't work when there isn't enough money to buy what is being produced. The mismatch leads to a recession. At the same time, many investors understand this, and they save their money. Without an ability to sell products and services to poor consumers, there is no reason to invest.

When a recession occurs, the federal reserve decreases interest rates. This decrease reduces the interest consumers are paying on debt so they can spend more. However, this effect is only temporary because the debt increases further. Over time, as a result of the

need for such interventions, interest rates have recently decreased to zero (Fig. 3).

In order to restore economic growth, the balance between consumers and investors has to be restored. By increasing the money flowing to consumers there will also be more reason for investors to invest and receive higher returns. The entire economy will grow more rapidly.

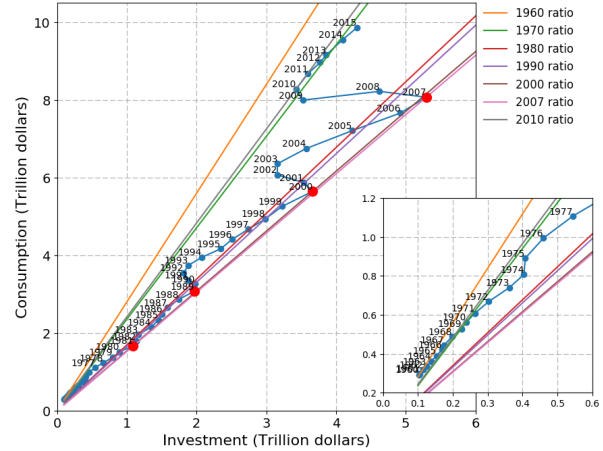


FIG. 2: Consumption versus investment between 1960 and 2015. The straight lines to the upper right represent the growth of the economy if the ratio of consumption to investment were fixed. Recessions occurred in years marked by red dots when investment grew too large compared to consumption.

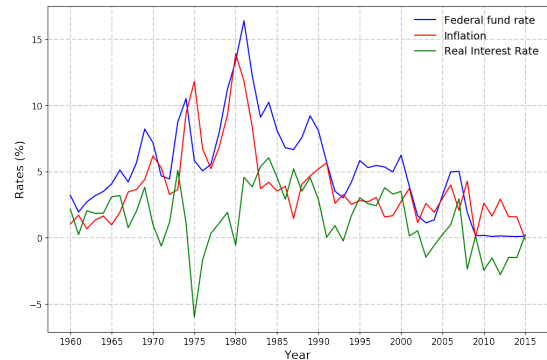


FIG. 3: Interest rate (blue), inflation rate (red), and real interest rate (green) showing before 1980 interest rates increased, afterwards they decreased. The current zero interest rate is due to consumers borrowing because they don't have enough money to buy products and services.

Instead of the economy bouncing from recession to recession (Fig. 2) it will rapidly grow increasing wages and consumption as well as investment and returns. Inflation, which was high before 1980, rises only when consumers receive relatively more money than investors. By keeping these two in balance, inflation will not rise.

[1] Yaneer Bar-Yam, Jean Langlois-Meurinne, Mari Kawakatsu, Rodolfo Garcia, Preliminary steps toward a universal economic

dynamics for monetary and fiscal policy, arXiv:1710.06285 (October 10, 2017).