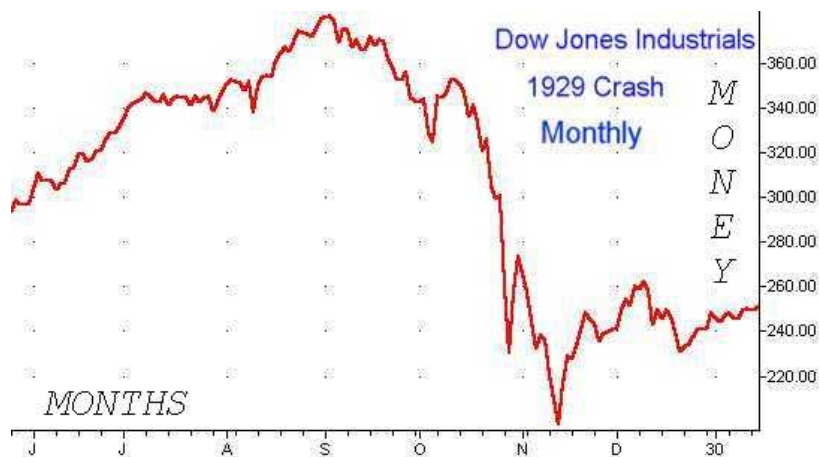


# FAMOUS FIRST BUBBLES?

## *THE STOCK MARKET CRASH OF 1929*

After World War I the United States experienced an economic boom based on new technologies in products, production processes and firm management (e.g. General Motors and Ford in automobiles, RCA in electrical appliances). The boom was facilitated by the increased use of installment credit. In 1927 a short recession ended and industrial production jumped 25% until 1929.

The US stock market boomed together with the economy and peaked in September 1929. On September 3 the index reached 381 compared to 1926=100. The stock market crashed in October 1929 (with frantic selling on Black Thursday October 24, Black Monday October 28, Black Tuesday October 29) and stock prices fell to 145 in November (-62%). In June 1932 stock prices reached their low at 34 (-91%).



The usual and familiar accusations were made and have since been repeated. Speculators were 'evidently' responsible for driving stock prices away from their fundamental value, causing a bubble in the market. Speculators were aided by 'easy credit' from banks and stock-market brokers. Not just the stock market crash was blamed on speculators, but, even more, speculators and the stock market were blamed for the entire Great Depression.

### **Fundamentals**

The fundamental value of stocks is the discounted present value of expected future dividends. Due to dividend smoothing and other considerations dividend payments usually lag earnings of firms. It is not surprising for example that during 1929 share prices of utility companies rose strongly, although most of these companies had not paid any

dividends. Utility companies were seen to benefit from the expanding sale of electrical appliances and used their earnings to increase investment rather than distribute as dividends. RCA also did not pay dividends.

Even without complications from dividend-pay-out policies, the data show that from the early 1920s stock prices followed the increase in dividend payments. Estimates show that in 1929 stock prices implied expected dividend growth rates that were lower than the actual post-WW2 growth rates (Sirkin, 1975). Recent estimates of a fundamental value for the S&P500 index show that no evidence of a bubble in 1929 exists (Barsky and DeLong, 1990; Donaldson and Kamstra, 1996). At the time, professional economists provided no consensus view, but a number of them also argued that the stock market was in line with fundamentals (among them the famous Irving Fisher). After the October 1929 crash share prices recovered slightly. But from early 1930 to mid-1932 the stock market and its fundamental value followed the downward trend in economic activity and dividends, its level adjusted for an increase in the risk premium.

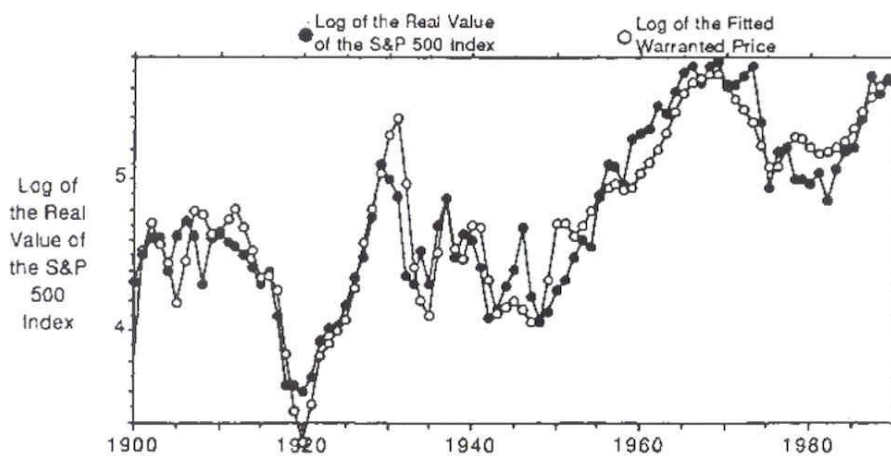


FIGURE 4

ACTUAL AND FITTED REAL STOCK INDEX VALUES

Thus, apart from the direct cause of the panic selling on a few days in October 1929, and perhaps the magnitude of those single-day price declines, there is nothing particularly strange in the behavior of stock prices before or after October 1929.

## The crash

The stock market peaked September 3, 1929. On September 5, 1929 Roger Babson addressed the National Business Conference and predicted that a sharp recession was in the offering. We now know that the index of industrial production actually peaked in June 1929. Restrictive monetary policy by the Federal Reserve was a major cause of the recession. Some of the tightening was attributed to anti-speculative reasons, but most of the Fed's emphasis with respect to the stock market was on moral suasion and direct pressure on banks and brokers.

More important for the monetary policy tightening was the gold outflow, mainly from the United States to France. The Fed raised the discount rate during January-July 1928 from 3.5% to 5% and in August 1929 to 6%. Because prices were falling, real interest rates were much higher than nominal interest rates. Additional bad news was the failure of the business and financial empire of Clarence Hatry in Britain in September 1929. In

October 1929 regulators denied the utility company Boston Edison a request for a stock split, fearing further price speculation on a price considered already higher than justified, and accusing the company of earning monopoly profits. On October 28, 1929 the Smooth-Hawley tariff was enacted. However, although surely bad news and although frequently mentioned as a major cause of the stock market crash and subsequent economic depression, the decision on the tariff came actually after the peak and the first panic in the stock market. US exports were also only 7% of GNP, and no evidence exists that import-export companies suffered more than other companies during the crash.

Many investors had bought stocks on margin, with borrowed money using stocks as collateral, and were liable for both interest rate costs, loan repayment and additional margin calls when prices decline. When stock prices started to drift downward during September/October 1929 the volume of trade increased. When prices declined and hope of a speedy recovery faded, the number of margin calls increased. Many were forced or attempted to sell their shares, and through sheer size of volume brokerage firms were swamped and prompt reporting of prices became impossible. Large scale or panic selling disrupted the market on a number of 'black' days in October 1929. Information on transaction prices was unavailable. Furthermore, speculators had a perverse incentive to stay away from the market in order to benefit from the distress sale and free fall in prices.

Conclusion. There is nothing particularly strange in the mechanics of the October 1929 stock market crash(es). Calculations with respect to a 'rational' fundamental value for the stock market in 1929 show that the market was not definitely overvalued at the time, given ex ante expectations of a hypothetical rational investor. In the following years the stock market simply followed the decline in economic activity and the general price level. Blame for the Great Depression cannot be found in the stockmarket, but rests with a failure of monetary policy.

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