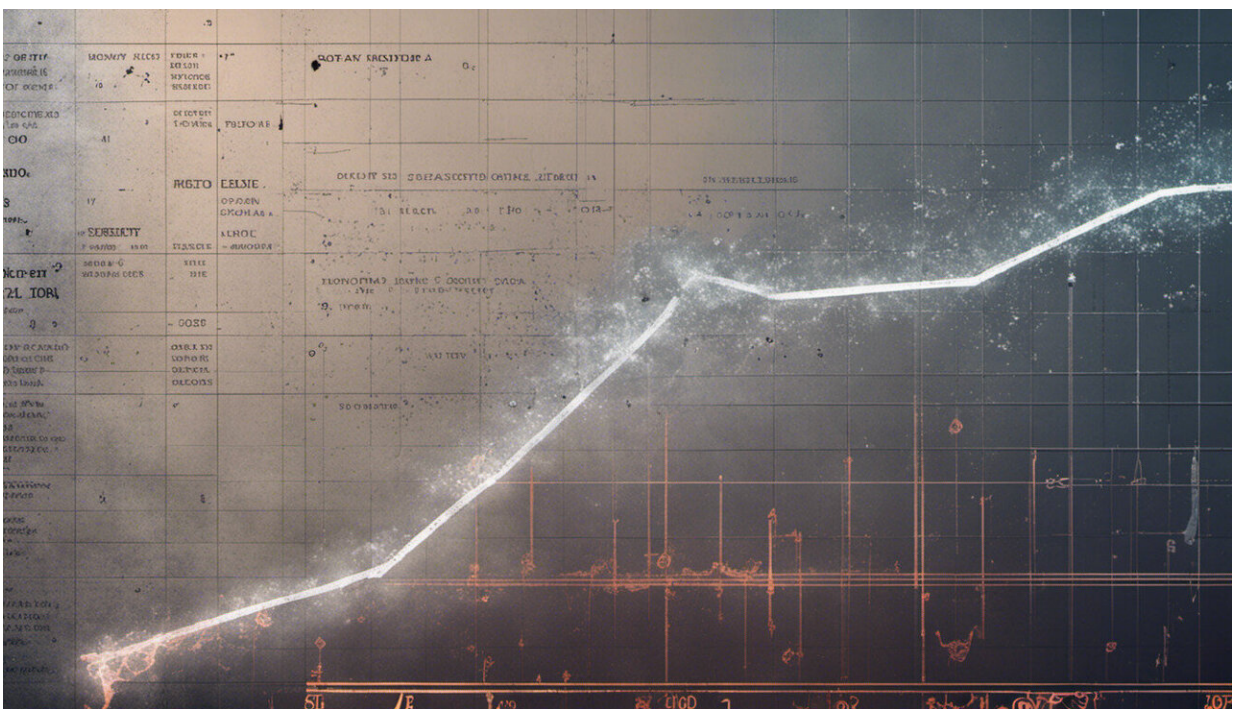


Economists have misunderstood a key indicator—and it's a big problem, says researcher

January 26 2023, by Tiago Cardao-Pito



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In studies, forecasts and recommendations to governments, markets are seen as capable of processing so-called rational information. Economists claim that firms' market prices result from rational expectation about their future monetary flows and intangible assets not accounted by

bookkeeping, which, however, would enable those future monetary flows to occur.

It is quite difficult to find evidence corroborating these assertions. They rely on information about the future, which is unknown and, thus, cannot be tested at the time of the analysis.

Albeit the lack of evidence, many economists count on Tobin's q , an indicator based on [market](#) values. While book value reflects the value of a company according to its financial statements (its books), market value is the value of a company according to the [financial markets](#). A high q value is interpreted as meaning that the firm has many growth opportunities. A low q is interpreted as the opposite.

What is Tobin's q

I recently published a [study](#) that shows that these associations for the variable Tobin's q can rather be explained by the manner the variable is computed. The findings were confirmed in a large sample involving 32,625 firms from eight countries over 20 years (2000-2019).

These findings may refute a key tenet regarding markets' future predicting ability. They raise questions about economic sciences' capacity for understanding contemporary organizations, markets and societies. They also help economic sciences in looking out for better scientific indicators.

Tobin's q , [named after economics Nobel prize winner James Tobin](#) (1918-2002), is perhaps the most used indicator in economic sciences. This indicator makes a comparison among two types of values for firms' assets: the monetary amounts invested in and market values of the assets—properties owned by the firms, such as machines, buildings, [raw materials](#), merchandising, money or debts from clients.

Economists claim that this comparison could be employed for estimating firms' future growth prospects. Future growth prospects represent future business opportunities translated into future monetary flows.

The refutation of Tobin's q

The problem is that economists estimate but do not know the market value of firms' assets. The amounts that a firm applied to its assets can usually be obtained from accounting. However, information is not available to estimate the market value of each asset.

This is why economists invoke the fundamental rule of the balance sheet. In the balance sheet the book value of assets must equal the book value of the funds used to finance them. The money to finance the assets comes from the owners of the firm (called equity) and from other people and organizations (called liabilities), including the amounts that firms owe to banks, creditors, suppliers, governments, etc.

However, this fundamental rule of "accounting" is based on historical transactions. It is not proven to apply to market values. Moreover, economists do not usually know the market value of liabilities either.

If the firm is listed in a stock market, economists can estimate their equity's market value through the value of the firm's listed shares. However, liabilities are seldom listed in any market. Thus, there is rarely any market input to identify their market value.

To solve this problem, economists simply assume that the market value of liabilities is similar to their book value and include these book values in the estimation of the firm's market value.

For example, just as a family may go to a bank to take out a mortgage loan to buy a house, companies take out loans to invest in their assets.

Now, I do not recommend that you use Tobin's q to value any family's wealth. But suppose you did for the sake of the example. Then in Tobin's q you would put exactly the same historical value of the owned mortgage loan as book value and as market value, because you ignore the latter.

The book value of debts will appear in the two components needed to calculate Tobin's q , i.e. the amounts that firms have applied to their assets and the assumed market values of those same assets. These two components of Tobin's q should be independent. However, they are not.

This non-independence generates a mechanical effect on the calculation of Tobin's q . Say, for example, that if a firm, such as the family in the example, takes out a new loan, its Tobin's q changes automatically and predictably. That is, changes in debt levels (liability) mechanically modify q .

The book value of debts will appear in the two components needed to calculate Tobin's q , i.e. the amounts that firms have applied to their assets and the assumed market values of those same assets. This non-independence makes the starting point of the calculation erroneous.

The direction of change depends solely on whether the market value of the assets is higher or lower than their book value. When the market value of the assets is higher than their book value, less debt (liabilities) automatically produces a higher q . When their [market value](#) is lower than their book value (which is more infrequent), more debt automatically produces a lower q . Therefore, we can explain systematic variations in Tobin's q without invoking speculative forecasts about growth prospects and intangible assets.

Doubts raised to economics and its status

Many economists see their discipline as superior to other social sciences

with which they refuse to interact or learn from. However, this insularity has allowed them to maintain fabulous claims. For instance, that markets are like clairvoyants predicting the future.

The refutation of Tobin's q exposes the lack of scientific evidence for many economics' conclusions. Economics addresses quite important phenomena, from economic growth to taxation, from inflation to interest rates, from wages to inequality, from production to the environment and climate change. Many economists are known to advise governments around the world, or even to attain governmental roles.

We must not allow economics to advise contemporary societies with flawed theories and indicators. Economics must interact with other social sciences like history, sociology, management, political sciences or legal sciences and these sciences should be participating more often in the study of economic phenomena, and in advising governments around the world.

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