

## Economics focus | Data birth

### Fifty years after the dawn of empirical financial economics, is anyone the wiser?

IT ALL began with a phone call, from a banker at Merrill Lynch who wanted to know how investors in shares had performed relative to investors in other assets. I don't know, but if you gave me \$50,000 I could find out, replied Jim Lorie, a dean at the University of Chicago's business school, in so many words. The banker, Louis Engel, soon agreed to stump up the cash, and more. The result, in 1960, was the launch of the university's Centre for Research in Security Prices. Half a century later CRSP (pronounced "crisp") data are everywhere. They provide the foundation of at least one-third of all empirical research in finance over the past 40 years, according to a presentation at a symposium held this month. They probably influenced much of the rest. Whether that is an entirely good thing has become a matter of debate among economists since the financial crisis.

Compiling the CRSP data was an arduous process in what were then the early days of computing. Up to 3m pieces of information on all the shares traded on the New York Stock Exchange between 1926 and 1960 were transferred from paper in the exchange's archive to magnetic tape. A lot of time was spent adjusting prices to take account of share splits, dividends, delistings and so on. Lorie and his co-researcher, Lawrence Fisher, chose January 1926 as the start date because they wanted the data to span at least one complete business cycle.

When the two economists published the first study based on these data in 1964, they reported that the annual compound return on the shares over the entire 35-year period was (depending on the tax status of the investor) between 6.8% and 9%. Acknowledging that good data on the performance of other assets were not available, the study claimed that the rate of return on shares was "substantially higher than for alternative investment media", providing the first empirical support for the still popular idea that shares outperform over the long run. Fisher and Lorie also observed that many people choose to invest in assets with lower returns due to "the essentially conservative nature of those investors and the extent of their concern about the risk of loss inherent in common stocks". Economists today call the amount of extra return that investors need to compensate them for this additional risk the "equity risk premium", although they differ greatly on how big investors should expect it to be.

After that there was no stopping the love affair between financial economists and number-crunching. Myron Scholes, now a Nobel laureate, became director of CRSP in 1974 and ensured the database was both kept up-to-date and made readily available to academic economists everywhere. In turn, this resource became ever more useful as computing power became more pervasive and affordable. The CRSP database has since been expanded to include bonds, property, some commodities, mutual funds and exchange-traded funds. It has been replicated across the world.

One of the earliest uses of the CRSP data was by Eugene Fama, an economist at the University of Chicago, to support his "efficient-market



Left - James H. Lorie 1922 - 2005

Right - Lawrence Fisher 1929 - 2008

hypothesis". He found that over time share prices tended to follow a "random walk". Markets are efficient, he said, because all relevant information is reflected in share prices at any given moment, meaning there are no predictable movements in prices for smart investors to exploit. Mr Fama did concede that there was some evidence of temporary short-term predictability in share prices, however. That caveat has spawned a vast number of papers based on discovering such "anomalies" through data mining. In theory, such anomalies are potentially lucrative for investors, but as believers in efficient markets observe with glee, it seems that no sooner are such anomalies discovered and reported in journals than they typically disappear.

For Mr Scholes empirical finance has barely scraped the surface of what will one day be known about asset pricing. The amount of research in this area is still growing rapidly. Fashionable areas of study include the ef-

fect of liquidity on asset prices and the impact of automated trading programs designed to take advantage of mispricing of securities. Partly to accommodate the boom in articles that report the results of this number-crunching, academic economic journals have proliferated, rising from around 80 when CRSP was founded to about 800 today. The sheer volume of material means that financial economists are becoming increasingly specialised.

#### The grandpa principle

That may have costs as well as benefits. Some economists worry that much of this statistical analysis is nothing more than noise that drowns out serious thinking about the big questions, such as why the financial system nearly collapsed two years ago and how a repeat can be avoided. With the creation of the CRSP database economists suddenly believed that "finance had become scientific," says Robert Shiller, an economist at Yale University and a longtime sceptic about the efficient-market hypothesis. Conventional ideas about investing and financial markets—and about their vulnerabilities—seemed out-of-date to the new empiricists, says Mr Shiller, who worries that academic departments are "creating idiot savants, who get a sense of authority from work that contains lots of data". To have seen the financial crisis coming, he argues, it would have been better to "go back to old-fashioned readings of history, studying institutions and laws. We should have talked to grandpa."

Mr Scholes counterpunches that the usefulness of this empirical analysis is proven by the fact that demand for it continues to grow. At CRSP's 50th-anniversary symposium plans were unveiled to publish new indices for large-cap and small-cap shares, as well as for growth and value stocks. These indices, CRSP claims, will be more academically rigorous and cheaper than existing ones. For believers in the efficiency of markets, that should be enough to ensure CRSP's continuing success. ■

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