

# Retrospectives

## John Maynard Keynes, Investment Innovator

David Chambers and Elroy Dimson

This feature addresses the history of economic terms and ideas. The hope is to deepen the workaday dialogue of economists, while perhaps also casting new light on ongoing questions. If you have suggestions for future topics or authors, please write to Joseph Persky of the University of Illinois at Chicago at [jpersky@uic.edu](mailto:jpersky@uic.edu).

### Introduction

When John Maynard Keynes managed the endowment of King's College at Cambridge University, the actively managed part of his portfolio beat the performance of the British common stock index by an average of 8 percentage points per year from 1921 to 1946. Little wonder that such modern investment giants as Warren Buffett (2013), George Soros (1987, 2011), and David Swensen (2001, 2005) have invoked Keynes in support of their investment beliefs and strategies. However, Keynes' actual investment strategy has been largely unexplored. An almost-complete record of Keynes' stock trading has until now remained dormant in the King's College Archives (Cox 1995), and we utilize this rich resource to reconstruct Keynes' investment decision making.

■ *David Chambers is Tenured Lecturer in Finance, Cambridge Judge Business School, United Kingdom, and (at the time of writing) Thomas McCraw Fellow, Harvard Business School, Cambridge, Massachusetts. Elroy Dimson is Emeritus Professor of Finance, London Business School, and Visiting Professor, Cambridge Judge Business School, United Kingdom. Their email addresses are [d.chambers@jbs.cam.ac.uk](mailto:d.chambers@jbs.cam.ac.uk) and [edimson@london.edu](mailto:edimson@london.edu).*

Keynes was an investment innovator. He traded currencies at the very inception of modern forward markets (Accominotti and Chambers 2013), commodity futures (Fantacci, Marcuzzo, and Sanfilippo 2010), and stocks—which are the focus of this paper. Most importantly, Keynes was among the first institutional managers to allocate the majority of his portfolio to the then-alternative asset class of equities. In contrast, most British (and American) long-term institutional investors of a century ago regarded ordinary shares or common stocks as unacceptably risky and shunned this asset class in favor of fixed income and real estate.

In addition, Keynes independently championed value investing in the United Kingdom at around the same time as Benjamin Graham was doing so in the United States. Both Keynes' public statements and his economic theorizing (Keynes 1936, chap. 12) strongly suggest that he did not believe that “prices of securities must be good indicators of value” (Fama 1976). Beginning as a top-down portfolio manager, seeking to time his allocation to stocks, bonds, and cash according to macroeconomic indicators, he evolved into a bottom-up investor from the early 1930s onwards, picking stocks trading at a discount to their “intrinsic value”—terminology he himself employed. Subsequently, his equity investments began to outperform the market on a consistent basis.

The result of such innovative thinking can be observed in his unconventional portfolios with pronounced tilts towards smaller companies and stocks with a high-dividend yield. His early confidence in an equity risk premium, and his development of small-stock and value-driven investment strategies, anticipated approaches employed by some of the better performing institutional investors in modern times (Lewellen 2011).

### **The King's College Endowment: 1921–1946**

John Maynard Keynes invested on his own account as well on behalf of several institutions (Pierce 1993), among which King's College, Cambridge, was closest to his heart. In 1911, he had been elected to the Estates Committee of his college, and in 1912 to the Council, its governing body. He was appointed Second Bursar just after World War I and had primary responsibility for investments from 1921. In 1924, he became First Bursar, the senior financial administrator of his college, and from that point he had full and apparently unchallenged discretion over investment policy until his death in 1946. Indeed, his annual “Chancellor of the Exchequer” speech became a not-to-be-missed fixture in the College calendar.

Oxford and Cambridge colleges are perhaps the ultimate long-horizon investors and King's, founded in 1441, was by no means the oldest. Traditionally, their assets were largely invested in real estate (Dunbabin 1975; Acharya and Dimson 2007), and the bursar collected rents from a predominantly agricultural portfolio, managed the expenditures, and drew up the college books (Neild 2008, p. 100). This pattern was reinforced by Trustee Acts from the mid-nineteenth century intended to ensure that trust funds were managed conservatively. The Acts together with college

statutes severely restricted the freedom of a bursar to undertake financial investments, requiring that they be primarily in such high-quality fixed income securities as UK and colonial government securities, UK railway securities, water company securities, and local authority housing bonds and mortgages (*Stock Exchange Official Intelligence* 1926, pp. 1922–23).

However, in 1921 Keynes persuaded his College Fellows to permit a part of the endowment to be excluded from these restrictions. Accordingly, we divide the King's endowment into two composite funds which we call the "Restricted Portfolio," subject to the Trustee Acts, and the "Discretionary Portfolio," comprising those funds where Keynes had full discretion. While Keynes was responsible for both portfolios, our focus will be on the Discretionary Portfolio, since it offers the purest expression of his views. The Discretionary Portfolio initially comprised a fund known as the "Chest" and then from September 1933 also included Fund B, a pooled vehicle for a myriad of small endowed funds which had previously been managed on a segregated basis. The two accounts were managed in a similar style. Although attention has tended to concentrate on the Chest, we look at Keynes' trading record for both these discretionary accounts.

The Discretionary Portfolio grew through a combination of performance and cash inflows from 8 percent of the £285,000 in total securities held by the College in 1921 to 68 percent of £1,222,000 in 1946. To put these valuations in a contemporary context, £285,000 invested in the UK equity market in 1921 would, by the start of 2013, have appreciated to £54 million, and £1,222,000 invested in the UK equity market in 1946 would, by the start of 2013, have appreciated to £141 million. Both estimates assume that the investment would have been in a capitalization-weighted index of the largest 100 companies, as published in Dimson, Marsh, and Staunton (2013), and that all income would have been disbursed.<sup>1</sup> As our starting point, we revisit Keynes' performance by taking information from his annual investment review of the College endowment, the *Report to Inspectors of Accounts*, which he prepared from 1922 until his death (although the report for 1926 is missing) for the investment committee, known as the Estates Committee. In the *Reports*, Keynes reviewed separately each of the four main accounts that made up the Restricted Portfolio and the two accounts making up the Discretionary Portfolio. For each, he provided separate lists of year-end holdings at market values as well as annual capital appreciation and income figures. This reporting format therefore suggests that each account was managed on a segregated basis.

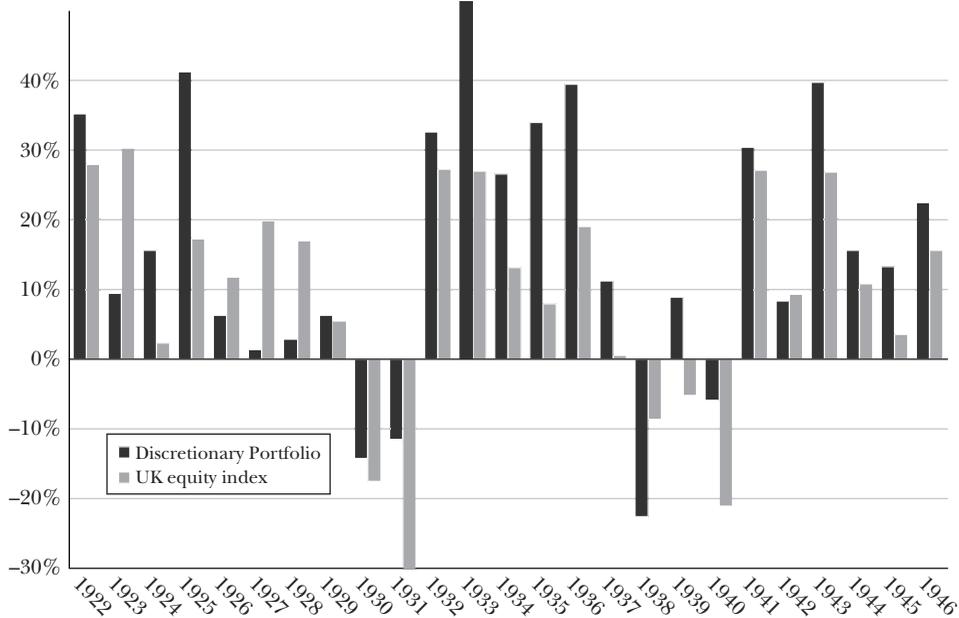
From the *Reports*, we have calculated the returns achieved by the Discretionary Portfolio (taking The Chest and Fund B together<sup>2</sup>), the Restricted Portfolio, and the Total Fund excluding real estate.<sup>3</sup> The returns are based on the estimates made

<sup>1</sup> We refer throughout to this index of the 100 largest UK equities, which is estimated by Dimson, Marsh, and Staunton, as the DMS Index.

<sup>2</sup> The Discretionary Portfolio returns also include a third fund, Fund C, established in 1933, which on average represented less than 1 percent of the total market value of the assets we analyze.

<sup>3</sup> Both the *Reports* and the College Accounts exclude any valuation of real estate holdings in the endowment throughout this period.

Figure 1  
King's College Investment Returns 1922–1946



Sources: Chambers, Dimson, and Foo (2013). The total returns of the Discretionary Portfolio for the financial years ended August 1922 to August 1946 are estimated from the annual *Report to Inspectors of Accounts*, from the King's College Archives for financial years ended August. The UK equity index is based on the equally-weighted Dimson, Marsh, and Staunton (2002) total return index.

Note: Figure 1, plots the total return (including dividends) for the Discretionary Portfolio, which was managed by Keynes, and for the UK equity index.

by Keynes of the appreciation or depreciation for each year as a percentage of the start-year market value. To this capital gain or loss is added the income return for the year, which is the reported investment income divided by the average of the beginning and end portfolio values. As a general rule, all endowment income was spent by King's College rather than retained in the endowment.

Our estimates are illustrated in Figure 1, which plots the total return (including dividends) for the Discretionary Portfolio and for the UK equity index. According to these estimates, over the whole period, from end August 1922 to end August 1946, the annual performance of the Discretionary Portfolio averaged +16.0 percent, as compared to +10.4 percent for the market index. In contrast, the annual arithmetic mean total return of the Restricted Portfolio was only +6.8 percent, which did not compare favorably with total returns from UK government bonds of +7.1 percent.

The year-by-year results also show that Keynes underperformed in only six out of the 25 financial years and that four of those years occurred in the first eight years of his management of the Discretionary Portfolio. By August 1929, he was lagging the UK equity market by a cumulative 17.2 percent since inception. In addition, he

failed to foresee the sharp fall in the market the following month. We discuss the significance of this period of underperformance below, arguing that it was the catalyst for the fundamental change in his investment approach sometime in the early 1930s.

To what extent is this higher return in the Discretionary Portfolio across the whole period generated by assuming higher risk? One measure of risk, known as “tracking error,” is the standard deviation of returns measured relative to a stock market index. Keynes’ tracking error, measured relative to our UK equity index, is 13.9 percent, a high level of portfolio risk.<sup>4</sup> The high tracking error of the Discretionary Portfolio was attributable to Keynes’ focus on stock selection, which we discuss in the following section.

Keynes’ risk-taking was rewarded with superior investment performance. The excess return on a portfolio is defined as the return on the portfolio minus the risk-free rate of interest. The reward-to-risk ratio is the excess return divided by the standard deviation of portfolio returns. This reward-to-risk ratio, usually termed the Sharpe Ratio, was 0.73 for the Discretionary Portfolio, which compares favorably with the Sharpe Ratio for the Restricted Portfolio (0.57) and the UK equity market (0.49).<sup>5</sup>

## Keynes’ Stock Portfolio Characteristics

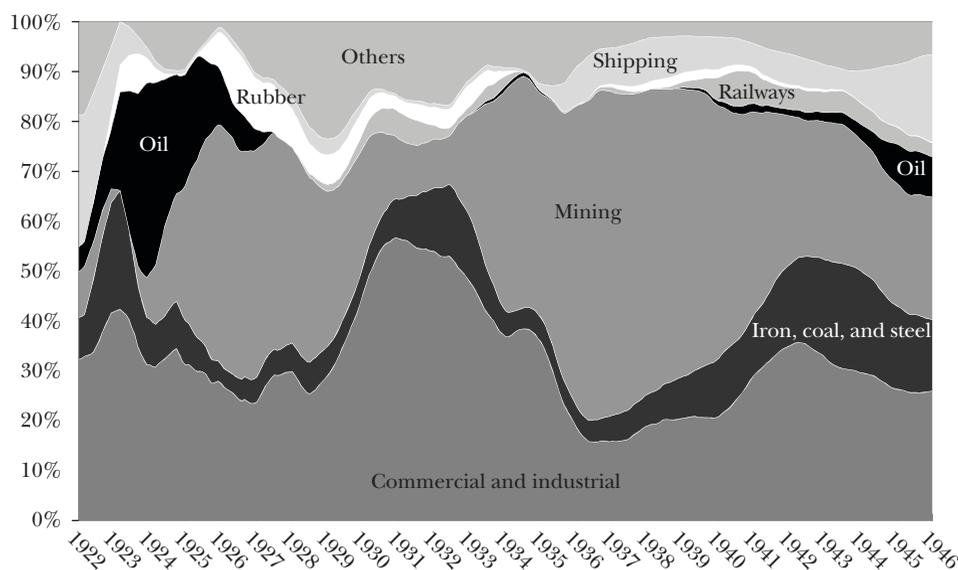
We describe the Discretionary Portfolios on four important dimensions. First, how diversified were Keynes’ portfolios? Second, how “active” were his sector weightings, or, in other words, to what extent did his sector weightings differ from those of the market? Third, measured in terms of stock market capitalization, was he more inclined to invest in small or large firms? Last, were his portfolios more tilted to high-dividend or low-dividend yield stocks? The characteristics data in this section are estimated from UK security prices collected from the *Stock Exchange Daily Official List* and capital and dividend histories from the *Stock Exchange Daily Official List* and the *Stock Exchange Official Yearbooks*.

One measure of portfolio diversification is the proportion of the market value of the Discretionary Portfolio’s UK equity securities allocated to the largest five (C5) or 20 (C20) shareholdings. The C20 measure started at 100 percent in the early 1920s when the total portfolio value was relatively modest, and although it declined, it remained at 80 percent in the 1940s as the portfolio value expanded. The C5 annual averages rose from 46 percent in 1921–29 to 49 percent in 1930–39, and then fell back to 33 percent in 1940–46. Keynes ran quite concentrated portfolios,

<sup>4</sup> For comparison, in the post-2000 period, the time-series tracking error for US university endowment funds averages only 3.4 percent (Brown, Dimmock, Kang, and Weisbenner forthcoming), and even for individual mutual funds it averages less than 6 percent (Cremers and Petajisto 2009).

<sup>5</sup> The only prior statistics on Keynes’ investment performance were reported by Donald Moggridge who edited *The Collected Writings of John Maynard Keynes* (1983) and analyzed by Chua and Woodward (1983), who suggested that Keynes was a very extreme performer. As we explain in Chambers, Dimson, and Foo (2013), the Chua–Woodward study suffered from a number of data limitations, and the performance of Keynes’ transactions was more nuanced than was previously believed.

Figure 2  
**UK Discretionary Portfolio Sector Weights: 1922–1946**



Notes: Weights within the UK equity portfolio are estimated over rolling twelve-month periods from August 1922 to August 1946. Sector definitions follow the London Stock Exchange classification. Others include Breweries, Electric, Lighting & Power; Financial, Trusts, Land, etc.; Insurance; Investment Trusts; Rubber; Telegraphs & Telephones.

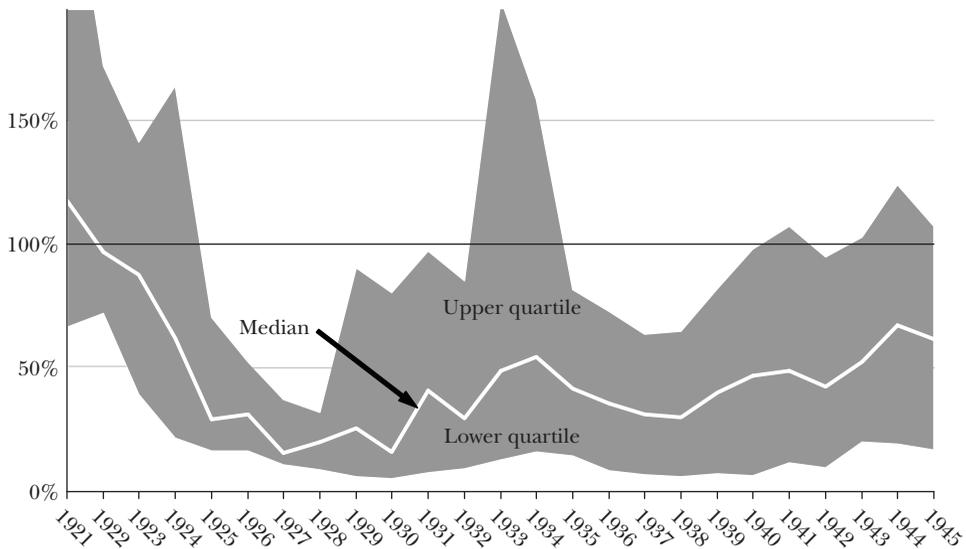
but there is no evidence that concentration measured in this way rose over time. We return to this point in the next section.

In looking at sectors, the majority of his UK equity holdings were concentrated in just two sectors, metal mining—tin mining stocks in the 1920s and gold mining stocks in the following decade—and commercial and industrial firms, as shown in Figure 2. While the latter was the largest sector represented in the stock market, representing at least 40 percent of the market index, mining only accounted for between 5 and 10 percent of the market index (Chambers, Dimson, and Foo 2013). Keynes' large overweighting of mining relative to the market was similar in magnitude to his underweighting of the second-largest sector, banking. Banking carried an index weight of 20 percent, and Keynes had little or no exposure in this sector.

As a director, Keynes contributed to the detailed statistical analysis of the *London and Cambridge Economic Service* which concluded in the mid-1920s that a combination of price-inelastic supply and strong underlying demand would cause the tin price to appreciate sharply (Moggridge, *The Collected Writings of John Maynard Keynes* XII, pp. 373–378, 416–421).<sup>6</sup> This analysis underpinned his decision to move into

<sup>6</sup> We refer throughout to *The Collected Writings of John Maynard Keynes* (1983, edited by Donald Moggridge) as *Collected Writings*.

Figure 3

**Size Distribution of UK Discretionary Portfolio Holdings: 1921–1945**

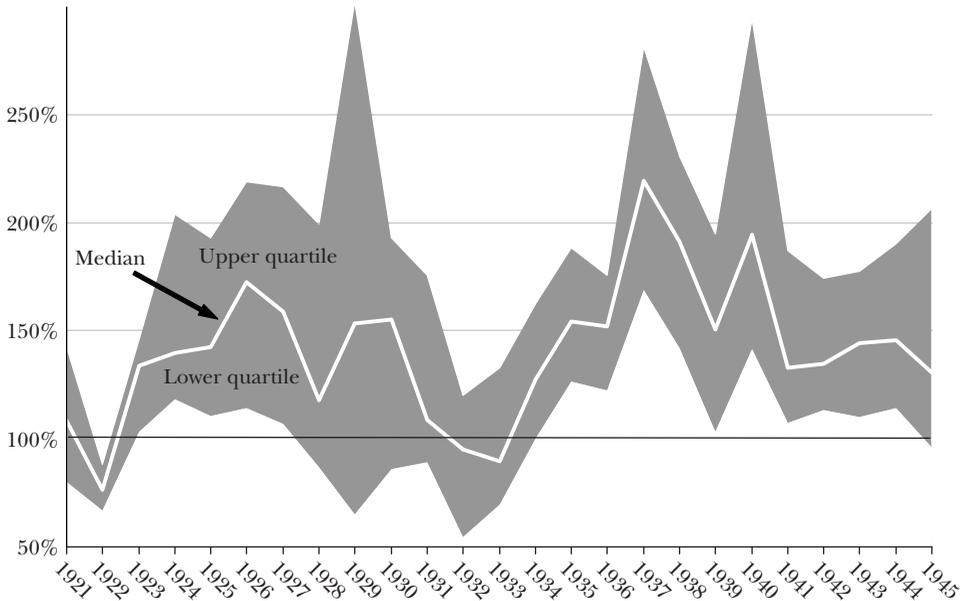
Notes: Each calendar year-end from 1921 to 1945, the size of each company in the Discretionary Portfolio is defined as its stock market capitalization expressed as a percentage of the market capitalization of the smallest firm in the DMS 100-share index. We plot this measure of relative size for the 25th percentile, median, and 75th percentile of firms in the Discretionary Portfolio. The inter-quartile range is shaded gray, and the median size of an equity holding is shown as a white line. The horizontal black line represents the size of the smallest constituent of the index. In most years, three-quarters of holdings are in companies that are smaller than the smallest firm in the index.

tin stocks. In the 1930s, he accumulated South African gold mining shares based upon his early realization that the devaluation of the South African currency in 1933 would have a favorable impact on their earnings (*Collected Writings XXI*, pp. 225–29). Keynes' substantial weighting in commercial and industrial stocks began in the early and mid-1920s with a diversified portfolio of industrial names. However, soon thereafter he concentrated his exposure in this sector on the two leading British automobile stocks, Austin Motors and Leyland Motors. In the context of the time, these would have been viewed as “technology” stocks.

In terms of firm size, Keynes had a decided tilt towards mid-cap and small-cap stocks. Compared to the ordinary market capitalization of the top 100 firms listed on the UK market at that time, the majority of his UK stocks were smaller firms. For each stock held in the Discretionary Portfolio at each calendar year-end from 1921 to 1945, we estimated its relative size, defined as its equity market capitalization expressed as a percentage of the market capitalization of the smallest firm in the DMS 100-share index.

Figure 3 plots this measure of relative size for the 25th percentile, median, and 75th percentile of firms in the Discretionary Portfolio. The interquartile range is shaded gray, and the median size of an equity holding is shown as a white line; the

Figure 4

**Yield Distribution of UK Discretionary Portfolio Holdings: 1921–1945**

Notes: Each calendar year-end from 1921 to 1945, the dividend yield of each dividend-paying company in the Discretionary Portfolio is expressed as a percentage of the dividend yield of the DMS 100-share index. We plot this measure of relative dividend yield for the 25th percentile, median, and 75th percentile of firms in the Discretionary Portfolio. The inter-quartile range is shaded gray, and the median dividend yield of an equity holding is shown as a white line. The horizontal black line represents the dividend yield of the index. In most years, three-quarters of holdings are in companies that have a dividend yield higher than the index.

horizontal black line represents the size of the smallest index constituent. It can be seen that, in most years, three-quarters of holdings are in companies that are too small to enter the list of the top 100 firms by market capitalization.

Turning to dividend yield, Keynes had a preference for high-dividend yield firms. For each dividend-paying stock held in the Discretionary Portfolio at each calendar year-end from 1921 to 1945, we express its dividend yield as a percentage of the DMS 100-share index. In Figure 4, we plot this measure of relative dividend yield for the 25th percentile, median, and 75th percentile of firms in the Discretionary Portfolio. The interquartile range is shaded gray, and the median dividend yield of an equity holding is shown as a white line; the horizontal black line represents the dividend yield of the index. In most years, three-quarters of holdings were in companies with a dividend yield higher than the index of the largest 100 UK firms. The weighted average dividend yield of the Discretionary Portfolio (not reported) dips slightly below the dividend yield on the index only twice (in 1922 and in 1932) and is higher than the median for the Discretionary Portfolio.

However, Keynes was willing to be flexible in this area. Hence, he substantially increased his exposure to mining companies and to distressed businesses that offered the potential for recovery between 1927 and 1936, even though these stocks had, at that time, stopped paying dividends; in total, they represented one-in-three of his equity holdings. Thereafter, the proportion of zero-dividend paying stocks fell to less than one-in-five of his holdings through a combination of his rebalancing decisions and of companies reinstating their dividends. As a result, the Discretionary Portfolio readopted its distinctive high-dividend yield tilt.

In summary, Keynes constructed portfolios that were very different from the overall market. He adopted very active sector weightings, selected small-cap and mid-cap stocks, and rotated between high-dividend and low-dividend stocks relative to the market.

## Keynes' Investment Philosophy

The core of Keynes' investment philosophy throughout the two-and-a-half decades he managed his college fund was a belief in the attractions of equities as a new asset class for long-horizon investors such as endowments.

During Keynes' time, UK institutional investor portfolios remained dominated by fixed income securities (Hannah 1986; Burton and Corner 1968; Baker and Collins 2003). To our knowledge, no other Oxbridge colleges made a substantial allocation to equities until the second half of the twentieth century. In the United States, the largest university endowments allocated less than 10 percent to common stock in the 1920s (on a historical cost-weighted basis), and this total only rose above 20 percent in the late 1930s (Goetzmann, Griswold, and Tseng 2010).

At this time when equities were rarely perceived as an institutional asset, Keynes made a radical shift to equities starting in 1921, and can justly be regarded as among the first institutional equity investors. Several years later, Keynes (1925) wrote a very positive review of Smith's (1924) book on *Common Stocks as Long Term Investments*, in which he extolled the virtues of US common stocks as residual claims on industrial growth. The annualized US equity risk premium over government bonds had been 4.28 percent during 1900–1920, and according to Dimson, Marsh, and Staunton (2013) over the same period it had been a near-identical 4.26 percent in the United Kingdom. Seeing the same potential in British ordinary shares as in American common stocks, Keynes identified their capacity to deliver a return premium over bonds.

History proved Keynes right, and between 1921 and 1946, the period during which he moved King's into equities, equities provided a real (inflation adjusted) return of 8.01 percent in the US and of 8.28 percent in the UK. Keynes' allocation of the Discretionary Portfolio to UK ordinary shares averaged 75 percent over the financial years 1922–29, 46 percent over 1930–39, and 69 percent over 1940–46. When we include the US common stocks, which he added to the portfolio from

1933 onwards, his total combined ordinary share and common stock weighting averaged 57 percent over 1930–39 and 73 percent over 1940–46.

Keynes (1925) also claimed a second advantage for equities, namely, the availability of an income premium over bonds. Over the period 1921–46, the Discretionary Portfolio was indeed able to earn an average dividend yield on its UK equities, including non-dividend-paying stocks, consistently higher than either the dividend yield on the UK equity market or the income return on government bonds.

Keynes was not a believer in market efficiency. In his Chairman’s Speech to the 1938 National Mutual Insurance Company annual meeting, he argued: “[Markets] are governed by doubt rather than conviction, by fear more than forecast, by memories of last time and not by foreknowledge of next time. The level of stock prices does not mean that investors *know*, it means they do *not* know. Faced with the perplexities and uncertainties of the modern world, market values will fluctuate more widely than will seem reasonable in the light of after-events” (*Collected Writings* XII, p. 238, emphasis in original). Among modern economists, Shiller (2003) notably echoes these sentiments. In chapter twelve of *The General Theory*, Keynes (1936, p. 154) writes:

It might have been supposed that competition between expert professionals, possessing judgment and knowledge beyond that of the average private investor, would correct the vagaries of the ignorant individual left to himself. It happens, however, that the energies and skill of the professional investor and speculator are mainly occupied otherwise. For most of these persons are, in fact, largely concerned, not with making superior long-term forecasts of the probable yield of an investment over its whole life, but with foreseeing changes in the conventional basis of valuation a short time ahead of the general public. They are concerned, not with what an investment is really worth to a man who buys it “for keeps”, but with what the market will value it at, under the influence of mass psychology, three months or a year hence. Moreover, this behaviour is not the outcome of a wrong-headed propensity. It is an inevitable result of an investment market organised along the lines described. For it is not sensible to pay 25 for an investment of which you believe the prospective yield to justify a value of 30, if you also believe that the market will value it at 20 three months hence.

Given his views on stock market efficiency, Keynes pursued an active investment approach. However, this approach changed radically during the course of his investment career. He began managing the Discretionary Portfolio employing a top-down investment approach using monetary and economic indicators to market-time his switching between equities, fixed income, and cash. This approach called the “credit cycle theory of investment” was described in the prospectus of the Independent Investment Company, a closed-end fund he cofounded and floated on the London Stock Exchange in 1924 (*Collected Writings*, XII, p. 33).

However, after disappointing performance in the late 1920s, Keynes discarded his top-down market-timing approach. Our formal statistical tests fail to find any evidence that Keynes was successful at timing the stock market (Chambers, Dimson, and Foo 2013). Keynes himself confessed, when reflecting on his investment record for King's in a 1938 internal memorandum to his College investment committee, that: "Credit cycling means in practice selling market leaders on a falling market and buying them on a rising one and, allowing for expenses and loss of interest, it needs phenomenal skill to make much out of it. . . . We have not proved able to take much advantage of a general systematic movement out of and into ordinary shares as a whole at different phases of the trade cycle" (*Collected Writings* XII, pp. 100, 106).

Consistent with Keynes' rejection of his market-timing investment approach, there is a marked contrast between how he reacted to the major equity market falls in 1929–30 and in 1937–38. When the UK market began its fall in October 1929, he sold one-fifth of his UK equities by value over the following 12 months and switched into government bonds. In contrast, when the UK market began to decline sharply a second time in August 1937, he added modestly to his UK equity positions and maintained his equity allocation at over 90 percent.

Whilst maintaining his commitment to equities as a new asset class during his tenure as manager of the King's endowment, Keynes radically switched his investment approach to a bottom-up, buy-and-hold stock-picking approach. Detailed analysis of his investment correspondence as well as the statistical analysis of his performance in event-time strongly suggests the early 1930s as the most likely inflection point in the evolution of his investment approach (Chambers, Dimson, and Foo 2013).

In August 1934, Keynes outlined this new approach as follows: "As time goes on, I get more and more convinced that the right method in investment is to put fairly large sums into enterprises which one thinks one knows something about and in the management of which one thoroughly believes" (*Collected Writings* XII, p. 57).

In the same 1938 internal memorandum to his investment committee, Keynes justified his success in managing the College investments as being due to his "careful selection of a few investments" as judged by their "intrinsic value" (*Collected Writings* XII, p. 107, emphasis in original). Keynes' value-oriented approach is reminiscent of the framework favored by Graham and Dodd in their influential 1934 book, *Security Analysis*. The two Columbia finance professors advocated the use of careful fundamental analysis of corporate financial statements in order to identify stocks undervalued by the market. While Graham had applied this approach to investment beginning in 1923 (Carlen 2012, pp. 142–3), Keynes' focus on investment value was developed independently (Woods 2013). Our searches in the King's College Archives reveal no indication of any contact between the two men.

A good example of Keynes' value-oriented stock-picking is provided by one of his largest core holdings, Union Corporation, the South African mining company, which accounted on average for 51 percent of his gold mine exposure over the period 1933–46. In June 1934, Keynes outlined the key reasons he liked the stock, namely, the fact that the share price was trading at a 30 percent

discount to his conservatively estimated break-up value and that he evaluated and trusted the management very highly (*Collected Writings* XII, pp. 54–57). In thinking about the intrinsic value of a stock, Keynes sometimes thought in a novel way about equity valuation. In the case of Austin Motors, another of his core holdings, he valued the shares in terms of market capitalization per car produced and estimated that Austin traded at a 67 percent discount to General Motors in October 1933 (King's Archives JMK/PC/1/221-2).

One last question remains. If, as Keynes claimed, he shifted his approach to concentrating on a few core investments, then why does this shift not become apparent in the trend in the C5 and C20 Discretionary Portfolio concentration measures described earlier? The reason is, although the number of portfolio holdings expanded into the 1930s, Keynes put larger amounts into his favorite stocks, as noted by Boyle, Garlappi, Uppal, and Wang (2012). A better measure of the effective level of diversification is provided by the inverse of the Herfindahl index of individual equity weights, a measure first used in financial economics by Sharpe (1970). The inverse of the Herfindahl index indicates the number of uncorrelated holdings, each with the same risk attributes as the average portfolio constituent and held in equal proportions, that would have the same volatility as the Discretionary Portfolio.

Looking at Figure 5, we see that in the early 1920s, when Keynes held a portfolio with almost identical weights in each constituent, the inverse of the Herfindahl index was close to the number of portfolio holdings. But over time the Discretionary Portfolio became less balanced and the inverse of the Herfindahl index peaked at 29 in the early 1940s. By that time, the effective diversification of Keynes' portfolio was markedly lower than the number of equity holdings might suggest. Moreover, Keynes' tendency to emphasise companies from a few industry sectors further reduced the effective diversification of his portfolios.

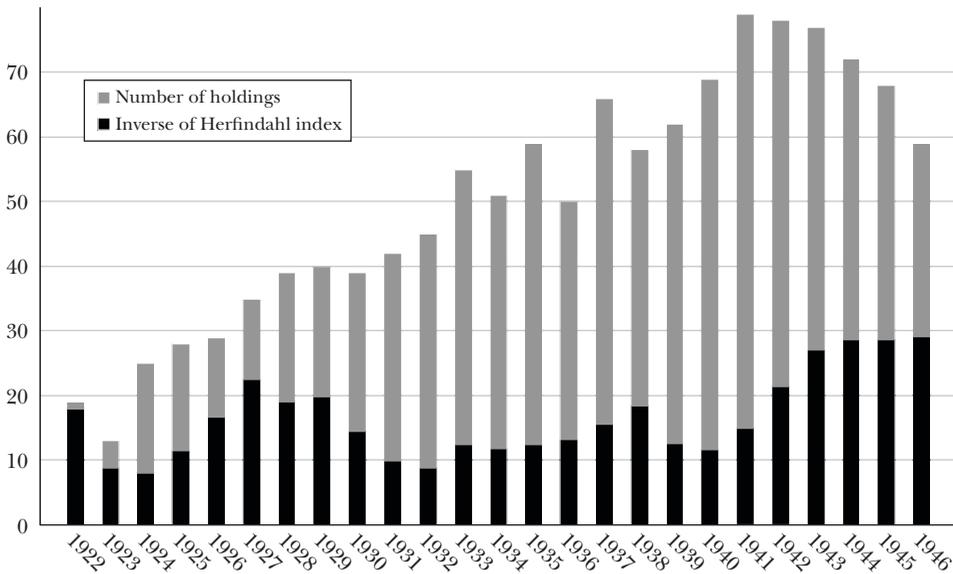
## Was Keynes an Inside Trader?

Judging from his correspondence, Keynes' stock-picking was for the most part the product of fundamental security analysis based on reading the financial press and on sell-side research received mainly through a selection of London and provincial stockbrokers. Keynes supplemented his fundamental analysis by making use of his considerable network of City contacts. For example, he counted among his closest friends Rupert Trouton—his former pupil, his broker, and a director of the Norwegian whaling firm Hector Whaling, one of his core holdings—and Henry Strakosch, who was chairman of Union Corporation, another of his core holdings. Keynes made particular use of Strakosch and his staff, when undertaking due diligence on mining stocks (King's Archives JMK/KC/5/3). However, he was not always personally connected to his core holdings and there was no apparent personal connection in the case of Austin Motors.

When the 7,632 potential personal contacts from Keynes' time at Eton College, Cambridge University, the Treasury during World War I, and from public

Figure 5

## UK Discretionary Portfolio Concentration: 1922–1946



Notes: For each financial year ended August, we present the number of holdings (the gray bars) and the inverse of the Herfindahl index for the Discretionary Portfolio (the black bars). The inverse of the Herfindahl index indicates the number of uncorrelated holdings, each with the same risk attributes as the average portfolio constituent and held in equal proportions, that would have the same volatility as the Discretionary Portfolio.

life are matched with the directors of the 247 firms in which he invested, Keynes was ultimately connected to 46 of those firms (Eldridge 2012). His connections proved particularly influential in the mining sector. The existence of a connection to a director at the time of investment led Keynes to allocate on average four times the weighting to stocks of mining firms as compared to nonmining firms, and furthermore this benefited performance (Chambers, Dimson, and Foo 2013).

Given his extensive contacts, the question arises as to whether Keynes was an insider. It would be surprising if he was not sometimes the recipient of what today would be deemed price-sensitive information. For example, he became aware of an imminent change in the Bank of England interest rate in 1925 (Mini 1995). However, the question is ultimately anachronistic given that insider trading by investors was not regulated in the United Kingdom until 1980, with the main exception being directors who owed fiduciary duties to their company not to trade on price-sensitive information (Cheffins 2008, pp. 39–40).

It is not possible with our data to discover how frequently and the extent to which Keynes exploited such information in his trading. However, if Keynes was using his

insider status, he was doing so not for gains from short-term trading, but instead for systematically accumulating long-term positions in his favorite shares such as Union Corporation, Hector Whaling, and Austin Motors. In addition, Keynes rarely engaged in flipping new issues—an activity that might plausibly be linked to insider status. Only 5 percent of his purchase transactions for King’s College were initial public offerings and in only a very few cases did he sell out in the days immediately following the start of trading.

## Conclusion

Investing is an important and largely overlooked part of Keynes’ professional life. His experiences trading in the stock market influenced his economic theorizing as evidenced by chapter 12 of the *General Theory*. Here he reflected on the possible adverse effect on corporate investment and the macroeconomy of stock market fluctuations resulting from the ebb and flow of investor sentiment. Indeed, his initial setbacks as an investor led him to bemoan the seeming inability of the “serious-minded” investor “to purchase investments on the best genuine long-term expectations he can frame” (Keynes 1936, p. 156). Whilst impressive, his investment performance for King’s College was not the uninterrupted success that has previously been believed. As Keynes himself documented, early attempts at a macro market-timing style of investing proved disappointing and led to a fundamental overhaul of his investment approach and his becoming a more patient, bottom-up stock-picker after the early 1930s.

The most significant of Keynes’ contributions to professional investment management was his path-breaking and strategic allocation to equities together with his early adoption of value-based investment strategies. By the 1940s, the weight of common stocks had increased to represent over half of the whole King’s College endowment’s security portfolio as a result of his equity-focused strategy. Institutional managers in general did not mimic this strategy until the second half of the twentieth century.

■ *We wish to acknowledge the important work of the King’s College Cambridge archivist, Patricia McGuire. Valued comments were received from Sir John Bradfield, John Campbell, Keith Carne, Oliver Dawson, Charley Ellis, Justin Foo, Walter Friedman, William Goetzmann, Chang-Tai Hsieh, Ulrike Malmendier, Tom Nicholas, Nigel Prentice, Raghavendra Rau, William Sharpe, Timothy Taylor, seminar participants at Boston, Harvard (HBS), London (LSE), Maastricht, Oxford (Saïd), Rutgers, Tilburg, Vienna, Virginia (Darden School), Warwick, and Yale (School of Management), and conference participants at the ASSA Meetings (New Orleans), CFA Society of the UK (London), Economic History Society Annual Conference (Nottingham), Gutmann Center for Portfolio Management (Vienna), NBER Conference on the Great Recession and Higher Education (Boston), Russell Academic Advisory Board, Summit on Investing for the Long Run (Oslo), World Economic History Congress (Stellenbosch), and*

*World Investment Forum (Georgia). We especially thank Stephen Dimmock, Paul Marsh, and Mike Staunton for data and ideas. The authors were supported by the Robert Brown Foundation, a JM Keynes Fellowship in Financial Economics (Chambers) and a Leverhulme Trust Emeritus Fellowship (Dimson).*

## References

- Accominotti, Olivier, and David Chambers.** 2013. "The Returns to Currency Trading: Evidence from the Interwar Period." Available at SSRN: <http://ssrn.com/abstract=2293684>.
- Acharya, Shanta, and Elroy Dimson.** 2007. *Endowment Asset Management: Investment Strategies in Oxford and Cambridge*. Oxford University Press.
- Baker, Mae, and Michael Collins.** 2003. "The Asset Portfolio Composition of British Life Insurance Firms, 1900–1965." *Financial History Review* 10(2): 137–164.
- Boyle, Phelim, Lorenzo Garlappi, Raman Uppal, and Tan Wang.** 2012. "Keynes Meets Markowitz: The Trade-off between Familiarity and Diversification." *Management Science* 58(2): 253–72.
- Brown, Jeffrey R., Stephen G. Dimmock, Jun-Koo Kang, and Scott J. Weisbenner.** Forthcoming. "How University Endowments Respond to Financial Market Shocks: Evidence and Implications." *American Economic Review*.
- Buffett, Warren.** 2013. *Berkshire Hathaway Letters to Shareholders 1965–2012*. Omaha, NE: Berkshire Hathaway Inc.
- Burton, Harry, and Desmond Corner.** 1968. *Investment and Unit Trusts in Britain and America*. London: Elek.
- Carlen, Joe.** 2012. *Einstein of Money: The Life and Timeless Financial Wisdom of Benjamin Graham*. New York: Prometheus Books.
- Chambers David, Elroy Dimson, and Justin Foo.** 2013. "Keynes the Stock Market Investor: The Inception of Institutional Equity Investing." Available at SSRN: <http://ssrn.com/abstract=2023011>. (Forthcoming in *Journal of Financial and Quantitative Analysis*)
- Cheffins, Brian R.** 2008. *Corporate Ownership and Control: British Business Transformed*. Oxford University Press.
- Chua, Jess H., and Richard S. Woodward.** 1983. "J. M. Keynes' Investment Performance: A Note." *Journal of Finance* 38(1): 232–35.
- Cox, Jacqueline.** 1995. "Keynes: An Archivist's View." *History of Political Economy* 27(5): 163–175.
- Cremers, Martijn, and Antti Petajisto.** 2009. "How Active is Your Fund Manager? A New Measure That Predicts Performance." *Review of Financial Studies* 22(9): 3329–65.
- Dimson, Elroy, Paul Marsh, and Mike Staunton.** 2002. *Triumph of the Optimists: 101 Years of Global Investment Returns*. Princeton University Press.
- Dimson, Elroy, Paul Marsh, and Mike Staunton.** 2013. *Global Investment Returns Sourcebook*. Zurich: Credit Suisse Research Institute.
- Dunbabin, John.** 1975. "Oxford and Cambridge College Finances, 1871–1913." *Economic History Review* 28(4): 631–47.
- Eldridge, Matthew.** 2012. *Keynes' Personal Investor Network*. Cambridge University MPhil dissertation.
- Fama, Eugene F.** 1976. *Foundations of Finance: Portfolio Decisions and Securities Prices*. New York: Basic Books.
- Fantacci, Luca, Maria Cristina Marcuzzo, and Eleonora Sanfilippo.** 2010. "Speculation in Commodities: Keynes' 'Practical Acquaintance' with Future Markets." *Journal of the History of Economic Thought* 32(3): 397–418.
- Goetzmann, William N., John Griswold, and Yung-Fang (Ayung) Tseng.** 2010. "Educational Endowments in Crises." *Journal of Portfolio Management* 36(4): 112–23.
- Graham, Benjamin, and David Dodd.** 1934 [2008]. *Security Analysis*. New York: Whittlesey House (a division of McGraw-Hill).
- Hannah, Leslie.** 1986. *Inventing Retirement: The Development of Occupational Pensions in Britain*. Cambridge University Press.

**Keynes, John Maynard.** 1925. "An American Study of Shares versus Bonds as Permanent Investments." (In *The Collected Writings of John Maynard Keynes* (1983), edited by Moggridge vol. 12, pp. 247–52.)

**Keynes, John Maynard.** 1936. *The General Theory of Employment, Interest, and Money*. Cambridge University Press.

**Lewellen, Jonathan.** 2011. "Institutional Investors and the Limits of Arbitrage." *Journal of Financial Economics* 102(1): 62–80.

**Mini, Piero V.** 1995. "Keynes' Investments: Their Relation to the General Theory." *American Journal of Economics and Sociology* 54(1): 47–56.

**Moggridge, Donald, ed.** 1983. *The Collected Writings of John Maynard Keynes*, 30 vols. Cambridge University Press. [A 2012 edition of *The Collected Writings* is also available from Cambridge University Press.]

**Neild, Robert.** 2008. *Riches and Responsibility: The Financial History of Trinity College, Cambridge*. Cambridge: Granta Editions.

**Pierce, Tomas.** 1993. "Keynes' Personal Investing: Activities and Beliefs." *Social Science Journal* 30(1): 13–22.

**Sharpe, William.** 1970. *Portfolio Theory and Capital Markets*. New York: McGraw-Hill.

**Shiller, Robert J.** 2003. "From Efficient Markets Theory to Behavioral Finance." *Journal of Economic Perspectives* 17(1): 83–104.

**Smith, Edgar Lawrence.** 1924 [2012]. *Common Stocks as Long Term Investments*. New York: Ferris Printing Company. [Whitefish, MT: Montana: Kessinger Publishing.]

**Soros, George.** 1987. *The Alchemy of Finance: Reading the Mind of the Market*. New York: Wiley.

**Soros, George.** 2011. "My Philanthropy." In *The Philanthropy of George Soros: Building Open Societies*, edited by Chuck Sudetic, 1–60. Philadelphia, PA: Perseus Books.

**Stock Exchange Official Intelligence, The.** 1926. London: Spottiswoode, Ballantyne.

**Swensen, David F.** 2001 [2009]. *Pioneering Portfolio Management: An Unconventional Approach to Institutional Investment*. New York, NY: Free Press.

**Swensen, David F.** 2005. *Unconventional Success: A Fundamental Approach to Personal Investment*. New York, NY: Simon & Schuster.

**Woods, John E.** 2013. "On Keynes as an Investor." *Cambridge Journal of Economics* 37(2): 423–42.

## This article has been cited by:

1. Maria Cristina Marcuzzo, Eleonora Sanfilippo. 2024. WHY WAS KEYNES KEEN TO INVEST IN AMERICAN BUT NOT IN BRITISH INVESTMENT TRUSTS?. *Journal of the History of Economic Thought* **II**, 1-24. [[Crossref](#)]
2. . Bibliography 515-527. [[Crossref](#)]
3. David A Bogle, Christopher Coyle, John D Turner. 2022. Capital market development over the long run: the portfolios of UK life assurers over two centuries. *European Review of Economic History* **26**:3, 370-398. [[Crossref](#)]
4. Maria Cristina Marcuzzo, Eleonora Sanfilippo. 2022. Keynes's personal investments in the London Stock Exchange and his views on the transformation of the British economy. *Structural Change and Economic Dynamics* **61**, 512-526. [[Crossref](#)]
5. Maria Cristina Marcuzzo, Eleonora Sanfilippo. Keynes as a Trader in Commodity Futures 61-81. [[Crossref](#)]
6. J E Woods. 2021. The safety of speculation .... *Cambridge Journal of Economics* **45**:5, 1069-1097. [[Crossref](#)]
7. Christian Hecker. 2021. How Should Responsible Investors Behave? Keynes's Distinction Between Entrepreneurship and Speculation Revisited. *Journal of Business Ethics* **171**:3, 459-473. [[Crossref](#)]
8. Eleonora Sanfilippo. 2021. Keynes's trading on Wall Street: did he follow the same behaviour when investing for himself and for King's?. *Financial History Review* **28**:1, 1-25. [[Crossref](#)]
9. David Chambers, Elroy Dimson, Charikleia Kaffè. 2020. Seventy-Five Years of Investing for Future Generations. *Financial Analysts Journal* **76**:4, 5-21. [[Crossref](#)]
10. David Chambers, Elroy Dimson, Christophe Spaenjers. 2020. Art as an Asset: Evidence from Keynes the Collector. *The Review of Asset Pricing Studies* **10**:3, 490-520. [[Crossref](#)]
11. David Chambers, Rasheed Saleuddin. 2020. Commodity option pricing efficiency before Black, Scholes, and Merton. *The Economic History Review* **73**:2, 540-564. [[Crossref](#)]
12. João Sicsú. 2020. Keynes and Graham's intelligent investor. *Journal of Post Keynesian Economics* **43**:1, 139-166. [[Crossref](#)]
13. David Chambers, Elroy Dimson, Charikleia Kaffè. 2020. Seventy-Five Years of Investing for Future Generations. *SSRN Electronic Journal* . [[Crossref](#)]
14. Enrico Battisti, Nicola Miglietta, Antonio Salvi, Fabio Creta. 2019. Strategic approaches to value investing: a systematic literature review of international studies. *Review of International Business and Strategy* **29**:3, 253-266. [[Crossref](#)]
15. Nigel Morecroft, Craig Turnbull. 2019. Institutional equity investing in Britain from 1900 to 2000. *Financial History Review* **26**:1, 1-19. [[Crossref](#)]
16. Satyajit Bose, Guo Dong, Anne Simpson. The Financial Ecosystem 19-46. [[Crossref](#)]
17. Carlo Cristiano, Maria Cristina Marcuzzo, Eleonora Sanfilippo. 2018. Taming the great depression: Keynes's personal investments in the US stock market, 1931-1939. *Economia Politica* **35**:1, 13-40. [[Crossref](#)]
18. Olivier Accominotti, David Chambers. 2018. John Maynard Keynes : économiste et spéculateur en devises. *Revue d'économie financière* N° **128**:4, 225-230. [[Crossref](#)]
19. J E Woods. 2018. The place of portfolio management in the Keynesian canon. *Cambridge Journal of Economics* **42**:1, 231-257. [[Crossref](#)]
20. Robert Fredona, Sophus A. Reinert. 2017. The Harvard Research Center in Entrepreneurial History and the Daimonic Entrepreneur. *History of Political Economy* **49**:2, 267-314. [[Crossref](#)]

21. Bjørn L. Basberg. 2017. Keynes, Trouton and the Hector Whaling Company. A personal and professional relationship. *Business History* 59:4, 471-496. [[Crossref](#)]
22. Nigel Edward Morecroft. Life Office Investment 1900–1960 and John Maynard Keynes 143-189. [[Crossref](#)]
23. Nigel Edward Morecroft. Keynes – Flawed Investor or Genius? 191-219. [[Crossref](#)]
24. Carlo Zappia. 2016. Whither Keynesian probability? Impolite techniques for decision-making. *The European Journal of the History of Economic Thought* 23:5, 835-862. [[Crossref](#)]
25. Olivier Accominotti, David Chambers. 2016. If You're So Smart: John Maynard Keynes and Currency Speculation in the Interwar Years. *The Journal of Economic History* 76:2, 342-386. [[Crossref](#)]
26. Richard J. Kent. 2016. A THIRD FUNDAMENTAL EQUATION FOR KEYNES'S TREATISE ON MONEY. *Journal of the History of Economic Thought* 38:2, 175-188. [[Crossref](#)]
27. David Chambers, Ali Kabiri. 2016. Keynes and Wall Street. *Business History Review* 90:2, 301-328. [[Crossref](#)]
28. David Chambers, Elroy Dimson. 2015. The British Origins of the US Endowment Model. *Financial Analysts Journal* 71:2, 10-14. [[Crossref](#)]
29. Bjørn Basberg. 2015. Keynes, Trouton and the Hector Whaling Company. A Personal and Professional Relationship. *SSRN Electronic Journal* . [[Crossref](#)]
30. David Chambers, Elroy Dimson, Christophe Spaenjers. 2015. Art as an Asset and Keynes the Collector. *SSRN Electronic Journal* . [[Crossref](#)]
31. 2014. Current Bibliography of the History of Science and Its Cultural Influences, 2014. *Isis* 105:S1, i-301. [[Crossref](#)]
32. David Chambers, Rui Esteves. 2014. The first global emerging markets investor: Foreign & Colonial Investment Trust 1880–1913. *Explorations in Economic History* 52, 1-21. [[Crossref](#)]
33. Keith Ambachtsheer. 2014. The Case for Long-Termism. *SSRN Electronic Journal* . [[Crossref](#)]
34. David Chambers, Elroy Dimson, Justin Foo. 2014. Keynes, King's and Endowment Asset Management. *SSRN Electronic Journal* . [[Crossref](#)]
35. Olivier Accominotti, David Chambers. 2013. The Returns to Currency Trading: Evidence from the Interwar Period. *SSRN Electronic Journal* . [[Crossref](#)]
36. Rui Esteves, David Chambers. 2012. The First Global Emerging Markets Investor: Foreign & Colonial Investment Trust 1880-1913. *SSRN Electronic Journal* . [[Crossref](#)]