
e-Xpertise in Industry Issue #36

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Quote for Today

Life is a succession of lessons which must be lived to be understood

Ralph Waldo Emerson

Introduction

Between the first and second world wars John Maynard Keynes was the bursar of King's College, Cambridge. His analysis and actions after the great crash of 1929 secured his place in history.

As an academic, he is regarded as the father of macroeconomics. However, he was also an investor who made a fortune, both personally and for his college, investing funds in the stock market. During his tenure

the college went from one of the poorest to one of the richest in Cambridge. After the 1929 crash, his stated method was to invest fairly large sums into enterprises he understood and regarded as undervalued. He was a long term investor in these companies and devoted considerable effort on research into markets and companies. This approach is said to have heavily influenced Warren Buffet's investment strategy.

Today, the job of King's College Bursar is something of a poisoned chalice as the current incumbent's performance will always be compared to Keynes's success.

Feature Article: Econometrics predictions for the application software market

Since the 1970's, users' expenditure on application software has risen inexorably. While Cambashi predict that the current recession will bite a "V" shape into this curve, we also predict that, in the medium term, the upwards trend will continue. For software providers, it is not the end of the feast.

Cambashi's predictions are based on econometric market models. These are quite different to the conceptual models found in books like [Crossing the Chasm](#). Our models relate, mathematically, growth in application software demand to economic data such as growth in GDP.

These models exploit our understanding of the forces that cause software investment. Just like any other investment, the basic reason to invest in application software is to obtain a return. Application software is a form of automation, replacing labour following a process, just as a machine might replace an assembly line worker. If the rules are right, and the programme implements those rules, then the process will be executed more efficiently and reliably. The ability of computer based processes to remember exceptions and take into account many more input parameters than any human process also increases the effectiveness of the process. And so we increase the return on the original investment.

In the late 1980's, inspired by work of others, Cambashi started to develop a series of econometric models to help explain and predict the evolution of application software markets. We developed sets of equations that modelled the relationship between investment growths, value added growths and application software growths in a number of countries. At first the results were disappointing but when we restated values in local currencies and introduced time lags, we found relationships. We found that investment growth is a more important input parameter than GDP growth, confirming that software is just another type of investment.

The actual outcome is not only a factor of demand, there must also be the supply capacity in terms of sales and deployment skills. Modelling the market from the product perspective, our forecasts take into account seasonality and factors like recurring revenues versus more volatile new name business. We publish a compromise between our two forecasts, usually at the European level. We test our models against historical data to see how well they fit against estimates of market size. Apart from the dot boom and dot crash era at the millennium, they have shown a good fit.

In the present credit crunch, we are seeing negative GDP growth and even steeper declines in investment growth. However, the forecasts we buy from economic analysts running whole economy models show that investment growth will return quite quickly. When we run these numbers through our models, we conclude that while GDP may decline for a considerable period, application software will recover relatively quickly.

We don't guarantee this outcome, after all governments are revising today reports they published a year ago about what happened two years ago! However, in the past economies returned to balance and we think that will happen again. Even if we have a discontinuity, it will probably be a matter of timing. There is a chance of a singularity, otherwise known as the end of capitalism, in which case all bets are off. As one of the Christmas cards sent to us said "I do hope Keynes was right".

The effect of exchange rate fluctuations is something we have often commented on. A reasonable 2008

over 2007 revenue growth in UK pounds, at late 2008 exchange rates, turned out as a decline in dollars or Euros. When rates are volatile, we reckon the only solution for our clients is to make sales and marketing plans in local currencies and avoid comparisons between one country's growth and another.

For a number of years, Eurostat has published value added growth and investment growth for some 50 or so industry sectors across Europe. While this was not comprehensive, and there were some issues due to late and missing data from some nations, it allowed the econometric modellers who supply us to start to provide forecasts of future growth by industry sector. We have been able to use this data in custom projects to provide detailed industry forecasts to clients.

Recently, a new supplier entered the market. They supply comparable value added and investment forecasts for about 100 industry sectors across about 80 countries. We have bought this data and are working through the steps needed to extend our models to provide even more industry specific forecasts for more countries. We expect that as the economy recovers it will become crucial to allocate resources with better market planning by segment - and Cambashi intend to be ready to help.

[Mike Evans](#)

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Hot Topic: Follow the money

In tough times, there are always winners as well as losers. Every business can organize its resources to find and convert the most attractive sales opportunities for its portfolio. Lawyers may not be writing contracts for property developers but their bankruptcy practices flourish. Of course, this continuing challenge should be met in good times too. However, the rapid rate of change of the last year means that past assumptions may be flawed and now more it is important than ever not to waste sales and marketing resources.

John Maynard Keynes said that he selected the most attractive investment opportunities from research. He was a well informed man who read the Financial Times every morning and networked with well placed friends in industry and commerce. We believe that he made sense of all these snippets of information by thinking through their cause and effect and built a mental model of how the economy worked and how each industry interacted with the economy. Today we are sure he would use a spreadsheet! By finding imbalances in the world economy, such as overvalued currencies or undervalued commodities, and identifying growing clusters of skills and expertise that could grasp the opportunities those imbalances created, Keynes selected promising investments.

We would suggest that a similar process would help decide how to allocate sales and marketing resources to sell ICT to industry. The essential skill is to understand the prospective customer's business, and even their customer's business, and how it is affected in the current unpleasantness. We advocate segmentation analysis to find the most attractive prospective customers. That means working out the factors that make a customer attractive for a particular ICT product in terms of demand, product fit, competition and channel to market.

Working out demand means considering the factors that would create the prospect's business case for your product. Each industry sector has a typical business model. They may sell to consumers, who may wish to conserve their savings. Consumer behaviour will differ from region to region. For example, in emerging economies savings ratios are high but welfare systems are poorly developed. The savings will be used, but only on a rainy day or as a kind of generational investment where they buy things that will create opportunity for their kids. In these economies

companies that provide healthcare or products that will improve children's experience, from educational toys to computers, are likely to be better prospects than those selling luxuries.

They may sell to businesses, who will be working out how to conserve cash and exploit assets to the full. Most will need short term financial benefits in cash from any computing investment. Products and services that reduce running costs, perhaps by enabling the removal of layers of management or automating workflow, will be more attractive. Products and services that can measure and control the allocation of resources will be more attractive than those which extend operations.

Then there is the consideration of whether or not they can pay. You will need to think about the effect of tight credit on their business models. Businesses selling products normally bought on a lease, such as machine tools, face a more difficult sell. Companies with cash on their balance sheets and good monthly cash flow are good prospects. Credit worthy enterprises, which means most governments, are also good bets.

A spin off benefit of working like this is that it helps develop the value proposition and the marketing messages to reach out to the prospect.

[Mike Evans](#)

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Book review: The Great Crash 1929" by John Kenneth Galbraith

Penguin 1975: ISBN-13 978-0-140-13609-8. UK £9.99

This classic of the financial crisis of 1929 and the following depression was first published in 1954 to warn of the bubble that might build in the US Stock Market and then republished in 1975 after the oil shock crash.

The book tells the story of investment from the mid 1920s to the mid 1930s. It begins with the building of the bubble and the defeat of those who urged caution, including reserve banks. It explains the creation of innovative investment vehicles in 1928 and 1929 and the excessive use of leverage in investment. It details the beginning of the crash and the way that day by day the news became worse and worse. In the subsequent years, the failure of Wall Street firms and government policymakers neither to understand the cause of the crisis nor to shift their mindset to a new environment are documented. The book ends with the arrival of Roosevelt's New Deal.

This is still a highly relevant and most readable book. In the current environment it is almost a page turner. In case the above sounds a little familiar we should recall that, in the 1929 crash, in less than three years, the Dow Jones lost 89% of its value. Professor Galbraith does not moralize or judge, he does not find many evil or crooked men. Rather he demonstrates that when the system is imperfect, and all systems have imperfections, then greed will undermine the system.

However, many of the policy failures of the 1930's such as protectionism, letting banks go bust and cutting government expenditure to balance budgets have not been repeated since. From the top of the sixties boom to the seventies oil shock, the Dow Jones lost about half its value, more in inflation adjusted terms, about the same as the current crisis. It recovered to its peak within two years. After the policy mistakes of the thirties, the market only surpassed its 1929 peak in the mid fifties.

[Mike Evans](#)

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