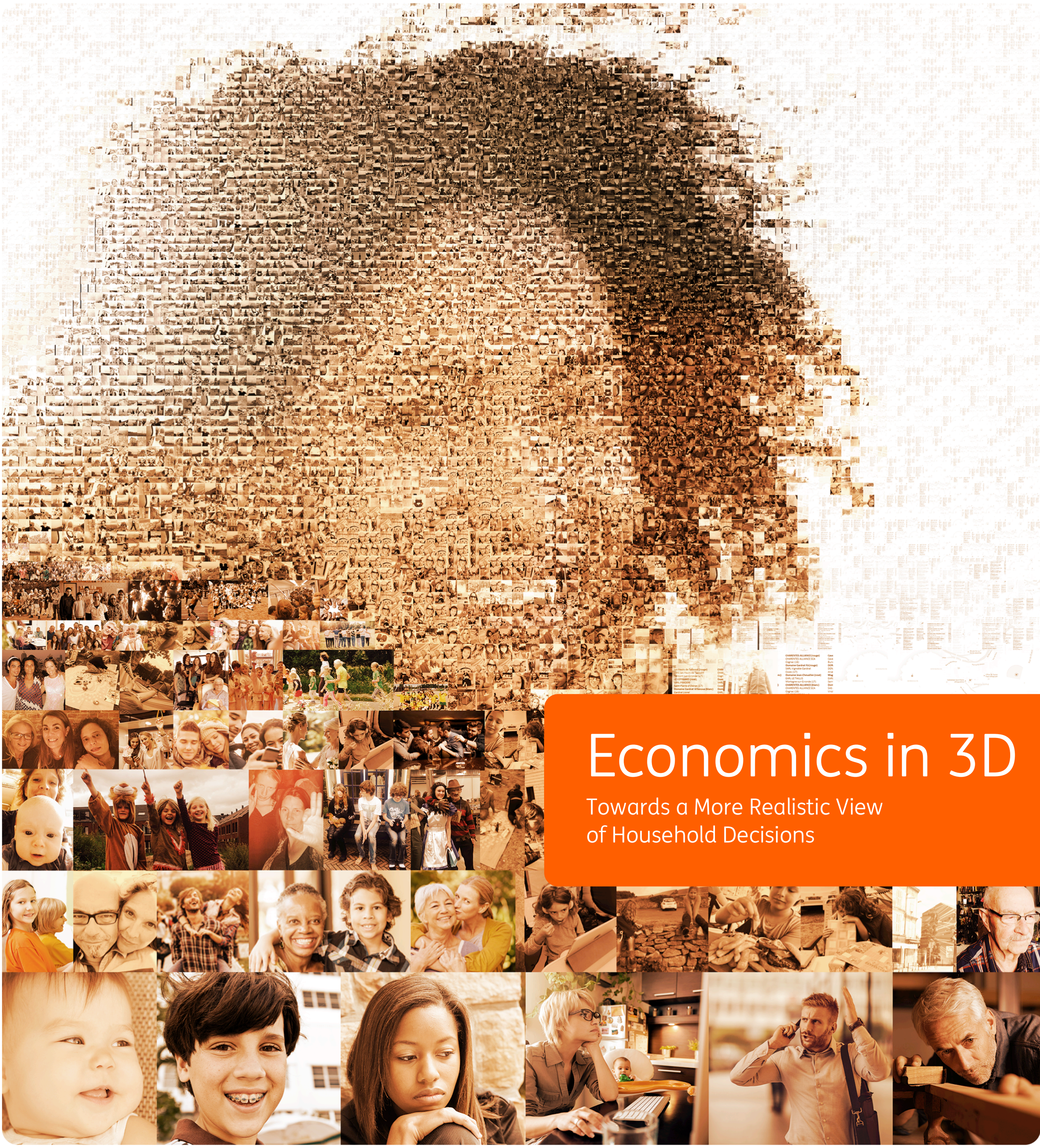

Economics in 3D

Towards a More Realistic View of Household Decisions

Economic and Financial Analysis
Consumer Economics

ING

Foreword

Stepping Up ING's Research on Consumer Finances

Macroeconomics is not enough

Individual consumers are typically ignored by economists in the banking industry. They concentrate instead on macro-economic forecasting. Looking at national and international economic developments, bank economists give generic advice on issues such as interest rates and exchange rates. The goal is to help clients make better financial decisions. To the extent that their advice is tailored to individual needs, the focus is largely on corporate and institutional clients. Only a sub-set of retail clients with substantial investments typically receive their direct support.

However, economists at ING have for several years been developing analysis and content designed to help retail customers of all kinds. In so doing, we seek to support ING's customer centric purpose of "***empowering people to stay a step ahead in life and business***". Our international consumer economics team, via its website **eZonomics**.com and ING's International Surveys (IIS), supports local financial education initiatives and produces customer-centric content, such as articles, tips and tools. Locally, we support initiatives such as **Financieel Fit** (Financially Fit) in the Netherlands. Our daily internet poll on consumer opinions on our retail banking website has long been the biggest poll in the country.

There can be little doubt that the need for such support is growing. People face fresh challenges and opportunities in making decisions. The financial crisis has accelerated the shift towards individuals taking more responsibility for their financial affairs. Rapid technological change, not least in the form of digital and mobile technologies, is changing how people make decisions and transact. Meanwhile, applying advanced analytics to Big Data promises to provide more valuable insights into consumers' finances.

Economists, inside and outside banking, have been slow to acknowledge that changing consumer behaviour may have significant effects on macroeconomic performance. Just as the state of the economic environment affects individuals, the changing behaviour of individuals can affect the economy as a whole. Macro affects micro and micro affects macro. This calls for a more holistic approach.

Recognising this, and to coincide with the launch of the **Think Forward Initiative**[1], ING has decided to step up its research into consumer economics. The first step is to deepen our understanding of the impact of economic, social, political, technological change. We intend to examine the effects on particular socio-economic segments. The second step is to analyse how individual behaviour is changing. What are the challenges and opportunities that people face? The third, and most important, step is to address the question: ***how can we help people make better financial decisions?***

Seeking ways to improve people's financial decision-making will need not just combining macro and micro-economics. It will take us beyond economics, to the tools of other disciplines. Helping people to learn or avoid mistakes will call upon psychological and educational insights. Addressing social influences on decisions will pull in other social sciences such as sociology and social anthropology.

So macroeconomics is not enough. The goal of this introductory report is to show why a richer understanding of consumer finances needs a more multi-disciplinary approach.

ING Economic and Financial Analysis

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[1] For more details, please visit http://www.thinkforwardinitiative.com

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Executive Summary

"*Macro needs micro*". Understanding individual behaviour is critical to better understanding economies and to improving macroeconomic forecasting. Individual consumers have so far typically been ignored by economists in the banking industry. Consumers don't all behave as if they are one. The increasing diversity of individual circumstances, behaviour and interaction affect the macroeconomy, just as the macroeconomy touches individuals.

"Micro needs meso". Economics needs to go back to its social roots. For a social science, it devotes remarkably little time to social groups, focusing mainly on the economy as a whole or on individuals. Behavioural economics has developed building blocks for a richer, more realistic, microeconomics, but it has not yet built a complete, unified picture of decision making. One reason is that it underplays the influence of social factors. Individuals are connected to society via their relationships with their households, families, friends, and other groups. This social, or meso level is crucial, and yet it is the most neglected by economists.

"Macro, meso and micro need a holistic approach". This need has grown because four forces are transforming financial decision making:

a) the global financial crisis which has led to a sharp divergence in household finances both between and within countries,
b) the fractious political climate amid rising inequality, plunging commodity prices and geo-political unrest which has led to divergences between 'segments' in society. Mistrust of institutions is reinforcing trends towards self-reliance and peer-to-peer advice,
c) technology and its influence on individual and group behaviour. Hyperconnectivity in the digital age presents a "double-edged" potential for information overload or for big data-style enhanced personalisation.
d) profoundly transformed lifestyles and work patterns, including the rise of social networking, the sharing economy and on-demand decision making apps.

Therefore, **ING is stepping up its research into consumer economics**, taking a more multi-disciplinary approach, which draws on insights from psychology and sociology. Our ambition is to improve our understanding of economic behaviour and our forecasting abilities. This will in turn help us to give more support to ING's customer-centric purpose of "empowering people to stay a step ahead in life and in business".

The launch of the **Think Forward Initiative** embodies ING's intensified efforts to better understand how and why people make financial choices. The aim is to use the lessons learned to inspire action. This is the first in a series of reports forming part of the contribution of ING's economists to this collaborative effort. We invite readers to join the debate.

Introduction

Taking Economics Back to the Future: The Challenges to Consumer Finances

Economics needs to go back to its roots as the science of household finances…

…and reconnect with other social sciences

Consumer finances are in a state of flux. People are faced with a rapidly changing economic, political, social and technological environment. They are being forced to respond. Ironically, this new situation calls for economists to go back to the roots of economics as the science of household finances. It also calls for economics to reconnect with other social sciences, such as psychology and sociology. This is the central message of this report, which is the first in a new stream of research into consumer finances.

In the first section, we will examine the four forces that are rapidly changing consumer finances. Readers familiar with the context may choose to gloss over this section and move to the second, which gets to the heart of our argument. In it, we will argue that understanding the implications needs a holistic, multidisciplinary approach. Not only do macro- and micro-economic factors interact, but insights from other disciplines are required. In particular, the social influences on individual decision-making are growing and evolving, shaped in part by rapid technological and demographic change. We argue that this third, social dimension, represents a gap in the middle of economics, which calls for a new 'meso-economics'.

In the final section, we summarise the three dimensions of financial decision-making that will be the focus of future research, in collaboration with our partners.

A. Consumer Finances in Flux

Four forces are transforming personal financial decision-making

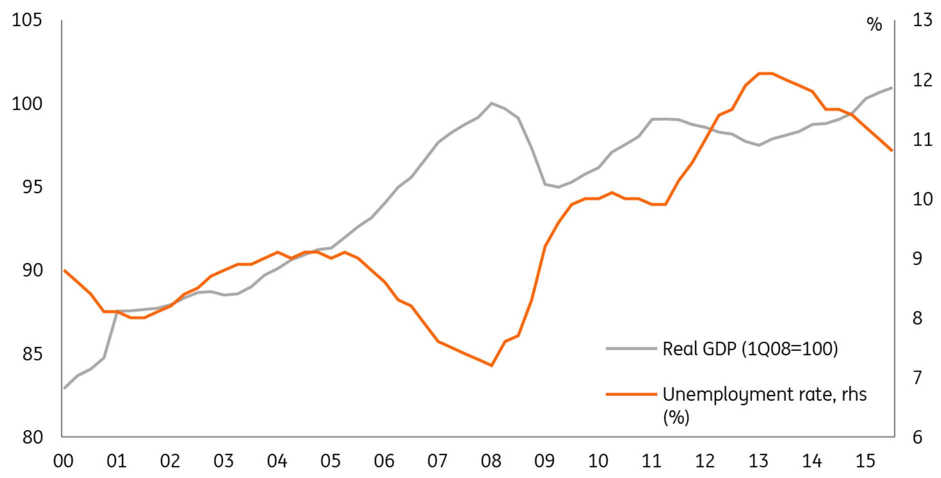
Consumer finances are going through a period of rapid change. Although the focus of much of our attention will be on Europe, many of these trends are global. Moreover, they stretch from global macroeconomic shifts to tech-driven changes in individual behaviour. To set the scene, we group the forces behind the transformation in personal financial decision-making into four themes:

1. Macroeconomy – the fall-out from the financial crisis

Seven years on from the onset of the crisis, many households still feel the financial effects

We are still feeling the after-effects of the global financial crisis that followed the collapse of Lehman Brothers in 2008. The impact on household finances the world over are wide-ranging. Income growth in the developed world, and more recently the emerging world, is struggling to get back to pre-crisis rates. In some countries, not least in Southern Europe, unemployment remains shockingly high and incomes lower, seven years on from the onset of the crisis.

Fig 1 Eurozone Real GDP level and Unemployment Rate (2000-15)

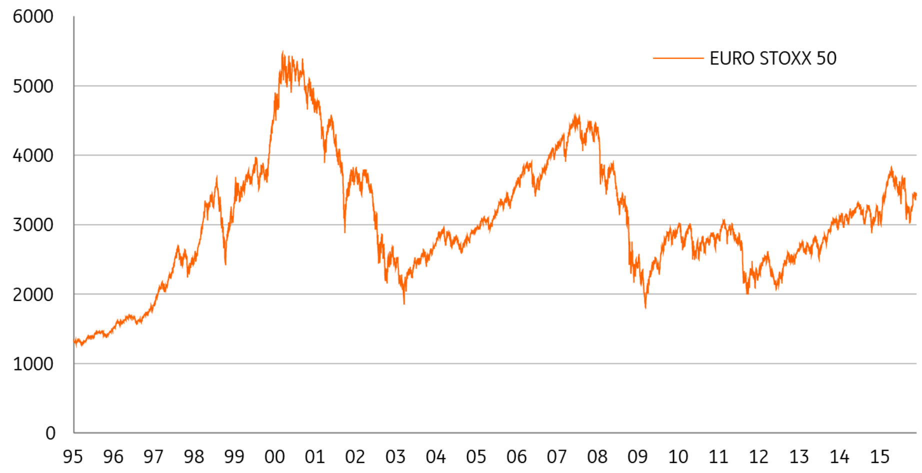


Source: ING, Macrobond

Plunging interest rates have been good news for many, but bad news for some…

Consumer finances also show the effects of the unprecedented policy responses to the crisis. In particular, in the developed world, interest rates have plummeted, in some cases even into negative territory. This has been good news for many borrowers. But it has hurt those relying on interest income, and undermined the solvency of pension funds, threatening the retirement income of ageing populations. And some borrowers, particularly riskier, less credit-worthy ones, have failed to feel the benefits, as credit availability and credit spreads have failed to return to pre-crisis levels.

Fig 2 Eurostoxx 50 (1995-2015)

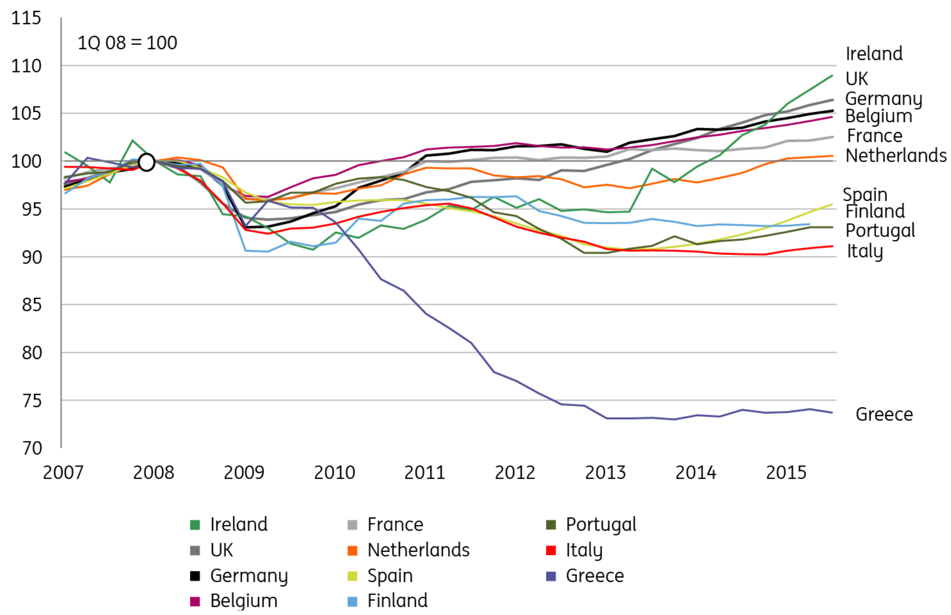


Source: ING, Macrobond

Asset prices have bounced back, albeit in a highly erratic and patchy fashion

The crisis and its aftermath have also sent asset prices on a wild ride. In many countries, asset prices, having plunged in 2008-9, have bounced back, albeit in a highly erratic and patchy fashion (see Fig 2). Stock markets have doubled or trebled from their low points, thanks in part to central bank bond purchases ('quantitative easing'), which have driven down bond yields to unattractive levels. But the trauma of earlier falls may linger for a generation or more[2]. In particular, they may be the formative memory for many millennials. Meanwhile, while house prices have been recovering from their crisis low points, many borrowers in the worst affected areas continue to struggle with loans bigger than the value of their homes.

Fig 3 Eurozone Real GDP level, 2007-15



Source: ING, Macrobond

[2] See Depression Babies: Do Macroeconomic Experiences Affect Risk Taking?* Ulrike Malmendier and Stefan Nagel http://qje.oxfordjournals.org/content/126/1/373.abstract Such cohort effects do not, however, prevent a recurrence of fresh booms and busts created by credit-fuelled speculative waves of optimism from remaining in the markets.

Household finances have diverged both between and within the Eurozone states

In the Eurozone, the sovereign debt crisis that spread from Greece in 2011 has led to a sharp divergence in household finances both between and within member states (see Fig 3). The forced imposition of tax hikes and government spending hurt growth in the Eurozone's periphery, with disproportionate effects on poorer and younger sections of society. Although austerity is easing, this income gap will not be readily reversed.

2. Politics – divergences and disintegration

The political climate is being clouded by rising inequality of income and wealth

The financial crisis is also having profound political repercussions. These in turn are affecting consumer finances. The political climate is being clouded by rising inequality of income and wealth. Policy responses to the crisis are partly behind this trend. Quantitative easing prevented the Great Recession from turning into another Great Depression. But since it largely worked through higher asset prices, it has disproportionately benefited the richer sections of society[3].

Political pressures to compensate the poor are constrained by budget deficits

Meanwhile, the crisis and the fiscal austerity that followed have disproportionately hurt the poor, resulting in political pressures to compensate them. However, the scope to do so, for example with higher benefits or minimum wages[4], has been limited by tough targets on budget deficits. Indeed, the pressure on public finances leaves question-marks over the long term sustainability of public welfare and pension systems.

Pension reforms have tended to reinforce intergenerational inequality

As a result, households are faced with having to take more responsibility for the future burden of pensions and health care. But politics inevitably intrudes when it comes to burden sharing. The political clout of older generations, who are relatively numerous and more inclined to vote, has meant that governments have tended to reform pensions in a way that favours current over future pensioners. This has tended to increase the inequality of income and wealth between older and younger generations. [5]

Populism and nationalism may also affect consumer finances

Weak economic growth has led to, and been worsened by, geo-political instability. Plunging commodity prices have undermined political stability in several emerging market economies. The reluctance of the West to intervene in the troubled Middle East is partly because of budget constraints. This has returned to haunt it with rising conflict, most recently in Syria, mass flows of refugees to Europe and more shocking terrorist attacks. Antipathy towards mass immigration may lend further support to nationalists, and to populist and radical parties. This may have implications for consumer finances through possible changes to fiscal policies, employment, and labour mobility. In particular, limiting flows of young people could hamper a potential remedy for societal ageing and economic imbalances.

Mistrust of institutions is leading to more self-reliance and peer-to-peer support

The political climate has also shifted against financial institutions and big business in general. They are contending with tougher regulation and tax regimes. Consumers may benefit from greater protection and a shifting of the tax burden, but the ongoing lack of trust may reinforce the trend towards self-reliance or peer advice in decision-making.

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[3] Although richer sections of society saw their wealth drop sharply with the onset of the crisis, they have largely recouped their losses.

[4] It should be noted that the net impact of minimum wages is controversial, with some arguing that higher unemployment results from higher minimum wages, advocating that structural reforms to labour markets are more beneficial

[5] See 'The growing intergenerational divide in Europe', Pia Hüttl, Karen E. Wilson and Guntram B. Wolff (Bruegel, November 2015) http://bruegel.org/2015/11/the-growing-intergenerational-divide-in-europe/

3. Technology – hyperconnectivity

Technology is transforming access to information

A third factor that is changing people's financial decisions is rapid technological change. The ultra-fast global diffusion of smartphones over the past decade is a prime driver of this. Digital and mobile technology is progressing at an astonishing pace, transforming access to information and, increasingly, analysis.

Mobile banking is rapidly changing money habits

The evidence of the transformational effect of the new technologies is clear. In the Netherlands, mobile banking has tripled the frequency of ING customers logins compared with 'traditional' internet banking to six times per week on average (and quite a contrast from the pre-internet days of monthly paper statements). Moreover, according to the ING International Survey on Mobile Banking 2015, 85% of people using mobile banking across Europe say they've changed the way they manage their money for the better, and the effect is growing over time[6].

Some are struggling with overload and distraction...

...but technology may also have answers for that too

Some consumers struggle with the ubiquity of information and communication, suffering from overload and distraction. For example, Microsoft Research found that once distracted by an e-mail alert, computer users take an average of twenty-two minutes to return to the same level of focus on the suspended task[7]. But innovators are addressing these problems with smarter filtering, search and aggregation tools. An emerging trend is the application of advanced analytics on both personal and 'Big' data. This is increasing the relevance of information and personalising consumers' on-line experiences, enriching them with peer comparisons.

On-line markets are driving prices down and quality up

Indeed, on-line markets are becoming increasingly transparent and globalised. With price and, helped by peer and user reviews, quality search improving progressively, markets are becoming increasingly competitive. This puts downward pressure on prices and upward pressure on quality and service.

Technology is also disrupting labour markets

Meanwhile, technological disruption is extending to labour markets, changing the income and employment prospects for a growing range of occupations. The threat to taxi drivers from the rise of mobile-friendly services such as Uber and Lyft is an obvious example. But even skilled knowledge work, for example in the legal and healthcare professions, is becoming exposed to competition from artificial intelligence. These trends will have a profound effect on education and career choices.

4. Consumer behaviour – more complex, more social

Consumers are faced with more numerous, complex and uncertain decisions....

The rapidly changing environment is both affecting and reflecting new patterns of consumer behaviour. Consumers are faced with more numerous, complex and uncertain decisions. As we have seen, digital technology is both a cause and a (perhaps partial) solution to this, opening access to many more options but also providing ways of dealing with them.

...and new ways of shopping

But growing complexity is not confined to the online world. Take, for example, the average Wal-Mart Supercenter, which now confronts shoppers with around 120,000 products. Consumer responses to the new shopping experiences opened up by e-commerce and digital technology are still evolving. One trend is towards

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[6] ING International Survey on Mobile Banking 2015, polling almost 15,000 people in 15 countries. http://www.slideshare.net/fullscreen/ING/ing-mobile-banking-2015-report/1
[7] Quoted in 'Eyes Wide Open – How to Make Smart Decisions in a Confusing World' by Noreena Hertz (2013)

more seamless 'omni-channel' experiences, leading to a convergence between on- and off-line shopping.

Changing consumer lifestyles and working patterns are creating new business models

Beyond shopping, consumer lifestyles and working patterns are changing too. Leisure is being transformed by on-demand on-line entertainment and games. Meanwhile, the reluctance of consumers to pay for on-line content is forcing the media, software and publishing businesses to adopt new business models, such as charging for premium ('freemium') services. Even the burgeoning new 'App economy' is evolving rapidly. Apps are increasingly meeting consumer needs and demands for decision-making tools and advice.

Social influences are having a growing impact

A key aspect of the changes to consumer behaviour is that social influences are having a growing impact on individual decision-making. Technology has been the enabler here, but the technology has also had to respond to how consumers chosen to use it. Social networking, peer-to-peer sharing, and new marketplaces for all kinds of products and services are having a profound effect on individuals' decisions.

Consumers are shifting from paying to own property and assets to paying to use them

Emerging consumer trends are also disrupting business. The embrace of the 'sharing economy' is spreading across the economy. According to the ING International Survey special report on the Sharing Economy published in July 2015 about a third of people in Europe think their participation in it will increase in the next 12 months[8]. Consumers are shifting away from paying to ***own*** property and assets towards paying to ***use*** them. For some, this is a necessity borne of lack of income or crowded living conditions. For others, this is a lifestyle choice.

Sharing economy trends are partly a backlash against big business and materialism

In part, the peer-to-peer and sharing economy trends are part of a backlash against big business. They also reflect a growing backlash against materialism, exemplified by the popularity of 'fast fashion'. Although some consumers are still in the thrall of the cornucopia of variety opened up by tech-enabled globalisation, others are turning their backs on it.

Environmentalism is another aspect of the reaction against technology and fast living

Environmentalism is another aspect of the reaction against technology and fast living. This is seen in the emergence of local food markets and the 'slow food' movement. The reaction against technology can also been seen in the growing popularity of live events and the revival of sales of physical books and vinyl records.

In the next section, we argue that the rise of the new consumer calls for economists to adopt a new multidisciplinary approach.

[8] See http://www.ezonomics.com/ing_international_survey/sharing_economy_2015

B. The Need for a New Multidisciplinary Approach

1. Macroeconomists, wake up!

"It's a recession when your neighbour loses his job; it's a depression when you lose your own." – Harry S. Truman

The financial crisis showed macroeconomic models are not up to the job...

Belatedly macroeconomists are beginning to acknowledge that their understanding of how the economy operates is deeply flawed. The financial crisis exposed their dismal forecasting record, and their old models are not up to the job of analysing the rapid structural changes that the global economy is going through. On top of that, they necessarily have no history to go on to assess the unprecedented monetary and regulatory policy shifts since onset of the crisis.

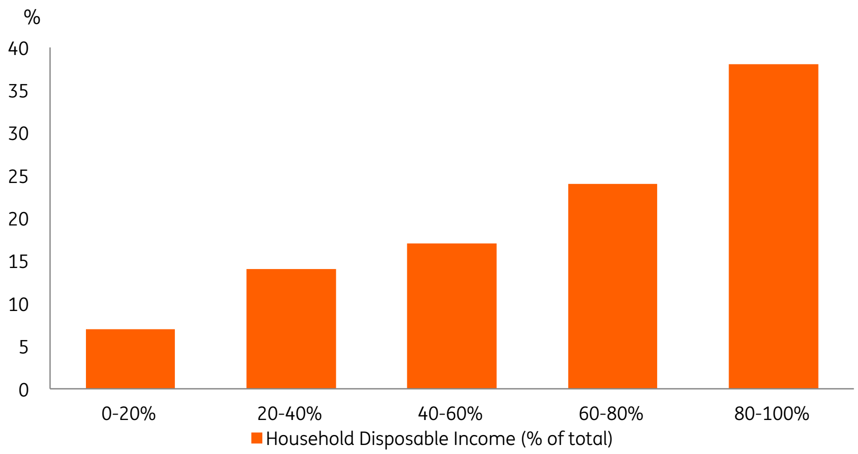
...treating consumers as one homogeneous bloc when it's obvious that they are not

Tempting though it is to go through the list of inadequacies of macroeconomics, the focus here will be on the fact that it has failed to grasp the changing circumstances and behaviour of individual consumers. Macroeconomic models still treat consumers as being one homogeneous bloc[9]. Yet is increasingly clear that the differences[10] between consumers are critical to our understanding of the macroeconomy. In other words, distribution matters.

Income and wealth inequality *does* affect economic performance

Macroeconomists have long been aware that income and wealth is unequally distributed. But, reasoning that the degree of inequality tends to change only slowly over time, they have largely ignored its impact on economic performance. But now, the financial crisis, and the resulting policy responses, are forcing macroeconomists to pay attention to inequality.

Fig 4 EU28 Household Disposable Income by Income Quintile, % of Total 2012



Source: ING, Macrobond

[9] In recent decades, macroeconomic modelling has been dominated by Dynamic Stochastic General Equilibrium (DSGE) models that model household behaviour by using a single 'representative agent', which is a rational, profit maximising, '*homo economicus*' with stable preferences and full information. Attempts to improve their performance relaxing these restrictive assumptions have enjoyed only limited success. One of the most successful critics of the 'representative agent' models is the latest Nobel Prize winner Angus Deaton, who has shown the importance to macroeconomics of understanding the behaviour of individuals, see https://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/2015/popular-economicsciences2015.pdf

[10] These differences run along a number of dimensions beyond the narrowly financial, including characteristics such as financial literacy, education, culture, life experiences etc.

'Quantitative easing', by driving up asset prices, has increased inequality…

It is increasingly clear that the sharp increase inequality in recent years, both between and within economies, can have meaningful macroeconomic consequences. While the poor have suffered from lost jobs and lower pay, the rich have done well, not least from the asset purchases by central banks (so called 'quantitative easing', or 'QE'). Massive bond buying by central banks in the US, Europe and Japan have driven up not just bond prices, but the prices of other risk assets such as stocks and property. Since these assets are largely owned by the rich, it is they who have benefited most.

…hampering economic growth because the rich tend to spend a lower proportion of any income or wealth gains

Quite apart from the polarising political consequences of increasing inequality, this may also have been hampering economic growth. The reason is that the rich tend to spend a lower proportion of any income or wealth gains than do the poor. Professor Larry Summers argues that this may be one reason why the boost to growth from QE may have been disappointing.

Awareness of just how extreme inequality is becoming was raised by Thomas Piketty's surprising best-seller 'Capital in the 21st Century'. Although some of his calculations and policy conclusions have prompted controversy, his work has alerted macroeconomists to the need to pay more attention to the impact of distributional shifts and asset price swings.[11]

Different income groups may respond very differently to big shocks, which may have dramatic, non-linear, effects

The idea that the household sector, which accounts for around 60% of spending (GDP) in a typical developed economy, can be adequately represented in macroeconomic models by a single 'representative agent' looks increasingly fanciful. With inequality rising, and asset prices set to remain volatile, the varied responses of different income groups to the state of the economy and markets really matter. This is likely to be especially so at times of big shocks, which may have dramatic, non-linear, effects through job losses, loan defaults and bankruptcies. As Will Hutton put it, economists may be "like weather forecasters who don't understand storms".[12]

2. Behavioural economists – you've got friends!

The rational *homo economicus* model is unrealistic…

We saw earlier how the financial crisis has had different effects on the finances of different parts of the population. But the idea of rational economic decision making that underpins macroeconomics is clearly at odds with how individuals actually make choices. The now popular field of behavioural economics, drawing on cognitive psychology, shows how unrealistic the model of *homo economicus*, who makes 'rational' decisions based on stable preferences and complete information is. Most decisions are made quickly and intuitively, drawing on experience, skills and rules of thumb. But even more considered decisions can fall victim to biases, lack of information or inattention.[13]

…people lack information, make quick intuitive decisions or fall prey to biases

The poor, stressed as well as financially constrained, are especially vulnerable

Behavioural economics also shows how financial decisions can be particularly problematic (see box). Simply introducing money into a decision changes people's perceptions. Losing money is especially stressful, but even the novelty of economic booms can add stress to financial decisions. The poor, being stressed as well as financially constrained, are especially vulnerable to thinking traps and may take excessively short term decisions. People struggle with numbers and

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[11] 'Capital in the 21st Century' Thomas Piketty. For evidence that inequality has been a drag on economic growth, see 'Inequality, the Great Recession, and Slow Recovery' Barry Z. Cynamon and Steven M. Fazzari. http://ineteconomics.org/uploads/papers/WP9-Cyn-Fazz-ConsInequ.pdf
[12] See http://www.theguardian.com/commentisfree/2009/jul/05/will-hutton-recession-britain-debt
[13] See Daniel Kahneman 'Thinking, fast and slow'. He divides the decision making processes into 'the automatic System 1 and the effortful System 2'.

understanding risk. They tend to be loss averse and overweight recent or familiar events.

What is distinctive about financial decisions?

People make thousands of decisions every day. Although only a handful involve the execution of a financial transaction, this is not the end of the story. Many transactions are preceded by multiple smaller decisions, and many non-financial decisions have financial ***consequences***. Thus even something as simple as turning on a light has financial consequences, which we often fail to consider. But as this example shows, even if we do consider the financial implications of such decisions, they do not all lead to specific financial transactions: after all, we do not receive a bill every time we turn on a light!

Nevertheless, behavioural economists have shown that introducing thoughts of ***money*** changes the way that people think about decisions. Money can serve as a medium of exchange, a unit of account (or measure of value), and a store of value (or a standard of deferred payment). So even if we define a financial decision more conventionally and narrowly as one involving a financial transaction, the multiple roles of money mean that transactions cannot be viewed in isolation:

1. **It's a journey**. The exchange of, and payment for, goods and services are only part of the transaction journey. When, where, how and also whether to transact are key. For example, car buyers could go through a search process lasting a year or more before actually going through with the purchase. The experience of past transactions will also affect future decisions.

2. **It involves numbers.** Although numbers facilitate comparisons, concepts such as interest rates, probabilities and risk are lost on many people. Managing the flow of multiple transactions in a household budget compounds the problem.

3. **It's emotional**. Financial decisions are affected by emotions, beliefs, and moods, which affect people's confidence and risk appetite. They may not always be 'rational'. Generally money is only a means to an end, and the emotional engagement is with what you can buy with it. For example, house buyers focus on the house, not the mortgage.

4. **It's social**. Trust in the other party to the transaction is crucial. But decisions are also affected by, and affect, others who may not be directly involved in the transaction itself. People consider the opinions, advice, needs and reactions of others.

5. **It's about time**. Financial transactions also facilitate the time-shifting of spending. Saving and investing allow people to 'freeze their dreams'. Borrowing allows them to bring them forward. Yet people's struggle to anticipate their future needs, including those of their loved ones, leads to recurrent mistakes with long term financial commitments.

People find it hard to know what will make them happy in the future

Another serious problem highlighted by behavioural economists is that people find it hard to know what will make them happy in the future, particularly the distant future[14]. As a result, people may be drawn into living for today, borrowing too much and saving and investing too little.

Low financial literacy leads some to suggest that people need to be 'nudged' by exploiting their own biases

Building on the insights of behavioural economics, considerable effort has been devoted to ways of improving financial literacy and capability. Given the shockingly low level of financial literacy, even among well educated people in the developed world, many have argued that consumers need to be 'nudged' by exploiting their own biases to encourage them to take decisions in their own interests.

Amid uncertainty, with many alternatives and little data, simple rules may be better

Others have a more upbeat view of the potential to teach people how to deal with risk and uncertainty. For example, Gerd Gigerenzer argues that in uncertain environments with many alternatives and little data, simple investment rules outperform the complex. [15] However, an essential problem is that in a world where the future is unknowable, so is the best decision.

Behavioural economics has not built a complete or unified picture of decision making

While behavioural economics has undoubtedly developed building blocks for a richer, more realistic micro-economics, it has not yet built a complete or unified picture of decision making[16]. It consists of a series of thinking biases, some of which conflict with one another, and the incidence of each depends on an ever-changing context. Thus sometimes people will be risk averse, and at other times overly confident, reflecting their mood or recent experiences.

It underplays the influence of social factors, which are growing in importance

As we saw in section A.4, individual behaviour is changing, which leaves behavioural economics, like macroeconomics, playing catch up. A key factor is that behavioural economics starts from a presumption of individual decision making, so underplaying the influence of social factors. Crucially, these social factors are growing in importance.

3. Economics – back to its social roots

Ironically, 'economics' comes from the ancient Greek for 'household management'...

...yet it largely ignores households interactions!

For a social science, economics devotes remarkably little time to social groups, concentrating mainly on the on the economy as a whole or on individuals. Yet people are social animals, and their decisions are heavily influenced by each other. Indeed, it is somewhat ironic that the term economics comes from the ancient Greek for 'household management'[17]. In modern day economics, the interaction within and between households barely gets a look in.

People are altruistic, and have a sense of fairness

Attempts have been made to reconcile the self-interested *homo economicus* of traditional, so-called neoclassical, economics with the obvious fact that people often forgo their own satisfaction for the sake of others. Altruism is rationalised on the basis that people believe that others will reciprocate or that seeing others being happy makes them happy or enhances their feeling of self-worth. But it is also true that people are prepared to make decisions without the expectation of such pay-offs. They do have a sense of fairness. They are prepared to be kind to

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[14] See "Time Discounting and Time Preference: A Critical Review." Shane Frederick, George Loewenstein, and Ted O'Donoghue. Journal of Economic Literature (2002). http://www.cmu.edu/dietrich/sds/docs/loewenstein/TimeDiscounting.pdf
[15] See 'Risk Savvy' Gerd Gigerenzer, Chapter 5.
[16] See Tim Harford's review of the criticisms of behavioural economics, 'Behavioural economics and public policy' http://www.ft.com/cms/s/2/9d7d31a4-aea8-11e3-aaa6-00144feab7de.html#axzz3rZgDzFTP
[17] The term economy stems from the Ancient Greek *oikonomia* "household management, thrift," from *oikonomos* "manager, steward," from *oikos* "house, abode, dwelling". Source: http://www.etymonline.com/index.php?term=economy

strangers. Indeed, the flipside of this is that people are prepared to make sacrifices in order to punish those who they believe have acted unfairly. [18]

Household, relationships are built on 'give and take'...

...and bargaining power

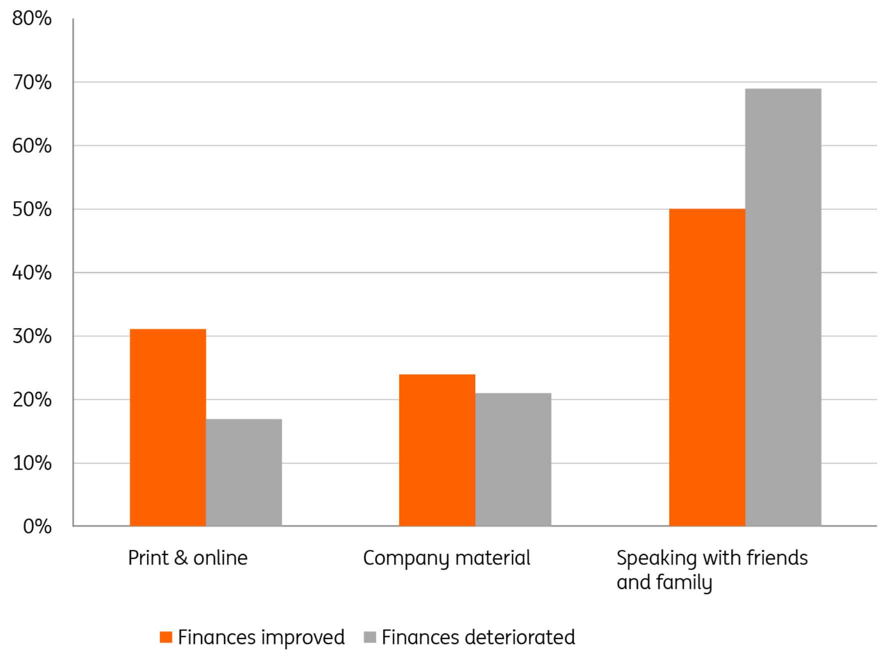
Within the household, relationships are built on 'give and take'. But traditional economics tends to gloss over this by assuming everyone in the household shares the same preferences. The reality is that preferences vary and how decisions get made will depend on the composition of the household and the relationships between them. The dynamics between couples, families or non-related households vary, with decisions being taken individually, collectively or else divided up between household members. A number of factors will affect the relative bargaining power of household members, including age, income, wealth, education, and financial literacy.

Gender roles have evolved...

...and housework and child-rearing have big effects on finances

Even in the simple and common case of male-female couples, research has shown a variety of decision-making approaches[19]. Gender roles have evolved as cultural norms have shifted and female labour market participation and economic power has grown. Studies have shown that reallocating income from fathers to mothers tends to increase children's well-being[20]. Unpaid housework and child rearing activities, not counted in traditional economic statistics, directly and indirectly affect household finances and decisions, notably through their effects on labour market participation, income and leisure time.

Figure 5 Sources of decision when choosing a restaurant - by financial position



Source: ING International Survey of almost 12,000 people in 12 countries between 14 April and 15 May 2013

[18] This has been illustrated by behavioural economics experiments on the "Ultimatum Game": For further references on fairness see https://en.wikipedia.org/wiki/Ultimatum_game
[19] For a short discussion and references on this point see http://www.ezonomics.com/stories/he_said_she_said_who_has_more_power_when_couples_talk_money
[20] See 'Sharing of Resources Within the Family and the Economics of Household Decision Making' Susan Himmelweit et al, Journal of Marriage and Family, (June 2013) http://www.busman.qmul.ac.uk/staff/PublicationsPDF/125660.pdf

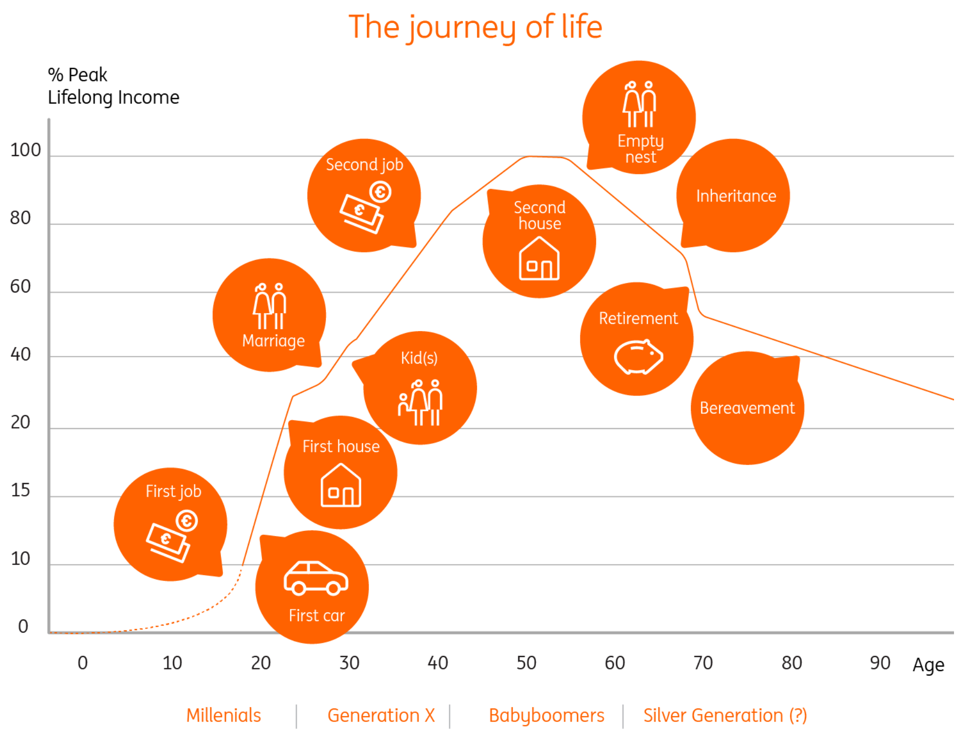
Decisions are influenced enormously by families

For the majority of households, decisions are influenced enormously by families, even if they are not all living under the same roof. Caring for children, aging parents or other dependent relatives accounts for much of household decision-making. At one end of the spectrum this includes day to day decisions over items such as food and leisure (see Fig 5), whether or not they are jointly consumed. At the other, it includes major life decisions like choosing to have another baby, buy a new home, or when and where to retire (see Fig 6). Such decisions are transformational, in financial as well as emotional terms.

In the Eurozone, the cost of raising a child may exceed €150,000

Consider, for example, the cost of raising children. Estimates in the US and the UK for last year put this cost at around €245,000 on average. Although education costs tend to be somewhat less in the Eurozone, available evidence suggests the even here the cost of raising a child could be over €150,000[21].

Fig 6 The Journey of Life: A Stylised View of a Financial Life

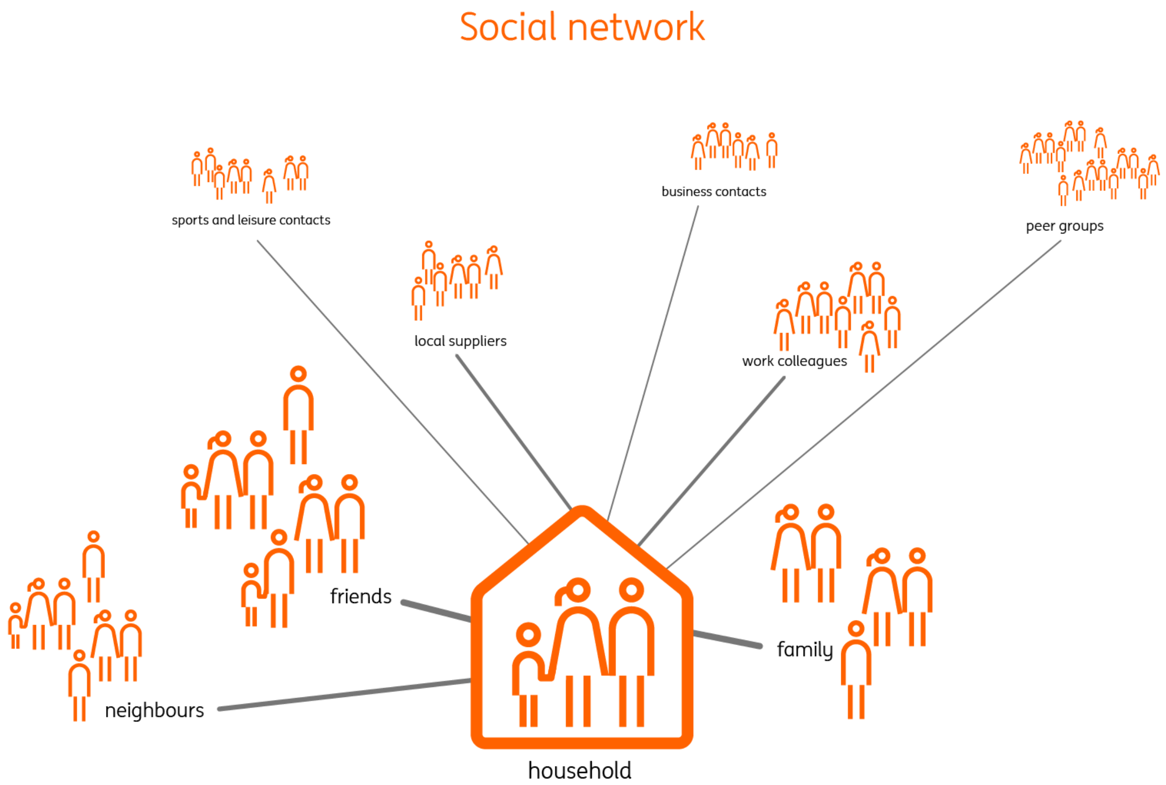


Decisions reflect not just the needs of others, but also their opinions and behaviour

The social influences on decision-making arise not just because of people's concerns about the *interests* of others. They also stem from people anticipating and responding to the *opinions* and *behaviour* of others. Many are preoccupied with what other people think of them. Their choices may be driven by a desire to enhance their status or change their image. Some wish to conform by following fashion, others to stand out by not.

[21] See 'Economics is a Family Affair', ING World Q4 2014, http://ingworld.ing.nl/en/2014-4Q/12-column-mark-cliffe

Fig 7 People have complex social networks



Amid uncertainty, it's common to copy others

In situations of high uncertainty, a common rule of thumb is to copy others. Back in the 1930s, John Maynard Keynes argued that "knowing our individual judgement is worthless" and that we copy others because they are "perhaps better informed". A typical example would be choosing to go into a busy restaurant rather than an empty one, simply assuming that others know something that we don't.

Copying others can create bandwagon or herding effects...which lead to errors

Copying the behaviour of others is a massive challenge to traditional economics, which assumes that we make our choices independently. When we copy others, it creates bandwagon or herding effects. Research shows that when members of a group make their choices individually, they collectively make better choices than when they are aware of each other's choices. The former leads to the 'wisdom of crowds', in which individual errors tend to cancel out, whereas the latter leads to the 'madness of crowds', which tends to reinforce individual errors. [22] Such madness is a feature of the endemic booms and busts in financial markets.

Social networking can help opinions and actions 'go viral'

This is the realm of network economics[23], where choices can go viral. The internet has powered the phenomenal growth of social networking where opinions and then actions can spread within minutes. Social networking has led to a sharp increase in the number of friends and acquaintances that people can maintain (see Fig 7). Some have argued that this has not materially altered the number of people with whom one can sustain stable relationships, beyond 'Dunbar's

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[22] See 'The Wisdom of Crowds: Why the Many Are Smarter Than the Few and How Collective Wisdom Shapes Business, Economies, Societies and Nations' James Surowiecki (2004) and 'Extraordinary Popular Delusions and the Madness of Crowds' Charles Mackay (1841).
[23] For an entertaining and informative introduction, see 'Positive Linking: How Networks Can Revolutionise the World' (2012) by Paul Ormerod

number' of around 150 people. Nevertheless, social networking has certainly made it easier to source new information. [24] As we saw in section A4, this is reshaping consumer behaviour.

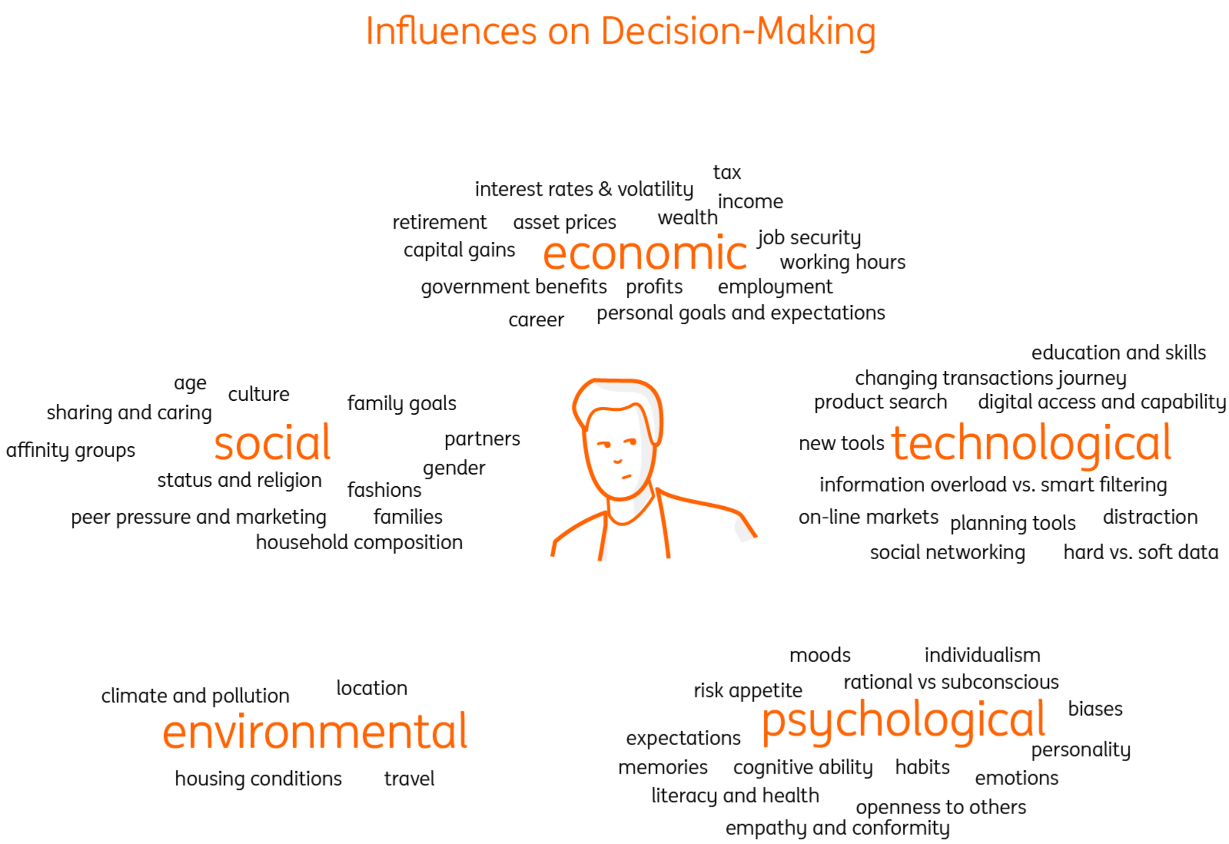
The size, structure and composition of networks are important

Network economics highlights the importance of the structure and composition of networks to the flow of information. It's not just what you know, it's who you know. Some well-connected individuals and organisations can be disproportionately influential by connecting people who would otherwise not be.

Influence is shifting away from big organisations and offline media experts

Social networking has also played a part in shifting influence away from traditional influentials such as big organisations and offline media experts and celebrities to citizen bloggers and vloggers. It has also enabled the creation of online peer groups at levels ranging from the local to the global.

Fig 8 Multiple influences on decision making



[24] For discussion of the impact of social networks see 'The Limits of Friendship' Maria Konnikova, The New Yorker (October 7, 2014) http://www.newyorker.com/science/maria-konnikova/social-media-affect-math-dunbar-number-friendships

C. Consumer Finances – A 3D Assessment

We need to look on three levels to understand people's financial decision making...

...the middle, social, level is crucial

Our central point is that we need to look on three levels if we are to fully understand people's financial decision making. Their behaviour cannot be judged simply by looking at the micro level of psychology and personal characteristics. People are profoundly affected at the macro level by their societal context. This will affect not just their finances but also their state of mind. But, as we have seen, there is a crucial middle level, namely the influence of the individuals and groups that people interact with. This social, or meso, level is vital, and yet it is the most neglected by economists.

While social sciences identify the three levels as distinct , they clearly interact...

...individual trends combine to affect social groups and the macro-economy

Although the processes at work on these three levels are distinct[25], reflected in the variety of models of behaviour developed by different social sciences, they clearly interact. Thus an economic downturn will have different effects on different sections of society and on different individuals. Meanwhile, factors affecting individuals, such as the adoption of new technology or public policy changes affecting taxes, benefits, or education, will affect the behaviour of social groups and ultimately society as a whole.

The 'paradox of thrift' shows how the microeconomic goal of boosting savings may harm the macroeconomic goal of stimulating growth

That said, while the three levels interact, it is important to emphasise that they are distinct: just as what is true of the economy is not necessarily true for households or individuals, so what's true for individuals is not necessarily true of the economy. An important example of such a 'fallacy of composition' is the 'paradox of thrift'. Thus it might be rational for individual households to save more, but if all households attempt to do so, they may drive down spending across the economy as whole, reducing aggregate income and thereby aggregate savings. This paradox can complicate policy-making: microeconomic policies designed to increase savings may conflict with the macroeconomic policy goal of stimulating spending and growth. One way of addressing this conflict is to recognise that not all households necessarily need to save more: indeed, some may be saving more than needed to meet their goals.

Economics need to use other social sciences to understand the meso- and micro-levels

The three dimensions are summarised in Figure 9. For each of the three levels, we note the disciplines that can be used to understand them. An important aspect is that economists need to embrace other social sciences to gain a better understanding of the meso- and micro-levels. The figure also summarises the drivers of each dimension, the current issues that they raise, and some possible responses to them.

[25] John Brodie Donald explains this eloquently in "Catataxis – How more of the same is different". See http://www.catataxis.com/index.php/what-is-catataxis/

Figure 9 Economics in 3D: The Dimensions of Decision Making

Dimensions	Drivers	Issues	Solutions
Macro			
· Society as a whole · Cross-country	Global and national economic, political, social trends	Weak growth in real incomes Unemployment and migration Divergent performance across Europe Fiscal restraint Outlook – fragile recovery	Growth-enhancing policies Monetary policy Fiscal policy Structural reform
Meso			
· Segments · Social · Cross-sectional Network economics Sociology Anthropology	Labour market Interest rates and asset prices (including housing) Fiscal policy Demographic (Ageing) Technology Social trends	Growing income and wealth inequality, due to · Labour market shifts, · Crisis legacy (including housing in S. Europe) · QE (boosting asset prices, not income) · Differential effects of fiscal austerity Employment prospects for low/medium skilled and the young Outlook – growing social and political tensions	Redistributive policies Fiscal policy (taxes, benefits) Education (incentivise 'future proof' high valued added skills) Regulation FI innovation (connectivity, communities, sharing tools, peer comparisons) P2P products
Micro			
· Individuals and households · Decision-making Micro economics Behavioural economics Psychology	Behavioural (psychological influences on daily habits and life moments) Social Demography and health Cultural Technology Housing	Systematic errors in decision-making Unhappiness due to financial stress (debt, unemployment, inadequate income/wealth, housing, pensions) Lack of financial literacy Shift towards individual responsibility for funding pensions, health and education Unsuitable/costly/complex financial products Mistrust of financial institutions Growing social influence on decisions Outlook – technology and data to empower smarter and more social decision-making	Personal Finance Education Financial industry reform (product transparency, standardised and simplified terminology) Innovation (consumer-centric product design, holistic analysis, advice, tools etc)

Conclusion

It's not just micro or macro. It's both. But in the middle: individuals are connected to society via their relationships

A fuller understanding of personal decision-making requires a three-dimensional view from economics. It's not just micro or macro. It's both. But there's another important dimension that connects them in the middle: individuals are connected to society via their relationships with their households, families, friends, workmates and broader social groups. The need for such a 3D view is being intensified by rapid economic, political, technological and social changes. These are posing new challenges for household finances which need to be addressed.

People are taking more responsibility for their finances…

…but they need help from policymakers and banks

Some people are rising to these challenges themselves by consciously taking more responsibility for their finances. But it is clear that most could use more help from enlightened policy changes and customer-centric innovations in financial services. The banking industry bears a particular responsibility, given its central role in the financial system and its ongoing need to rebuild trust in the wake of the financial crisis. The crucial ingredient here is for banks and other financial institutions to deliver products and services that help customers to meet ***their*** personal goals by making smarter decisions.

With this in mind, ING and its partners have launched the **Think Forward Initiative**. This series of reports will form an important part of the contribution of ING's economists to this collaborative effort. We invite readers to join the debate.

Mark Cliffe

8th December 2015

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Disclaimer

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