

# Foreword

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The legitimacy of including behavioral economics in mainstream economic thinking has sharply increased in the last few years.<sup>1</sup>

Behavioral-based books are in the best-seller list in many countries; behavioral analyses are part of the standard curriculum in most graduate schools; most recently, the Nobel Prize committee attributed this year's prize to Richard Thaler, for "integrating economics with psychology".<sup>2</sup>

But we must go further. There is a widely perceived need for economic studies that explore real human behavior, especially after the global financial crisis hit the world ten years ago.<sup>3</sup> The simplifying assumption of a rational and self-interested agent has proved insufficient to explain the systematic deviations that have contributed to the crisis.<sup>4</sup>

Of course there is a long tradition of studies on individual behavior, tracking back to Simon's seminal 1955 contribution and his 1957 book aptly named *Models of Man*.<sup>5</sup> Allais, Ellsberg and others<sup>6</sup> detected the fundamental limits of the economists' particular model of man. But for many years the economic discipline, while fully accepting those insights, considered them as just a useful warning that economics does not deal with real human beings but with simplified representations.

We now believe that economic models, especially when used to inform policy making, should also be robust regarding real human beings' behavioral traits. Limited ability to process information, aversion to losses, endowment effects, and social preferences could all imply that policies deemed sub-optimal in standard neoclassical settings are in fact the most

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<sup>1</sup> See DellaVigna (2009) for a survey of academic literature; Driscoll and Holden (2014) for a discussion on how the behavioral findings have informed macroeconomic modeling; Lunn (2014) and OECD (2017a) for wide-ranging examples and analyses on the application of behavioral insights to public policies.

<sup>2</sup> The Committee for the Prize in Economic Sciences in Memory of Alfred Nobel (2017).

<sup>3</sup> See for example Hendry and Muellbauer (2017) and the literature quoted there.

<sup>4</sup> See the account in Gorton (2010).

<sup>5</sup> Simon (1955; 1957).

<sup>6</sup> Allais (1953) and Ellsberg (1961).

appropriate. This could be true also when recognizing the richness and flexibility of the fully rational agents-based theories.<sup>7</sup>

Behavioral economics has also entered the core business of central banks: monetary policy. As Janet Yellen put it some years ago: “Individuals have money illusion, follow heuristic rules of thumb, and care about issues like fairness and equity. . . . theories built on behavioral foundations have strikingly different implications from those predictions that follow from more standard theories”.<sup>8</sup> Importantly, behavioral considerations have also become part of the general discussion on the role of expectations in economic theory, especially in times of high uncertainty.<sup>9</sup> Recently De Grauwe and Ji have proposed macroeconomic models where agents are not sophisticated enough to formulate rational expectations, and are therefore forced to adopt simpler heuristics to forecast the future.<sup>10</sup>

Depending on a range of parameters, the policy trade-offs faced by central banks can be actually different from those based on standard models.

Finance is an obvious field in which to apply behavioral insights. Financial services are in fact often complex, involve trade-offs between the present and the future, require an assessment of risk and uncertainty, and the decisions are sometimes not repeatable, so that people cannot learn from their own past experience.

The “behavioral finance revolution”, as it has been labeled, has opened the way to a more integrated approach to the analysis of economic phenomena.

Consider households’ financial decisions. Heuristic thinking, which is people’s tendency to use simplistic rules to make complex decisions, has emerged as one of the main explanations for why people concentrate their investments in a few assets (portfolio under-diversification)<sup>11</sup> or why many households over-pay for their bank accounts, keeping old and expensive tariffs when their bank has made cheaper options available to them.<sup>12</sup> The predisposition to simplify decisions can also explain the propensity to over-borrow, to under-save and to favor shorter debt maturities, phenomena all observed in households’ borrowing decisions.<sup>13</sup>

Financial intermediaries may have an incentive to exploit consumers’ biases. Let me give you an example, referring to the US subprime mortgage market. In the run-up to the crisis, advertisement “framing” was used by many banks to increase their business: low initial interest rates were

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<sup>7</sup> See for example the discussion in Gul and Pesendorfer (2008).

<sup>8</sup> Yellen (2009).

<sup>9</sup> Visco (2009).

<sup>10</sup> De Grauwe and Ji (2017).

<sup>11</sup> Benartzi and Thaler (2001).

<sup>12</sup> Stango and Zinman (2009a); Branzoli (2016).

<sup>13</sup> Stango and Zinman (2009b).

frequently publicized with much more prominence than the higher rates that would inevitably follow.<sup>14</sup> The rational *homo economicus* would not have been tricked by such strategies, while the main man in the street was.<sup>15</sup>

A deeper understanding of how investment and saving decisions are made and why people make predictable mistakes when choosing financial services is therefore crucial in order to achieve effective financial consumer protection.

The financial industry, the banking industry in particular, is rooted in trust: financial intermediaries have to be trusted by the millions and millions of individual savers giving money to them. Trust is based on the stability and transparency of financial intermediaries: because people's trust is a public good, public authorities have to protect savers on both fronts. I do not want to enter here into the debate about whether a single supervisory authority should be charged with both missions, or whether we need two. What the economic literature and international experience have shown is that laws and rules are not enough.<sup>16</sup> There is more. Savers do not usually have the knowledge to really understand the characteristics of the financial products they buy, even when they are clearly explained to them. But also when they do, their decisions might not be fully rational.

Financial education is key in both respects.

The initiatives of financial education, for students and for adults, promoted by the Bank of Italy now take behavioral considerations more into account. We try to increase savers' basic concepts and at the same time help them make rational choices in accordance with their true needs. For instance, this year we involved about one hundred teenagers in a role play whose aim was to make them aware of their mistakes and irrational behavior.

It is hard to estimate precisely how pervasive behavioral biases are in the population, but we have some evidence suggesting that they are actually quite common.<sup>17</sup> A survey conducted recently by the Bank of Italy shows that almost a quarter of the Italian adult population are overconfident, which means they overestimate their actual knowledge of basic financial concepts.<sup>18</sup>

In other developed countries this percentage is even higher. Overconfident savers face a significantly higher risk of making bad investments, and overconfidence is just one of the relevant biases!

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<sup>14</sup> For a general overview of how the presence of biased consumers may affect firms' pricing decisions, see Grubb (2015).

<sup>15</sup> Gurun et al. (2016).

<sup>16</sup> OECD (2017a).

<sup>17</sup> See DellaVigna (2009).

<sup>18</sup> Banca d'Italia (2017).

New technologies can affect those biases. On the one hand, they bring risks that are not yet completely understood. For instance, being able to buy a financial product with a single click on my smartphone may exacerbate my short-termism, self-control problems and confirmatory bias.<sup>19</sup> On the other hand new technologies offer an opportunity: for instance, digital practices may lead savers to take “good” actions, through automated reminders to save or to pay back a loan, or a better price/product comparison.

Anyway, laws and regulations must be an important part of the picture. We may think of many: nudges, default options, framing disclosure, cooling off periods, and also restrictions to consumer choices. Such interventions entail an increasing degree of intrusiveness and they have different welfare implications. Nudges, defaults and disclosure requirements usually benefit not-so-rational consumers without imposing costs to rational agents: they in fact help the former to make the right choice, for instance overcoming the framing effect, but they do not change the actual decision of the latter. Restrictions to consumer choices, such as limitations to product selling, imply a trade-off between the protection of vulnerable savers and the costs imposed to rational ones.<sup>20</sup> But there could be circumstances that justify these costs, with well-founded reasons.

Let me conclude. Economic theory is a simplified representation of the world and it should be considered as a tool to increase human welfare, offering good predictions and supporting the decisions of policy makers.

During more than three decades of fierce debate, behavioral economics has influenced the way we think about real-world phenomena and how we design economic policies. It still has some opponents.

However, the question is not whether behavioral finance should replace the standard theory, but whether the debate between behavioral and “traditional” economists improves our understanding of the real world, and provides policy makers with more effective tools.

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<sup>19</sup> See OECD (2017b).

<sup>20</sup> Campbell (2016).

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