

## **Increasing Financial Capability: Underwriting the Provision of a Public Good**

### **I. Financial capability – acknowledging a public policy challenge**

This conference, to put it into the finance lingo, deals with a ‘derivative’: the want of financial capability – the ‘underlying’ being the ever stronger emphasis put on individuals in managing potential threats to their well-being. This is, most obviously, an important subject from an individual as well as a societal perspective. With pay-as-you-go social security systems under pressure, individuals are more and more called upon to take care of their own affairs. That is, they are assumed to provide on their own for a decent standard of living during their ever longer years of retirement, at least in a complementary way. In addition, further mechanisms of collective insurance (protection against health risks or job losses, for example), as a result of heightening cost pressures, have been cut back, again necessitating supplementary contributions on the part of individuals.

However, while responsibilities delegated to private households have been increasing substantially, their capacity to cope with the new challenges is, on average, still barely up to the task. Even more problematic, significant minorities, in particular those most deserving, are even less adequately equipped with the required basic knowledge. That is a major reason why financial capability or literacy has risen on the policy agenda – as, for example, comprehensively documented in the OECD’s study from 2006 on *Improving Financial Literacy*.

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\* Deutsche Bundesbank, Frankfurt; opening remarks at the EU Commission’s *Increasing Financial Capability Conference*, Brussels, March 28, 2007.

In fact, many monetary authorities have responded early on to these challenges. They could have rationalized this activity from a purely monetary perspective, that is, through financial literacy's impact on the efficiency as well as stability of financial markets, and thus on the transmission of monetary policy. But, chiefly, central banks justified their involvement less indirectly: namely, they frequently declared their intention to foster consumer welfare. Consequently, central banks did and do interpret financial illiteracy as a policy issue in need of remedial action. This holds true, for example, for the U.S. Federal Reserve, which proposes a whole series of programs addressed at a more general audience. It is as well the case with numerous central banks within the European System of Central Banks – visiting the respective homepages bears witness to this fact. As concerns the Bundesbank, we have been engaged in economic and financial education for at least three decades. In other words, we understood and understand the capacity to deal responsibly with financial and economic affairs for meanwhile a long time as an important part of our activity program, our public duties. Through our publications (in particular the *Monatsbericht*) we inform the public debate on a broad range of topics concerning economics as well as financial issues. In this vein, we have produced numerous brochures and booklets, targeting separately students as well as teachers who use this material rather actively for learning or teaching purposes. Moreover, we do engage in many teaching projects, frequently visiting schools or universities.

In our eyes, therefore, the general topic of this conference, for which we very much applaud the EU Commission and in particular David Wright, Director General of the DG Internal Market and Services, to have organized it, is indeed of the essence. And it has gained in importance over the last decade against the briefly alluded to changing economic and financial environment. In these introductory remarks I will sketch three points in a broad brush way, that is, touch, very sketchily, on the Why, the How and the Perspectives or Further Works of financial literacy. In other words, I will try to succinctly overview this conference.

## II. Raising financial capability: A project of enlightenment

Consumers should be financially literate in order to make better decisions. This is the Why-dimension in a phrase. Hence, the task is to enable people to make choices in their own best interest. Fostering this capacity is at the same time the probably most effective device to underwrite investors' protection, to deal with their vulnerabilities. And investors' education is particularly relevant in light of all long-term funding or investment projects. The pension funding issue will be the topic of Panel III this afternoon. Here the capacity to deal with one's own financial affairs, to control one's future responsibly, is particularly relevant.

To develop a reasoned judgment on financial issues has, in addition, more than an individual dimension. It quite obviously concerns societal well-being as well, by impacting, for example, on all the questions Pervenche Berès, the Chairperson of the European Parliament's Economic and Monetary Affairs Committee, addressed so convincingly in her remarks. As she correctly stressed, the political process will also benefit from a knowledgeable constituency.

It is here where, quite logically, the notion of enlightenment comes in. While as economists we – almost tautologically – assume that consumers know, or more precisely, do what's in their own best interests, this is palpably not the case. The financial literacy tests reported in the (already quoted) OECD study make this case decisively. Here we can build on an argument which has been convincingly developed by Immanuel Kant in the early 1780s in his famous piece on: “*Was ist Aufklärung?*”. Kant wrote: “Aufklärung ist der Ausgang des Menschen aus seiner selbstverschuldeten Unmündigkeit.”<sup>1</sup> A rough and ready translation would go like: “Enlightenment is the escape venue of man from his self-inflicted incapacity to judge.”

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<sup>1</sup> The quote goes on: “Unmündigkeit ist das Unvermögen, sich seines Verstandes ohne Leitung eines anderen zu bedienen. Selbstverschuldet ist diese Unmündigkeit, wenn die Ursache derselben nicht am Mangel des Verstandes, sondern der Entschließung und des Mutes liegt, sich seiner ohne Leitung eines anderen zu bedienen.”, initially published in 1784 in the *Berlinische Monatsschrift*, here quoted from *Was ist Aufklärung?*, Reclam Universalbibliothek, no. 9714, Stuttgart 1974, p. 9.

Escaping from illiteracy, developing a solid capacity to judge – financial capability – is precisely the task this conference is engaged in. And today we will be presented many examples of ways how to best achieve this target. As their guiding principle, conference organizers took a life-cycle approach – most probably in tribute to the late Franco Modigliani, the great economist, who during his long career frequently published on long-term finance issues as seen from the perspective of an individual investor as well as its societal consequences. Actually, he devoted his last book to pension funding.

### **III. Venues to deliver financial agency**

But how should one nurture financial capabilities? The most natural way to contribute to financial enlightenment is of course to start early – this is the subject of Panel I on underwriting a solid education for young people. Therefore, it should be of course a primary concern of schools. But adults, quite palpably, need support as well. Financial education programs for this audience should start from difficulties as experienced in situations where individuals are confronted with a choice between complex products or have to decide – and follow through – on a long-term savings plan.

Those issues will be briefly touched upon in a minute. But to begin, I would like to sketch the two basic approaches which orient the attempts at bringing financial literacy to children. One is to develop a stand alone, specialized course in economics and finance which makes students aware of economic topics and providing them with the tools to understand real world issues. In the German case, with education being a prerogative of the Laender, like in the U.S., this is a line of attack quite frequently taken. It is, however, mainly the higher grades (9 to 13) in which classes in politics and economics are taught. But, quite clearly, vulnerabilities afflict children much earlier – enormous mobile phone bills are a problem for too many of them in very low grades already. Hence, insofar domestic education does not suffice and in order to deal with these concerns, appropriate teaching support is called for from almost the beginning of children's schooling.

Here I would like to emphasize a further, possibly only supplementary approach and concerning later grades mainly: Since finance (like computer literacy) has a substantial horizontal dimension, one might as well think of introducing economic cases in a number of different courses. For example, because math and statistics are of the essence, finance lends itself very nicely to enhancing students' interest and capabilities in those subjects, otherwise frequently perceived as a bit tedious. For example, a solid knowledge of interest rate compounding – obviously too frequently lacking according to most financial literacy tests – is an indispensable prerequisite if one wants to have an informed evaluation of a loan contract or put a judgment on a promised stream of returns. In many circumstances, financial topics thus could be integrated very fruitfully in math classes, in fact making them more interesting, and ultimately: valuable, for students. Then, in those classes where the basics of probability are taught, data on returns provide a particularly good rationale for the study of expected value, standard deviation as well as all sorts of sample biases. In my view, the 'underlying' subjects would not be hijacked by an extrinsic, impure field. To the contrary, their teaching and understanding could be substantially enhanced.

This holds true for a number of further traditional school courses. Most evidently, in order to develop an understanding of many questions in history or social sciences, taking an economic or financial perspective is inevitable. But, interestingly enough, economic and financial topics do come up as well in more pure fields like literature. From a certain angle, Balzac's *César Birotteau* is about a pension funding and wealth allocation problem – dealing with financial mishaps and, admittedly, other disappointments. Maupassant's *Bel ami* takes on questions of a changing financial infrastructure – with the, at that time new, concept of a *Universalbank*. Or Emile Zola's *L'argent* is a marvelous description and explanation of the functions bourses perform. There are numerous further examples from other literatures (Goethe, Thomas Mann, di Lampedusa, Dostojevski etc.) and periods (V.S. Naipaul, Julian Barnes etc.) to ponder. But one should of course be aware of the critique that it would make for a very poor reading of these authors if one would mainly take note of the finance dimension. Interpreting exclusively from such an angle would, for sure, diminish the *joie de lire* – unless for those inflicted with our *déformation professionnelle*. Nonetheless, to put in a personal reminiscence, in my pen-ultimate

class at the Gymnasium I was very much inspired by the joint reading of Schiller's *Jungfrau von Orleans* as well Brecht's *Heilige Johanna der Schlachthöfe* – admittedly forced upon us by our teacher of German decades ago, in particular because he developed our reading of both texts against their respective political and economic contexts. Thus, one might persist: an economic or financial perspective might foster a deeper understanding even of literary questions.

Anyway, bringing in such a perspective in an appropriate way would at times support financial literacy. But this would concurrently call for new didactic and pedagogical approaches. It would also imply an updating of teachers' education programs. This, in my eyes, is at a minimum a sensible venue to ponder.

#### **IV. Issues of financial literacy – three examples**

The management of risk is the “primary subject matter of finance”.<sup>2</sup> Accordingly, containing its potential negative consequences has been high on Finance's research agenda. As an upshot, we now do have a reliable body of empirical and analytical research. Even more practical: there are tools available for individuals and households to cope with potential threats, to which probabilities can be attached.

In particular, we do have instruments, very much workable on an individual level, which could support households effectively in their choices for bankrolling their retirement years.<sup>3</sup> Some of the analytical concepts, as developed in Finance, are very much in an enlightenment tradition: That is, they are about debunking myths – almost routinely rendered as conventional wisdom. Here is only room to refer very rapidly to three of the most important ones.

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<sup>2</sup> See the marvelous book by Robert Shiller (2003), *The New Financial Order*, Princeton: PUP, p. 1.

<sup>3</sup> Here I draw on two books, written purposively for a large audience, by two of academic finance most accomplished practitioners: Zvi Bodie and Michael Clowes (2003): *Worry-Free Investing. A Safe Approach to Achieving Your Lifetime Financial Goals*, Upper Saddle River: Pearson Education and Manfred Weber (2007): *Genial einfach investieren. Mehr müssen Sie nicht wissen – das aber unbedingt*, Frankfurt: Campus.

The first conceptual advice builds from the idea that markets are weakly efficient: in practical terms this means that, on average, we cannot beat the market, that is, the average or representative investor. While this sounds like a blatant truism it is generally not acknowledged – with detrimental consequences for portfolio performance as a result of too much trading. Indeed, if there needs to be proof for this claim, 70 percent of active professional portfolio managers do not meet the benchmark on an annual basis. With the time-period lengthening, this underperformance relative to the market portfolio, unfortunately, widens. In the same vein, past track-records are basically of no avail. While there are, evidently, investors who do beat the average over a substantial period of time, this does not contradict our general proposition. First of all, to tell the difference between skill and luck on standard levels of confidence we would need (too) many data points. And those investors who apparently have the knack to do it consistently – are, unfortunately, very rare birds indeed. This boils down to the proposition: do not try to beat the market – and, as a corollary, as the great economist James Tobin once lucidly quipped, do not put all your eggs into one basket.

The second conventional mistake, which has been long exposed by classical Finance, is the claim that stocks are not risky in the long-run. Unfortunately, reality flatly contradicts this point. While it is true, that the dispersion of stock returns decreases with the length of time, this does not allow us to conclude that the nest-egg we are targeting to achieve through a savings plan will be attained. There remains a substantial shortfall risk. An indirect proof of this point is that in real world markets insurance premiums against asset price declines (the prices of put options, for example) rise with the length of time. What ultimately counts is not the geometric mean of changes but the absolute (real) value of accumulated wealth. This is, of course, an absolute quantity which is targeted to be drawn upon in order to give command over real resources. And for this absolute level of assets to be achieved, *actual* returns and their *time pattern* (as well as those of withdrawals) are of course decisive. Looking, instead, at the individual saver's problem from the perspective of the geometric mean over a long period of time is simply misrepresenting the problem. Age-dependent rules of thumb on the appropriate mix between stocks and bonds are wrong! In fact, Paul Samuelson, another of those giant economists, has already shown in the early 1960s that the length of an investor's time horizon

should not affect the mix between stocks and bonds. To be sure, classical Finance does not advocate staying away from stocks. But it emphasizes that one should be invested in equities in light of their contribution to one's own targets, that is for the right reasons.

A third common misconception – the so-called irrational optimism phenomenon – is more empirical than conceptual. Dimson et al. have shown that numerous corporate pension plans do assume return series which will be not achieved on average.<sup>4</sup> Individual investors, apparently, do indulge in such unachievable expectations as well. All of this leads at the company as well as the individual level to underfunding – to a shortfall with regard to the amount of wealth strived for. With a bit of data handling – relying on survivorship bias and some sampling error – one can rather ingeniously construct apparently supportive evidence to the contrary. But, here again, knowing one's statistics is positively enlightening. A very instructive example of this line of applied 'Kantian' Finance has been given by Gary Burtless from the Brookings Institution. He has shown that the median replacement rate as an upshot of investing 6 percent of a workers income (plus all proceeds in between) over a 40 year period in the U.S. stock market (nota bene: this has been the best performing stock market, hence we do have a serious success bias) has been on average rather high, that is: 47 percent. But dispersion about this mean was substantial, that is the standard deviation was 22 percent and replacement rates ranged between less than 20 and more than 100 percent of earnings.<sup>5</sup> What is important, the actual outcome was purely dependent on the timing, and it could vary substantially over only brief periods of time. Unfortunately, however, as mortals we cannot diversify away this time risk. Coping with this risk is actually the major reason speaking in favor of generational contracts, implicit in pay-as-you-go systems.

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<sup>4</sup> Elroy Dimson, Paul Marsh, and Mike Staunton (2004): Irrational Optimism, in: *Financial Analysts Journal*, January/February, pp. 15-25.

<sup>5</sup> These results are gross of fees and they assume a fair annuitization of proceeds at the end of the investment period. In other words, they are positively biased.

## V. Perspectives – on supporting enlightened investors

Modern Finance comes in two guises: One is the physics part, starting from axioms with all the quantitative trappings – the part to which we alluded in these remarks mainly. The other branch is inductive, acknowledging the behavior of real-world human beings and therefore applying insights from psychology. From this latter perspective we know that individual choices are heavily dependent on the context. Moreover, when individuals choose they are frequently too much assured of themselves. At the same time, on average we are more hurt by deceptions than pleased by positive surprises. Overconfidence as well as loss aversion, however, lead to too much portfolio reshuffling. This overtrading translates into fees – and, as a rule, taxes returns substantially.

Behavioral finance has meanwhile produced a number of important empirical results. They can be applied, as is shown with remarkable ease in Martin Weber's splendid book, to improve individuals' choices and decisions. One important conclusion from this research is that framing is decisive. A real world application would be to nudge light-handedly individual behavior by introducing default options, being in the individuals' best interest, of course. This is what 'libertarian paternalists' suggest.<sup>6</sup> Some of the counter-arguments have a somewhat gratuitous ring. They remind us of the arguments, from a first-best world, against 'merit goods' (Richard Musgrave). Unfortunately, this is in view of the on average available information set, information processing capacities and the self-control of real world individuals not the perspective we can start from.

Our remarks have been largely on issues of Finance. Incidentally, Max Weber, the renowned sociologist, deemed that to be in the know about stock exchanges was of substantial importance already in the late 19<sup>th</sup> century. At that time he wrote a small booklet, eyeing as well a popular audience: the publisher being the Göttinger Arbeiterbibliothek – Göttingen's Workers' Library.<sup>7</sup> This is still a compelling and, coming back to our initial remarks on 'Aufklärung', an enlightening perspective:

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<sup>6</sup> See concisely Richard Thaler and Cass Sunstein (2003): Libertarian Paternalism, in: *American Economic Review*, vol. 93/no. 2, Papers and Proceedings, May, pp. 175-179.

<sup>7</sup> There's a French translation: Max Weber (1999), *La bourse*, Paris: Transition.

Classical Finance can here deliver copiously. Moreover, enlightenment is about enabling not fear-mongering. It is about, to quote Kant ones more: “Sapere Aude! Habe Mut, dich deines eigenen Verstandes zu bedienen!” (Have the courage to make use of your own reason.) Finance provides a toolbox to deal with “le commerce de promesses” (Pierre-Noel Giraud) with which investors are constantly confronted. But it also provides instruments and products to contain risks and enhance opportunities. Therefore, most importantly, Finance can be deployed, what I am here lacking the time to go into, most constructively – see on this in particular Robert Shiller’s *New Financial Order*.

This conference, in presenting and elaborating on the different approaches taken to underwriting a broadly based financial capability, can significantly contribute to this task. Supporting financial literacy is, of course, not a one-off event. It has to be constantly nurtured. Therefore I do hope that this Commission sponsored conference starts a series of exchanges. In any case, I am looking forward to the results of today’s venture as well as its possible impact on the issues under debate.