

# **The non-death of efficiency theory: how « zombie economics » is institutionnally « embedded »**

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## **Introduction**

The title of this paper is inspired by two books:

-“Zombie economics” was published in 2010 by the Australian economist John Quiggin; it was about the “reanimation” of economic theories supporting neoliberalism, supposedly “killed” by the Great Financial Crisis of 2007-2008.

-“The strange non-death of neoliberalism”, by Colin Crouch, followed one year later in the same vein; other articles and books have appeared since then on why neoliberalism continues to thrive, for example recently Pierre Dardot and Christian Laval on “The neverending nightmare” (Dardot & Laval, 2016).

Quiggin treats efficiency theory as a major case of “zombie economics” but I found his development unconvincing in two ways: first it is limited to the academic discussion and says nothing about what makes these zombies survive, and second even in the discussion he ignores the basic ambiguity of the concept which flaws the whole debate.

This ambiguity is a point I developed in the article accepted last year in Accounting Economics and Law on the discussion of efficiency theory (Charron, 2016). I had remarked efficiency theory after the Global Financial crisis had entered an era of « low profile survival », illustrated by the fact that when Eugene Fama and Robert Shiller were awarded in 2013 the Nobel Memorial Prize in Economic Sciences, the word « efficiency » was difficult to find in the 45 pages of the report of the Prize Committee<sup>1</sup>, which was all about the forecastability of the price of financial assets, making real efforts not to mention the « E » word. In the article I focused on the way market efficiency is defined, discussed and tested. I remained on the theoretical side of efficiency survival, but later on I thought I had to explore the practical side, not really addressed by Quiggin and others: how is efficiency theory kept alive?

Then I began to realize that this comes through many ways, many channels: teaching, regulation, professional norms and habits, not to mention the interrelations between them. I also realized that, in a short period of time, it was too ambitious for me to conduct an empirical research on this, so my contribution at this stage is rather to explain how the problem of « efficiency theory survival » can be described and investigated and to give some illustrations supporting this approach. To go further

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<sup>1</sup> Accessible here : [http://www.nobelprize.org/nobel\\_prizes/economic-sciences/laureates/2013/advanced-economicsciences2013.pdf](http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/2013/advanced-economicsciences2013.pdf)

through empirical research I will have either to make dramatic choices to focus on one specific aspect or to collaborate with others to explore this area. In both cases I will need some feedback and help.

Discussing financial theory in sociological terms is not new: Mackenzie (2006) has produced what can be considered the foundational research in this area, using (and somehow reinventing) the notion of performativity to understand, in his terms, “how financial models shape markets”. Our approach here will differ in several ways, essentially in that, instead of investigating models, formulas or, more generally, market devices, we will focus on a concept which is “incorporated” or “embedded” in them, and which remains, in its most effective form, in the realm of the “taken for granted”, what Bourdieu called (in French) the “*cela-va-de-soi*”.

More specifically, our idea is to build upon the distinction between technical and fundamental efficiency, described and elaborated in our article, to show that, whereas technical efficiency is the one that is tested, thought about by finance practitioners and teachers and, within certain limits, openly discussed, fundamental efficiency is the one that is the most effective precisely because it is barely discussed, “embedded” as it is as an underlying assumption of key formula and models and as a rationale of still an important part of financial regulation. The point is to show how efficiency theory is reproduced, through an approach closer to Bourdieu’s notion of *reproduction* than to Mackenzie’s take on *performativity*.

The remainder of the paper is divided into three parts. The first one clarifies what is kept alive, by recalling the distinction between technical efficiency and fundamental efficiency. The two other parts will explore how it is kept alive, in finance teaching and financial regulation respectively. As specified before, this is more a research program than a research proper: we will explain in which ways such a research is to be conducted and illustrate our perspective with some salient examples.

## 1. What is kept alive?

As I argued in previous works (Charron, 2010; Charron, 2016), what is most needed when discussing efficiency is clarity on this very notion. The most important point to be made here is that “markets know best”, the sentence that best encapsulates the idea, can mean two different things: “You can’t beat markets” or “Markets tell the truth”. Thaler (2009), a prominent figure of behavioural finance, expressed this distinction by explaining efficiency had two components: the “Price Is Right” and the “No Free Lunch”. Says Thaler: “The price is right principle says asset prices will, to use Fama’s words “fully reflect” available information, and thus “provide accurate signals for resource allocation”. The no free lunch principle is that market prices are impossible to predict and so it is hard for any investor to beat the market after taking risk into account.”

We proposed to call the No Free Lunch component *technical efficiency*, like André Orléan, because it’s about the technique investors should implement, and the Price Is Right component *fundamental efficiency* (rather than informational), because it’s about asset prices reflecting their fundamental value<sup>2</sup>. Many problems in the discussion come from the confusion between the two and from the highly questionable idea that technical efficiency necessarily implies fundamental efficiency, an inference Shiller called “one of the most remarkable errors in the history of economic thought” (Shiller, 1984).

Technical efficiency implies an investor should not try to guess the market trend: the best strategy for him is to build a portfolio as representative as possible, in order to replicate this trend as closely as

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<sup>2</sup> The idea Thaler developed in 2009 had been expressed four years earlier, using different words (and in French), calling “*efficience technique*” (technical efficiency) what Thaler calls “No Free Lunch component” and “*efficience informationnelle*” (informational efficiency) what Thaler calls “Price is Right component” (Bourghelle, Brandouy & Orléan, 2005). Later on, the point has been detailed and refined by Orléan (2014).

possible. Fundamental efficiency implies any kind of public intervention or regulation trying to influence, to weigh on asset prices can only be harmful, the price produced by the market mechanism being the best one, the more appropriate at any time. Table 1 makes the distinction more visible.

**TABLE 1 – DEFINING TWO EFFICIENCIES**

<i>Kind of efficiency</i>	<b>Technical</b> <b>(“No Free Lunch”)</b>	<b>Fundamental</b> <b>(“Price Is Right”)</b>
<i>Basic proposition</i>	Asset prices are unforecastable	Asset prices express their intrinsic value
<i>Practical consequence</i>	Passive portfolio management is better than any kind of active portfolio management	Markets can regulate themselves, can be left to their own devices
<i>View on bubbles</i>	Bubbles are unpredictable	Bubbles don’t exist

For technical efficiency, the basic proposition is that asset prices are unforecastable, the main practical consequence is that passive portfolio management is the best way to invest money, the view on bubbles is that they are unpredictable. For fundamental efficiency, the basic proposition is that asset prices express their intrinsic value, the practical consequence is that markets don’t need to be regulated and the view on bubbles is that they don’t exist.

Quiggin, an heterodox economist, just ignores or doesn’t take seriously fundamental efficiency, like mainstream economists, because he directly uses the distinction between weak, semi-strong and strong efficiency. This is a distinction based on the kind of information taken as a starting point to test

efficiency, to see how prices react to it; these three forms have been defined by Fama (1970) to test forecastability, hence they all are forms of technical efficiency.

Indeed the way efficiency is effectively tested tells a lot about the way it is understood and thought about by economists and finance professionals: what is nearly always tested is technical efficiency (in Charron, 2016, I recalled important exceptions, but they remain exceptions). Hence, for them, the practical meaning of market efficiency is the idea that you can't beat markets.

Technical efficiency is a testable proposition. It doesn't have to be constantly "reanimated", just tested. There are controversies about the way it is tested but its meaning and implications are uncontroversial. The idea that it supports neoliberalism is questionable: it supports passive investment and makes sense for investors and from an investor's point of view, but it doesn't imply competition has to be imposed and organized by the state wherever it's conceivable, it doesn't imply the marketization of the society or the financialization of the individual up to the point he considers himself as a portfolio of assets calculating a discounted cash flow of his own.

What implies all this is rather fundamental efficiency, the survival thereof seems, then, a greater concern especially if we are to think about the way neoliberalism survives and thrives. Only if the markets tell the truth does it make sense to extend their realm.

Moreover, in terms of market failure, the financial crisis itself is a failure of fundamental efficiency, not of the technical one: it is hard to see it as a demonstration that financial asset prices can be forecasted or that active asset management should prevail, whereas it is a clear example of the end of a "bubble" phenomenon (or even, in Soros' terms, a "super-bubble" [Soros, 2008]), i.e. an example of fundamental inefficiency.

We consider, then, that the notion of technical efficiency hasn't been "killed" by the GFC: if an acceptance of efficiency can be thought of as "kept alive" since then, it is fundamental efficiency.

Consequently, we will now explore how the concept of *fundamental* efficiency is kept alive. Our central proposition is that it is reproduced through institutional constraints, and more specifically:

-teaching, implying a cognitive constraint

-regulation, implying a legal constraint.

Hence its post-GFC reproduction can be investigated in:

-finance curricula, especially the more dominant and “global” ones: the CFA, MBAs

-post-crisis financial regulation

## **2. How it is kept alive: the cognitive side**

The idea to focus on teaching logically derives from our perspective here: we don't intend to show how the notion of fundamental efficiency is justified, discussed or demonstrated but how it survives refutations, be they practical or theoretical. Then such a survival has to be achieved through something stronger than rationality or consistency, i.e. legitimacy, and what legitimizes ideas is teaching, and more specifically in our case degrees leading to executive positions in the financial industry.

This, of course, is questionable in itself. One could argue, for example, that such a legitimacy primarily derives from professional norms and habits; our point would be here to show that professional legitimacy crucially derives from the mastery of a set of tools and concepts, which are inculcated and reproduced through curricula. A certain circularity appears here: these curricula are supposed to include what a practitioner needs to master, but then what a practitioner needs to master also draws its legitimacy, measured for example by its ability to be endorsed by clients and employers, from the fact that it is what is taught in the most prestigious institutions.

Clearly, empirical research is needed to test our proposition that elite finance curricula are the leading sources of legitimacy in this area. An exploratory research by Yong Jie Guan (2016) has tried to show thus how the CAPM is reproduced through teaching and its interrelations with professional norms. Our idea is to study the CFA programs and the finance curricula of a sample of 16 Top MBA programs. This sample is made of the MBAs which are in the Top 10 of at least one of the two most renowned rankings (the Financial Times ranking and the ranking made by The Economist; we used the last rankings available [2017 for the FT, 2016 for The Economist]).

At first glance, the idea that the basic reproduction mechanism relies on feedback loops between professionals and teaching is clearly illustrated in the case of the CFA with the « CFA practice program analysis » which ensures « industry practitioner input at every stage » (CFA Institute).

Then in terms of content we will look at how financial assets' valuation is understood in these curricula. What this content is made of is generally well known, but I think it can be interesting to see this in more detail. At this point the illustration I can show is the Table 2 on finance courses in the 16 “elite” MBA programs of my sample, even if this table is not finished.

The left column indicates the school or University where the program is taught, then the table shows the status of finance courses in the sense of courses on capital markets and valuation; this status can be core, core but non compulsory in cases there is a “flexible core”, or elective, but when it's elective Financial Accounting or Corporate Finance are generally part of the core. Then a column indicates the designation of the course and a last one the key concepts. What I called key concepts here is what is not purely descriptive in the shortest descriptions of the courses I could find.

Unsurprisingly we see appear hear a classical set of interrelated concepts and models: the DCF, time value of money, the cost of capital through the WACC, market efficiency. When the « E » word is put forward, it is understood as technical efficiency, which is the one that matters for investors. Again when efficiency is expressly mentioned or put forward in teaching or among finance professionals, it is generally meant as technical efficiency.

**TABLE 2 – FINANCE TEACHING IN ELITE MBAs**

<b>School</b>	<b>Status</b>	<b>Designation</b>	<b>Key concepts</b>
<b>INSEAD</b>	Core	Financial markets and Valuation	Time value of money, DCF, risk-return arbitrage, Cost of capital
<b>Chicago Booth</b>	Core but non compulsory	Finance (category of courses)	
<b>Kellogg</b>	Core	Finance	DCF, Multiples methods
<b>Darden</b>	Core	Financial management and policies	Cost of capital, Informational efficiency
<b>Harvard</b>	Core	Finance I, Finance II	Capital budgeting, DCF, Risk analysis, WACC, Information asymmetries, Agency conflicts
<b>Stanford</b>	Core but non compulsory ( ? )		
<b>Tuck</b>	Core	Capital markets	
<b>Berkeley-Haas</b>	Core	Introduction to finance	Time value of money, Capital market efficiency
<b>IESE</b>	Core	Capital markets	Value creation, EMH
<b>HEC</b>	Core	Financial markets	Time value of money, Modern portfolio theory, CAPM, Market efficiency, Cost of capital
<b>University of Queensland</b>	Elective (Core : Financial Management)		
<b>Columbia</b>	Elective (Core : Financial Accounting, Corporate Finance)		
<b>IE Business School</b>	Elective (Core : Financial Accounting, Corporate Finance)		
<b>Wharton</b>	? (Flexible Core)		
<b>Cambridge Judge</b>	Elective		
<b>London Business School</b>	? (Flexible Core)		

More to the point is the fact that fundamental efficiency is an implicit assumption of the key concepts, as brilliantly illustrated by Ortiz (2017) on the WACC. In the calculation of the Weighted Average Cost of Capital for a specific firm, the value of equity is given by the market capitalization, the value of debt is given by the market value of the company's outstanding bonds, market prices are used to determine

the risk-free rate of return and the calculation of the beta is also based on historical market prices. Hence market prices are used as inputs in several ways to calculate this key management indicator; this use does make sense only if these prices are meaningful. And for them to be meaningful, financial markets have to be efficient in a fundamental way, not in a technical way: technical efficiency doesn't necessarily imply fundamental efficiency, hence unforecastable prices are not necessarily meaningful in the sense used here. The same can be said on the CAPM through the calculation of the beta, for the Black & Scholes model etc.

The notion of fundamental efficiency, then, is reproduced and « embedded » as an implicit and generally unnoticed assumption: this doesn't come so much through explicit references to Fama, but through the very basic fact that *market prices are used as data*.

This is consistent with the fact that valuation and pricing here is not really about value and price, these are questions of risk modeling and risk management. What counts is not risk in absolute terms but in relative terms (Philipponnat, 2017): the beta, the use of benchmarks, the prevalence of passive asset management, all this derives from this basic proposition, which in turn implies you don't have to worry about price and price movements but about their statistical distribution. The *practical* underlying assumption is fundamental efficiency, hence you *practically* don't have to worry about it. More than 30 years ago, the (then young) Lawrence Summers published a short article which, while appearing in the Journal of Finance, used a comical tone: he exposed a situation where there were two different kinds of economists studying the ketchup market; one the one hand, "general" or classical economists were studying the "fundamental" drivers of the price of ketchup (tomato prices, purchasing power of consumers etc.), and on the other hand "ketchup economists located in the Department of Ketchup" were using as data only ketchup prices ("They believe that ketchup transaction prices are the only hard data worth studying"). The serious issue raised by the article was the lack of concern of financial economists on intrinsic value: "The parallels should be clear. Financial economists like ketchupal economists work only with hard data and are concerned with the interrelationships between the prices

of different financial assets. They ignore what seems to many to be the more important question of what determines the overall level of asset prices.” (Summers, 1985) Ortiz, in a way, rediscovered as an anthropologist what Summers had expressed as an economist: financial economy, through its more popular and legitimate tools, is mainly taught and practiced considering financial asset prices as a natural phenomenon, as data to be collected and modeled<sup>3</sup>, which for examples excludes per se the idea to test fundamental efficiency, i.e. to test if price changes are explained or not by fundamental drivers. This is becoming particularly paradoxical at a time data considered hitherto as the epitome of natural data, i.e. temperatures, have come to be more and more influenced by human activity as shown by the growing evidence on climate change.

The uncritical and systematic use of market prices as input data in formulas and models means either fundamental efficiency is assumed or that it is not an issue. Now if an efficiency is a concern for regulators and policymakers, it is the fundamental one. Let’s turn now to post-crisis financial regulation to see how the survival of the notion of fundamental efficiency could be traced here.

### **3. How it is kept alive: the legal side**

Looking at the way the notion of fundamental efficiency is kept alive in financial regulation is looking at the rationales and underlying assumptions of such a regulation. The discussion on the normative framework of post-crisis financial regulation is still dominated by the question “did something really important happen”? Did a paradigm change take place? For example Eric Helleiner in “The status quo crisis” (2014) explained nothing important happened in this area whereas Andrew Baker (2013) argued that a radical paradigm change was indeed underway, but through an incremental and slow process.

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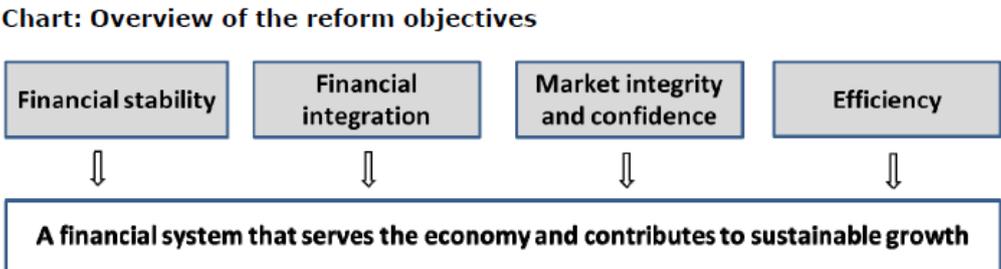
<sup>3</sup> This is also a general feature of probabilistic reasoning (Pradier, 2006, p. 61)

This paradigm change is generally understood as the advent of macroprudential regulation, around the notion of systemic risk (Scialom, 2011). At a global level, the creation of the Financial Stability Board, the first institution specifically designed to ensure stability through the fight against systemic risk, can be considered as a milestone (Donnelly, 2012).

Here our proposition is that efficiency theory in financial regulation comes through transparency, and more specifically the transparency ideology (Charron, 2004). In short it is the idea that if all investors are equally, timely and fully informed, then prices will be right and fundamental efficiency attained. Hence the research to be conducted should identify where and how this transparency ideology is kept alive in post-crisis financial regulation.

Post-crisis financial regulation has been abundant, with the two more important pieces being, in the EU, what can be called the “Barnier program”, i.e. the whole package of reforms implemented when Michel Barnier was at the Commission, and, in the US, the Dodd-Frank law.

On the European side, an illustration of the way efficiency is considered by regulators can be given through an examination of a report issued in 2014 by the European Commission to take stock of the EU’s reform agenda on financial regulation (EC, 2014). In the press release announcing this report, efficiency appears in the overview of the reform objectives the following way:



Efficiency is thus presented as one of the four objectives of the reform package, along with financial stability, financial integration and “market integrity and confidence”. Whereas financial stability clearly refers to the new regulatory paradigm identified by Baker (2013), financial integration is more related to the specificities of the EU as a political construct trying to build a single and harmonized regulatory framework for its member states, and market integrity and confidence refers to the fight against frauds and abuses. As for efficiency, the more detailed table provided in the same press release doesn’t give much clarity about what exactly an “efficient” financial market is:

<b>Efficiency</b>	
Reducing the implicit subsidy for TBTF banks	<ul style="list-style-type: none"> <li>• CRD IV package</li> <li>• Bank structural reform</li> <li>• BRRD, SRM</li> </ul>
Securing more risk-reflective pricing	<ul style="list-style-type: none"> <li>• CRD IV package</li> <li>• Solvency II</li> <li>• EMIR</li> </ul>
Enhancing competition and efficiency	<ul style="list-style-type: none"> <li>• CRAs (facilitating market entry)</li> <li>• MiFID II, EMIR, CSDR (opening access to market infrastructures)</li> <li>• BRRD (facilitating market exit)</li> </ul>
Reducing information asymmetries	<ul style="list-style-type: none"> <li>• EMIR</li> <li>• MiFID II, PRIIPs, IMD II, DGS, MCD</li> <li>• SSR</li> <li>• AIFMD</li> <li>• Prospectus Directive</li> </ul>
A financial framework reactive to financial innovation and technological development	<ul style="list-style-type: none"> <li>• ESMA/EBA/EIOPA (powers to temporarily prohibit certain products or practices)</li> <li>• MiFID II (safeguards for algorithmic and high frequency trading; OTF); reinforced by MAR</li> <li>• Transparency Directive (to cover Contracts for Difference)</li> <li>• Payments package</li> </ul>
Ensuring access to	<ul style="list-style-type: none"> <li>• Reducing the administrative burden and reporting requirements for SMEs (e.g. Prospectus Directive,</li> </ul>

finance	<ul style="list-style-type: none"> <li>• Transparency Directive, Accounting Directive, MAR)</li> <li>• Creating a dedicated trading platform to make SME markets more liquid and visible (MiFID II)</li> <li>• Addressing SME risk-weighting in the bank capital framework (CRD IV package)</li> <li>• Introducing new EU frameworks for investment in venture capital (EuVECAs) and in social entrepreneurship funds (EuSEFs)</li> </ul>
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This is just a part of the original table where you have on the left column the primary objectives in bold and a series of sub-objectives for each primary objective, the right column being called “how it is reached”.

What we see here is that in the eyes of the Commission the notion of efficiency is really vague. Among the six sub-objectives, only two are unambiguously related to the concept of efficiency in at least one of its two acceptations: “reducing information asymmetries”, because full and equal access to information is a logical prerequisite for both technical and fundamental efficiency<sup>4</sup>, and “enhancing competition and efficiency”, insofar as it ensures no market participant is in a position to weigh on prices in a significant way, which would imply forecastability (at least for him) and/or the ability to abstract from fundamental factors, hence technical or fundamental inefficiency. Now “reducing the implicit subsidy for TBTF banks” clearly has more to do with financial stability, in that it is part of the measures designed to deal with SIFIs (Systemically Important Financial Institutions), the most significant of them being precisely the “TBTF banks”. “Securing more risk-reflective pricing” is related to risk modeling, which is an issue for testing technical efficiency and for evaluating systemic risk but not for fundamental efficiency, unless non-market data are seriously taken in account, which doesn’t seem to be the case here, the approaches to pricing being used in CRD IV, Solvency II or EMIR relying essentially on mainstream financial economics, i.e. Summers’ “ketchupal economics”. “A financial framework reactive to financial innovation and technological development” alludes only indirectly to efficiency insofar as investors are not properly informed or don’t understand such innovations and developments. “Ensuring access to finance” is a broad objective which can include access to information (a prerequisite for both efficiencies, as we saw) and the extension of the reach of financial markets (which is justified if fundamental efficiency is attained), but again the relationship is partial and indirect.

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<sup>4</sup> In the case of technical efficiency, this information is just the information available, it doesn’t have to be related to fundamental factors.

My point here is that in this area also we need more clarity, and I propose to distinguish two parts in the Barnier program:

-Institutions regulation: CRD IV (Basel III), Banking Union... with an explicit focus on systemic or « macro-prudential » risk, the definition of which is externally controlled (at the FSB level) and remains mainly focused on the TBTF issue. Clearly for now fighting systemic risk practically means dealing with the bankruptcy risk of the biggest banks and it doesn't really go beyond. There are many discussions and debates to go beyond but with little practical consequence to date.

-Markets regulation: MIFID 2, AIFM, UCITS V, PRIIPS, EMIR... A less publicized part of post-crisis financial regulation, where transparency ideology still reigns supreme, with a focus on investor/consumer protection (the investor as a consumer to be protected, mainly through information)

Then in the US, within the Dodd-Frank law essentially, we can also identify these two parts, corresponding to a renewed « twin-peaks » mode of financial regulation with the CFPB (Consumer Financial Protection Bureau) as a market-conduct regulator and the FSOC (Financial Stability Oversight Council) as a macro-prudential authority.

The macro-prudential side remains fragile, with a difficult and late implementation of the Volcker rule and a narrow conception of systemic risk (TBTF, limited to banks) that continues to prevail like in Europe..., whereas the other side remains completely dominated by the transparency ideology via a clear focus on consumer protection.

In both cases, exploring the rationales of post-crisis financial regulation to identify how transparency ideology (and, consequently, the notion of fundamental efficiency) is expressed and reproduced would

require a much closer look at this regulation, maybe through case studies. One can already remark that fundamental efficiency here is not a hidden assumption, as is the case in finance teaching and practices, but an openly discussed objective, albeit it may not really be rigorously described and put forward.

## **Conclusion**

What this exploratory paper has reached thus far can be summarized this way:

-if the post-crisis “survival” of efficiency theory is to be an issue, it is when dealing with fundamental efficiency, i.e. the idea that financial asset prices reflect their intrinsic value.

-in the financial economics which forms the basis of the tools and models used by practitioners and taught in the most renowned finance curricula, these prices are assumed to be reliable to the point they are used as the only “hard data” to be considered. Which means either fundamental efficiency is implicitly assumed or it is not a concern.

-for regulators and policymakers, for whom the formation of bubbles, i.e. fundamental inefficiency, is a real concern, this objective is still supposed to be reached through equal and full access to information for investors, considered in this regard as consumers.

The idea not to consider seriously the notion of fundamental or intrinsic value, on the grounds it cannot be rigorously or “objectively” defined, is widespread among economists. Accountants, for example, seem to pay more attention to this problem, but the introduction of the notion of fair value in accounting regulation through the IFRS obliges them to pay more attention to market prices, assuming

they are reliable. The “mark-to-model” alternative is focused on risk modeling, which is, as we saw, also a way to avoid the question of intrinsic value.

Our view is that this question will be raised inevitably. One major reason for this is, as explained for example by Philipponnat (2017), the changes implied by environmental factors linked to the climate change and resource limitations. This kind of changes can make future cash flows, which are generally considered for the appraisal of intrinsic value, starkly different from past ones, and make stock prices and states’ creditworthiness more diverse and differentiated than they used to be. Such an evolution makes the assessments of the risk of markets as a whole, or the assessment of the risk of an individual asset only in relative terms less relevant. Now, whereas it seems at first glance difficult for finance teachers and practitioners to depart from an approach which is so deeply entrenched, regulators and policymakers could at least begin to reflect on the ways through which they could urge them to gauge financial asset prices on a more specific, one-per-one basis. This also has to be with an approach of valuation as a social and political construct and of asset management as something more akin to craftsmanship than to hard science.

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