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From the Internet bubble (1999-2000) to the Internet bubble (2020-2021)? An opening towards another economy [1]

by

David Bourghelle[2] , IAE, University of Lille

&

Jacques Ninet[3] , University of Poitiers

The *Agenda 2030* Policy Briefs series mobilizes economists and practitioners to identify an economic and financial reform agenda to achieve the 2030 Agenda at the territorial, national and supranational levels. Contact: thomas.lagoardesegot@kedgebs.com.

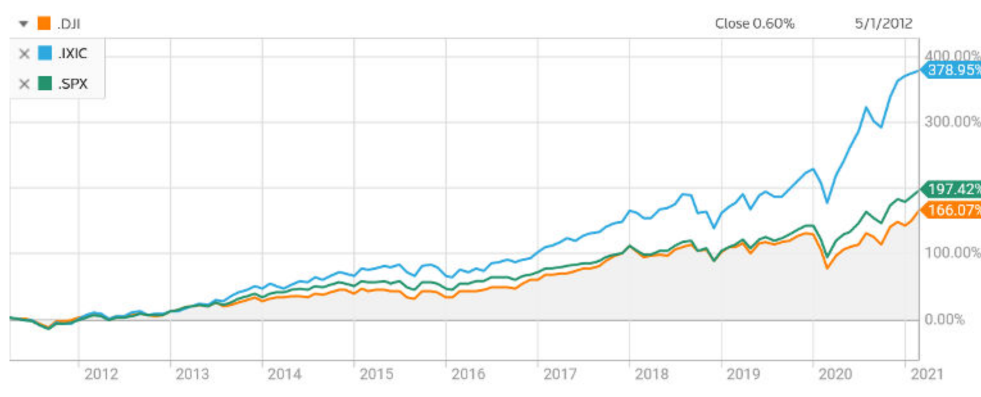
[1] We thank Thomas Lagoarde-Segot and Roland Pérez for their review and comments.
[2] Associate Professor, IAE, University of Lille. Email: david.bourghelle@iae.univ-lille1.fr
[3] Affiliate Professor, University of Poitiers. Email: jacques.ninet@laposte.net

Introduction

This policy brief examines the dynamics of equity markets since the onset of the Covid-19 pandemic and its possible role in the emergence of a radically renewed "aftermath". In the first part, written in mid-February 2021, we assess the likelihood that sectoral bubbles have formed, mainly but not only in the US markets. In the second part, we consider the consequences that a major financial crisis could have on the questioning of the carbon-based and highly unequal growth model that governs the Western world.

1. Bubble or not bubble?

Since their impressive fall in February-March 2020, caused by the outbreak of the pandemic, all stock markets have reacted positively, but with varying rebound dynamics. While the European markets have just regained the ground they lost, some Asian stock markets (Japan, Taiwan, India) and the American markets have entered a phase that can be described as euphoric or exuberant, to the point where the question of the formation of bubbles can legitimately be raised. This is all the more legitimate given that the NYSE and the Nasdaq, which have just finished their twelfth year of growth since the collapse caused by the subprime crisis, and which do not seem to want to stop there, are the leading markets in the world.



https://www.reuters.com/markets/us

Dj: Dow Jones industrial average - IXIC: Nasdaq Composite - SPX: S&P500

Although there is no definition of a financial bubble - and modern financial theory and the so-called Greenspan Doctrine refuse to acknowledge it before it bursts - we can venture to sketch out some characteristic aspects.

An asset bubble most often appears as the terminal phase of a long bullish sequence, a phase during which stock prices clearly break away from their usual relationship with economic data, both micro and macro, according to a well-known metric (ratios of market capitalization to profits, sales or net assets, on the one hand, and market capitalization to GDP, on the other). It is also a period in which expected returns on assets are increasingly determined by the expected capital gain on resale and less and less by current income, rents, dividends and coupons, whose rate of return decreases as prices rise.

1.1 Overvaluation of stock prices at the micro and macro levels?

The table below shows the undisputed high valuation of current stock prices. Credit purchases are still in line with the price increase, far from their 2008 record. Nevertheless, they have exploded in 2020 (+42% or USD 235 billion).

	période	moyenne	écart-type	valeur 2020	nbre ecart-type
Données macro					
Capi / PIB Monde	2007-2020	82%	17%	116%	1,97
Capi /PIB US	1970-2020	80%	32%	183%	3,22
Données micro (S&P 500 et Wilshire 5000)					
PER (trailing)	1927-2020	17,36	10,56	38,23	1,98
Dividend yield	1927-2020	3,77%	1,72%	1,58%	-1,28
nbre IPO	2000-2020	219	105	480	2,49
margin debt / capi	1996-2020	2,05%	0,00%	1,98%	0

Source: authors' calculations

Thus, for example, we can observe the significant increase, and without any comparison with the episodes of 2000/2001 and 2007/2008, in the market capitalization of the Wilshire5,000 index in [4]relation to US GDP (more than 3 standard deviations above its long-term average).

https://www.longtermtrends.net/market-cap-to-gdp-the-buffett-indicator/

Finally, traditional valuation indicators based on the Price Earning Ratio (P/E), yield or dividends also indicate valuation levels that are dangerously close to the levels reached on the eve of the bursting of the internet bubble. For example, the ShillerP/E Ratio (or CAPE for *cyclically adjusted price to earnings*), calculated on the basis of the 10-year moving average of inflation-adjusted net earnings per share (EPS), is at around 35, well above its historical average of 16.7 times and its level of 32.6 observed in September 1929. Under these conditions, earnings and dividend yields are very close to their historical lows.

[4] A market capitalization-weighted index of the value of 5,000 actively traded U.S. stocks.

https://www.multpl.com/

1.2 Recurrent elements presiding over the formation of bubbles

It is generally objected to this analysis that the prevailing monetary conditions (zero interest rates; *quantitative easing*) make comparisons with historical averages/medians insignificant. And, above all, that the gigantic amounts provided by the public authorities to all non-financial agents through successive stimulus plans explain both the surprising resilience of the US economy (due to the return of wealth created by the rise in asset prices) and the enthusiasm of (new) savers for risky investments in *a* general *recovery* perspective.

Faced with these arguments, which are put forward every time it is claimed that "*thistimeisdifferent*", a brief review of the conditions of our time is necessary to verify their adequacy to the six characteristics common to all bull/crash cycles in history, as identified by Minsky and described by Kindelberger (1978)[5].

- the change of state: the completion of globalization and digitalization of the economy; the monopoly of GAFAM
- technical progress with a universal scope: AI, biotechnologies, clean cars
- general complacency: this would have been replaced instead by a dichotomy between financial exuberance and generalized skepticism (the level of implied volatility of options remaining higher than in the usual bullish phases)
- the lender of last resort: the omnipresence of central banks and their submission to the moods of the markets; the Fed's about-face in late 2018
- The spread of euphoria: the "unicorns"; the new "stock marketers".
- -credit and monetary expansion: unconventional monetary policies; dealing with the consequences of the pandemic through hyper-liquidity and stimulus packages

1.3 Market Dynamics Approach: Speculative Bubble Models

If a certain number of characteristics common to all financial bubbles seem to be present today, what theoretical framework should be used to try to understand future dynamics? The dominant financial theory thinks of asset valuation within a conceptual framework in which the future is probabilistic and

[5] Ninet, J. (2004) Les déterminants récurrents des bulles financières. Économie appliquée tome LVII N°2

bubbles (divergence between price and intrinsic value) are possible but irrational, and their bursting, which marks the return to fundamentals, is unpredictable. The situation is quite different in situations of radical uncertainty about the future. Here, in the absence of objective knowledge of the future, the fundamental values of assets are indeterminate (Orléan, 2011). Stock market dynamics are then governed by collective beliefs, products of collective affective investments. Under these conditions, a financial crisis can no longer be analyzed as the return of market prices to their hypothetical "true" value, but as a brutal bifurcation of the collective regime of financial affects.

Considering this theoretical framework, it is possible, during a bubble episode, to identify a succession of collective affect regimes that translate into distinct emotional sequences that determine investor behavior[6].

The emergence of a bubble and the reaching of its paroxysm, then, its bursting are then associated respectively:

- the birth and development of a shared belief in the existence of an asset class whose attractiveness is such that a growing proportion of investors want to acquire it *("phantasticobject"* such as tulip bulbs, internet stocks, securitized assets, real estate, credit derivatives, biotechs, technos...).

- the sudden and unexpected reversal of this collective belief in the absence of any significant new information that could objectively affect market valuations.

Following Kindelberger's work, Rodrigue proposes a standard bull/crash scenario, distinguishing the three ascending phases by their dominant actors and the unifying themes mobilized to justify the vigorous growth of prices (e.g. B. Clinton's State of the Union speech in January 2000 "we have created a new economy").

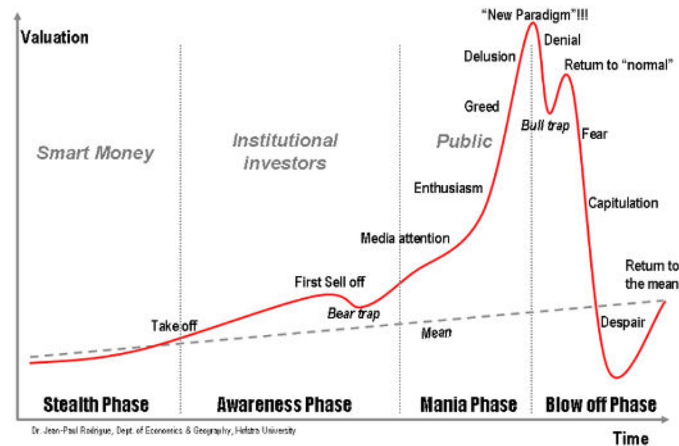
The following graph shows the characteristic phases or regimes of a financial bubble. Three elements seem particularly important:

1. the nature of the investors active during the different phases (we go from insider investors to institutional investors and then to the "general public")

2. The accompaniment of these phases by a succession of "feelings", emotional states" of "passionate regimes" or "regimes of affects" (enthusiasm, greed, illusion, denial, fear...)

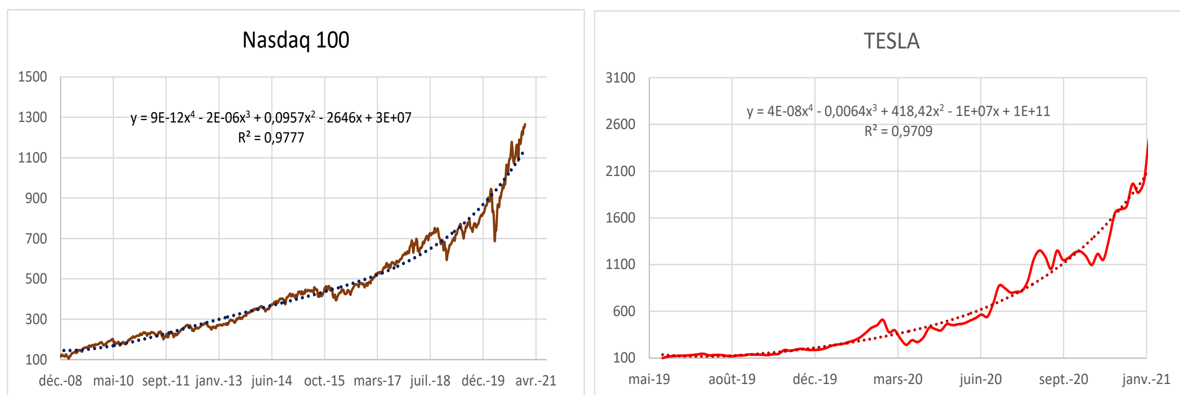
3. The key role played by the media in the emergence of a "new paradigm" likely to rationalize ex-post a sometimes vertiginous growth of stock prices boosted by considerable leverage.

[6] Bourghelle, D., andRozin, P. (2021Collective affects and speculative bubbles in financial markets: aspinozistperspective, forthcoming inRethinking Finance in the face of new Challenges,Critical Studies on Corporate Responsibility, Governance and Sustainability, D.Bourghelle, R. Perez,Ph.RozinEditors



https://transportgeography.org/contents/chapter3/transportation-and-economic-development/bubble-stages/

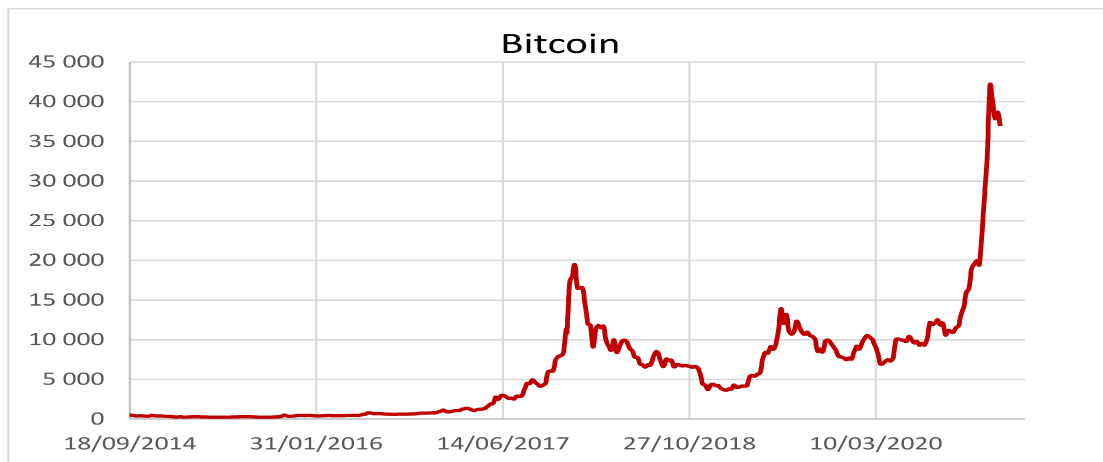
This diagram clearly shows the convexity of the rising part of the stock market price curve and the imbalance between the long duration of the rise and the brevity of the collapse. The in-depth study of the great bubble/crash cycles in stock market history verifies this double characteristic visually and economically. The markets collapse after having accelerated to a near-vertical rise (candle). Practiced today, this analysis clearly shows that indices like the Nasdaq 100 and stocks like TESLA are well into this phase.



Source Reuters authors' calculations

Recent history has also provided emblematic trajectories of pure speculative bubbles with Gamestop, whose value underwent rampant speculation facilitated by no-fee trading platforms and wall-streetbets, AMC Entertainment HoldingsInc, or KossCorporation.

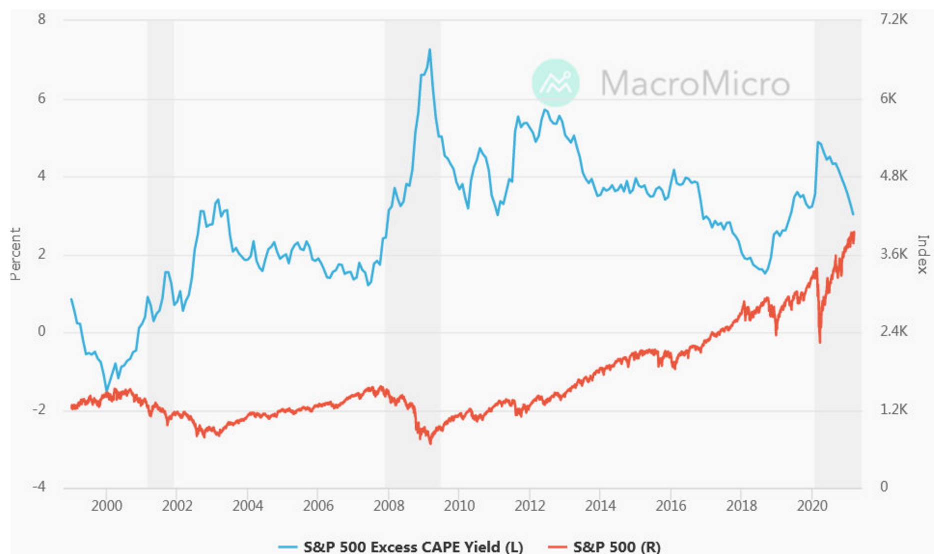
Crypto-currencies are not to be outdone. Although it is a very special case (the quantity in circulation is limited by a strict issuance mechanism and its price is governed by a principle of scarcity, as for a work of art), Bitcoin, which had already outperformed, at the end of 2017, the most significant euphoric of history (the tulips, the Mississippi Company etc ...) has, so to speak, doubled the stake in late 2020.



Source Reuters

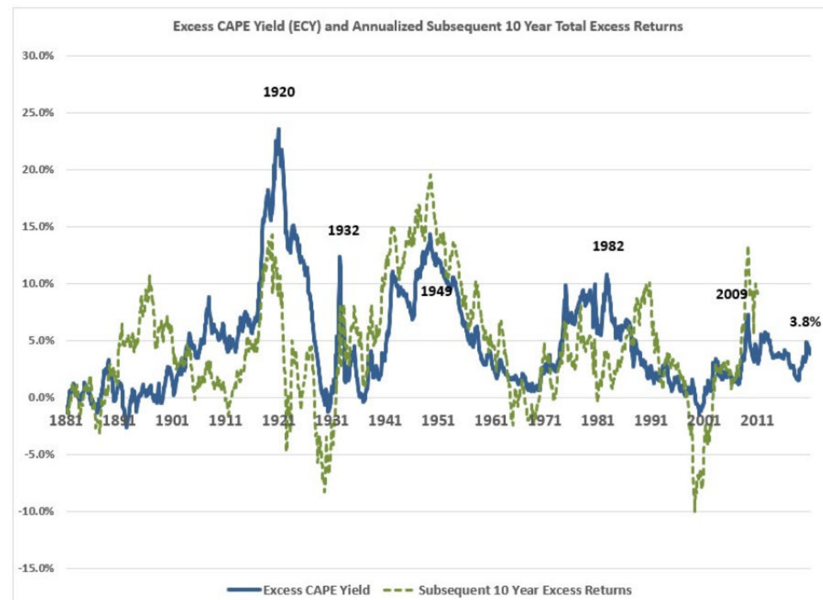
1.4 If it is a bubble, how and when will it burst?

While the conditions seem to be right for localized bubbles to burst (Tesla, Bitcoin), the same cannot be said for the major US indices (except for the Nasdaq). For example, for S&P500 stocks, the Excess Cape Yield(ECY), an indicator developed by Robert Shiller, which can be likened to a measure of the equity risk premium and is intended to take into account the level of interest rates in stock valuations, is close to 4% in the USA at the end of 2020. Despite the levels reached by the major stock market indices, equities still seem to be sufficiently attractive compared to bond investments.



https://en.macromicro.me/charts/27100/us-shiller-ecy

This observation seems more compatible with a trajectory of maintaining positive real returns on the equity compartment than with the hypothesis of the imminent bursting of a global speculative bubble... **at least as long as the monetization of the US budget deficit does not generate inflationary risk and bond yields remain very low**!



https://awealthofcommonsense.com/2020/12/could-we-see-record-stock-market-valuations-this-cycle/

As a result of this analysis, the financial bubbles that have been inflating for the past few months, or even years, are either on the verge of bursting (Tesla of course, but also Bitcoin, the Nasdaq, the Indian or Taiwanese stock markets...), or they are in the process of maturing, with the inevitable consequence - the same causes causing the same effects - of their future explosion.

Because of the disappearance of the shared belief in infinite growth in stock prices that would result, and the process of mimetic contagion that would ensue, it is in this case a generalized plunge of all the American, European and Asian stock markets that we should fear.

2. A bubble like any other (Gamestop) or THE ultimate BUBBLE leading to a necessary break with financial capitalism (Game over)

The guiding idea of this second part is that the formation of bubbles, even sectoral ones, necessarily leads sooner or later to a crash and that the latter tends to turn into a generalized financial crisis, a fortiori in today's highly leveraged economies. What will be the consequences for the global financial system? What role could such a crisis play in the agenda of shifting the growth regime towards a more responsible and frugal economy?

2.1 Towards a systemic crisis

The bubble-crash sequences we have been experiencing for nearly forty years can be seen as inevitable but manageable avatars - and well managed by central banks - of the current growth model, based on the primacy of shareholders and the central role of financial markets.

On the contrary, they can be seen as signs of a deep pathology of the system, with each recovery from the crash implying a higher degree of commitment from the central banks, up to and including the so-called non-conventional monetary interventions that have become, along with zero or negative interest rates, the permanent rule for nearly ten years.

Under this second hypothesis, the impact of a major financial crisis would be all the greater because the support policies put in place to respond to the recessionary effects of the pandemic have taken these interventions to a level that is probably unsurpassable, and so this time it could not be digested by the

amplification of worn-out monetary mechanisms. It would therefore be the occasion for the necessary rethinking of the growth model and its financing methods.

It has indeed become quite clear that the main obstacle to an effective and serious consideration of environmental risks (carbon footprint and global warming, destruction of biodiversity) and, at the same time, to a real effort for more social justice, lies in the absolute priority given to shareholder enrichment fueled by the maximization of growth (production/consumption/destruction) and the search for the lowest cost (disqualification of labor and neglect of externalities).

Although it is based on an incomplete economic theory and on the unverifiable (and unverified) postulate of financial efficiency, this model still benefits forty years later from the repulsive effect of the failure of socialist (Soviet bloc) and social-democratic (stagflation) experiments. This makes it possible to reject a priori any ambition for collective organization as inevitably leading to the gulag and/or the bankruptcy of states. This political credit and the increasing role played by central banks in bridging its increasingly gaping fractures have allowed this growth regime to endure, even though it has clearly entered a depressive phase in most advanced countries (*secular stagnation*).

If we push the reasoning further, we can say that the moral hazard created by central banks no longer concerns only financial actors (*too big to fail*) but the entire system, which can play with impunity and cynicism, as was the case in 2009, when the promises of reform launched with great fanfare after the Lehman bankruptcy were purely and simply buried.

Starting from a situation of almost generalized over-indebtedness, inherited from the 2008 crisis and then amplified by an exceptional increase in "*corporate*" debt in emerging countries, the explosion of directly monetized public spending has put central banks in the front line, with the combined balance sheet total of the four main banks now exceeding 30% of world GDP!

This monetary house of cards rests exclusively on the confidence of economic agents in its capacity...to perpetuate itself thanks to...their confidence. The straw in the system is that the accumulated public debts are only fiscally sustainable - assuming that they can be "rolled over" indefinitely - if they bear interest close to zero. The explicit strategy of the Bank of Japan is to keep the yield on JGBs close to zero by buying the necessary quantities. In a way, this is the same strategy pursued by the ECB, to avoid a debt crisis in the eurozone and to keep the fiscal impact as small as possible[7].

In the United States, the Fed has not posted any clear target for the yield on the T-Note, probably because it no longer has the means to do so at a time when Joe Biden is launching a new public spending plan representing nearly 10% of GDP. The disproportionate amount of aid distributed and its immediate impact on demand, particularly for imported goods, raise doubts, especially since the "*bond vigilantes"* also represent the mass of non-resident holders of the federal debt.

To take up the typology of crises established in the theory of regulation, we can therefore ask ourselves whether the coming financial crisis might not be the trigger for a crisis of a "stealth" or ill-defined mode of regulation (between competition and oligopolies), leading to that of the mode of accumulation (saturation of mass consumption in the advanced countries) and finally to the collapse of the system, requiring the transition to an economy oriented primarily towards sustainable development and ensuring the long-term survival of humanity.

2.2 The Covid-19 pandemic. Simple accident or precursor?

As a major exogenous event, of the natural accident type, the pandemic can be approached in two diametrically opposed ways.

[7] It is understandable that these practices nullify the overall concept of sustainable debt and remove the risk of a debt trap.

- For the supporters of the system (= status quo), the reactions (more or less coordinated) of the political and monetary authorities, their speed and their unprecedented scale have proved its resilience, as evidenced by the stock market recovery and the hope of a rapid return of the economies to (or above) their previous state[8].

- On the other hand, we can consider this "accident" as a warning -which is far from costless-, a revelation of the vulnerabilities of our world and its total unpreparedness for future disasters, whether they are natural or caused by Man (anthropocene).

Once again, the observation must be made that no self-criticism and no reforming will emanate from those who consider the pandemic as a *"one off"* that the reactivity of the economic leaders and the miracle of science (the flash vaccination) have rapidly curbed. The colossal creation of monetary wealth ex-nihilo to compensate for the deficit of real wealth due to the cessation of activities reveals the will to keep the system afloat at all costs while waiting for it to restart and shows that "the inflexion of production and consumption models" remains totally irrelevant. But it is precisely the fact that most of this creation has been poured into financial assets (the bubbles in our first part) that reveals the inanity of this approach. And the inevitable correction of this absurdity will, at last, offer the opportunity to lay new foundations.

2.3 Three decisive elements for a new financial regime

The financing of the MDGs is confronted - primarily - by two obstacles: the liberal mantra that "the coffers are empty"; and the inadequacy of market financing channels, due to the inadequacy of analytical tools and instruments. There is nothing irreversible about this. But removing them implies reviewing the very foundations of our unequal growth regime

Taxation. The objection that the tax rate is already too high to consider using taxation to finance the SDGs is valid. But the real question is who bears the tax and who does not. In other words, firstly, to re-establish a real progressivity on high incomes and, secondly, to open the possibility of defiscalizing (totally or partially) the activities working for the SDGs by putting an end simultaneously to the privileges, exemptions and frauds that only benefit the shareholding of transnational oligopolies and the "big fortunes" (not to mention the "dirty" money). To which we can add that a better distribution of added value (lowering the RoE) would reduce public spending on redistribution (the largest share of the budget in France) without compromising social justice and general well-being.

Savings. Public coffers are empty but private assets are flourishing. The "*saving glut", a* by-product of the unequal distribution of wealth between and within countries, has never been so high, almost everywhere in the world. Before considering financing the energy transition through additional monetary creation, should we not set up channels for mobilizing savings in favor of the investments necessary for the ecological transition? Do zero interest rates not offer an extraordinary opportunity to rebuild a discriminating structure, based on tax exemptions or even interest rate subsidies? Of course, this presupposes a break with the idea that only the market is capable of setting the appropriate interest rate for a given general interest loan.

The banking circuit. Between the financing of the economy by the all-market and pure monetary creation, should we not consider the (re)construction of financing circuits involving the banking system, piloted by institutions such as the EIB, the CDC, the BPI (and their European counterparts)? And at the same time, as is often suggested, favour bank loans dedicated to the SDGs to the detriment of operations with negative effects on the environment, health, etc. The idea here would be to entrust national or

[8]OECD raises its global growth forecast sharply to 5.6% in 2021
https://www.lesechos.fr/monde/enjeux-internationaux/locde-plus-confiante-sur-la-croissance-mondiale-1296596

supranational operators who are particularly qualified (more so in any case than the Central Bank) with the task of sorting out the loans distributed by the banks with a view to refinancing them in a way that is also discriminatory.

Conclusion

The monetary treatment of the economic crisis caused by the pandemic has so far made it possible to avoid the necessary rethinking of the infinite growth model based on the production/consumption/destruction cycle. On the other hand, it has exacerbated its hyper-financialization, leading in all likelihood to the next major financial crisis that the central banks, already heavily committed, will no longer be able to absorb. Unlike the mystification of 2009, and because the timetable of the global ecological crisis is not shifting in time, it will be essential to offer a credible and effective alternative to this model.

Inspired in part by the models and structures implemented under Fordist regulation and which were wiped out by the neo-liberal wave, the solutions outlined in this paper constitute real innovations in relation to the growth regime that prevails today. Based on the abolition of the aberration of the double-digit RoE, on the restoration of tax justice and on the return, at least partially, to a system of bank financing, they express the will to subject the financial system to the objectives of responsibility and sustainability.

An indispensable contribution of research will be to make people admit that mechanisms that have worked in the past in the service of shared objectives are today rejected only for ideological reasons, but that they are really of a nature to contribute to a better consideration of the Common Good and the Common Future.

So, GAMESTOP or GAME-OVER?

Bibliographic references

Bourghelle, D., and P., Rozin, (forthcoming 2021) Collective affects and speculative bubbles in financial markets: a spinozist perspective, forthcoming in Rethinking Finance in the face of new Challenges, Critical Studies on Corporate Responsibility, Governance and Sustainability, D. Bourghelle, R. Perez, Ph.Rozin Editors. Emerald Group Publishing UK

Bourghelle, D. O. Brandouy, R. Gillet & A. Orléan, (2005) Croyances, représentations collectives et conventions en finance, Economica.

Kindelberger C, P, P. L Bernstein (2000), Manias, Panics and Crashes, A History of Financial Crises. https://link.springer.com/book/10.1057/9780230536753

Ninet, J. (2004) Les déterminants récurrents des bulles financières. Économie appliquée tome LVII N°2

Ninet, J. (2017) Negative interest rates: The black hole of financial capitalism. Paris, Classiques Garnier.

Ninet, J (forthcoming 2021) Unconventional Monetary Policies: New normal or "black hole"? 2019: the year of truth. in Rethinking Finance in the face of new Challenges, Critical Studies on Corporate Responsibility, Governance and Sustainability, D. Bourghelle, R. Perez, Ph.Rozin Editors. Emerald Group Publishing UK

Orléan, A. , (1987), Anticipations et conventions en situation d'incertitude, Cahiersd'ÉconomiePolitique, 13 pp. 153-172.
https://www.persee.fr/doc/cep_0154-8344_1987_num_13_1_1047

Orléan, A. , (1992), Contagion des opinions et fonctionnement des marchés financiers, Revue économique, 43, 4, p 685-698
https://www.persee.fr/doc/reco_0035-2764_1992_num_43_4_409384

Orléan A, (2011). The empire of value: refounding the economy. Paris, Editions du Seuil.

Taffler R.J. ,V. Agarwal & C. Wang (2019), Narrative Economics and Investor Emotions: An Empirical Analysis, working paper, Warwick University.
https://www.qmul.ac.uk/busman/media/sbm/research/researchcentres/behavioural-finance-working-group/Taffler-et-al.pdf

Tuckett, D. & R. Taffler, (2008) Phantastic objects and the financial market's sense of reality: A psychoanalytic contribution to the understanding of stock market instability, The International Journal of Psychoanalysis, Vol 89, issue 2. https://doi.org/10.1111/j.1745-8315.2008.00040.x