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Kindleberger and Financial Crises

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Kindleberger and Financial Crises

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Abstract : This paper aims to assess to what extent the contributions of Kindleberger to the explanation and control of financial crises may still be a source of valuable insights for the present. Kindleberger had the great merit, to be shared with Minsky, of having resumed in the early 1970s, after an eclipses of more than two decades, the investigation on the intrinsic instability of credit and its impact on financial crises. Though his pure model may be considered less pregnant than that of Minsky, it extends its scope to the international and political aspects of financial crises. In addition Kindleberger provides a powerful support to the model by rooting it in the empirical evidence systematically investigated since the early 18th century. The application of Kindleberger's model has been successfully extended, with the collaboration of Aliber, also to the financial crises occurred after the publication of his major book (Kindleberger, 1978). This paper argues that Kindleberger's insights are still invaluable to understand the subprime crisis and the ensuing Great recession and to design the institutions and policies necessary to resume a sustainable path of economic progress.

Key words: Kindleberger, Financial Crises, International Lender of Last Resort.

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1. Introduction

When Lawrence Summers, former US Treasury Secretary, was challenged in 2011 by Martin Wolf, associate editor and chief commentator at the *Financial Times*, to dispute the assertion that economics has been useless in the Subprime financial crisis, he claimed that a very useful contribution has been provided by a few economists also in this dramatic occasion. He admitted however that the most constructive contributions had to be found not in the work of mainstream economists but of outsiders such as Walter Bagehot, the well-known 19th century financial journalist, the post-Keynesian theorist of financial instability Hyman Minsky, and "perhaps more still" the eminent MIT economic historian Kindleberger (Wolf and Summers, 2011).

What have in common these three scholars? First, all of them had a first-hand experience of the real world. Bagehot collaborated with his father in his shipping and banking business and served for seventeen years as editor-in-chief of the Economist founded by his father-in-law. Minsky was not only a full professor at the Washington University of St Louis but also served as director of a bank for many years. Kindleberger had a brilliant academic carrier at MIT but in his formative youth he had worked in many important institutions having policy-making responsibilities, including the US Treasury, the Federal Bank of New York, the Bank for International Settlements; in particular he had served in the US Department of State as leading architect of the Marshall Plan. Second, their understanding of the point of view of practitioners was so deep not only for their first-hand knowledge of the real world but also because their approach was not blurred by an uncritical faith in the intrinsic stability of markets, in particular financial markets. Free from the blinding belief in their self-equilibrating properties they focused on the structural characteristics of financialised monetary systems, studying their effective behaviour and the ensuing policy requirements. For the same reason these three economists have been more popular with high-level practitioners than with most academic economists and policy makers often unable, or unwilling, to give up the postulates of classical economic theory even in consequence of blatant empirical anomalies. Kindleberger managed, however, to be

influential also in the academic circles owing to his excellent didactic qualities, his broad range of research interests (witnessed by his 30 books and a vast range of articles), his immense culture not only in the twin fields of economic history and history of economic analysis, and his engaging diplomatic capabilities. Occasionally he managed to be also fairly influential with policy makers because his keen concern for the political factors and consequences of economic processes made his theses particularly persuasive, even when they were perceived as uncompromisingly heterodox.

We focus in this paper on his two more influential books that are still particularly relevant for the recent and ongoing financial crises: *The world in Depression 1929-1939* first published in 1973, and *Panics, Maniacs and Crashes* first published in 1978. The second section refers to the first book, while the third section refers to the second book. The forth section discusses the policy implications of the two books. The fifth section is about the originality of Kindleberger's contributions, a precondition for claiming his persisting topicality. The sixth section discusses what is still particularly relevant for the recent and ongoing crises. The seventh section concludes.

2. *The World in Depression, 1929-1939*

In the preface to the 40th Anniversary Edition of 2013, DeLong and Eichengreen (2013, p.7) express their agreement with the assertion of Larry Summers, reported in the introduction of this paper, on the enduring relevance of this book for the recent and ongoing crises and emphasize that the readers may draw three important lessons that still stand out today "the first having to do with panic in financial markets, the second with the power of contagion, the third with the importance of hegemony". These three points provide a structure to this section.

As DeLong and Eichengreen (2013, p.7) maintain, in "*The World in Depression*" Kindleberger gave the best ever "explain-and-illustrate-with-examples" answer to the question of how and why panic occurs and financial markets fall apart. According to

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Kindleberger, panic defined as "sudden fright without cause"[1] plays a crucial role in triggering a crisis and in feeding its early stages, showing that the economic agents are not as rational as assumed by standard economic theory. In this book Kindleberger provided a first sketch of his "literary model" of financial crises clarifying causes and modalities of the typical sequence "mania-financial distress-panic-revulsion-crash-discredit", later applied to the most significant financial crises in the period 1719-1975 (Kindleberger, 1978, pp.6-7) and beyond (Kindleberger and Aliber, 2011). He summarises his explanation of the Great Depression and other major financial crises in the following way: "What happens, basically, is that some event changes the economic outlook. New opportunities for profit are seized and overdone, in ways so closely resembling irrationality as to constitute a mania. Once the excessive character of the upswing is realized, the financial system experiences a sort of "distress", in the course of which the rush to reverse the expansion process may become so precipitous to resemble panic. In the manic phase, people of wealth or credit switch out of money or borrow to buy real or illiquid assets. In panic, the reverse movement takes place, from real or financial assets to money, or repayment of debt, with a crash in the prices of commodities, houses, buildings, land, stocks, bonds—in short, in whatever has been the subject of the mania" (Kindleberger, 1978, p.5).

We will postpone the discussion of this model to the next sections limiting ourselves in this section to discuss some aspects of its application to the Great Depression. Differently from most other main accounts of the Great Depression, including the influential monetarist reconstruction by Friedman and Schwartz (1963), Kindleberger's approach is not focused on the United States but on the international process of contagion between countries particularly within Europe:

"Where Kindleberger's canvas was the world, his focus was Europe. While much of the earlier literature, often authored by Americans, focused on the Great Depression in the US, Kindleberger emphasised that the Depression had a prominent international and, in particular, European dimension. It was in Europe where many of the Depression's worst effects, political as well as economic, played out. And it was in Europe where the absence of

[1] DeLong and Eichengreen (2013, p.7) expand a little Kindleberger's definition as "sudden overwhelming fear giving rise to extreme behaviour on the part of the affected".

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a public policy authority at the level of the continent and the inability of any individual national government or central bank to exercise adequate leadership had the most calamitous economic and financial effects." (DeLong and Eichengreen, 2013, p. 7). This is still true of the Subprime financial crisis and the ensuing Great recession confirming Kindleberger's perceptiveness and topicality.

In Kindleberger's view, major crises are mainly international crises. In fact, "for the most part [...] financial crises ricochet from one country to another. Juglar[2], Mitchell[3], and Morgenstern[4] noted that financial crises tend to be international, and either affect a number of countries at the same time or alternatively spread from the centres where they originate to other countries ". (Kindleberger and Aliber, 2011, p. 155.) The channels of transmission of crises vary overtime but the contagion itself is not a novelty: "Akerman called the crisis of 1720 the first international crisis, because the speculation from 1717 to 1720 in France and in Britain affected the cities of the Netherlands, northern Italy, and Hamburg.[5] [...] The South Sea and Mississippi bubbles were connected in several ways". (1978, p.120). The transmission may happen through expectations infection when the falling of the prices in one country lead to the switch from over-optimistic to over-pessimistic expectations in others; in some cases the transmission happened through specific channels like short term capital movements, interest rates, the rise and fall of world commodity inventories, the rising (or the falling) of the price of internationally traded commodities and securities since "the security and asset markets in various countries are linked by movements of money. The inflation in the United States in the late 1960s and the early 1970s let to larger money flows from the United States to Germany and Japan and the inflation rates in these countries increased as their monetary bases and their monetary supplies increased" (Kindleberger and Aliber (2011, p. 157.)

On this point Kindleberger's analysis of the Great depression had to challenge the very influential interpretation of Friedman and Schwarz (1963) who stressed that "the crisis

[2] Juglar (1889), p. xiv, 17, 47, 149 and passim.
[3] Mitchell (1926).
[4] Morgenstern (1959), chap. 1.
[5] Åkerman (1957), vol 2, pp. 247, 255.

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originated in the United States. The initial climactic event—the stock market crash—was American, and the series of developments which started the stock of money downward in late 1930 was predominantly domestic" (Kindleberger, 1978, p.116). Kindleberger finds it "impossible to understand the view that the 1929 depression was of domestic origin in the US" (ibidem, p.237). He maintains that "as Hoover stated, some part of the real cause of the depression was expansion of production outside of Europe during World War I, expansion which proved excessive at 1925 prices when European production recovered after that year. In addition, there were the financial complications of reparations and war debts; badly set exchange rates, especially for the pound and the French franc, which piled up French claims in London." (ibidem, p.136). This is not the only point on which Kindleberger questions Friedman's monetarism. Although Kindleberger generally tries hard to keep a cautious and balanced point of view, he does not succeed to conceal his dislike for monist theories, such as monetarism, pretending to explain everything by relying on a unique causal factor (in the case of Friedman the supply of high-powered money) and consequently adopting a policy strategy based on simplistic policy rules (fixed rate of growth of money supply). First of all monetarism is based on the crucial assumption the exogenous nature of money supply and its controllability. Kindleberger, on the contrary emphasizes that money supply is endogenous and uncontrollable (1978, pp.57-58, 76-77, 97). Therefore, while Kindleberger's explanation of the Great depression starts from a "mania" that "connotes a loss of touch with reality or rationality, even something close to mass hysteria or insanity" and implies destabilising speculation, Friedman claims that "there can be no destabilizing speculation: A destabilizing speculator [...] would be buying high and selling low, thereby losing money. In a Darwinian sense, therefore the destabilizing speculator would fail to survive" (Kindleberger, 1978, pp.26-27). However, according to Kindleberger, "the a priori assumptions of rational markets and consequently the impossibility of destabilizing speculation are difficult to sustain with any extensive reading of economic history" (ibidem).

The international breadth of Kindleberger's analysis led him to capture a crucial determinant of financial crises: the fundamental role played by political leadership (or primacy) in the deployment of a financial crisis:

"In [...] *The World in Depression, 1929-1939,* I reached the conclusion that the 1929 depression was so wide, so deep and so prolonged because there was no international lender of last resort. Exhausted by the war and groggy from the aborted recovery of the 1920s, Great Britain was unable to act in that capacity and the United States was unwilling to do so" (ibidem, p.4).

Kindleberger's theory of economic leadership has been very influential not only with economists and historians but also with experts in international relations and political scientists: "these insights stimulated a considerable body of scholarship in economics, particularly models of international economic policy coordination with and without a dominant economic power, and in political science, where Kindleberger's 'theory of hegemonic stability' is perhaps the leading approach used by political scientists to understand how order can be maintained in an otherwise anarchic international system" (DeLong and Eichengreen, 2013, p.9). The theory of hegemonic stability received this name by Gilpin (1987) and caught on in many disciplines including political economy (Eichengreen,1987), political science (Keohane,1984) and international relations (Goldstein, 2005). This theory is also a crucial ingredient in many recent theories of long waves (or Kondratief cycles) as worked out, for example, by Modelsky (1987) or within the World System Theory (see in particular Wallerstein, 1983; and Arrighi, 1994). Kindleberger stresses, however, that "political scientists interpreted [...] economic leadership in a wider sense of hegemony, extending it from the economic to the political, military and cultural areas [...] dominance and hegemony do not appeal to me as rhetoric, implying, as they do, the use of force rather than example, persuasion, even subsidies." (Kindleberger, 2000, pp.3-4). This quotation confirms the diplomatic cautiousness of Kindleberger. As Robert Solow, his colleague and friend, maintains, he "was a skeptic by nature, just the opposite of doctrinaire. He mistrusted iron-clad intellectual systems, whether their proponents were free marketeers or social engineers. In fact, he considered clinging to rigid beliefs in the face of disconcerting evidence to be one of the more dangerous forms of irrationality, especially when it is practiced by those in charge" (Solow, 2005, viii).

Whatever language we like to use, we find in Kindleberger the crucial distinction between merely self-interested hegemony and benevolent hegemony. The first is a matter of fact. Hegemony in this sense follows a typical parabola and switches from one country to another: "primacy in the world economy over the years has moved inexorably from one country to another, as nations pass through a 'life-cycle' not unlike that of a human being. Successful ones have a great vitality in youth and middle age, but lose much of it as the aging process unfolds." (Kindleberger, 2000, p.17). In a less known book, *World Economic Primacy, 1500-1990* (1996), Kindleberger "traces the economic and financial leadership of the largely western world from the Italian city-states to Spain, Brugge, Antwerp, Amsterdam, London and New York" (Kindleberger, 2000, p.3). Benevolent hegemony implies instead that the leader (or hegemon) exerts its power in the interest of a larger international community. According to Kindleberger "there have been numerous historical examples of leading countries which have taken on costly burdens in the public interest." (ibidem). We limit ourselves to mention two of his examples: "Prussia in the Zollverein of 1834 agreed to the division of customs receipts according to the populations of the various kingdom, duchies, principalities, etc., rather than by the source of their collection". The United States provide more recent examples: "settlements under Land-lease, contributions to the United Nations Relief and Rehabilitation Agency (UNRRA), interim aid and the European Recovery Program (Marshall Plan)" (ibidem). The duties of a benevolent hegemon are quite demanding as they include the discharge of the five following functions: maintaining a relatively open market for distress goods; providing countercyclical, or at least stable, long term lending; policing a relatively stable system of exchange rates; ensuring the coordination of macroeconomic policies; acting as a lender of last resort by discounting or otherwise providing liquidity in financial crisis. Therefore, to act as a benevolent hegemon implies significant economic costs: "a leading country typically pays more than its proportionate share of joint venture like a war fought for allies, or a program of foreign aid [...] the need to overprovide arises from the presence of 'free riders', who share in the consumption of public goods, including peace, freedom from aggression, economic stability and the like, but hold back from contributing to their costs"

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(Kindleberger, 2000, p.4). It may seem thus irrational, at first sight, that a country accepts to play the role of a benevolent hegemon. This explains why a dominant country could be unwilling to play this role: while the costs are easily measurable, the returns are more elusive either because earned in the longer run or "because [the leader] is rewarded in a different coin than economic return, income or avoidance of loss, such as prestige, or, the French obsession, *gloire*" (ibidem).

The set of insights on the crucial role of hegemony in financial crises is likely to be the most important single contribution of Kindleberger and plays a crucial role in the understanding of the recent crises (see section 6).

3. Manias, Panics, and Crashes

According to Nouriel Roubini (2010), Kindleberger's *Manias, Panics and Crashes* (1978) was the first attempt to develop a general theory of financial crises. This claim would have been rejected by Kindleberger himself as he insisted that, looking at the history of economic analysis, "there is hardly a more conventional subject in economic literature than financial crises" (Kindleberger, 1978, p.3). In addition he recognized that the economist who first provided a general theory of financial crises was Minsky: "the monetarist-Keynesian debate leaves little if any room for instability of credit and fragility of the banking system [...] a notable up-to-date exception is Hyman Minsky"(1978, p. 72). At the beginning of its book Kindleberger claims that "the general validity of the Minsky model will be established in detail in the chapters that follow" (ibidem, p.20). What Kindleberger aims to do, building on Minsky and in continuity with a long tradition of thought, is to work out a "literary model" providing a general framework able to interpret financial crises since the early 18th century.[6] This model is based on a set of assumptions on rationality, expectations and heterogeneity of agents. He did not make crystal-clear the full set of assumptions

[6] Kindleberger (1978, p.7) makes clear at the very outset of his book that it "is an essay in what is derogatively called today "literary economics", as opposed to mathematical economics, econometrics, or (embracing them both) the "new economic history."

underlying his model but they can be inferred from the reading of his comments to the many historical cases analysed in his books.

Kindleberger assumes that people behave more or less rationally in normal times. Nevertheless sometimes coordinated departures from rationality happen and lead to the rise and then to the burst of bubbles and, in some cases, to financial crises. These collective waves of irrationality are often referred to as herding behaviour. An example of herding behaviour is the case when agents replicate others' investment behaviour without carefully analysing the current situation. Herding behaviour may have many causal factors. One is the wrong belief that others are rational and (or) have better information.[7] A second explanation "is that of mob psychology, a 'group think' when virtually each of the participants in the market changes his or her views at the same time and moves as a 'herd'" (Kindleberger and Aliber, 2011, p. 42). A third alternative is the case when "various individuals change their views about prospective developments in markets at different times as part of a continuing process; most start rationally and then more of them lose contact with reality" (ibidem, p. 42). A fourth case might occur when "rationality differs among different groups of traders, investors, and speculators [but] an increasing number of individuals in these groups succumb to the hysteria as asset prices increase" (ibidem). A fifth "case is that all the market participants succumb to the 'fallacy of composition', the view that from time to time the behaviours of the group of individuals differs from the sum of the behaviours of each of the individuals in the group" (ibidem). The sixth possible explanation "is that there is a failure of a market with rational expectation as to the quality of a reaction to a given stimulus [...] especially when there are lags between the stimulus and the reactions. Finally irrationality may exists because investors and individuals use the wrong model, or fail to consider a particular and crucial bit of information [...]" (ibidem).

[7] Herding behaviour has been extensively studied by behavioural finance scholars. Key authors in the field are Daniel Kahneman, Robert Shiller, Vernon L. Smith and Amos Tversky. The scope of theses studies often goes beyond the field of finance. Herding behaviour characterizes many human activities as well as the activities of other living creatures. In fact herding behaviour is very common among animal species; see for example W.D. Hamilton (1971). Herding behaviour may happen, as well, when agents are rational but have partial information, for example Banerjee (1992), Bikhchandani, Hirshleifer and Welch (1992), Avery and Zemsky (1998) and Chari and Kehoe (2004).

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Whatever is the main cause of herding behaviour, this departure from rationality is an essential ingredient of the description of financial crises developed by Kindleberger. Herding behaviour pushes investors to coordinate on buying assets when it would not be rational to do so, with the effect of inflating bubbles. Herding behaviour drives non professional investors to join the market insiders in their "euphoric" buying.

Another essential ingredient in Kindleberger's explanation of bubbles and crises is the dynamical evolution of expectations during a financial crisis "that is the culmination of a period of expansion and leads to a downturn" (Kindleberger, 1978, p.3). According to Kindleberger, a common feature of financial crises is that a specific change in expectations drives each phase of a crisis. Expectations tend to become over-optimistic during the phase of bubble formation and lead to overinvestment in the market affected by these expectations. Since expectations are not stable over time, when the bubble approaches its peak, expectations reverse to over-pessimism, often this happen suddenly. As a consequence of this change in beliefs, investor rush to sell their investment and the market collapses.

It is reasonable to think that over-optimistic expectations played an important role in inflating the housing bubble in the US that lead to the Sub-prime crisis. Case and Shiller's (2003) work confirms that home buyers had quite over-optimistic expectations about future housing prices. According to their work 83 to 95 percent of buyers in 2003 were expecting an annual growth of housing prices around 9 percent, on average, in the following ten years. Easy money is often blamed for the increase in housing prices that preceded the financial crisis of 2008 but Glaeser, Gottleb and Gyourko (2010, p.39) showed that the decline in the interest rate can explain only a fraction of the rise in housing prices: "one plausible explanation for the house price boom and bust, the rise and fall of easy credit, cannot account for the majority of the price changes." Glaeser et al. are aware of the findings of Case and Shiller and in the conclusions they say that: "It is easy to imagine that such exuberance played a significant role in fuelling the boom" (ibidem).

A third ingredient, inspired by Minsky's financial crisis theories, is the dynamical interaction among heterogeneous agents. Kindleberger identifies two main groups of agents: insiders

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and outsiders. Insiders are fully informed operators inside the market; they usually move first both in the rising phase and in the falling one. The outsiders are followers, they usually are the ones who lose the most during the falling phase since they buy when prices are high, because they expect the prices to rise even more, and they sell once the downfall has already begun. Insiders are usually professional investors and the first ones that get affected by over-optimism, they lead the run to buy assets and boost prices. Insiders alone would probably not be able to give the rise to a big bubble; in fact the rise in asset prices goes a step further when outsiders (normally not professionals) step in. They might be affected by herding behaviour, optimistic expectations about returns of their investments or both of them. In any case outsiders contribution to inflate the bubble is usually important.

Kindleberger identifies three phases in the typical bubble at the origin of financial crises: the rise, the peak and the crash. These phases seem to display similar characteristics in different crises: when the bubble rises further investors enter the market, prices go up, euphoria spreads among insiders and outsiders. At the peak some investors realize that prices cannot go up forever and decide to sell. If the number of sellers is big enough then panic spreads, everybody tries to exit the market and the bubble bursts.

A bubble is often started by an exogenous major shock that Kindleberger calls "displacement". The shock drives expectations toward over-optimism, speculators invest more than it would be rational to do and prices begin to rise. A displacement is a shock that "will alter the economic outlook by changing profit opportunities in at least one important sector of the economy. Displacement brings opportunity for profit in some new or existing lines, and closes others" (Kindleberger, 1978, p.16.)

The shock may be a change in the financial instrument, the sudden accessibility of a new market, a major technological innovation or a change in the laws shaping the investment landscape. An example of the first type of shock is the investment in shares of company stocks that was one of the causes of the South Sea bubble of 1720. Citing from Kindleberger: "the Glorious Revolution of 1688, for example, gave rise to a boom in company promotion: by 1695 there were 140 joint-stock companies with a total capital of £4.5 million, of which fewer than one-fifth had been founded before 1688. By 1717 total

capitalization had reached £21 million" (ibidem, p.42.) In a single year, 1720, the share price raised from £128 in January to £1,000 in August and back to £150 in September. In the meanwhile people got ruined, frauds and briberies were uncovered and burst of the bubble led to the failure of banks, in the UK and abroad, who could not collect the loans made to investors who bought the shares at high price. A major technological change was the spread of electricity, highways and automotive production that preceded the 1929 crisis (Kindleberger and Aliber, 2005, p.26.)

Financial liberalisation in Japan, joint with an increase in money supply, allowed banks to sharply increase loans during the 1980s: this was the shock that started the inflation of the housing prices in the country and led to the collapse in 1992. In more recent times, changes in financial regulation and technological advances played an important role to boost optimism about Internet technologies that caused the crash of the *dotcom* bubble in 2001 (ibid., p. 26 and 160-2.)

During the rising phase over-optimism spreads among investors. In the short run over-optimistic expectations become self-fulfilling. Prices rise just because people buy on the wrong belief that prices will keep rising. At the beginning only insiders drive the bubble but soon also not professional investors will join; this is the moment in which herding behaviour plays a central role. At this point also credit institutions get affected by "euphoria". Banks start financing more risky investment and gradually the overall liquidity falls below the safety threshold and expose financial institutions to the risk of not being able to face unexpected shocks. In fact "one of the stylized facts is that as credit bubbles expand, the lenders extend credit to borrowers who are increasingly less attractive in terms of their repayment histories and their ability and willingness to adhere to the contracts. The increase in the share of subprime loans from 6 per cent to 20 per cent of the total market for residential real estate mortgages that occurred between 2004 and 2005 resulted because there prime mortgages to satisfy the demand for mortgage-related securities were insufficient. Some of the lenders wanted the higher rate of return associated with mortgage-related securities" (Kindleberger and Aliber, 2011, p.300.) In order to fulfil the rising demand, financial institutions developed new mortgage-backed

securities on more risky mortgages; more risky borrowers were financed to allow for mortgage-related securities to be issued to the market. Prices keep rising as a consequence of the inflow of capital in the market up to the point in which some insiders begin to worry that the game has already gone too far.

When the bubble approaches its peak, behaviour based on irrational expectations becomes more common: euphoria is widespread and some investors behave almost as if they expect the prices to increase with no limit.

Also many kinds of misbehaviour become more common at this stage than in normal times. It gets easier to set up Ponzi schemes when credit is abundant and investors are affected by over-optimism. Hence fraudulent schemes more often appear on the market and, in some cases, even banks may be tempted to engage in illegal behaviours on the expectations that prices will keep raising and the misbehaviour will not be uncovered. Also self-dealing gets easier at this stage of the bubble. Kindleberger argue that the extension of misbehaviour may differ a lot among crises and that the existence of independent media may play an important role in controlling for self-dealing and frauds even at the peak of a bubble.[8]

At the peak of the bubble all the ingredients needed for a crash are already on the table: reduced liquidity, inefficient allocation of investment, frauds and Ponzi schemes. At this point market expectations become unstable: the feeling that the prices might already be at the maximum spreads among market participants. In this situation any event might turn into the match that ignites the flames: it may be the failure of a single institution or any single bad news that the investors will interpret as a signal that the game is over. Some investors start to sell their assets, prices drop and suddenly over-optimism turns into over-pessimism. This is enough to start a downward spiral of asset prices.

During 2005 the housing bubble in the US was reaching its peak: financial institutions where highly leveraged, many risky subprime loans had already been made. In such unstable situation a moderate drop in housing prices in 2006-2007 was enough to trigger

[8] Research conducted during the last decade seems to support Kindleberger's intuition about the role played by media in preventing misbehaviours. For example see Dyck, Volchkova and Zingales (2006) and Dyck, Morse and Zingales (2006).

the subprime mortgage crisis that involved Lehman Brothers and other major financial institutions in the US and around the world.

Kindleberger observes that the "industry" of producing books and articles on financial crises is counter-cyclical. This explains why this activity almost disappeared after WW2 until the middle 1970s, since financial crises "and recessions from 1945 to 1973 were few, far between, and exceptionally mild" (Kindleberger, 1978, p.3). This explains also why "with the worldwide recession of 1974-75, the industry has picked up" (ibidem). The works of Minsky and Kindleberger on financial crises are prescient rather than merely countercyclical as their early contributions in the 1970s preceded a long period of growing financial instability. They had only to update their analysis to the new crises. Kindleberger did so in the subsequent editions of his book with the help of Aliber. As a matter of fact financial crises seem to have affected the last forty years more than any other period of the same length before (see, e.g., the econometric study by Kaminsky and Reinhart, 1999). Kindleberger and Aliber observe that many crises took place in the last four centuries but "the uniqueness of the last forty years is that there have been four waves of financial crises; each wave was preceded by a wave of credit bubbles that involved three, four or in some episodes eight or ten countries" (ibid., p. 273.) The world economy faced in the 1970s a first wave of credit bubbles; The wave started with the increase of long run foreign banks' loans to governments and state-owned firms in Argentina, Brazil, Mexico and other developing countries. For almost a decade the income of these countries had grown at a slower pace than debt, making debt itself less and less sustainable. When, in 1979, the Federal Reserve adopted a contractive monetary policy the ability of these countries to finance their trade deficits came to an end. As a consequence also the trade surplus of industrialized countries declined.

The second wave of bubbles was originated by the appreciation of the Japanese currency in 1985 and by the response of the bank of Japan that decided to buy dollars in order to slow the appreciation of the national currency. The rapid increase in the national reserves of Japanese banks boosted the increase in loans that fuelled investment on real estate: "the 1980s real estate bubble in Japan was so massive that by the end of the decade the chatter

in Tokyo was that the market value of the land under the Imperial Palace was greater than the market value of all the real estate in California" (ibid., p. 173.) The bubble affected all the financial values. By the end of the decade the value of Japanese stocks doubled the value of US stocks. In the same period the rise in rents was slower than the rise of real estate values and the rent rate got smaller than the interest rate. Investors in the late 1980s faced a negative cash flow but due to the increase in prices they were able to borrow larger amounts against their properties. Also western investors bought Japanese stocks attracted by the rapid growth of their prices. The bubble kept inflating until the end of 1989 when the Bank of Japan, concerned by such high housing prices, issued new regulations to slow down the growth of real estate loans. Once that happened some investors were not able anymore to finance the wedge between rents and interest payments on their loans; they become seller under distress of their houses. At this point housing prices declined and during 1990 and 1991 they declined by 30% each year.

A third wave of bubbles started in 1989 and 1990 with the ending of the financial isolation of Mexico and other developing countries.

Finally the fourth wave involved the fast increase in the housing and commercial real estate prices from 2002 to 2006 in the US, Spain, Britain, Ireland, Iceland, South Africa and other countries.

4. Policy implications

A key point in Kindleberger's work is the role played by the absence or presence of a lender of last resort and, if present, by its effective behaviour. In all the crises analysed by Kindleberger this factor seems to have played a central role. Its understanding presupposes the grasping of the viewpoint of practitioners: "The lender of last resort is a construct not of the mind of the economists but of the practice of the market [...] the Bank of England emerged as the lender of last resort in the 1700s. That practice preceded theory [...] the Bank assumed the role as lender of last resort only gradually [...] in spite of the opposition of theorists" (Kindleberger, 1978, p.162). Kindleberger stressed that a merely national lender of last resort can deal with national crises but might not be able to deal

with international ones that involve changes in currencies value. Therefore, to deal with international crises, an international lender of last resort is needed. Kindleberger argues that before the 1929 crisis the UK played the role of international lender of last resort while after the Second World War this role has been played by the US. During the 1929 crisis, the UK could not act as an international lender of last resort while the US were not willing to do it. According to Kindleberger this is one of the reasons why this crisis was more dramatic than others. Moreover "an international lender of last resort would help countries moderate the deviations of the market values of their currencies from long-run equilibrium values. One inference from financial history is that in the absence of an international lender of last resort the economic depression that follows a financial crisis can be long and drawn out, as in 1873 and 1890 and the early 1930s" (ibid., p.232.)

Kindleberger was fully aware of the counter-arguments against the opportunity that an authority assumes the role of lender of last resort: "those who oppose the function argue that it encourages speculation in the first place. Supporters worry more about the current crisis than about forestalling some future one" (1978, p.20). In addition the reliance of banks on last-resort lending enhances moral hazard: "the public good of the lender of last resort weakens the private responsibility of "sound" banking" (ibidem, p.161). The counter-argument is here very much in accordance with Keynes' views although Kindleberger does not seem to be aware of that: "if, however, there is no authority to halt the disintermediation that comes with panic, with forced sales of commodities, securities, and other assets [...] the fallacy of composition takes command. Each participant in the market, in trying to save himself, helps ruin all" (ibidem, pp.161-162). The way out suggested by Kindleberger is that last-resort lending should not be granted but activated at the last moment only when it is considered really unavoidable. This requires an authoritative benevolent hegemon capable of exerting efficiently his discretionary power.

The debate on the international lender of last resort has seen new contributions in the last fifteen years and especially in the aftermath of the financial crisis in 2008. Before the crisis one of the key point in the debate was the risk of moral hazard linked to the role of the international lender of last resort. Mishkin (2000) was one of the authors stressing the point

but at the same time he argued that an international lender of last resort was needed especially to limit the damage of financial crises in less developed countries, where the national authorities were less able to fulfil the task. Corsetti, Guimaraes and Roubini (2003) gave their contribution to the debate showing that an active international lender of last resort can actually mitigate the moral hazard problem and help less developed countries to implement reforms that otherwise would not be affordable.

After 2008 there was a change in focus of the debate on this issue. Many authors advocated a reform in the IMF and central banks regulation in order to build a stronger *safety net* and be able to deal with global imbalances. There had been many proposals on the floor; some argued that the IMF should act as a "central banks swap clearing house" (Levy, Yeyaty and Cordella, 2010). Some suggested a mix of reforms including the creation of an international bankruptcy court coupled with the creation of a network of lenders in which also Multilateral Development Banks act as lenders of last resort (Fernandez-Arias, 2010). Allen and Carletti (2009) suggested reforms at the national level, the creation of a national authority to deal with systemic risk and act as a balance for the central bank; they also suggested that the IMF should be reformed to give Asian countries a larger role than they do now. Even the IMF itself is working on internal reforms aimed to cope with systemic risk and to strengthen the international safety net to push the IMF toward a more active role in preventing and solving international crises (Beaumont et al., 2010).

Giannini (1999) stressed that the evolution of the financial system and the limitations that constrain the activity of international bodied like the IMF suggest that the role of an international lender of last resort should be carefully discussed and he argued that, for the aforementioned reasons, coordinating worldwide the allocation of capital may be a daunting task.

There is a further policy suggestion in Kindleberger's work that relates to misbehaviour and frauds during the rise of bubbles. This suggestion has to do with the important role played by media. Free journalism can play an important role in constraining misbehaviours and frauds as it actually did at least in some of the crises discussed in the book. In other cases the press had a role in worsening the problem. At the time of the South Sea Bubble

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"some members of the press were for sale" and helped to convey wrong information to the market (Kindleberger and Aliber, 2011, p. 145). In 1837 in France the press was far away from acceptable standards when a journalist wrote: "Give me 30,000 francs of advertising and I will take responsibility for placing all the shares of the worst possible company that it is possible to imagine. [...] Charles Savary of the Banque de Lyon et de la Loire had 500 journalists singing the praises of his operations" (ibid. p. 146.) Kindleberger did not develop this intuition in the later editions as much as he did with other insights, but some research conducted during the last two decades seems to support his point.[9] If this intuition is correct then well functioning media, aside from other benefits, can perform an effective external monitoring of financial institutions that could at least mitigate the dire effects of financial crises.

5. The originality of Kindleberger's contributions

Kindleberger has always been generous in recognizing the predecessors of his ideas. His list is much longer than that of Summers reported in the introduction to this paper (Minsky and Bagehot) and includes all the members of what he calls "classical ideas of overtrading, followed by revulsion and discredit, as expressed by Adam Smith, John Stuart Mill, Knut Wicksell, Irving Fisher and others, but most recently by Hyman Minsky, a monetary theorist who holds that the financial system is unstable, fragile, and prone to crisis" (Kindleberger, 1978, p.8). In other words Kindleberger claims that his own interpretive model is rooted in a tradition that since long fought the simplistic monetarist perspective of mainstream economists. Even the obsolete words on which he often indulges (such as overtrading, revulsion, discredit) aims to emphasize the direct descent of his model from this tradition. This "tradition", however, is to some extent a self-serving construction of Kindleberger himself that confirms both his eclecticism and his diplomatic abilities. It plays the role of defining his own point of view as central between the Keynesians and the Monetarists, the two camps that in the 1970s, when the first edition of his two books were written, were

[9] See Dyck, Volchkova and Zingales (2008) and Dyck, Morse and Zingales (2010).

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fighting a harsh war for the hegemony in macroeconomics and economic policy. To understand the cautious positioning of Kindleberger between these two fighting armies we have to recall that the Keynes of the Keynesian camp was that of the neoclassical synthesis as promoted, among others, by his colleagues and friends of MIT Modigliani, Samuelson and Solow, while the monetarist camp was still represented in his view by Friedman and his followers, although in the meantime it was being rapidly taken over by the revised monetarism of the new classical economists led by Lucas (Lucas, 1981).[10] We have to stress that in this view the Minsky's model which Kindleberger refers to as immediate source and support of his own model, is eradicated from its Keynesian roots, as reconstructed by Minsky (1975) in his own unconventional but perceptive interpretation, and transplanted in the classical tradition of Kindleberger altering in a significant way its meaning and policy implications (Ciocca, 2010).

Although Kindleberger and Minsky have different theoretical background, language and motivations, still there is a potential complementarity between their contributions that Kindleberger has partially exploited by systematically utilizing Minsky's insights for interpreting financial crises in history. From the theoretical point of view Minsky has not only a temporal priority, as fully recognised by Kindleberger, but a deeper understanding of the "logic" of the causal interactions of the crucial variables. The relation between the works of Kindleberger and Minsky is more complex than it could appear to the casual reader. Kindleberger cites repeatedly the Minsky model in his work as the direct source of his own model of financial crises. Still, he seems to use the model more as a device to read historical cases in a coherent way than as comprehensive synthesis of the historical cases analyzed in his book. If we limit ourselves to compare Kindleberger's "pure" model with that of Minsky, in our opinion the latter is much superior and not only for its priority. First of all Kindleberger's model is admittedly less ambitious. In particular Kindleberger is not interested in business cycles in general but only in the phase immediately preceding and

[10] Kindleberger provides a balanced but critical account of the rational expectations hypothesis (1978, pp.25-27) but seems unaware in 1978 of the emergence of a new school of macroeconomics, the so-called new-classical macroeconomics taking a point of view on disequilibrium and instability much more extreme than that of Friedman himself.

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following the peak: "we are not interested in the business cycle as such [...] but only in the financial crisis that is the culmination of a period of expansion and leads to downturn. If there be business cycles without financial crises, they lie outside our interest. On the other hand, financial crises that prove so manageable as to have no effect on the economic system will also be neglected. The financial crises we shall consider here are major both in size and effect" (Kindleberger, 1978, p.3). On the contrary Minsky aims to explain also the ordinary business cycles and why and how they periodically degenerate in severe financial crises. In addition the crucial concepts in the two models are only apparently the same. In particular "financial distress" is considered by Kindleberger as a synonymous of "financial fragility", however financial distress as used by Kindleberger is in fact a much less pregnant concept than financial fragility as used by Minsky. Financial distress is significant for Kindleberger only in the eponymous phase of the cycle comprised between overtrading and discredit. On the contrary financial fragility plays in Minsky a crucial role not only in explaining the crisis and its evolution but also, more in general, in explaining the behaviour of the economic units along all the cycle. As for the phase of "discredit" its mechanics is explained in much more detail by Fisher's debt-deflation theory later subsumed by Minsky as crucial articulation of his model. As a consequence of these and other shifts of meaning, Kindleberger's model critical drive is much weaker than that of Minsky. Kindleberger's critique to the postulates of mainstream theory are radical but restricted to the most significant periods of financial crises: "markets generally work, but occasionally they break down. When they do, they require government intervention to provide the public good of stability" (1978, p.6).,

The substantial divergence between Kindleberger's and Minsky's models emerges clearly in their different attitude on the applicability of their models to the contemporaneous world. Kindleberger always kept a defensive attitude on this issue: "I take no position on its present applicability to the domestic financial picture in the United States, as opposed to the international monetary sphere, where it clearly does apply" (1978, p.24). Minsky on the contrary explicitly argues that the relevance of the financial instability hypothesis has increased with the process of financialisation although he does not deny that institutional

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changes such as the emergence of powerful central banks and the increasing potential weight of the state in the economy may be used, under precise conditions, to stabilize such an unstable economy.

Differently from Minsky's point of view, Kindleberger's approach turns out to be acceptable also for many mainstream economists who are prepared to see Kindleberger, Minsky and Keynes himself as representative of the "economics of depression", an approach different from orthodox economics but believed to be significant only for rare and short-lived periods of severe financial crisis. The point of view of Minsky is much more radical. Equilibrium is seen not only as dynamically unstable but also as structurally unstable and self-disequilibrating. Instability is not seen as a transient state of the system but as an intrinsic characteristic of a capitalist system. This different vision of the working of a financialised market economy has significant implications also from the point of view of policy.

On the other hand Kindleberger empirically corroborates Minsky's model in the period considered (since 1720). This is in any case an invaluable contribution that gives weight to both models.[11] In addition Kindleberger extends Minsky's framework in two crucial directions: the international dimension of financial crises, and their political dimension. Minsky's conceptual model is generally referred to a closed economy (not necessarily a single relatively closed country but possibly a set of strictly interrelated countries or the world economy itself) while the severe financial crises studied by Kindleberger are generally international crises involving a process of contagion between different countries.

The focus of Kindleberger on the political dimension of financial crises is the second crucial extension of the Minsky's framework, the influence of which is witnessed by the huge literature that it has inspired. Kindleberger acknowledges a predecessor in Perroux (1948) who "developed a theory of 'dominance' which he applied to the United States. One country dominated others when they had to respond to its initiative, but it did not have to react to theirs" (Kindleberger, 2000, pp.3-4). The recent literature on economic hegemony generally

[11] To be more precise, the empirical evidence examined by Kindleberger is inconsistent with mainstream economics in its two basic variants: monetarism and neoclassical synthesis, while it is prima facie consistent with both Kindleberger's and Minsky's models. The issue whether it corroborates more Kindleberger's of Minsky's model goes beyond the scope of this paper.

recognized the primacy of Kindleberger (see e.g. Milner, 1998). Arrighi (1994) argued that the episodes of financialisation observed in history occur in periods of declining hegemony when, according to Kindleberger, financial instability proceeds unchecked. This may suggest one explanation of the correlation often observed between financialisation and financial instability.

6. The lessons of Kindleberger for today

The most topical insights that we can draw from Kindleberger's contributions may be classified under three headings: method, model, policy. The method of Kindleberger is original and productive. It aims to occupy a niche between economic history and economics, a niche that, unfortunately, is still underdeveloped notwithstanding his efforts. He maintained that we need to pursue a middle course between the reconstruction in chronological order of the uniqueness of a certain economic event or process, as is typical of economic history, and the assertion of general regularities, as is typical in economics and in the new quantitative history. This middle course requires a balanced synthesis, often missing in the economic literature, of induction (or abduction) from the empirical evidence and deduction from theoretical principles. In his opinion, the approach to this synthesis pursued by econometrics does not work in the case of financial crises because "rare events such as panics cannot be dealt with by the normal techniques of regression" (Kindleberger, 1978, p.8). Kindleberger christened his own approach with the special name of "historical economics" but the neologism did not catch on. He pursued this approach by working on secondary sources: "historical economics of a comparative sort relies on secondary sources, and cannot seek for primary material available only in archives" (ibidem, p.7). The link between empirical evidence and empirical regularities is obtained through a comparative analysis resembling the construction of a taxonomy by a biologist: "I think that [Kindleberger] began to work on the book in the spirit of writing a natural history, rather as Darwin must have done at the stage of the Beagle—collecting, examining and classifying interesting specimens." (Solow, 2005. vii). He so discovered that the different "species" of

financial crises had, at least in the period considered, a few significant analogies and could thus be encompassed within an overarching "genus" that could be expressed by a qualitative "model". In the case of financial crises "if one may borrow a French phrase, the more something changes, the more it remains the same. Details proliferate; structure abides" (Kindleberger, 1978, p.21). He found elements of this model in a long tradition of thought in economics that we have mentioned above, and he felt able to articulate the model in a full-fledged way by relying on the Minsky's qualitative model of financial instability: "the argument here is that the basic pattern of displacement, overtrading, monetary expansion, revulsion, and discredit, generalized in modern terms by the use of the Minsky model, describes the nature of capitalistic economies well enough to direct our attention to crucial problems of economic policy" (ibidem).

The process of globalisation of finance occurred after the first publication of the book has made Kindleberger's approach particularly relevant for today's problems. In particular the focus on financial contagion between countries and his emphasis on its deployment in Europe greatly enhances the persisting topicality of Kindleberger's contribution. The subprime crisis originated in the US but soon propagated to other countries, mainly in Europe, where the process of contagion nurtured by the absence of a benevolent leadership produced the worst effects. The model of Kindleberger is still useful to understand what has happened and is happening while we write. As we have seen, Kindleberger has been rather cautious on the persisting validity of his own model in a single economy, such as that of the US, characterized by a powerful central bank and a big government having at their disposal a battery of sophisticated means of control of the economy. At the domestic level he seems to be close to admit, whether for conviction or for diplomacy, that the capacity of control of financial crises has improved: "it is not necessary to agree with [Minsky] about the current monetary system of the United States to recognize that his model may have great explanatory power for past crises" (1978, p.8-9). This defence applies also to his own model. He argues, however, that the latter, and its policy implications, are more than ever relevant for coping with the international dimension of financial crises: "is there need for an international lender of last resort? My answer is yes [...] Responsibility for stability is a

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public good. Public goods, though notoriously difficult to produce, are nonetheless called for" (Kindleberger, 1978, p.220). Kindleberger is led by his theory of hegemony towards an increasingly pessimistic assessment of political and financial instability at the world level. In particular he observes that " the United States appears to be less and less willing to bear even a proportionate share of the expenses to justify the more-than-proportionate share it wants of decision-making in international institutions [...] Decline in US foreign aid, delay in paying its dues to the United Nations, and slowness in voting for expansion of the International Monetary Fund and World Bank are sharp indications" (Kindleberger, 2000, p.4). In other words, whether the decline of the US hegemony is real or not, an issue extremely controversial, there are growing pressures from the Congress and the electorate itself against its playing a role of benevolent hegemon at the international level. On the other hand, none of the emerging powers has the capability or willingness of playing this role. As for the EU, there is no benevolent hegemon acting within the European Community. The only country that could play this role, Germany, does not have the willingness to play it as was made crystal-clear during the crisis of the Eurozone.

Kindleberger passed away in 2003 before the prodromes of the financial crisis appeared, but his approach proves still illuminating. The absence of an international benevolent hegemon underlies the sequence of catastrophic events initiated in 2007. At the local level, the presence of a benevolent hegemon in the USA and its absence in the Eurozone explains well why the crisis originated in the USA with unprecedented virulence has been somehow thwarted, while the crisis in the Eurozone is still falling in a vicious circle propelled by mechanisms of contagion similar to those emphasized by Kindleberger. It is possible to argue that in the US the policy authorities pursued a strategy of intervention fairly consistent with Kindleberger's prescriptions: "the lender of last resort should exist, but his presence should be doubted" (1978, p.12). Even the bankruptcy of the Lehman Brothers, it could be claimed, was consistent with Kindleberger's analysis: "always come to the rescue, in order to prevent needless deflation, but always leave it uncertain whether rescue will arrive in time or at all, so as to instil caution in other speculators, banks, cities, or countries. In Voltaire's *Candide*, the head of a general was cut off "to encourage the

others."(ibidem). Lehman Brothers was the only bank "too big to fail" that was not rescued by the US policy authorities and this exception was not only to scare the other banks and speculators but also to convince a powerful reluctant constituency to accept an unprecedented bailout strategy showing the dire effects of the orthodox prescriptions.

7. Concluding remarks

We have read in recent years of a "Kindleberger moment", i.e. a moment in the recent financial crisis when Kindleberger interpretive and policy insights were found particularly relevant for analysts and decision makers. In this view the Kindleberger's moment is often compared and contrasted with a "Minsky moment" and even a "Keynes moment". We believe that this approach is misleading because unduly separates the "moment" of a process from its other constitutive moments facilitating an instrumental use of the ideas of these great economists in the very 'moment' in which this is found useful (see Epstein, 2010). On the contrary, we believe that what is really still relevant for the interpretation and control of contemporaneous crises is the general conceptual framework of these great economists.

Kindlberger's approach has a lot to teach to economists and other social scientists, today more than ever. First of all we find in his scholarship a rare unfailing respect for facts and an uncompromising concern for what they really have to say, independently of any theoretical or political prejudgment. This was possible because he rejected any sort of causal monism and fundamentalism: "truth is multidimensional [...] differences of approach to truth can be justified on the basis of taste or depth of perception." (ibidem). Owing to his uncompromising honesty in the interpretation of the empirical evidence and his theoretical pluralism, Kindleberger has had the great merit, to be shared with Minsky, of having resumed and developed in the early 1970s a long tradition linking financial crises with the intrinsic instability of credit in a monetary economy. In his opinion this tradition started "with the spread of banking after the opening of the eighteenth century" (Kindleberger, 1978, p.6), but was interrupted by the Great Depression: "neglect of the

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instability of credit began by and large with the depression of the 1930s" (ibidem, p.70). Kindleberger explains this apparent paradox by appealing to the countercyclical nature of the literature on financial crises; this does not explain, however, why, after the most devastating financial crisis in history, mainstream economics was so keen in all its branches to dismiss the relevance of financial instability for explaining economic behaviour. The explanation has to be sought not in some cyclical factor but in the evolution of the economic, financial and institutional structure in consequence of the great depression. Most countries hit by the crisis introduced severe measures of systematic financial repression. In the US, for example, the Banking Act (also called Glass-Steagall act) of 1933 introduced the separation between investment and commercial banking and much stricter rules of regulation and supervision in the financial sector. These structural reforms led to a period of unprecedented stability until the late 1960s. Severe financial crises, absent during the Bretton Woods period, reappeared during the 1970s and progressively increased their frequency, intensity and geographical extension (see Kaminsky and Reinhart, 1999). As for the co-evolution of economic theory and policy, the Keynesian revolution prompted by the publication of the *General Theory* (Keynes, 1936), contrary to what Kindleberger maintains and consistently with the interpretation of Minsky (1975), was very much based on a deep and innovative concern for financial instability. This orientation, however, was progressively abandoned after WWII by the mainstream Keynesian school, as represented among others by Modigliani, Samuelson and Patinkin, aiming to a "Neoclassical Synthesis". We are now in a position to understand the loss of interest for financial instability: the unprecedented financial stability experienced in the 1950s and 1960s convinced most mainstream economists, both of Keynesian and monetarist orientation, that financial instability was a relic of the past deserving only an antiquarian interest. This explains also the defensive attitude of Kindleberger claiming the validity of his model only for the past, or for the global system lacking the institutions for financial repression and regulation at the world level. The method of Kindleberger based on the logical order of his model with plenty of historical illustrations of each passage of the argument proved to be efficient to corroborate the model itself, but blurred the analysis of the evolution of the financial

system and of the policy strategy adopted to regulate the economy, a kind of analysis that requires a structural approach to historical change. This has perhaps contributed to improve the acceptability of his analysis also by mainstream economists but de-potentiated the depth and scope of its analysis and of its policy implications that remain mainly restricted to the role of a lender of last resort.

Notwithstanding these limits, as we argued above, we can still draw many important insights from Kindleberger's contributions. One of the main lessons is that most big crises are the result of the complex interaction of different factors: like long term imbalances, individual cognitive biases, collective irrational behaviours, simple errors and the unavoidable inability to perfectly forecast future events. Hence, in dealing with financial crises the overall complexity should be taken into account when scholars and policy makers try to find solutions or just struggle to understand the what happened. This complexity is one of the reason why Kindleberger was suggesting the development of a stable international lender of last resort. In all the editions of his book Kindleberger points out the importance of the role played by the presence or absence of a lender of last resort during a financial crisis. This point of view has been integrated with an important part on financial regulation in the last (1996) and posthumous editions of the book co-authored by Robert Aliber (2005 and 2012). A national lender of last resort may play a significant role in national crises but, according to Kindleberger, only an international lender of last resort can properly deal with an international crisis. Since recent financial crises more often than in the past have an international nature as a consequence of the progressive globalization of finance, the importance of an international lender of last resort could be bigger now than it has been in the past.

There is an open debate on the desirability and the feasibility of an international lender of last resort. In any case the actual state of the international financial system leaves a few open questions on the floor: will the US be capable and willing to act as a benevolent international lender of last resort? In case they will not, which subject may do it? During the current crisis we have seen an increasing effort of coordination among the policies put in place by the Federal Reserve, the European Central Bank and the Bank of Japan. Could it

be that we are witnessing the first steps of a new joint international lender of last resort? The results have not been brilliant so far, particularly in the Eurozone. Can we expect in the future a stronger coordination in bad times among central banks and governments or in order to achieve such coordination an international body would be required? The analysis by Kindleberger on the huge costs of leadership does not authorize an optimistic answer.

References

Åkerman, J., 1957, *Structure et cycles économiques*, Presses Universitaires de France.

Allen, F., and E. Carletti, 2009, The Global Financial Crisis, in *Conference Proceedings of the 13th Annual Bank of Chile Conference on Monetary Policy under Financial Turbulence*, 2011, pp.23-47.

Arrighi, G., 1994, *The Long Twentieth Century: Money, Power and the Origins of Our Times*, New York: Verso.

Avery, C. and P. Zemsky, 1998, Multidimensional Uncertainty and Heard Behaviour in Financial Markets, *American Economic Review*, 88, pp.724-748.

Banerjee, A., 1992, A simple model of herd behaviour, *Quarterly Journal of Economics*, 107(3), pp.797-817.

Beaumont, C., Giorgianni, L., Weeks-Brown, R., Kohler, L., Rossi, M., Christopherson, K., Eastman, D., Giddings, A., Kwak, K., Liu, Y., Rosenberg, G., Adler, G., Goretti, M., Guo, K., Halikias, I., Joshi, B., Lanau, S., Roaf, J., Saenz, M. and A. Stuart, 2010, *The Fund's Mandate -The Future Financing Role: Reform Proposals*, IMF.

Bikhchandani, S., Hirshleifer, D. and I. Welch, 1992, A theory of fads, fashion, custom, and cultural change as informational cascades, *Journal of Political Economy*, 100(5), pp.992-1026.

Case, K. E., and R. J. Shiller, 2003, Is There a Bubble in the Housing Market?, *Brookings Papers on Economic Activity*, 2, pp. 299-342.

Chari, V. and P. Kehoe, 2004, Financial Crisis as Herds: Overturning the Critiques, *Journal of Economic Theory*, 119, pp.128-150.

Ciocca, P., 2010, Kindleberger e l'instabilità, *Moneta e Credito*, vol.63 n.251, pp.209-226.

Corsetti, G., Guimaraes, B. and N. Roubini, 2003, International Lending of Last Resort and Moral Hazard: A Model of IMF's Catalytic Finance, *NBER Working Paper*, 10125.

DeLong, J. B., and B. Eichengreen, 2013, *'Foreword' to Kindleberger, The World in Depression 1929-1939,* 40th Anniversary Edition, Berkeley and Los Angeles: University of California Press, pp.7-11.

Dyck, A., Volchkova, N., and L. Zingales, 2008, The Corporate Governance Role of the Media: Evidence from Russia, *Journal of Finance*, 63(3), pp.1093-1135.

Dyck, A., Morse, A., and L.Zingales, 2010, Who blows the whistle on corporate fraud?, *The Journal of Finance*, 65(6), pp.2213-2253.

Epstein, G., 2010, Beyond the "Kindleberger Moment", Fighting Global Austerity, *Economia e Politica*, 07.07.2010, http://www.economiaepolitica.it/europa-e-mondo/beyond-the-kindleberger-moment-fighting-global-austerity/#.VKKHYsBI, retrieved on the 30.12.2014.

Eichengreen, B., 1987, Hegemonic Stability Theories of the International Monetary System, in R.Cooper, B.Eichengreen, G.Holtam, R.Putnam, and R.Henning, eds., *Can Nations Agree? Issues in International Economic Cooperation,* The Brookings Institution, pp.255-298.

Fernandez-Arias, E., 2010, Multilateral Safety Nets for Financial Crises, *Inter-American Development Bank Working Paper*, IDB-WP-192.

Friedman, M. and A. Schwartz, 1963, *A Monetary History of the United States, 1867-1960*, Princeton: Princeton University Press,

Gilpin, R., 1987, *The Political Economy of International Relations*, Princeton: Princeton University Press.

Glaeser, E. L., Gottleb, J. and J. Gyourko (2010), Can Cheap Credit Explain the Housing Boom, *NBER Working Paper, 16230*.

Giannini, C., 1999, The IMF and the Lender-of-Last-Resort Function, *Finance & Development*, 36 (3).

Goldstein, J. S, 2005, *International Relations*, New York: Pearson-Longman.

Hamilton, W. D., 1971, Geometry for the selfish herd, *Journal of Theoretical Biology*, 31 (2), pp.295-311.

Juglar, C., 1889, *Des crises commerciales et leur retour périodique en France, en Angleterre et aux Etats-Unis*, 2nd edn., Paris: Alcan (Reprinted New York: Kelly, 1967).

Kaminsky, G. L., and C. M. Reinhart. 1999. The Twin Crises: The Causes of Banking and Balance-of-Payments Problems. *American Economic Review*, 89(3), pp.473-500.

Keohane, R. O.,1984, *After Hegemony: Cooperation and Discord in the World Political Economy*, Princeton: Princeton University Press.

Keynes, J. M., 1936, *The General Theory of Employment, Interest and Money*, London: Macmillan.

Kindleberger, C.P., 1973, *The World in Depression, 1929-1939*, Berkeley: University of California Press.

Kindleberger, C. P., 1978, *Manias, Panics, and Crashes: A History of Financial Crises*, New York: Basic Books, revised and enlarged, 1989, 3rd ed. 1996.

Kindleberger, C. P., 1990, *Historical Economics: Art or Science?.* Berkeley: University of California Press, 1990.

Kindleberger, C. P., 1996b, *World Economic Primacy, 1500-1990*. New York: Oxford University Press.

Kindleberger, C. P., 2000, A New Bi-Polarity?, in Mundell, R. and A., Clesse, 2000, *The Euro as a Stabilizer in the International Economic System*, Kluwer Academic Publishers, pp.3-20.

Kindleberger, C. P., and R. Z. Aliber, 2005, *Manias, Panics, and Crashes: A History of Financial Crises*, fifth edition, Hoboken, N.J.: Wiley.

Kindleberger, C. P., and R. Z. Aliber, 2011, *Manias, Panics, and Crashes. A History of Financial Crises*, sixth edition, Palgrave Macmillan.

Levy Yeyati, E. and T. Cordella, 2010, Global Safety Net: the IMF as a swap clearing house, Vox, www.voxeu.org/article/global-safety-nets-imf-clearing-house

Lucas, R.E. Jr. , 1981, *Studies in Business Cycle Theory*, Cambridge (Mass.): the MIT Press.

Milner, H. 1998, International Political Economy: Beyond Hegemonic Stability, *Foreign Policy,* No. 110, 2, pp.112-123.

Minsky, H. P., 1975, *John Maynard Keynes*, New York: Columbia University Press.

Mitchell, W. C., 1926, Introduction to Thorp W. L., Business Annals, National Bureau of Economic Research, 88-97.

Mishkin, F. S., 2000, The International Lender of Last Resort: What are the Issues?, paper prepared for the Kiel Week Conference, "The World's New Financial Landscape: Challenges for Economic Policy," Kiel Institute of World Economics, Kiel, Germany, June 19-20, 2000.

Modelski, G., 1987, *Long Cycles in World Politics*, Seattle: University of Washington Press.

Morgenstern, O., 1959, *International Financial Transactions and Business Cycles*, Princeton: Princeton University Press.

Perroux, F., 1949, L'effet de domination et les relations économiques, *Économie appliquée*, XL (2), pp.271-290.

Roubini, N., and S. Mihm, 2010, *Crisis economics: A Crash Course in the Future of Finance*, Harmondsworth: Penguin.

Solow, R., 2005, Foreword to the 5th edition of Kindleberger (Kindleberger and Aliber, 2005).

Taylor, L. and S. A. O'Connell, 1985, A Minsky Crisis, *The Quarterly Journal of Economics*, 100, pp.871-885.

Wallerstein, I., 1983, *Historical Capitalism*. London: Verso.

Wolf, M., and L. Summers, 2011, Larry Summers and Martin Wolf: Keynote at INET's Bretton Woods Conference 2011, www.youtube.com, 9 April.

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THE ABSTRACT OF THE PROJECT IS:

The research programme will integrate diverse levels, methods and disciplinary traditions with the aim of developing a comprehensive policy agenda for changing the role of the financial system to help achieve a future which is sustainable in environmental, social and economic terms. The programme involves an integrated and balanced consortium involving partners from 14 countries that has unsurpassed experience of deploying diverse perspectives both within economics and across disciplines inclusive of economics. The programme is distinctively pluralistic, and aims to forge alliances across the social sciences, so as to understand how finance can better serve economic, social and environmental needs. The central issues addressed are the ways in which the growth and performance of economies in the last 30 years have been dependent on the characteristics of the processes of financialisation; how has financialisation impacted on the achievement of specific economic, social, and environmental objectives?; the nature of the relationship between financialisation and the sustainability of the financial system, economic development and the environment?; the lessons to be drawn from the crisis about the nature and impacts of financialisation? ; what are the requisites of a financial system able to support a process of sustainable development, broadly conceived?'

FESSUD

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4	Fondation Nationale des Sciences Politiques	France
5	Pour la Solidarite, Brussels	Belgium
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13	Lund University	Sweden
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