THE BANKING CRISIS OF CREDIT SUISSE: ORIGINS, CONSEQUENCES, AND REFORM PROPOSALS

Sergio Rossi[1]
University of Fribourg (Switzerland)
Email: sergio.rossi@unifr.ch

Manuscript received 30 April 2023; accepted 18 May 2023.

ABSTRACT

This paper focuses on the major factors originating the banking crisis of Credit Suisse —a systemically relevant bank not just for Switzerland (where it is domiciled) but also for the global economy as a whole. The second section explains the origins of such a crisis, which are to be found in the possibility for banks to provide any credit line they consider profitable, in particular as regards speculation, independently of the amount of pre-existent savings. The third section points out the consequences of this crisis for both financial institutions and the whole economic system. The fourth section puts to the fore a monetary-structural reform disposing of the possibility for banks to open credit lines for "non-GDP-based transactions" without having enough funds to finance them. The last section concludes with some further considerations about the existing financial market regulations, in particular as regards

[1] The author thanks Ignacio Perrotini for his kind invitation to contribute a paper. The usual disclaimer applies.

http://dx.doi.org/10.22201/fe.01851667p.2023.325.86135

those minimum capital requirements that banks must respect, once they grant any credit line that is considered profitable for them.
Keywords: Financial crises, financial stability, monetary policy, payment systems.
JEL Classification: E52, E58, G01, G18.

LA CRISIS BANCARIA DEL CREDIT SUISSE:
ORÍGENES, CONSECUENCIAS Y PROPUESTAS DE REFORMA

RESUMEN

En el presente artículo analizo los principales factores que originaron la crisis del Credit Suisse Bank —un banco sistemáticamente relevante no sólo para Suiza (donde está domiciliado), sino también para la economía global. La segunda sección explica los orígenes de esa crisis, que se encuentran en la posibilidad de que los bancos provean una línea de crédito que consideren rentable, en particular en lo que concierne a la especulación, independientemente de la cantidad de ahorro pre-existente; la tercera destaca las consecuencias de esta crisis para las instituciones financieras y para todo el sistema económico. La cuarta sección propone una reforma monetaria estructural que evite la posibilidad de que los bancos abran líneas de crédito para "transacciones no basadas en el PIB" sin que tengan fondos suficientes para financiarlas, y la última concluye con algunas consideraciones acerca de las regulaciones existentes de los mercados financieros, en particular las concernientes a los requerimientos mínimos de capital que los bancos deben respetar una vez han concedido un crédito que consideran rentable.
Palabras clave: crisis financiera, estabilidad financiera, política monetaria, sistemas de pago.
Clasificación JEL: E52, E58, G01, G18.

1. INTRODUCTION

Credit Suisse is a systemically relevant bank (so-called "too big to fail") in Switzerland —where it is domiciled— and also for the global economy, since it has been carrying out its financial activities, particularly as regards investment banking, across the world during the last forty years, exploiting the famous dictum of "privatizing the profits and socializing the losses" at the big casino of global finance. As a matter of fact, this financial capitalism is the essential factor of all those systemic crises that have been occurring more and more frequently in the global economy since the beginning of the twenty-first century, that is, when globalization, financialization and deregulation have reached their peak, resulting in several crises and catastrophes (including the climate crisis) with dramatic and devastating consequences for many people, especially those agents most fragile on economic grounds.

This paper focuses on the major factors originating the collapse of Credit Suisse in March 2023, when the Swiss government and National Bank had to intervene in order to avoid its bankruptcy —which would have induced another global financial crisis similar to the crisis that burst after the failure of Lehman Brothers in the United States on 15 September 2008. The next section recalls some public sector interventions in the aftermath of the Lehman Brothers' crash, pointing out the different strategies of UBS and Credit Suisse —the two systemically relevant Swiss banks at global level. The third section explains the origins of the crisis of Credit Suisse, which are to be found in the possibility for all banks to provide any credit line they consider profitable, in particular as regards speculation across financial markets, independently of the amount of pre-existent savings. The fourth section puts to the fore a monetary-structural reform in order for banks to be no more in a position to open credit lines for "non-GDP-based transactions" (Werner, 2011, p. 29) without having the funds to finance them. The last section concludes with some further considerations about the existing financial market regulations, in particular as regards those minimum capital requirements that banks must respect, after they grant any credit line they consider profitable for them.

2. SOME RECENT HISTORICAL LESSONS THAT CREDIT SUISSE DID NOT WANT TO LEARN

A month after Lehman Brothers was declared bankrupt, the Swiss government, surprising the whole world, had to intervene to prevent the bankruptcy of the (too-big-to-fail) UBS, whose investment banking activities in the United States proved problematic owing to the volume of illiquid financial assets on its balance sheet. At that time, the Swiss

National Bank (SNB) —which is the monetary authority in Switzerland— set up a stabilization fund (SNB StabFund) —a sort of "bad bank"— to which UBS could transfer all its illiquid assets in order to avoid bankruptcy. The amount of this transfer (38.7 billion US dollars), and the granting of a loan to UBS by the Swiss Confederation for an amount of 6 billion Swiss francs at an interest rate of 12.5 per cent per annum, succeeded in preserving the UBS brand, which in the following years abandoned part of its activities as an investment bank, mainly in the US market, and thus considerably reduced the volume of high-risk assets on its own balance sheet.

The restart of UBS, together with the introduction of stricter regulations for systemically relevant banks both in Switzerland and internationally, with regard to liquidity and capital requirements in proportion to the financial assets shown on the balance sheet and assessed according to "market risks", have led many people, institutions as well as politicians to erroneously assume that a new systemic financial crisis (that is, a crisis affecting the whole financial system) could no longer occur, even in the likely event that a too-big-to-fail bank was in trouble again. Being able to draw on the increased equity that this bank must have under the new financial regulations, many believed —wrongly of course— that the risk of a systemic crisis had been eliminated. To tell the truth, not everyone believed that these new regulations were sufficient to avert another global financial crisis, not least because it was now clear that in the event of such a crisis, the State would have to intervene to prevent an economic catastrophe. This is indeed the famous principle of "privatizing the profits and socializing the losses" of any too-big-to-fail bank. If before 2008 it was quite doubtful that the public sector would have bailed out a too-big-to-fail bank in any case (in an economic system supposedly inspired by liberalism, which makes any firms' managers responsible for both their own profits and losses, which can lead to a bankruptcy), public bail-outs of systemically relevant banks, in particular UBS as far as Switzerland is concerned, had by then become a real certainty, which the managers of similar financial institutions therefore exploited to their advantage, certain that they could count on the State in the event of their risks of bankruptcy becoming a reality.

So it was that, unlike UBS after being bailed out by the Swiss government, Credit Suisse continued undaunted as an investment bank, especially in the United States, being sure it could count on a government intervention if its own activities were close to bankruptcy. Indeed, the billion-dollar losses Credit Suisse recorded in 2021 with regard to the hedge funds Archegos and Greensill Capital were not enough to induce this bank's managers to reduce the volume of risky assets on its balance sheet. These managers did not change their strategy even after the failure of FTX —the world's largest cryptocurrency trading platform— which revealed in November 2022 that it did not have enough liquidity to satisfy all of its clients' claims. These and other warning signals were ignored by Credit Suisse's managers, who, on the contrary, had the effrontery to declare that the liquidity outflows had stopped, while in reality they continued to weaken the bank's capital strength with a rapid run on the bank's counters by several of its deposit holders: In the last three months of 2022, their cash withdrawals amounted to 138 billion Swiss francs, compared to a balance sheet total of 531 billion Swiss francs for Credit Suisse in the same year.

3. THE URGENT BUT POINTLESS BAILOUT OF CREDIT SUISSE

The Swiss government could not hesitate in taking the decision to avoid the bankruptcy of a systemically relevant bank such as Credit Suisse at any cost, orchestrated within a few days and announced on 19 March 2023 at the end of a stressful weekend for several stakeholders in the Swiss economy and global finance. As a result, the SNB decided to open credit lines totalling 250 billion Swiss francs (150 billion to Credit Suisse and 100 billion to UBS), and the Swiss Confederation gave a 9 billion Swiss francs guarantee to UBS in order to mitigate the risks arising from UBS's acquisition of some potentially loss-providing financial assets from Credit Suisse.

The intervention of Swiss political authorities and the SNB had become as indispensable as it was unavoidable, in light of the rapid and significant loss of confidence of Credit Suisse's shareholders originating the collapse of its share price on stock exchange markets across the world. Despite the fact that both liquidity and capital requirements exacted by Credit Suisse in compliance with various national and international regulations were met by it, this was not enough to avoid panic and a run on this bank by an increasing number of shareholders and deposit holders. The domino effect was very rapid and problematic, forcing the Swiss Confederation to clear any doubts as to the resilience of the whole Swiss banking sector —which is also highly interconnected across the global economy.

UBS was thus able to use its strong market position in the Swiss banking sector to its own advantage (in the short term), to acquire Credit Suisse at an attractive price, swallowing up all its assets. The result is a "monster bank" that will have a much dominant position both in Switzerland and in the global economy, moreover knowing for sure that it can continue speculating huge sums of money in the immense casino of market finance, given the now explicit guarantee it enjoys from the State —to wit, the Confederation and the SNB— after two urgent interventions that avoided the bankruptcy of UBS in 2008 and of Credit Suisse in 2023.

Now, neither the global financial crisis that erupted in the autumn of 2008 after the collapse of the US investment bank Lehman Brothers nor the bailout of Credit Suisse in March 2023 will serve to teach to both regulators and financial institutions a lesson, as the latter are now certain that, as a whole, they are too big to be allowed to fail if problems arise. In particular, the Swiss banking sector will undergo a concentration of its own activities as a result of the forced takeover of Credit Suisse by UBS, whose market share in the national economy will allow this bank to dictate terms to its borrowers, among whom are both many people with mortgage loans and several companies (particularly small and medium-sized ones) that do need to obtain bank loans in order to finance their own activities in the "real" economy.

In a liberal economy such as Switzerland's, the paradox is twofold in this regard: On the one hand, the profits are privatized and the losses of banks such as UBS and Credit Suisse are socialized, because they are "too big to fail"; on the other hand, the takeover of Credit Suisse by UBS allows a concentration of market power that clashes with the principle of market competition, as well as with that of the individual responsibility of each economic agent. To be sure, as a matter of fact, the new UBS will not only be too big to fail, but also too big to be properly managed, given that the most profitable (but also riskiest) financial activities are those carried out in the big casino of global finance, whose main players are precisely those financial institutions that know they are too big to be allowed to fail, taking advantage of the fact that they are also too big to be properly supervised. Indeed, financial market supervisory authorities do not have the capacity to observe the activities carried out by these institutions worldwide. Hence, they often limit themselves to supervising only the activities carried out within their own national borders, not least because these authorities compete with each other to prevent that some of the most profitable activities carried out by systemically relevant banks are relocated outside their country's borders —thereby causing these countries to lose competitiveness, with all the negative consequences that can weaken the growth of the national economy in this (neoliberal) perspective.

The scenario for the near future thus appears to be already predictable and very worrying, both for those who fear losing their jobs in the Swiss financial sector (given the important number of job cuts already announced by Credit Suisse) and for many economic activities that depend on bank loans, at a time when interest rates show an upward trajectory in line with the monetary policy decisions of the major central banks —which, however, will not succeed in reducing thereby the rise in consumer prices, but could actually push this rise further, as banks will demand higher interest rates to finance the production costs of firms, inducing a number of them to pass on these higher bank charges to their sales prices. Once again, financially weaker people will much suffer from this, creating a spiral that will drag the economy as a whole downwards, with negative repercussions also for public finances. All this will aggravate social tensions and worsen the situation in the labour market, which is already confronted with a series of overlapping and mutually reinforcing problems, given also the lack of political will to intervene in order to solve these problems eventually and in the general interest of all stakeholders.

As if this were not enough to push the economy and society as a whole towards the abyss, the forced takeover of Credit Suisse by UBS will induce more problems as regards climate warming, as this takeover will create a giant bank with regard to the financing of fossil fuel activities. This will exacerbate the environmental crisis, and the whole world will be more exposed to climate risks, particularly as regards financial institutions. This also increases the risks of lawsuits and defaults, which will also damage the international reputation of Switzerland as a financial hub and a geographic region where economic activity could be profitable for a variety of stakeholders looking after the common good.

It is precisely for the sake of the common good that the financialization of the economy must quickly be brought to an end, putting at the centre of the economic system the needs of human beings, which must be satisfied respecting also the climate and the environment. Furthermore, it is clearly necessary to rethink financial regulations, considering the obvious inability of the current rules to prevent the outbreak of a banking crisis like the one that led to the takeover of Credit Suisse by UBS. In particular, minimum capital requirements based on the allegedly measured "market risk" of the financial assets in banks' portfolios must be abandoned —since they are clearly insufficient, as demonstrated in the case of Credit Suisse— and be replaced by a regulation that guarantees greater security for depositors of any bank (whether it is "too big to fail" or not). Minimum capital requirements to be imposed by new regulations in this regard must be differentiated by considering the type of activities banks engage in as well as their national or international scope. Hence, the higher the risks of a bank's financial activities, the higher its level of capital should be. Internationally active banks should have a higher level of capital in order to avoid geopolitical risks of any kinds, such as those encountered in the aftermath of the war in Ukraine or the Covid-19 pandemic crisis.

These regulations, however, are not enough to avoid that another systemic financial crisis bursts before long. They might reduce the risks of any financial institution going bankrupt, but are not clearly in a position to impede that banks abuse of their credit granting capacity to inflate a credit bubble. In order for this abuse not to occur anymore, a structural reform of the banking sector is necessary, focussing on the issuance of bank money with a view to limit this activity in a transparent and efficient way. Let us elaborate on this crucial issue in the next section.

4. THE NEED FOR A MONETARY-STRUCTURAL REFORM OF THE BANKING SECTOR

As Tobin (1963) noted, banks are special, because they can open credit lines even if they do not have the corresponding amount of pre-existing deposits. Indeed, Schumpeter (1954, pp. 1110-117) explained that for banks the causality runs from loans to deposits —whereas for non-bank financial institutions, such as hedge funds and insurance companies, it is logically the other way round, to wit, these institutions have to obtain the amount of savings they want to lend, because they have a balance-sheet constraint (which banks do not have). In this regard, a fallacious criticism raised by financial circles is the claim that any increase in minimum capital requirements for banks would induce them to reduce the volume of loans they grant, thereby reducing both growth and employment in the economy as a whole. In reality, this is an argument easy to reject, because banks can really lend any amount they consider as generating profits for them —without any limit dictated by any level of capital requirements. In fact, this level has to be met only after the bank has lent out any amount: The bank first grants a credit line, then seeks the necessary deposits to finance it and thereby meet existing capital requirements. This is why the current banking regulations need to be completely revised, requiring that banks willing to lend for unproductive transactions, that is to say financial transactions, must have indeed all the funds to finance these transactions. Hence, there should be a 100 per cent liquidity reserve for transactions that banks decide to finance, when these transactions do not generate any income across the economy. This full-reserve regime, however, should never be applied to bank loans for any income-generating transactions, namely those transactions at the origin of gross domestic product as a result of the payment of wages in the labour market —which, in fact, is the only factor of production, that is to say the only source of national income, as Keynes (1936, pp. 213-214) explained (see Rossi, 2007, Ch. 2 for analytical elaboration).

So far, all financial market regulations (like the so-called Basel Agreements) have simply aimed at impacting the behaviour of financial institutions, without being in a position to avoid a systemic banking crisis to occur. To be sure, as long as banks can provide credit lines for "non-GDP-based transactions" (Werner, 2011, p. 29) for an amount exceeding available income (in the form of bank deposits), there can be no guarantee that financial stability prevails. This guarantee can only exist once a structural reform of banks' book-keeping is put into practice, separating explicitly "non-GDP-based transactions" from "GDP-based transactions" (Werner, 2011, p. 29) in the banks' ledgers. If so, then banks' book-keeping must be split into two accounting departments:

The first department should record all transactions implying the issuance of money, and the second department must record all transactions requiring the opening of a credit line. Indeed, money and credit are two ontologically distinct items: Money is a means of payment, making sure "a seller of a good, or service, or another asset, receives something of equal value from the purchaser, which leaves the seller with no further claim on the buyer" (Goodhart, 1989, p. 26), while credit is a loan that banks provide to finance any kind of transactions, being aware that a bank deposit results necessarily from this operation for an amount that allows the banking sector (as a whole) to collect the savings that finance thereby such a credit *ex-post*.

This provides the clue for establishing a structural reform of banks' book-keeping, so that money and credit cannot be mixed-up when banks abuse of their credit-granting capacity (which inflates credit bubbles, thereby increasing financial instability, possibly leading to a systemic financial crisis). This is so much so that a similar monetary-structural reform was already implemented at the Bank of England, as a result of the 1844 Bank Act inspired by Ricardo (1824/1951, p. 276), who lucidly noticed that "[t]he Bank of England performs two operations of banking, which are quite distinct, and have no necessary connection with each other: It issues a paper currency as a substitute for a metallic one; and it advances money in the way of loan, to merchants and others." This clearly points out the distinction between money and credit at the central bank level, which the 1844 Bank Act put into practice at the Bank of England, separating its own ledgers into two accounting departments, namely, the Issue Department and the Financial Department. In the first department, all issuance of central bank money were recorded, whilst the second department recorded all those credit operations that the Bank of England carried out. Such a 'departmentalization' of the central bank's book-keeping intended to avert inflationary pressures as a result of excessive central bank money with regard to available income (see Rossi, 2020 for analytical elaboration).

Now, this same logic must exist within any banks because each bank can (and does) issue money as much as its managers decide to open credit lines to any kind of economic agents —most of the time, these agents being other banks or some non-bank financial institutions. Through a two-department book-keeping system, each banking institution will thereby be able to know on a real-time basis the amount of available income on its own balance sheet. This is enough to avert that this bank creates excess money when it opens some new credit lines. Hence, if a bank still provides too much credit with regard to available income in the whole banking system, financing in such a way any kind of transactions that do not increase national income, then monetary authorities and financial supervisory authorities will be in a much better position (than today) to know that such a bank must be sanctioned, as it will be plain that it issues too much money with respect to produced Gross Domestic Product (GDP). This explicit accounting separation between money and credit in banks' ledgers will make it much easier to sanction all those banks that abuse of their credit granting capacity to inflate any credit bubble. This will also be an information available to any bank's shareholders, who might thereby "vote with their feet" (that is, sell their bank's shares on the stock exchange market) or even vote against this strategy during the annual shareholders' meeting. The bank's managers will be led thereby to adopt a much less risky business strategy in their own interests (to wit, for a better reputation and higher wage benefits, notably their end-of-year bonuses).

Let us illustrate in the remainder of this section the workings of such a monetary-structural reform with the help of a stylized case. Suppose that a firm pays the wage bill to its workers for an amount of *x* US dollars. In order to carry out this payment, the firm needs to obtain a credit line from Bank A. Once this payment order is carried out, its result is recorded in the two departments of Bank A as shown in Table 1.

As a first accounting step, Bank A records into its Issue Department the emission of *x* US dollars on behalf of the paying firm (entry 1), which remunerates thereby its wage earners, who are credited with the corresponding bank deposit (*x* US dollars) as shown by entry 1'. When Bank A carries out this payment order, it transforms the monetary debt of the firm (as recorded in entry 1) into a financial debt of the same firm (entry 2'). As a result, Bank A's Financial Department records the debt of this bank to the firm's wage earners —as this occurs to date within the relevant bank accounts.

However, contrary to today's banking practices, when Bank A opens a credit line to some other bank (Bank B) in order for the latter to carry out financial market transactions that do not generate a new income

Table 1. The result of a payment of wages through two accounting departments

Bank A			
Issue Department (I)			
Assets		**Liabilities**	
(1) Credit on firm F	+x USD	Financial Department (II)	+x USD
(2) Credit on firm F	–x USD	Financial Department (II)	–x USD
(B*)	0		0
Bank A			
Financial Department (II)			
Assets		**Liabilities**	
(1') Issue Department (I)	+x USD	Wage-earners' deposit	+x USD
(2') Credit on firm F	+x USD	Issue Department (I)	+x USD
(B*) Credit on firm F	x USD	Wage-earners' deposit	x USD

Note: (B*) is the balance of those entries that are recorded in the relevant department.

within the economy as a whole, the bank 'departmentalization' averts that this kind of credit lines can provide loans for an amount higher than pre-existent income (in the form of bank deposits worth x US dollars, as recorded in Table 1). Indeed, if Bank A were abusing of its credit-granting capacity, it would be required to record this credit line across its own two departments, making thereby plain that it is thus affecting the relationship between money and income negatively. This is enough to disincentivize banks to continuing expanding their credit lines beyond the amount of available income within the whole banking system, because such a misbehaviour would be clearly noticed by monetary authorities, financial supervisory authorities as well as by the banks' shareholders.

Now, with regard to the amount of x US dollars deposited with Bank A (see Table 1), the 'departmentalization' of its ledger makes sure that it can only lend such an amount for what Keynes (1930, p. 217) called "financial circulation", to wit, "non-GDP-based transactions" (Werner,

Table 2. The result of a financial transaction respecting the money-income relationship

Bank A			
Financial Department (II)			
Assets		Liabilities	
(B_I) Credit on firm F	x USD	Wage-earners' deposit	x USD
(3') Loan to bank B	$+x$ USD	Securities sold to wage earners	$+x$ USD
(4')		Wage-earners' deposit Deposit of bank B	$-x$ USD $+x$ USD
(5')		Deposit of bank B Deposit of firm F	$-x$ USD $+x$ USD
(6') Credit on firm F	$-x$ USD	Deposit of firm F	$-x$ USD
(B_E) Loan to bank B	x USD	Securities sold to wage earners	x USD

Note: (B_I) is the initial balance resulting from Table 1. (B_E) is the end balance after all those transactions recorded in entries (3'), (4'), (5') and (6') have been carried out.

2011, p. 29), which do not increase the volume of produced income but only the amount of debt to be reimbursed to banks. Indeed, the separation of the Issue Department from the Financial Department in banks' book-keeping makes it plain that no bank can lend on financial markets more than the total amount of bank deposits recorded within the whole banking system.

Let us suppose that Bank A lends the amount of x US dollars to Bank B, which spends this sum across financial markets. Table 2 shows the book-keeping results of this transaction, in which the firm involved can sell to Bank B some financial assets to pay its debt to Bank A.

Entry (3') in Table 2 records the loan Bank A can provide to Bank B, considering the amount of available income deposited with the former bank. Now, in order for Bank A to open a credit line to Bank B up to x US dollars for unproductive transactions, it must sell an equivalent amount of financial assets to its original depositors, that is, firm A's workers (see Table 1). This is a *sine qua non* condition for Bank A to obtain the necessary amount of income it needs to finance its loan to Bank B, which obtains thereby the ownership of the amount of bank deposits initially owned by the firm's wage earners (entry 4'). Entry 5' then records the purchase of this firm's output by Bank B, which provides thereby this firm with the income it needs to reimburse the loan it received from Bank A (entry 6').

The final balance in the Financial Department of Bank A shows two important points. On its liabilities side, wage earners have transformed their claims on bank deposits worth x US dollars into an equivalent amount of financial assets. On its assets side, the credit line that Bank A opened to the firm has been replaced with a credit line to Bank B. All in all, there are no inflationary pressures, since the relation between money and income (amounting to x US dollars) is unaffected by financial transactions. The risks of inflating credit bubbles, to wit, the risks of a systemic financial crisis, are thereby averted, with a monetary-structural reform of banks' book-keeping whose effectiveness does not depend on bankers' behaviour as this is the case to date with existing minimum capital requirements. The only issues to be addressed once such a monetary-structural reform is put into practice refer to the securities bought by wage earners and the creditworthiness of Bank B, which will have to reimburse the loan obtained from Bank A with some income at maturity. This is where and when the so-called micro-prudential tools of financial supervisory authorities could play their role, making sure the collateral is up to the task of avoiding the bursting of a financial crisis. If the latter occurs, however, it will have no systemic effects anymore, since they have been eradicated by the monetary-structural reform proposed in this section: In this case, indeed, the collapse of a bank will not involve any other banks or non-bank financial institutions, since the amount of credit lines for "non-GDP-based transactions" will not exceed the total amount of income available across the national economy as a whole. This would provide an operational guarantee that no bank failure will induce a systemic financial crisis, thereby putting only on the bank's managers and shareholders the onus of this bank's strategic failures.

Only a structural reform of this kind can prevent financial institutions, and particularly any systemically relevant banks, from continuing to play at the big casino of globalized finance knowing that they can count on a State intervention when a financial crisis scenario occurs.

5. CONCLUDING REMARKS

One should be under no illusion that a higher capitalization than the rules currently in force for systemically relevant banks would have made a bank run on Credit Suisse less likely, in light of the several vicissitudes the bank went through in the two years preceding its forced takeover by its historical rival, UBS. This bank run on Credit Suisse was actually the result of various serious problems experienced by Credit Suisse, including its huge losses in 2022. A greater capitalization of Credit Suisse could have avoided a run on the bank provided that this bank's managers had adopted a much less risky strategy, thus reducing their investment banking activities in the aftermath of the global financial crisis that burst in the fall of 2008, which forced UBS to abandon this type of activities to a large extent, in order for this bank to concentrate on commercial banking and wealth management, thereby reducing its own risk exposure considerably, with beneficial results for its shareholders and also reassuring the bank's depositors —contrary to what happened to Credit Suisse from 2008 onwards.

The fact remains that considerably increasing the existing minimum capital requirements could reduce the complexity of actual banking regulations, which, in fact, are a figment of the supervisory authorities' imagination: As a matter of fact, it is really impossible to assess the risks associated with different categories of financial assets. This is so much so since a significant part of these activities are opaque, multi-layered, and concern a lot of countries. To be sure, risk and uncertainty are not synonymous, as the former can only be measured if there is a finite number of possible scenarios (as when playing poker), while uncertainty is linked to the existence of an infinite number of scenarios, which make the future unknowable and unpredictable as Keynes (1921) pointed out. ◄

REFERENCES

Goodhart, C.A.E. (1989). *Money, Information and Uncertainty*. 2nd edition. Basingstoke and London: Macmillan.

Keynes, J.M. (1921). *Treatise on Probability*. London: Macmillan.

Keynes, J.M. (1930). *A Treatise on Money,* vol. 2: *The Applied Theory of Money*. London: Macmillan.

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

Ricardo, D. (1924/1951). *Plan for the establishment of a National Bank*. In: P. Sraffa and M.H. Dobb (eds), *The Works and Correspondence of David Ricardo*, vol. IV: *Pamphlets and Papers 1815-1823* (pp. 276-300). Cambridge: Cambridge University Press.

Rossi, S. (2007). *Money and Payments in Theory and Practice*. London and New York: Routledge.

Rossi, S. (2020). Central banks' contribution to financial instability. *Bulletin of Political Economy*, 14(2), pp. 203-217.

Schumpeter, J.A. (1954). *History of Economic Analysis*. London: George Allen & Unwin.

Tobin, J. (1963). Commercial banks as creators of 'money'. In: D. Carson (ed.), *Banking and Monetary Studies* (pp. 408-419). Homewood, IL: Richard D. Irving.

Werner, R. (2011). Economics as if banks mattered: A contribution based on the inductive methodology. *The Manchester School*, 79(2), pp. 25-35.