Triggering events for recovery and resolution plans : towards better financial crisis management

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Triggering events for recovery and resolution plans: towards better financial crisis management

By Henry Peter* and Ilias Pnevmonidis**

The memories of the 2008 financial meltdown marked by belated regulatory actions and its disastrous impacts on the banking sector and on the global economy are still fresh. During the past few years, supranational standard-setting bodies and state authorities have focused on improving how to prevent and manage a financial crisis.

A key feature is the obligation for every bank of systemic relevance to establish recovery and resolution plans ("living wills") in order to prepare the framework of regulatory actions amidst a financial crisis that could threaten its survival. The point of initiation of such plans ("triggering event") however remains subject to a heated debate and, unfortunately, to growing regulatory divergence. The development of fully operational and efficient triggers, quantitative as well as qualitative, will be a necessary step towards greater stakeholder protection. The issue regards not only the banking sector but also the insurance industry; cross-fertilisation as well as a unified approach between the two sectors is, in fact, desirable. The purpose of this contribution is to shed some light on this complex issue and to make proposals regarding the essential components (methodology and parameters) of triggering events, keeping in mind the necessity to promote cross-border consistency.

We first of all touch upon the notion of triggering events as currently applied. We in particular make reference to regulatory practice under Swiss, EU and U.S. law, highlighting the inconsistency and inefficiency of some regulatory crisis management choices. We then focus on the two basic elements of any trigger: a) the timing of its initiation and b) the criteria applied to efficiently determine the need for regulatory intervention. With respect to the first, there seems to be a certain confusion regarding when crisis management should kick-in and what can be done depending on the point in time at which it does (recovery/resolution/winding-down). We argue for the establishment of a progressive trigger requiring increasingly stringent measures rather than a one-shot "black and white" approach. Regarding the second factor, we suggest to focus less on (i) balance sheet capital requirements and to further favour (ii) forward-looking criteria and liquidity as opposed to equity tests. Moreover, it is key to realise that any analysis in this context has to be based on financial statements drawn up in accordance with economic principles and in a market consistent manner as opposed to traditional accounting standards (GAAPs, IFRS, etc.).

Also, through the use of such a progressive trigger, we attempt to resolve the existing clash between "soft" and "hard" triggers. We conclude with our view as to who should blow the whistle à propos the financial health of a financial institution. Although regulators have undertaken this role, we explore the possibility of having third stakeholders being also involved in the initiation of the trigger.

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Introduction

"When a man knows he is to be hanged in a fortnight, it concentrates his mind wonderfully"[1]

Following the 2008 financial meltdown and the uncoordinated state responses to the collapse of a great number of financial institutions, numerous jurisdictions underwent major reforms of their banking and insolvency regulations. It became quickly apparent that one of the principal reasons leading to the latest global financial crisis had been the inefficiency of the divergent regulatory approaches to timely and properly initiate crisis management procedures.

One of the innovative proposals has been the obligation for every systemic bank to establish recovery and resolution plans ("living wills") in order to prepare the framework of regulatory actions amidst a financial crisis threatening financial survival. Recovery planning should *"enable firms to maintain or restore financial strength and viability by preventing undue delays in the implementation of recovery measures"*.[2] Moreover, resolution plans are to be created by the regulators in order to *"set out the approach to resolution that is likely to be adopted should the need arise"*.[3] All in all, these plans seek to allow for an efficient and sufficiently early reorganisation of financial institutions facing financial distress and also limit moral hazard by introducing a credible scenario of coordinated resolution or of an eventual winding-up. The point of initiation of such plans (so called "triggering event") remains, though, subject to a heated debate and unfortunately to regulatory divergence.

This contribution aims at demonstrating the necessity of triggers' appropriateness and possibly standardisation. Appropriate because they are an essential part of the process. Through standardised triggering mechanisms, states will establish a predictable environment regarding the legal impacts of crisis management measures. Furthermore, consistent rules will safeguard a certain level-playing field across jurisdictions and facilitate cross-border coordination of crisis management.

We do not claim to have developed a silver-bullet solution regarding the essential constituent elements of crisis management triggers. Our purpose is to highlight the existing regulatory discrepancies as well as make some proposals concerning the crucial factors which should influence the elaboration of op-

1 Samuel Johnson, cited in *Richard J. Herring,* Incentives to Improve the Corporate Governance of Risk, in: James R. Barth/Chen Lin/Clas Wihlborg (eds.), Research Handbook on International Banking and Governance, Cheltenham/Northampton 2012, 313.

2 Financial Stability Board, Recovery and Resolution Planning for Systemically Important Financial Institutions: Guidance on Recovery Triggers and Stress Scenarios, Basel 16/07/2013, 5.

3 Financial Stability Board, Recovery and Resolution Planning: Making the Key Attributes Requirements Operational, Basel November 2012, 14. Operational resolution plans provide more specific details regarding: entities to which powers are to be applied by one or more national resolution authorities; the conditions under which the plan might be implemented; and arrangements for providing funding to the firm during and immediately after the resolution as well as the actions needed to implement the resolution strategy.

erational triggers, keeping in mind the necessity to promote cross-border consistency.

I. Definitions

1. Triggering events and crisis management stages

Based on the fundamental definition provided by the Financial Stability Board (FSB) we could describe triggering events as *"quantitative and qualitative criteria for identifying when an event has occurred or a situation is developing that requires senior management or supervisory authority attention, designed to prevent undue delays in addressing a recovery, resolution or winding-down situation"*.[4] As such, they should be distinguished from early warning indicators, which are normally calibrated so as to alert financial institutions for oncoming adverse circumstances at an earlier stage than recovery triggers.[5]

Consequently, triggering events should be perceived as crisis backstops that should cover a broad range of crisis management scenarios and ensure the timely implementation of recovery and resolution plans (RRPs) with an arsenal of legal measures that these last could include. Their nature often presents characteristics resulting from the regulatory attitude of each jurisdiction and the severity of the crisis tests they need to address. By and large, legal statutes provide for the general lines and elements of the initiation of a crisis management trigger. Nevertheless, RRPs are expected to establish a more detailed frame for each triggering event according to the potential options of crisis management strategies.

The principal objective of coherent triggering approaches would be to avoid or minimise the structural flaws that played such a significant part in the onset of the 2008 banking crisis. Back in 2008, constructive ambiguity[6] had been described as a limit to moral hazard;[7] nevertheless, it contributed significantly to market panic and contagion. Hence, the development of efficient triggers, quantitative, as well as qualitative, will be a necessary step towards greater transparency and legal certainty. In addition, clear triggers will provide an essential safeguard for shareholders', creditors', investors', depositors' protection and, generally, financial market stability, as all the aforementioned stakeholders will be affected by a recovery or resolution procedure. We should also stress that triggers are expected to incentivise banking management to proactively set in motion adequate initiatives, in order to avoid reaching the "cape of distress" requiring regulatory intervention or, worst, liquidation.

According to the specific characteristics of each triggering event, it should be able to initiate one of the following three distinct crisis management hypotheses by order of severity: a) a recovery procedure, b) a procedure of bank resolution and c) a winding-up procedure.

Recovery is considered the first effective backstop into a bank's overall risk management framework. It will consist of measures adopted by the financial institution itself aiming at restoring financial strength and viability when the bank comes under severe stress but it has not yet reached the point necessitating a regulatory intervention.[8]

At a second level, and if recovery fails to deliver the expected results, the regulatory authorities will step in and implement what is known as a bank resolution procedure. According to the Basel Committee on Banking Supervision (BCBS), *"the terms resolution and resolution regime are understood as referring to any action by a national authority, with or without private sector involvement, intended to maintain financial stability and/or address serious problems in a financial institution that imperil its viability where, absent resolution, the institution is no*

[4] Financial Stability Board (n. 3), 3.

[5] *Id.*, 6.

[6] Initially, the concept of constructive ambiguity has been an integral part of the function of central banks as Lenders of Last Resort (LOLR). Under this dogma, central banks and financial regulators are to avoid any declaration of explicit commitments to step in and rescue troubled financial institutions. The regulators' policy responses amidst a financial crisis are never announced *ex ante*. Consequently, they try to maintain an unclear future course of action with regard to their bail-out strategy.

[7] The notion of moral hazard describes the tendency of financial institutions to take significant and even unnecessary risks during their conduct of business because they are aware that the final cost of such risks will be borne by government budgets and, consequently, taxpayers.

[8] Financial Stability Board (n. 3), 7.

longer viable and there is no reasonable prospect of it becoming so".[9]

The purpose of a resolution regime is to safeguard systemic functions and, overall, a financial institution as a going concern; therefore, a resolution regime should be initiated at a sufficiently early pre-insolvency phase. As a rule, resolution measures will entail severe restrictions to the exercise of various shareholders' and creditors' rights and will be based on far-reaching legal concepts such as the creation of bridge financial institutions or a bail-in[10] implementation.

Finally, and if the financial institution is no longer viable, the only remaining option would be a classic winding-up procedure. Under this scenario, the regulator will close and liquidate the failing financial institution in conformity with the relevant rules of bankruptcy legislation but here again with a view to implement the least prejudicial solution in the well-understood interest of all stakeholders.

Although these definitions seem *a priori* straightforward, they present a certain degree of complexity and are frequently subject to confusion and discretionary interpretation. This vague and sometimes conflicting understanding of crisis management terminology can have significant impacts on the elaboration and implementation of triggering events.

2. The necessity of well-understood and defined crisis management concepts

The creation of efficient triggers requires an explicit differentiation of the potential crisis management stages. Despite the traditional distinction regarding an ailing financial institution between going concern and gone concern, in practice the regulators are often and understandably faced with an ambiguous gray area of financial viability. As a result, and due to the growing use of "soft" triggers from state legislations, one can come across a variety of terms, which claim to adequately describe recovery, resolution and winding-up. This terminology might cover broad notions such as apparent solvency, non-viability, likely failure[11] or a danger of default.[12]

Supranational bodies such as the BCBS, the FSB and the EU Commission are currently working on the elaboration of fundamental standards, which could enhance harmonisation regarding the available crisis management terms. Despite progress in this field, we believe that, at the end of the day, they bear part of the responsibility with regard to the existing regulatory confusion.

The definition on bank resolution provided above[13] is a useful example in support of this argument. In fact, this definition needs to draw clearly the line between resolution practices and the more general state of bank liquidation, which will lead to ordinary bankruptcy procedures. However, the wording *"the institution is no longer viable"* can create serious confusion as it can allow misinterpretations of the term viability. It is not evident if it refers to a pre- or post-insolvency stage of a financial institution. In any event, insolvency remains itself a grey area concept. In addition, if the authorities wait until the financial institution will have no reasonable prospect of surviving before implementing resolution measures, their intervention will come inevitably at a very – too – late stage.[14] At that point, the financial institution might even have become insolvent and resolution will be an unnecessary process.

The corollary statement provided by the FSB regarding the aforesaid definition of the BCBS on bank resolution contributes in additional frustration. The FSB highlighted that *"the resolution regime should provide for timely and early entry into resolution".*[15] Such a component of the definition could result in

[9] Basel Committee on Banking Supervision, Resolution Policies and Frameworks – Progress so Far, Basel July 2011, 7.

[10] According to the FSB, bail-in within resolution are *"restructuring mechanisms to recapitalise a firm in resolution or effectively capitalise a bridge institution, under specified conditions, through the write-down, conversion or exchange of debt instruments and other senior or subordinated unsecured liabilities of the firm in resolution into, or for, equity or other instruments in that firm, the parent company of that firm or a newly formed bridge institution, as appropriate to legal frameworks and market capacity"*, in: Financial Stability Board, Thematic Review on Resolution Regimes – Peer Review Report, Basel 11/04/2013, 2.

[11] E.g. Section 7(2) of the UK Banking Act.

[12] E.g. Title II, Section 203(b)(1) of the Dodd-Frank Act.

[13] See note 9.

[14] *Charles Goodhart,* When should a bank enter resolution?, Butterworths Journal of International Banking and Financial Law November 2012, 603.

[15] Financial Stability Board, Key Attributes of Effective Resolution Regimes for Financial Institutions, Basel October 2011, 7.

confusion of the notion of resolution with the concept of recovery.[16]

It, thus, becomes obvious that the line between the various stages and concepts might remain ambiguous. It could be argued that the primary task of supranational standard-setting bodies is to introduce broad guidelines, leaving states a margin of discretion in defining each concept. However, as we will suggest in the following section of this contribution, too much discretion will inherently lead to regulatory divergence, which might become a significant obstacle to cross-border coordination.

II. Current regulatory approaches to triggering events

An overview of the solutions currently adopted by domestic legislations provides a clear image of the growing fragmentation of crisis management triggers. Certain jurisdictions focus on traditional over-indebtedness concepts, some establish triggers relating to qualitative criteria and others prefer a more discretionary approach based on non-viability tests.[17]

1. Quantitative triggers

Triggers tend to be predominantly quantitative. They can be further classified in three distinct categories: a) these based on the traditional notion of over-indebtedness, b) those following a prospective liquidity test and c) those linked exclusively to regulatory capital criteria.

1.1 Over-indebtedness/balance sheet test

The balance sheet determination of over-indebtedness has been part of the two pronged classic evaluation of non-viability of a financial institution. This test indicates a situation where the bank's liabilities exceed the assets and, consequently, its equity is depleted.[18]

The balance sheet test of non-viability has – we believe rightly – come under severe criticism and is considered relatively outdated. First of all, it can provide a misleading image of an institution's financial health. The variety of accounting standards and valuation techniques used can lead to different interpretations and results, allowing for arbitrariness and uncertainty. In addition, as this evaluation is based on information that the authorities cannot easily access and as this approach is by essence backward looking, the regulator's intervention will normally come at a very late stage limiting the efficiency of actions. In other words, it could be considered as inherently flawed because it amounts to a retrospective test of financial viability.

Among the various jurisdictions, Switzerland has maintained the balance sheet test as part of bank insolvency interpretation.[19] More recently, the EU, in its draft Bank Recovery and Resolution Directive introduced a broad test for triggering resolution which cumulatively groups non-viability, the absence of any private sector alternative or supervisory action and the protection of public interest.[20] The notion of non-viability, referring to a situation when the institution is deemed failing or likely to fail, will be interpreted through additional requirements reflecting, among others, balance sheet analysis.[21]

1.2 Liquidity/cash flow test

A crucial lesson of the latest financial crisis is that within international banks, with complex corporate structures, important counterparties' exposure and significant interconnectedness within the financial markets, a liquidity crisis is the primary source

16 Institute of International Finance, Making Resolution Robust – Completing the Legal and Institutional Frameworks for Effective Cross-border Resolution of Financial Institutions, 2012, 37.

17 For example regarding bank resolution procedures, most jurisdictions according to the BCBS have the tendency to adopt pre-insolvency qualitative regulatory triggers, exercised within the discretion of the authorities, with the examples of jurisdictions introducing quantitative prudential thresholds being much fewer, in: Basel Committee on Banking Supervision (n. 9), 13–14.

18 UNCITRAL, Legislative Guide on Insolvency Law, United Nations New York 2005, 46.

19 *"Besteht begründete Besorgnis, dass eine Bank überschuldet ist"*, in article 25(1) of the Swiss Banking Act.

20 EU Commission, Proposal for a Directive of the European Parliament and of the Council Establishing a Framework for the Recovery and Resolution of Credit Institutions and Investment Firms and Amending Council Directives 77/91/EEC and 82/891/EEC, Directives 2001/24/EC, 2002/25/EC, 2005/56/EC and 2011/35/EC and Regulation (EU) No 1093/2010, COM (2012) 280 final, Brussels June 2012, 71, article 27(1).

21 *Id.*, article 27(2)(b).

of financial distress. But surprisingly liquidity factors had been mostly ignored or neglected before 2008 when assessing financial viability. Hence, since 2008 regulators have shown growing interest in the role of liquidity as a key element of interpretation of the deteriorating financial condition of a bank. This change of regulatory mentality has materialised in shaping the Basel III framework and in the legal developments which have followed this.[22]

The cash flow/liquidity test describes the case when a bank will not be able to service its existing obligations as they will fall due.[23] This approach of insolvency evaluation seems much more appropriate as it is well known that businesses die of lack of liquidity rather than of lack of capital. It is also inherently a prospective – as opposed to retrospective – viability test, which is what mainly matters.[24]

Cash flow is thus a key indicator, which can – and should – be used as an early warning of potential liquidity problems. Still, it remains a forecast based on plausible scenarios, not facts, and displaying what might happen given a particular set of circumstances.[25] In any event, it should be considered as the preferred test of potential distress, even if conceived for business failures within a normal economic environment and not systemic financial crises.[26]

Switzerland, under its current Banking Act, also applies liquidity tests before FINMA decides to impose a winding-up procedure.[27] The EU will also resort to liquidity analysis for the interpretation of financial viability, either on an isolated basis or cumulatively with a balance sheet test.[28]

1.3 Regulatory capital criteria

Along with the traditional balance sheet and cash flow tests, it has become a common practice to base triggering events on capital ratios. Following the 2008 financial collapse and the severe new rules under Basel III, banks are compelled to hold more and qualitatively better capital.[29] The underlying assumption is that better capitalised financial institutions are better protected against financial collapse. On that basis a continuous regulatory race has been experienced during these last years among developed financial markets and policy making bodies.

The Federal Deposit Insurance Corporation (FDIC) in the U.S. has had a long tradition of using quantitative capital requirements for the exercise of its crisis management powers. The capital ratio of each bank remains the most critical indicator of fi-

22 The BCBS developed two minimum standards for funding liquidity. The first one, called Liquidity Coverage Ratio, aims at ensuring that a bank maintains an adequate level of unencumbered, high-quality liquid assets that can be converted into cash to meet its liquidity needs for a 30 calendar day time horizon under a significantly severe liquidity stress scenario, in: Basel Committee on Banking Supervision, Basel III: International Framework for Liquidity Risk Measurement, Standards and Monitoring, Basel December 2010, 3. The BCBS provides a detailed list of the fundamental characteristics of these highly liquid assets, in *id.,* 4–5. The second, called the Net Stable Funding Ratio, is defined as the portion of those types and amounts of equity and liability financing expected to be reliable sources of funds over a one year time horizon under conditions of extended stress, in *id.,* 25.

23 UNCITRAL (n. 18), 45–46.

24 *Henry Peter,* Bankruptcy and Reorganisation Trigger Criteria: From a Retrospective (Balance Sheet) to a Prospective (Cash Flow) Test, in: Henry Peter/Nicolas Jeandin/Jason Kilborn (eds.), The Challenges of Insolvency Law Reform in the 21st Century, Schulthess, Zurich/Basel/Geneva 2006, 35.

25 *Timothy Jury,* Cash flow analysis and forecasting: the definitive guide to understanding and using published cash flow data, Wiley United Kingdom 2012, 257.

26 World Bank, Principles and Guidelines for Effective Insolvency and Creditors' Rights Systems, April 2001, 30.

27 *"Dass eine Bank... ernsthafte Liquiditätsprobleme hat",* in article 25(1) of the Swiss Banking Act.

28 EU Commission (n. 20), 71, article 27(2)(c).

29 In general, the quantity as well as the quality of the regulatory minimum capital requirements (Tier 1 capital) has been reformed, the Tier 2 capital instruments have been harmonised and Tier 3 capital instruments were eliminated. More specifically, the regulatory capital that banks must hold at all times will consist of the Tier 1 and Tier 2 capital instruments. Tier 1 capital must be at least 6% of RWAs (out of which Common Equity Tier 1 must be at least 4.5%) and the total minimum capital requirements (Tier 1 plus Tier 2 capital) must be at all times at least 8% of RWAs, in: Basel Committee on Banking Supervision, Basel III: a Global Regulatory Framework for More Resilient Banks and Banking Systems, Basel December 2010, 12. Regarding reforms concerning the quality of regulatory capital, the predominant form of Tier 1 capital must be common shares and retained earnings, in *id.,* 13. In addition, banks outside of periods of stress should build capital conservation buffers above the regulatory minimum presented above. This capital conservation buffer must be at least 2.5% of RWAs and must comprise mainly of Common Equity Tier 1, in *id.,* 55. Finally, the BCBS introduced a countercyclical buffer in order to ensure that the capital requirements imposed to a bank will take into consideration the macro-financial environment in which a bank operates. The decision regarding the exact size of this buffer will be left to national regulatory authorities and might vary from 0 to 2.5% of RWAs, in *id.,* 58.

nancial viability with severe restrictions imposed progressively on under-capitalised, significantly under-capitalised and critically under-capitalised institutions.[30]

Moreover, one of the direct and innovative responses to the last financial crisis has consisted in the broad recourse to various contingent convertible capital instruments, focusing by essence on recapitalisation of financial institutions and not on their liquidity needs.[31] The triggering events of these instruments, resulting in this debt-to-equity conversion or debt write-down, are directly linked to the safeguard of specific capital ratios.

In the latest amendments to its Capital Adequacy Ordinance, Switzerland introduced for systemic banks two capital buffers, the breach of which will initiate a recovery or resolution procedure: a) a capital conservation buffer, which will serve the objectives of recovery and will impose a debt-to-equity conversion once the regulatory capital falls under 7% of the Risk Weighted Assets (RWAs)[32] and b) a progressive capital component, which will be used for the purposes of resolution resulting in a debt-to-equity conversion as soon as the regulatory capital falls under 5% of the RWAs.[33]

Overall, in today's market, the entirety of hybrid contingent convertible bonds, in as well as outside Switzerland,[34] is based on capital ratios.

2. Qualitative triggers

Contrary to quantitative triggers, qualitative ones will not be directly related to any specific capital or liquidity ratio. Under this approach, the financial aspects of the bank will remain crucial for the initiation of crisis management triggers but a certain degree of discretion applies for the interpretation of its viability. As highlighted by the FSB, qualitative triggers may include criteria such as an unexpected loss of senior management, adverse court rulings, significant reputational damage or requests from counterparties for early redemption of liabilities.[35]

Regarding credit institutions, the FDIC can, for example, use a variety of qualitative triggers in order to determine the necessity for regulatory intervention. These triggers range from violations of regulations that are likely to cause insolvency, the cessation of insured status, an unsafe and unsound condition to transact business, concealment of the institution's books, records or assets, as well as money laundering offences.[36] Such qualitative infringements do not need to take place on a cumulative basis with quantitative breaches in order to cause the intervention of the FDIC.

Under the new requirements of the Swiss Banking Act, designed to improve resolvability and facilitate the process of recovery and resolution planning, systemic banks will have to satisfy qualitative conditions referring to risk diversification, corporate organisation (i.e. corporate governance) and safeguard of systemic financial services.[37] If the bank is unable to demonstrate that it can fulfill these requirements in case of an insolvency threat, then FINMA will intervene and impose appropriate measures to improve resolvability.[38]

3. Discretionary triggers

The creation of discretionary or so-called "soft" triggers is *"less rules focused and more judgment*

30 The capital ratios created are the following: well-capitalised (capital ratio > 10%), adequately capitalised (capital ratio > 8%), under-capitalised (capital ratio < 8%), significantly under-capitalised (capital ratio < 6%) and critically under-capitalised (capital ratio < 2%), in: *Mathias Dewatripont/Xavier Freixas,* Bank Resolution: Lessons from the Crisis, in: Mathias Dewatripont/Xavier Freixas (eds.), The Crisis Aftermath: New Regulatory Paradigms, CEPR London 2012, 118.

31 We should remind here that such hybrid instruments remain highly untested and during the 2008 financial collapse did not behave as expected by failing to absorb widespread losses, in: *Ceyla Pazarbacioglu/Jainping Zhou/Vanessa Le Leslé/Michael Moore,* Contingent Capital: Economic Rationale and Design Features, IMF Staff Discussion Note 25/01/2011, 8.

32 Article 129 of the Swiss Capital Adequacy Ordinance.

33 *Id.,* article 130.

34 Lloyds had issued CoCo bonds in late 2009 providing for an automatic debt-to-equity conversion if the core capital of the bank falls under 5%. Rabobank's CoCos, issued in January 2011, will be written down once they hit a trigger, below an equity capital ratio of 8%. Finally, Barclays issued twice such financial instruments, which will lead to a write-down to zero if the common equity Tier 1 ratio of the bank falls under 7%.

35 Financial Stability Board (n. 3), 5.

36 Section 11(5)(C), (E), (H), (J) and (M) of the Federal Deposit Insurance Act.

37 Article 9(2) of the Swiss Banking Act.

38 *Id.,* article 10(2).

based".[39] Regulatory authorities will not mechanically base their intervention on the breach of thresholds referring to capital, liquidity or any relevant business performance parameters. On the contrary, discretionary triggers provide state regulators with broad powers to assess if, when and which measures should be adopted.

Discretionary triggers are suggested to be the most popular current solution to the enigma of suitable triggering events, with almost the totality of new bank resolution regimes having introduced at least some degree of discretionary powers for resolution authorities regarding the interpretation of the appropriate moment of their intervention.[40] The following examples show this current trend.

New resolution triggers were introduced in the U.S. under the Dodd-Frank Act in 2010. The Dodd-Frank Act adopts a much broader definition of resolution thresholds allowing for an interpretation of a potential danger of default and the consequences of this last on U.S. financial stability.[41] Despite the fact that the triggers proposed under such law allow for a wider margin of discretion for the authorities in determining the appropriate timing for an intervention,[42] they need to be cumulatively satisfied before the authorities' intervention.

On the other side of the Atlantic, the UK Banking Act of 2009 introduced two general conditions for the exercise of resolution powers by the UK authorities: a) the failure or likely failure of the bank to meet the threshold conditions so as to carry regulated activities[43] and b) the unlikelihood that action will be taken by or in respect of the bank that will enable it to satisfy the threshold conditions.[44] The evaluation of this likely failure is subject to the appreciation of the financial regulator.

Finally, the introduction of the point-of-non-viability trigger in the new version of the Swiss Capital Adequacy Ordinance grants both broad and discretionary intervention powers to FINMA regarding the evaluation of an insolvency risk for a bank.[45]

4. Potential problems relating to current regulatory approaches

We believe that the above overview of current regulatory approaches with respect to triggering events substantiates our opinion that regulatory inconsistency remains a significant obstacle to the standardisation of RRPs.

First of all, we observe that it has become a common practice to base triggers on regulatory capital ratios. But such tests result from complex accounting standards and tend to focus on the current rather than the prospective financial health of a bank. By doing so, regulators tend to forget that back in 2008 it was liquidity – not capital – shortage, which brought international banks to their knees. In most cases of failing banks, capital triggers had been inefficient, as they could not reflect the growing cash adequacy problems within the financial institutions.[46] Certain of them which had been successfully recapitalised through the intervention of state authorities did not manage to convince the markets about their financial health and faced continuous liquidity pressures that eventually pushed them to collapse.[47]

39 *Andrew Haldane/Vasileios Madouros,* The Dog and the Frisbee, Speech at the Federal Reserve Bank of Kansas City's 36th Economic Policy Symposium "The Changing Policy Landscape", Wyoming 31/08/2012, 20.

40 *Christoph Henkel/Wulf Kaal,* Contingent Capital in EU Bank Restructuring, Northwestern Journal of International Law and Business Vol. 32 2012, 252.

41 The authorities can intervene when among others, a) a financial company is in danger of default, b) its failure would have serious adverse effects on the financial stability of the U.S., c) no viable private sector alternative is available to prevent this default and d) any resolution action by the authorities would avoid or mitigate such adverse effects, in Title II, section 203(b)(1)–(7) of the Dodd-Frank Act.

42 And that despite the interpretation of terms such as default or danger of default by the Act, in *id.,* section 203(c)(4).

43 Within the meaning of section 41(1) and schedule 6 of the UK Financial Services and Markets Act.

44 Section 7 of the UK Banking Act.

45 Article 29 of the Swiss Capital Adequacy Ordinance.

46 Commission of the European Communities, Commission Staff Working Document Accompanying the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, the European Court of Justice and the European Central Bank for an EU Framework for Cross-Border Crisis Management in the Banking Sector, SEC(2009)1407, Brussels 20/10/2009, 35.

47 The Belgian bank FORTIS is an interesting example corroborating this argument. Despite an urgent bailout by the BENELUX governments on the 28th of September 2008 for a total of € 11.2 bn recapitalising the bank, FORTIS faced continuous market and liquidity pressures and was eventually broken up along national lines and acquired by the Dutch government and the French group BNP Paribas.

Illiquidity remains the broadest financial risk for modern financial markets.[48] Regulators have realised that even very ambitious capital requirements might not suffice during the next financial crisis, and that, in other words, the effectiveness of capital adequacy standards is debatable.[49] Consequently, regulatory focus gradually shifts to liquidity risk. For these reasons, we believe that the debate around triggering events should also – or perhaps essentially – focus more on cash adequacy.

Furthermore, the implementation of discretionary triggers might prove problematic. It is true that, on the one hand, such triggers will ensure flexibility as they will allow regulators to adapt to the rapidly evolving and multi-factor reality amidst a financial crisis. On the other hand, however, discretionary triggers include an inherent danger of regulatory forbearance.[50] A broad margin of judgment before an intervention might result in untimely crisis management actions, raising serious concerns in the markets, condemning a financial institution and potentially contributing to market contagion. They also lack any predictability, which is so essential for financial markets.

We should also stress that regulatory divergence might become a considerable obstacle for cross-border cooperation. If various – national or supranational – authorities opt for diverse, uncoordinated and sometimes conflicting triggering criteria, it is highly unlikely that will result in a consistent approach with regard to the recovery, resolution or winding-up of international banks, which are often crucial because of their systemic relevance.

With this in mind, we will now suggest what could be the main constituent features of a desirable approach to crisis management triggers.

III. The quest for a suitable trigger

We will begin by touching upon the issue of the timing of regulatory intervention. There seems to be in fact notable confusion regarding when crisis management should kick-in and what can be done depending on the point in time at which it does. We will then address the nature of the criteria that could be used in order to efficiently determine the need for regulatory intervention. Our proposal highlights the need for a transition of solvency evaluation from accounting standards to risk and market-value based models. Finally, we will explore how the existing clash between "soft" and "hard" triggers could be solved.

1. Appropriate timing of the intervention

As described under the first section of this contribution, there seem to be blurry lines between the terms used to define the distinct phases of crisis management. The use of "soft" triggers contributes further to this growing confusion between recovery, resolution and winding-up. State legislators should elaborate more precise notions in bank insolvency rules as well as clarify the most appropriate moments of intervention so as to promote predictability and facilitate their tasks amidst a financial crisis.

We favor the establishment of a sequence of crisis management triggers, which will allow for a progressive intervention of the financial regulator. The intensity of the regulator's intervention will increase with the severity of the ongoing crisis. The choice of a high (i.e. early stage) trigger will focus on recovery whereas a low (i.e. later stage) trigger will focus on resolution.[51] The final stage of triggers will be designed for the initiation of a winding-up procedure. Each trigger and the resulting measures have to be conceived as a whole. The measures adopted under each scenario should be appropriate to address the specific needs of the financial institution at the relevant stage of a crisis.

Such a progressive approach will safeguard the principle of proportionality. Especially in the case of bank resolution, the decision of regulatory authori-

[48] *Jacques de Larosière,* Remaining European and Global Challenges, in: Group of Thirty (ed.), Regulatory Reforms and Remaining Challenges, Occasional Paper 81, Washington DC 2011, 30.

[49] *Emilios Avgouleas,* Breaking-up Mega-banks: a New Regulatory Model for the Separation of Commercial Banking from Investment Banking, in: Panagiotis Delimatsis/Nils Herger (eds.), Financial Regulation at the Crossroads: Implications for Supervision, Institutional Design and Trade, Wolters Kluwer The Netherlands 2011, 198.

[50] Regulatory forbearance describes a situation when a financial regulator decides to postpone an intervention, despite being fully aware of the financial distress of an ailing bank.

[51] An interesting example is the Swiss Capital Adequacy Ordinance regarding the triggers of contingent convertible capital instruments maintained by a systemic bank in its capital buffers, see n. 32–33.

ties to intervene might eventually deprive shareholders and creditors from their governance as well as from fundamental property rights. As a result, such measures should kick in at an appropriate time following the evolution of a crisis and only if previous measures addressing recovery have already failed.

As most jurisdictions opted for broad, discretionary triggers or traditional solvency tests that do not necessarily distinguish between the separate phases of crisis management, there are few examples in the field of banking regulation endorsing such a progressive approach in respect of triggering events and the measures they lead to.

An interesting exception to the current regulatory practices is the system of Prompt Corrective Action operated by the FDIC concerning the treatment of failing U.S. credit institutions. The U.S. authority applies a progressive course of action using regulatory capital as a factor of determination of the severity of a bank's crisis. As to well and adequately capitalised banks, there are no powers of intervention. If a bank is deemed under-capitalised, there will be a process of close monitoring by the regulator, as well as an obligation on the bank to submit and implement a capital restoration plan following the instructions of the Federal banking agency.[52] Should the bank fail in any material respect to implement this restoration plan and should it become significantly under-capitalised, the available measures in the arsenal of the FDIC include a forced recapitalisation, restrictions of assets' growth, of specific activities and of transactions with affiliates, the appointment of new directors, as well as a procedure of divestiture.[53] The same regulatory measures are applicable with regard to the final stage of crisis management, when a bank is considered critically under-capitalised. In addition, the FDIC may appoint a receiver, thus, initiating a resolution procedure for the credit institution.[54]

Regarding this progressive crisis management approach, it is interesting to highlight that to a certain extent the insurance industry seems more advanced in this field than the banking sector, at least in Switzerland. This leads as to summarise what FINMA has put in place with respect to insurers following the 2008 crisis. After all, cross-fertilisation as well as a unified approach between the two sectors is, in fact, desirable.

The FINMA Circular 2008/44 regulates the so-called Swiss Solvency Test, which applies in Switzerland to insurance companies. In its Appendix 4, it sets out the actions that FINMA may progressively initiate, when an insurance company does not satisfy the requirements of a test which is based on various thresholds. The criterion is the Risk Bearing Capital (RBC) of the company compared to its Target Capital (TC) as defined in the Circular. If the company operates within a green zone (RBC > 100% of TC), FINMA will initiate no action.[55] Should the company enter the yellow zone (RBC = between 80% and 100% of TC), FINMA will "intensify the risk dialogue" with the company and will order it to perform a causal analysis for the drop of its RBC.[56] Further restrictions concerning, for example, dividend payments and intra-group transactions are not excluded. In case the insurance company is in the orange zone (RBC = between 33% and 80% of TC), FINMA will tighten its intervention measures requiring the creation of a restructuring plan and imposing restrictions linked to liquidity and risk management.[57] Finally, if the company reaches the red zone (RBC < 33% of TC), FINMA will take immediate steps in order to increase the RBC or transfer part of the insurance portfolio to a third – sounder – company.[58] The revocation of the insurance license is the measure of last resort.

2. Appropriate criteria

We will now touch upon the essential elements that could be used for the assessment of triggering events. We begin with regulatory capital, considered a traditional triggering factor, and we then focus on more forward-looking criteria such as CDS spreads.

52 Section 38(e) of the Federal Deposit Insurance Act.
53 *Id.*, section 38(f).
54 *Id.*, section 38(h)(3).
55 Appendix 4, n. 13 of FINMA Circular 2008/44.
56 *Id.*, n. 14–27.
57 *Id.*, n. 28–36.
58 *Id.*, n. 37–40.

2.1 Towards an economic model of financial standards

Triggers based on the value of equity and other regulatory capital ratios have been repeatedly criticised as representing a solvency image of a financial institution based purely on traditional accounting standards.

As has been seen, on the one hand, the initiation of the trigger frequently relies on the evolution of equity to assets ratios. The evaluation of equity under this scenario is influenced by numerous accounting principles, which are subject to application bias and cross-border divergences.[59] Consequently, capital ratios resulting from the comparison of the value of equity to the financial institution's assets might be prone to discretion and, sometimes, manipulation. Many cases demonstrated the limits of such an approach, such as the Japanese banking crisis in the 1990s[60] and the example of certain U.S. banks during the 2008 financial meltdown.[61] Moreover, the valuation of assets, especially amidst a rapidly evolving financial crisis, might be extremely difficult and reasonable certainty cannot be achieved.[62]

Also, not only can the value of equity be potentially manipulated, but in 2008 it was also a lagging indicator regarding the financial condition of most banks.[63] As a natural reaction to the 2008 financial collapse, markets have grown skeptical regarding these reported book values.[64]

The Basel Committee has also endorsed the option of using indicators based on the level of RWAs of the bank for the evaluation of regulatory capital requirements. Nevertheless, such a concept is subject to divergent methods of risk assessment implementation among different financial institutions and across jurisdictions. In July 2013, the Basel Committee undertook an analysis of regulatory consistency regarding the evaluation of RWAs for credit risks. The Hypothetical Portfolio Experience under which 31 otherwise equivalent international banking groups were asked to evaluate the risk of a common set of (largely low default) wholesale obligors and exposures revealed notable dispersion. As a result, capital ratios could vary as much as 15% or 20% in relative terms (1.5 to 2 percentage points) in either direction around the capital requirement benchmark of 10% used for the study.[65]

The Basel Committee identified three principal causes explaining this considerable variation: a) varying Internal Ratings-based approaches by the financial institutions regarding credit risk assessment, b) diversity in supervisory choices and c) supervisory deviations in the national implementation of the Basel standards.[66]

By and large, and following the progressive implementation of the new Basel III standards relating to regulatory capital, we estimate that capital ratios will continue playing an important role in the final determination of crisis management triggers.[67] However, they should be based more on a synergy of economic, risk and market-value approaches. A marked-to-market evaluation model will obviously provide a

59 Among these standards, obviously the IFRS and US-GAAP.

60 The Japanese banking system was practically insolvent for almost a decade, however, the accounting manipulation of capital ratios allowed Japanese banks to fulfill their minimum book value capital requirements under the Basel accords, in: *Stijn Claessens/Richard Herring/Dirk Schoenmaker,* A Safer World Financial System: Improving the Resolution of Systemic Institutions – Geneva Reports on the World Economy No. 12, ICMB Geneva 2010, 72.

61 Certain U.S. financial institutions, which were eventually shut down or forced into government assisted mergers, had maintained strong regulatory capital ratios, which were not near the under-capitalisation threshold necessitating an intervention of the authorities. This had been the case for Bear Stearns, Washington Mutual, Lehman Brothers, Wachovia and Merrill Lynch, which presented capital ratios ranging from 12.3% to 16.1%, in: *Dewatripont/Freixas* (n. 30), 118.

62 In 2008, Morgan Stanley, an expert financial institution on assets' valuation, entered into negotiations with Wachovia, for a potential acquisition by the latter, which just two weeks after became insolvent, in: *Richard Herring,* The Central Role of Resolution Policy in Dealing with Systemically Important Financial Institutions, 2011, available at *<http://fic.wharton.upenn.edu/fic/papers/11/11-71.pdf>*, 27.

63 *Pazarbacioglu/Zhou/Le Leslé/Moore* (n. 31), 9.

64 *Herring* (n. 62), 27.

65 Basel Committee on Banking Supervision, Regulatory Consistency Assessment Programme (RCAP): Analysis of Risk-Weighted Assets for Credit Risk in the Banking Book, Basel July 2013, 8.

66 *Id.,* 7.

67 Capital ratios triggers are objectively less prone to manipulation than stock prices or ratings. Moreover, they are not significantly affected by market contagion as liquidity is, in: *Pazarbacioglu/Zhou/Le Leslé/Moore* (n. 31), 19. They will also incentivise shareholders and management to follow more prudential business practices and explore private sector options for recapitalisation, so as to avoid the initiation of the trigger.

fair and more realistic assessment of the financial health of a bank compared to a static book value of equity appraisal, provided there is a reliable liquid market. The constant value changes not only of the assets, but also of the institution's liabilities due to the shifts in market conditions will, in any event, be better reflected through such a model. Moreover, with regard to risk assessment and its impacts on regulatory capital, although some diversity is desirable, the Basel Committee should probably better identify the areas that require further clarification, guidance, potential constraints to flexibility and discretion, as well as enhanced cross-border disclosure.[68]

2.2 Forward-looking factors

The desirable approach towards efficient crisis management triggers should include more forward-looking factors able to proactively detect whether a banking venture is likely to fail or be distressed. Such triggers could encompass both quantitative and qualitative criteria. We could cite a long list of such features, admitting however that not all of them are adequate to address the challenges of a financial crisis.

First of all, one could resort to the use of ratings downgrades. When evaluating the financial health of a bank, rating agencies take into consideration a variety of accounting, market-based, as well as qualitative standards. Consequently, their rating estimation could become a useful proxy for the identification of future financial problems. Unfortunately, this has proven not to be true during the 2008 financial crisis, when rating agencies failed to timely grasp – or at least reveal – the deterioration in global financial markets.

Moreover, triggers could be based on stock prices. It has been noticed that, in various cases of collapse of both financial institutions and mega-corporations, a severe and persistent decline in the market value of their equity had taken place, before they entered the final stage of insolvency.[69] However, the use of stock prices for the identification of financial problems does not come without a risk. Stock prices might be prone to manipulation. Furthermore, they might be an unreliable source of timely information as they are considered to be able to reflect only small valuation changes over small periods of time.[70] Finally, a trigger linked to the stock price movements might contribute to panic during crisis situations. A rational assumption by existing shareholders that the sale of shares by exiting shareholders might eventually activate the trigger could turn into a self-fulfilling prophecy, as many shareholders might also panic and decide to sell equity in order to exit the bank before a resolution or winding-up procedure.[71]

Furthermore, as mentioned above, the new liquidity ratios introduced by the BCBS and the various liquidity buffers required from systemic banks under domestic legislations stress the importance of liquidity management in the post-2008 era. Hence, forward-looking triggers should reflect such considerations. The inability of a bank to fulfill its cash requirements could call for an intervention of the authorities. This action should allow an intervention before a liquidity squeeze deteriorates and results into a further solvency crisis.

The main concern is that the use of liquidity triggers might give ground for conflicting interpretations between recovery and resolution. So far, liquidity problems, especially in their most severe form, have been addressed by central banks under the function of the Lender of Last Resort (LOLR). But the link between a liquidity crisis and the role of state authorities in respect of opening a resolution procedure might be in conflict with this fundamental role of central banks and result in a situation where banks with urgent liquidity assistance will be considered insolvent.[72] Nevertheless, many financial institutions resorting repeatedly to central banks for liquidity already face growing solvency problems and might have already passed the threshold for recovery.[73]

We should also note that state regulators should be cautious when fixing the level of such liquidity

[68] Basel Committee on Banking Supervision (n. 65), 8–10.

[69] See the examples of Lehman Brothers and Enron, in: *Claessens/Herring/Schoenmaker* (n. 60), 73.

[70] *Id.*

[71] *Darrell Duffie,* A Contractual Approach to Restructuring Financial Institutions, in: Kenneth Scott/George Schultz/John Taylor (eds.), Ending Government Bailouts as We Know Them, Hoover University Press Stanford 2010, 116.

[72] *Andrew Campbell/Rosa Lastra,* Definition of Bank Insolvency and Types of Bank Insolvency Proceedings, in: Rosa Lastra (ed.), Cross-border Bank Insolvency, Oxford University Press Oxford 2011, 31.

[73] *Goodhart* (n. 14), 604.

ratios as certain features of liquidity regulation remain potentially controversial. A primary example of potential controversy is the definition of liquid assets, which is currently much broader under the Basel standards than under most domestic regulatory regimes.[74] As a solution, liquidity ratios could be complemented with qualitative evaluations under stress tests and other supervisory exercises. Hence, the initiation of this type of triggers could be precipitated by the results of such stress tests or crisis management scenarios, emphasising the financial vulnerability of a bank.[75]

Finally, we should highlight that the Credit Default Swaps (CDS) spreads of a financial institution could provide crucial information, which could be used as the basis for activating a trigger. A CDS refers to the possibility of a given firm's failure; in fact, its price reflects the market estimation of how likely it is that the firm will not to be able to repay its debt in full. In the case of the U.S. financial institutions, the evolution of their CDS spreads took an abrupt turn after the summer of 2007. Based on figures provided on key dates between August 2007 and September 2008, it turns out that the CDS market provided a remarkably accurate indicator of the forthcoming collapse of certain troubled U.S. banks. The following table I summarises these findings.[76]

Based on the same approach, we created a table for the two Swiss systemic banks regarding their CDS prices at the same dates as for the above cited U.S. financial institutions. The result is as follows (table II):[77]

Table I: One-year cds rates of the major financial institutions at key dates during the crisis

Financial Institution	8/15/2007	12/31/2007	3/14/2008	9/29/2008
Bank of America	11	29	93	124
Wells Fargo	23	45	113	113
J.P. Morgan	19	32	141	103
Citigroup	15	62	225	462
Wachovia	14	73	229	527
Washington Mutual	44	422	1,181	3,305
Goldman Sachs	28	78	262	715
Morgan Stanley	31	129	403	1,748
Merrill Lynch	29	159	410	666
Lehman Brothers	38	100	572	1,128
Bear Stearns	113	224	1,264	118
AIG	31	59	289	821

All figures are in basis points per year.

Table II

Financial Institution	15/08/2007	31/12/2007	14/03/2008	29/09/2008
UBS	33	46	209	308
Credit Suisse	50	49	188	157

74 *Charlie Beach/Claire Rieger*, Liquidity and Funding, in: Richard Barfield (ed.), A Practitioner's Guide to Basel III and beyond, London 2011, 159.

75 *Henkel/Kaal* (n. 40), 253.

76 *Oliver Hart/Luigi Zingales*, Curbing Risk on Wall Street, in: Stijn Claessens/Douglas Evanoff/George Kaufmann/Laura Kodres (eds.), Macroprudential Regulatory Policies: The New Road to Financial Stability?, World Scientific London/Singapore 2012, 326.

77 Source: Bloomberg.

Regarding UBS, there is a constant rise during this selected one-year period. In August 2007, the bank became aware for the first time of its true exposure to the subprime market and the Swiss Federal Banking Commission (SFBC) ordered an immediate increase in capital requirements. As the situation for UBS kept deteriorating, in early 2008 the Swiss National Bank (SNB), the SFBC and the Federal Department of Finance (FDF) started working on a possible worst case scenario for the bank. In March 2008, the SFBC required a change of management and, as of early September 2008, all three Swiss authorities became confronted with the necessity of a massive state intervention in order to save UBS, an intervention that was implemented in October 2008. This evolution is reflected in the CDS rates' evolution in a manner which is rather anticipatory compared to most other sources of information.

Credit Suisse had also been subject to close monitoring during the same period but maintained better CDS rate performance. From August 2007, it had been subject to stricter capital requirements. As the bank had been exposed to the subprime market, the SFBC implemented from Mars 2008 onwards specific measures forcing Credit Suisse to significantly limit its global exposure in the field of Leveraged Finance products. The bank needed to be recapitalised but was able to do so in October 2008 from private sources i.e. without any state aid.

It is interesting to compare the CDS spreads of the two Swiss banks during the relevant period; they *ex post* appear to be quite accurate indicators of the respective bank's strength.

This said there have been two principal arguments against the use of CDS spreads as a future crisis indicator. Firstly, the pricing of the risk through such financial instruments is not constant over time.[78] Therefore, they might send conflicting signals to financial markets and regulators. Secondly, they developed a negative reputation during the 2008 crisis as being potentially subject to manipulation and perhaps one of the causes behind the crisis. However, one should highlight that the actual problem in 2008 was not the CDS instruments *per se* but the way they were traded and their complete absence of collateralisation by most financial institutions selling CDS insurance.[79]

All in all, it appears that there is not a silver-bullet, exclusive solution in choosing among available forward-looking instruments in their role as early warning indicators of a potential crisis management procedure. Each option has strengths and weaknesses and by none can flaws be excluded. We believe that the final choice should result from a combination of – or of some of – the factors which we have highlighted. A critical evaluation of these parameters by regulatory authorities linked to a non-mechanical implementation of carved in stone resulting measures, i.e. a certain degree of discretion, is a necessary component.

2.3 "Hard" vs "soft" triggers

A core aspect of the current debate regarding the suitable form of crisis management triggers relates to the conflict between "hard" and "soft" thresholds. The first could be described as encompassing all triggers which are based on purely objective, mostly quantitative parameters and which, as a consequence, kick in automatically whenever the relevant limit is superseded. The crisis management mechanism will thus be activated without any further evaluation from the bank's management or supervisory authorities. On the other hand, "soft" regulatory triggers have a subjective component and the non-viability test is, at least in part, based on a qualitative analysis. As a result, regulatory authorities enjoy a certain degree of discretion as to the measures to be taken, and when to take them.

78 It has been observed that *"a CDS spread at one point of the business cycle, under one set of market conditions, can be indicative of a higher level of risk than that same spread observed at another time under a different set of business conditions"*, in: *Claessens/Herring/Schoenmaker* (n. 60), 72.

79 When entering into a CDS transaction, the seller of CDS will have to post collateral, primarily cash, to the buyer of CDS in an amount equal to the marked-to-market value of the total CDS trades. The seller, thereafter, has to update its collateral position daily and post more collateral if the likelihood of default and, thus, the value of the CDS contract increases. Before the 2008 crisis, the CDS market did not require such protection through collateralisation. Consequently, as AIG had sold enormous amounts of CDS "insurance" without posting adequate collateral, it was unable to satisfy CDS buyers when the risk of failure of numerous firms increased and the buyers began demanding the collateral, in: *Hart/Zingales* (n. 76), 323.

a. Principal features of "hard" triggers

The need for the creation of automatic triggers stems from the demands for more certainty and transparency in a banking crisis. Regulatory interventions will have significant impacts for a variety of markets' participants. Shareholders and creditors might in particular see their rights severely restricted and, as a consequence, call for foreseeability regarding the thresholds which will enable the authorities to exercise their powers. Investors need and require predictability not only about the beginning of the process but also about the effects thereof.[80]

Moreover, it has been claimed that it will be easier to achieve harmonisation and consistency across jurisdictions through the use of "hard" resolution thresholds, avoiding divergent discretionary actions.[81]

Furthermore, without the use of automatic triggers the marketability of contingent convertible financial instruments might be at stake. It will be practically unthinkable for investors to become subject to potential debt-to-equity conversion or debt write-down policies without rigid thresholds in place in that respect. After all, the pricing and demand of such instruments will heavily depend on these events.[82]

All this is certainly convincing but the antithesis cannot be ignored. It might in fact be true that hard rules increase *ex ante* efficiency, certainty and transparency, characteristics that are critical for shareholders, creditors and investors.[83] Those rules can limit regulatory forbearance and arbitrariness, as well as become an effective stopover to the propagation of moral hazard.[84] But on the other hand they are also subject to potential drawbacks when compared to discretionary triggers.

Flexibility is indeed an important and probably necessary component of the authorities' intervention, especially amidst a broad financial crisis, when often unforeseen events unfold rapidly. This is why regulatory authorities cherish powers that will allow them to address a crisis according to the specific conditions of each financial institution, rather than based on a "one-size-fits-all" solution. As a result, they are reluctant to commit themselves to automatic triggers without benefiting from a certain degree of discretion and constructive ambiguity.[85]

More specifically, rigid triggers might be unsuitable to adequately reflect macro-prudential considerations and respond to the challenges of a systemic event. Based on the size of a financial crisis, market participants might grow nervous and uncertain if they consider the fixed capital or liquidity requirements to be insufficient.[86] In such a case, an automatic low trigger might be reached too late, resulting in the financial implosion of an international bank.[87]

Finally, it is unclear if "hard" triggers could facilitate cross-border coordination. On the contrary, they might contribute to a stalemate in negotiations for recovery and resolution planning or an actual crisis management procedure, if the various authorities involved apply different levels of thresholds with regard to their intervention.

b. Advantages and drawbacks of a "soft" triggers approach

When adopting a "soft" triggers approach, the decision on regulatory intervention will be based on the likely failure of a financial institution and on a prospective tailor-made analysis of its final non-viability if no action is taken. In order to perform this analysis, the authorities will examine multiple, quantitative and qualitative, factors. This analysis will take into account the specificities of the relevant financial crisis. Hence, regulators will have to accommodate a certain degree of uncertainty regarding their final decision and the form of this last.[88]

80 Institute of International Finance (n. 16), 56.

81 Institute of International Finance, Addressing Priority Issues in Cross-border Resolution, May 2011, 21.

82 Hence, speculative investors will be interested in high trigger contingent convertible capital instruments, which present important risk but at the same time they offer a high yield, in: *Pazarbacioglu/Zhou/Le Leslé/Moore* (n. 31), 12.

83 *Martin Cihak/Erlend Nier,* The Need for Special Resolution Regimes for Financial Institutions – The Case of the European Union, IMF Working Paper WP/09/200 September 2009, 14.

84 As the majority of creditors of international banks are other financial institutions and intermediaries, any disruption of their expectations by discretionary state powers might contribute to crisis propagation and systemic issues, in: Institute of International Finance (n. 16), 38.

85 *Goodhart* (n. 14), 603.

86 *Herring* (n. 62), 27.

87 *Paul Tucker,* Basel III, TBTF and Macro-prudential Regimes, in: Group of Thirty (n. 48), 17.

88 Institute of International Finance (n. 16), 37.

The principal advantage of such a regulatory approach will be that of flexibility. It is intellectually reassuring but practically unrealistic to design triggers covering every case and potential financial emergency.

Furthermore, we estimate that broader powers regarding triggers will facilitate the cooperation of regulatory authorities for the drafting of RRPs and the implementation of cross-border procedures. Although potentially controversial, as too much discretion might become a source of conflicts, the *ex post* efficiency of cross-border bank resolution practices using a "soft" trigger approach is expected to increase.[89]

Nonetheless, if combined with regulatory forbearance,[90] constructive ambiguity[91] can become a source of confusion and market agitation. In 2008, various regulators decided to refrain from any disclosure regarding their potential actions with regard to troubled financial institutions, so as to attenuate any further moral hazard issues. This decision did not produce the expected results. On the contrary, it contributed to market panic and crisis contagion, forcing states to ultimately intervene on a much larger scale through the use of immense financial resources.

One of most sensitive issues at stake is definitely regulatory forbearance. "Soft" triggers and a broad margin of judgment before a possible intervention might, in fact, result in untimely – too late – actions, condemning a financial institution in insolvency. It is a known fact that regulatory forbearance had been one of the main reasons behind the deterioration of the financial conditions of numerous banks during the 2008 crisis.[92] On the one hand, it is true that certain regulators lacked the necessary information that would have allowed them to step in more rapidly. On the other hand, regulatory forbearance might be used as a convenient excuse for the incompetence of regulators to identify a crisis and their failure to adequately monitor the activities and financial condition of banks.[93]

Finally, the use of discretionary triggers will involve a significant workload for the supervisory authorities and will require sufficient cooperation and information exchange with the supervised financial institutions. If these last will be unable or unwilling to identify early signs of a potentially severe financial trouble and promptly inform the authorities, such triggers will not become efficient.

c. A solution to the clash between "hard" and "soft" triggers

In sum, optimal resolution triggers are likely to be based on a compromise resulting from the conflict between rules and discretion.[94] Discretionary triggers seem preferable but specific characteristics of "hard" triggers are also compelling for the protection of shareholders and creditors, as well as for the marketability and risk pricing of contingent capital instruments which are essential in view of the objectives of bank recovery and resolution. Consequently, we believe that the adoption of progressive triggers, which could accommodate elements of various triggers designs, might be a satisfactory solution to this puzzle.[95]

At a first stage, regulators could use "hard" triggers based on purely quantitative data. If these fixed thresholds are superseded, regulatory intervention would, however, not be triggered automatically, but the authorities would undertake a thorough assessment of the bank's financial condition.[96] It is only if, following a prospective viability assessment, the bank is deemed likely to fail that a full crisis management procedure will be implemented.

This concept would accommodate legal certainty, as shareholders and creditors will be aware that reaching certain given and precise thresholds will be necessary for the supervisory authorities to step in and that this will necessarily lead to a review of the failing bank's viability. Regulatory authorities should be able to maintain an element of discretion and judgment, as their final decision will be the re-

89 *Cihak/Nier* (n. 83), 14.
90 For the definition see note 50.
91 For the definition see note 6.
92 *Hart/Zingales* (n. 76), 323.
93 *Dewatripont/Freixas* (n. 30), 121.

94 As stressed by *Cihak/Nier, "a rule can increase commitment to take resolution action and therefore reduces the scope for forbearance. Increasing a degree of discretion can lead to a fuller appraisal of the situation at hand and can make it easier to incorporate an element of judgment"*, in: *Cihak/Nier* (n. 83), 14.
95 *Henkel/Kaal* (n. 40), 253.
96 *Goodhart* (n. 14), 604.

sult of an interim, cautiously tailored solution for each troubled bank.[97]

We should stress, though, that such a system of progressive triggers will require an open, straightforward and constant exchange of information between supervised financial institutions and regulators. Appropriate risk warnings should be established within financial institutions, allowing for a rapid identification of a breach of a trigger by the management and/or financial auditors, who should immediately inform the regulators, so that they can conduct their assessment.[98]

IV. Competent "whistleblowers" of an imminent crisis

Under the majority of current regulatory approaches, it is for state regulators to identify cases of threshold breaches and, more generally, the need to implement appropriate measures. This principle might, however, become subject to significant exceptions, even in certain major jurisdictions. It has, in fact, been argued that other stakeholders, such as creditors or the bank's management, should be also able to become involved in the initiation of anti-failure processes.

Creditors in the U.S. are, for instance, authorised to request that an involuntary bankruptcy procedure starts against an insolvent company under Chapter 11 section 303 of the Bankruptcy Code. Still, such a possibility does not apply to financial institutions and it has been so far rarely used in practice.[99] It is in any event probably right to consider that such a powerful tool in the hands of bank's creditors might be ill-conceived.

First of all, outsiders will seldom have a clear picture of the true financial condition of a financial institution, as they normally rely on external reports and communications.[100] Even bank regulators have been, in certain cases, incapable of timely detecting a financial crisis due to the insufficient information being available. We do not believe that creditors could dispose of a better inside view. Furthermore, they might misuse such powers in order to push a competitor out of the market or simply as a threat in order to selfishly exhort the payment of their debts.

In addition, creditors will be subject to potential measures such as bail-in and might experience a change of their legal status or suffer a more or less radical haircut of their claims. Consequently, they might become biased in rapidly initiating a recovery procedure so as to avoid upcoming resolution measures or in pushing a decision for resolution to the future in order to avoid any prejudice in respect of their present claims. Both choices, blowing the whistle too early as well as too late, can have disastrous results for a financial institution.

Another option would be to allow financial institutions to apply voluntarily for bank resolution procedures, if they consider that they are on the brink of financial insolvency and that an intervention of the authorities is indispensable.[101] Contrary to the case of the progressive trigger mentioned above, where certain "hard" thresholds will be in place and once reached the management will be compelled to resort to the financial regulators, under this scenario the financial institution will be entirely independent to decide if its financial survival is at stake. Should it make such a determination, it will petition the competent authorities for the initiation of an intervention. Although a bank should by definition be equipped with the mechanisms that will allow an early identification of a potential financial threat and its management should be aware at any point of the bank's true financial condition, we are of the view that a practice relying too much on financial institutions to interpret autonomously a likely failure might be problematic.

As the experience demonstrated during the 2008 financial crisis, various financial institutions were

97 World Bank (n. 26), 30.

98 Financial Stability Board (n. 3), 9–10.

99 *Leif Clark*, Triggering Criteria for Starting and Stopping Bankruptcy, US Legal Principles, in: Peter/Jeandin/Kilborn (n. 24), 21.

100 *Herring* (n. 62), 28.

101 Such is the case under the new German law regarding the reorganisation of credit institutions. In case of severe financial troubles and if a recovery is not possible, a German systemic bank can voluntarily petition the German Federal Supervisory Authority (BaFin) by submitting a reorganisation plan and by nominating a reorganisation trustee. BaFin will review the petition and if it deems that the bank is likely to fail, it will forward the petition to the competent court, which will take the final decision, in Section 7 of the Law on the Reorganisation of Credit Institutions. Moreover, under the procedure of Chapter 11 of the U.S. Bankruptcy Code, any company might submit a voluntary petition without even being financially insolvent.

simply unaware of the potential consequences of their hazardous business activities and tended to ignore or underestimate the continuous deterioration of their liquidity and capital ratios.[102] Moreover, not all banking groups are well prepared for a financial crisis. The risk assessment mechanisms and capital requirements in place might prove insufficient to provide early warnings, especially in the case of a systemic event. But, above all, as has been highlighted with regard to regulatory forbearance of bank supervisors, a bank's management might try to conceal bad news as long as possible. The infamous "gamble for resurrection" could ultimately prove a fatal decision and sentence the bank to financial collapse.[103] The concept of limited liability within banking institutions could also become a source of hazardous judgments, which might prevail over risk-averse behaviors.[104]

As a result, although not necessarily always ideal, the primordial role in interpreting the likely failure of a financial institution and, subsequently, the initiation of a trigger should remain within the powers of regulatory authorities. Despite the risk of regulatory forbearance, they are better equipped and will better safeguard impartiality, independence and productivity than the management of a bank. This is also preferable in a cross-border perspective. They should, however, be assisted in this role by the supervised banks, whose contribution will be of great importance through a close collaboration and information exchange with the competent authorities.

Conclusion

Following the questionable pre-2008 regulatory and behavioral attitude and their disastrous consequences, crisis prevention and management remains a very ambitious and moving target, the latter explaining in part the former. In that context, identifying the proper triggers is a key part of the ongoing efforts to improve financial regulation. This has to be done in a manner which is to all possible extent standardised both in terms of the rules themselves and of their implementation, nationally as well as internationally in view of the fact that the financial industry is increasingly globalised and therefore systemic.

We highlighted that, contrary to certain current regulatory approaches, regulators should opt for a prospective rather than a retrospective test. Such an approach should focus on an evaluation of financial viability and interpret a likely failure based on economic, market-based value models rather than classic retrospective accounting standards (IRS, US GAAPs, etc.). Capital ratios could remain a useful part of such determinations but should be complemented with forward-looking liquidity requirement diagnosis, both being correlated to risk assessments and shifting market trends. We demonstrated, for instance, that CDS spreads could usefully act as crisis indicators.

This prospective test should necessarily rely not only on quantitative triggering criteria, but also on qualitative thresholds. A qualitative, i.e. to a certain degree discretionary, approach will also impact on the powers of the enforcing authority.

Furthermore, there should not be one single threshold, but a series of triggers' levels, resulting in the progressive implementation of increasingly stringent measures. One-shot "black-and-white" regulatory responses can, in fact, hardly address the specific circumstances of each particular crisis and financial institution.

Finally, cross-border harmonisation of crisis management procedures remains an acute challenge. Transnational compatible rather than domestic focused triggers is a necessary feature towards an effective response to the next major financial crisis.

102 The near collapse of UBS is an interesting example stressing that there can be lagging communication mechanisms with the management, which might become fully aware of an imminent insolvency at a very late stage, when any recovery is impossible.

103 *Herring* (n. 62), 28.

104 *Dewatripont/Freixas* (n. 30), 121.