

# CRISIS MANAGEMENT IN PUBLIC INSTITUTIONS - CROATIAN FINANCIAL SYSTEM AND THE COVID-19 PANDEMIC

Ante Žigman\*  
Tomislav Ridzak\*\*  
Mirna Dumičić Jemrić\*\*\*

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## Abstract

*Crisis management in the context of public institutions is particularly important, due to the extremely large possible impact of the consequences of systemic crises on society as a whole. Suboptimal or too slow decisions of public institutions usually affect a much wider set of people, entities, and economic and financial developments than when it comes to crisis management in individual companies, even if they are systemically important. This paper focuses on the activities of the Croatian National Bank and the Croatian Financial Services Supervisory Agency in dealing with the crisis caused by the coronavirus pandemic and presents the most important activities*

*of the government, government agencies, and commercial banks that have had an impact on financial stability. The analytical part of the paper presents the effect of trading suspension on the Zagreb Stock Exchange on 12th March 2020 and its implications on the market. Although it is still too early to make final assessments, given the course of the pandemic, the available data suggest that the activities of domestic institutions have so far been effective in maintaining financial stability in Croatia.*

**Keywords:** *crisis management, financial stability, pandemic, financial regulator*

## 1. INTRODUCTION

According to Pearson and Clair (1998), crisis management implies organized and coordinated effort of various system participants in cooperation with the stakeholders to mitigate or manage a crisis. In the context of public institutions, crisis management is particularly important due to the extremely large potential impact of the consequences of the crisis on society as a

whole. On top of that, crisis management in public institutions could even be considered a matter of national security (Kos and Hromadskyi, 2017). Namely, poor or insufficiently fast decisions of public institutions in many cases can affect a much wider set of people, entities, and economic and financial developments than when it comes to crisis management in individual companies, even if they are systemically important. This is especially true when a country

\* Ante Žigman, President of the Board of the Croatian Financial Services Supervisory Agency, E-mail: ante.zigman@hanfa.hr

\*\* Tomislav Ridzak, Board Member of the Croatian Financial Services Supervisory Agency, E-mail: tomlslav.rldzak@hanfa.hr, ORCID: <https://orcid.org/0000-0003-2899-8215>

\*\*\* Mirna Dumičić Jemrić, Advisor in the Office of the Governor of the Croatian National Bank, E-mail: mirna.dumicic-jemric@hnb.hr, ORCID: <https://orcid.org/0000-0003-1893-5456>

or region experiences an endogenously or exogenously caused crisis or, in extremely unlikely, but possible cases, where the crisis affects most of the world at the same time.

The global financial crisis has further fueled discussions about improving crisis management processes and the specific roles and responsibilities of individual regulators of the financial system and institutions whose activities have an impact on financial stability. It has also revealed significant space for progress, related to the timing and coordination of actions, taken by various institutions, both at the national and international level.

As Solt (2018) pointed out, financial crisis management is primarily aimed at reducing the costs of a crisis episode, and strategies for such actions should be devised before it occurs. This is in line with the results of a study by Tokakis, Polychroniou, and Boustras (2019), who confirmed that effective reactions of policymakers during crisis conditions are positively related to the quality of the pre-crisis management phase since they can significantly affect the efficiency of early warning signals of the potential crisis, as well as the tools available for dealing with the crisis.

In general, once when the systemic crisis episode occurs, one of the key factors for the preservation of financial stability is public confidence in institutions, which especially refers to the regulators of the financial system, the fact also confirmed by the OECD (2020) research on the territorial impact of the corona crisis from health, economic, social and fiscal perspectives. This trust is built systematically and gradually, through activities to strengthen protection mechanisms and buffers at the system level in peacetime and timely responses in crises, as well as through active communication with experts and the general public

about systemic risks and measures taken. However, the practice has shown that it is also necessary to establish formal procedures that ensure coordinated action of all actors which, in turn, can affect the stability of the system.

From the point of view of financial stability, central banks are usually cited as the most important institutions. Bindseil (2015) highlights that financial crisis management is one of their most important tasks, emphasizing the three main roles of the central bank in such situations - ensuring system liquidity, adequate central bank risk management, and implementing supervisory measures and activities. At the same time, in addition to central banks and other "traditional" institutions considered important for maintaining financial stability, such as banking supervisors, ministries of finance or deposit and savings insurance agencies, Singh and LeBross (2011) draw attention to the growing importance of non-banking regulators of the financial system such as those in charge of securities markets, pension funds, leasing companies, and insurance companies because their decisions can also significantly affect the financial stability.

To ensure better and timely cooperation between individual financial system regulators at the EU level, the ESRB issued a Recommendation on a macro-prudential regulatory framework (ESRB / 2011/3) to establish national macroprudential bodies and develop a formal framework for macro-prudential supervision of the financial system in the EU countries. Based on this recommendation, grounded in a special law, the Financial Stability Council was established in Croatia (NN, 2013). In that sense, the scene for the ongoing corona crisis has been much better prepared than for the previous crisis episodes.

The COVID-19 pandemic represents an unprecedented shock in recent history, the scale of which could not have been foreseen even in early 2020 when it became clear that the coronavirus had begun to spread beyond Asia. It is also a real stress test for challenging the process of managing crisis episodes, with its scope and implications surpassing “normal” crises. Moreover, unlike in previous crises when developments in the financial sector caused the crisis, in this case, the financial sector, under the guidance of supervisors, acted as a buffer for the real economy. Although the institutional framework has become much stronger in the meantime, the scale and the uncertainties related to this crisis episode resulted in additional challenges for its management, which is also in line with findings of Tokakis et al. (2019) who show that “conventional” crises episodes are both easier to predict and handle.

The measures taken for preventing the spread of the coronavirus and reducing the general panic among people have resulted in unforeseen consequences both for the real economy and the financial system. Paralyzed economies and the extremely high volatility that prevailed in financial markets, whereby individual segments were practically completely frozen, required extremely quick and decisive reactions from governments and financial market regulators, both globally and at the level of individual countries.

As the corona crisis still goes on, the number of published research papers dealing with crisis management in public institutions and the pandemic is still negligible. In one of the rarely published papers, Janssen and van der Voort (2020) analyze agility and adaptability in corona-crisis governance and emphasize that the decision-making speed that characterizes the agile approach sometimes contradicts the adaptive approach applied to complex problems such as pandemics which

involves the interaction of all important stakeholders. By comparing the reactions of public institutions to the corona crisis in Belgium and the Netherlands, Pattyn et al. (2020) indicate that reactions in a particular country are also influenced by past experiences, the existing institutional structure and governance methods of organizational culture and the like, which is expected given that close cooperation between public institutions is implied, and a similar conclusion can be drawn based on the Croatian example.

This paper presents actions, taken by the two most important regulators of the Croatian financial system - the Croatian National Bank (CNB) and the Croatian Financial Services Supervisory Agency (HANFA), aimed at mitigating the effects of the coronavirus pandemic crisis. Following the introduction, the second part of the paper describes the most important events related to the pandemic and their effects on the economy and financial markets. The third part focuses on the consequences of the crisis on the Croatian economy, with detailed descriptions of actions taken by the CNB, the HANFA, the Croatian government, state agencies, and commercial banks, focusing on those with a significant impact on financial stability. The fourth part describes a study of the automatic circuit breaker and the supervisor’s intervention on the stock market (Zagreb Stock Exchange), while the final part provides a conclusion.

## **2. CHARACTERISTICS OF THE CRISIS CAUSED BY THE CORONAVIRUS PANDEMIC IN CROATIA**

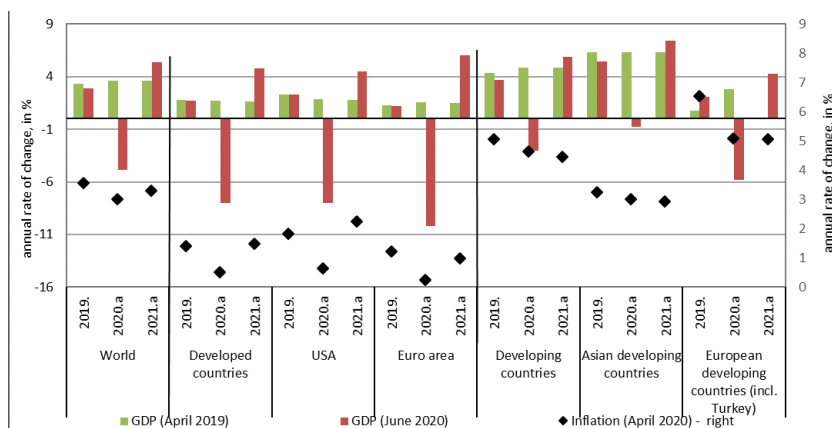
The first information about the appearance of coronavirus and its strong infectivity appeared in late 2019 in central China in the city of Wuhan. Although at first, it

seemed that the problems caused by the epidemic would affect only China and some Asian countries, in early 2020 it became clear that the virus could not be controlled, and on March 11 the World Health Organization declared a global coronavirus pandemic. (Croatian Financial Services Supervisory Agency, 2020)

The crisis caused by the pandemic is, in many respects, literally unprecedented - both in the way it has distressed the lives of individuals and in the way it has affected the real sector and financial markets. Its specificity is that it has almost simultaneously hit an extremely large number of countries in which, due to epidemiological measures to prevent the spread of the virus, economic activity slowed down overnight, while some activities completely stopped. The strong macroeconomic shock that occurred at the same time on both the supply and the demand side, which was further exacerbated by a huge

uncertainty about the further course of the pandemic as well as the panic mixed with fear for one's health and wellbeing, quickly spilled over into financial markets, influencing the overall financial system (CNB, 2020a).

Until then, the optimistic economic forecasts, which in the first quarter of 2020 predicted only a slowdown in economic growth in Asian countries, almost overnight became extremely negative and were further revised to lower after the introduction of strict epidemiological measures in most world economies (Figure 1). The focus of these measures was to stop the spread of the virus by minimizing social contacts, regardless of the economic costs of such an approach. Only a few countries, such as Sweden, have decided to continue living in normal mode without restrictions in certain activities, but with increased precautions. However, up to now, it has not yet been possible to assess the efficiency of such an approach.



**Figure 1.** Projections of global economic growth  
<sup>a</sup> Forecast.

Source: IMF (WEO, June 2020/April 2019).

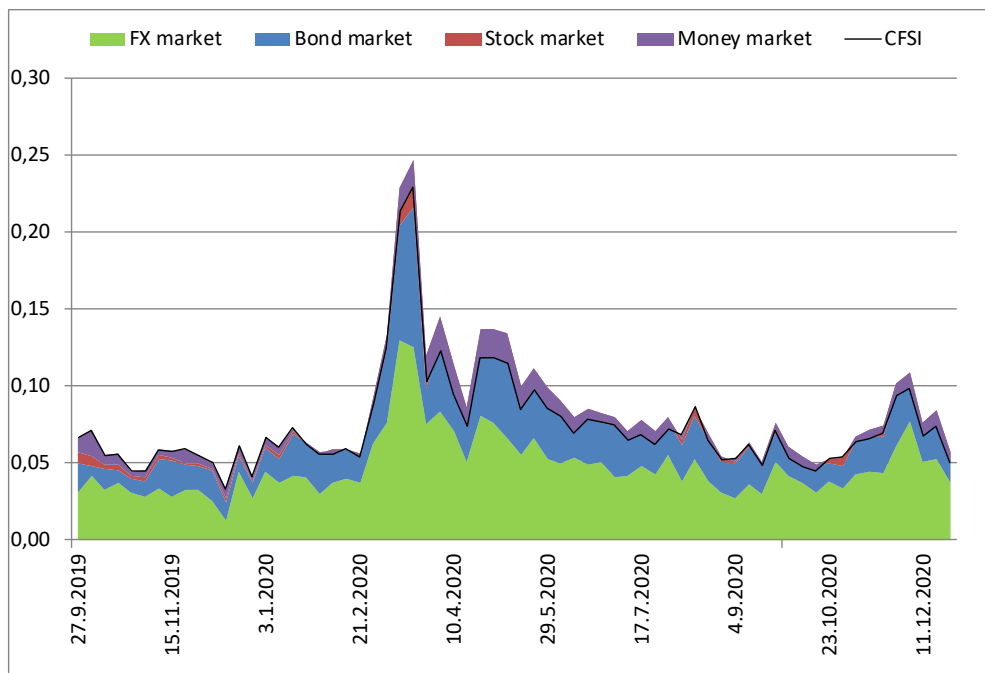
The first signs of panic in Croatia appeared after the identification of the first infected person in Zagreb in March 2020. Similar to financial markets around the

world, the reaction in domestic markets was extremely rapid and tumultuous (Figure 2). Strong depreciation pressures on domestic currency against the euro emerged

immediately (Figure 3), and there was a significant decline in liquidity in the bond market.

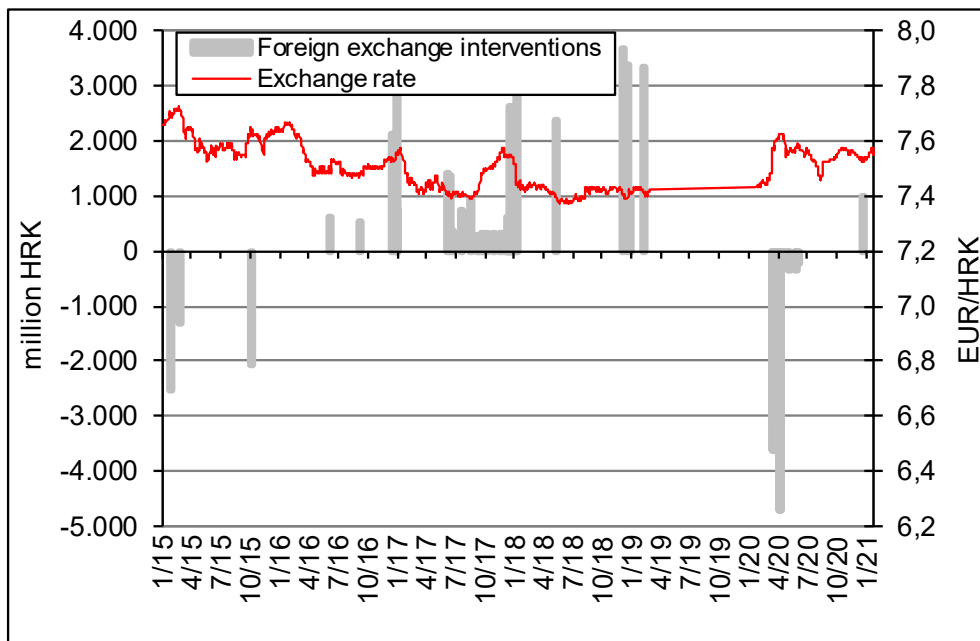
In addition, investment funds faced outflows of investors who began to withdraw their shares in a desire to own as liquid forms of assets as possible (Figure 4). This resulted in pressures on the domestic bond market, as funds aimed to gather much-needed liquidity. A decline in bond prices

in the second instance diminished fund unit values, provoking further outflows, thus creating a vicious circle that had a significant detrimental effect on the domestic bond market. Similarly, the domestic equity market that is characterized by limited liquidity, even under normal circumstances (see: Benić and Franić, 2009; Minović 2012, Vidović 2020), was under sellers' pressure.



**Figure 2.** Croatian financial stress index

**Sources:** Bloomberg, ZSE, CNB.



**Figure 3.** Foreign exchange interventions and exchange rate

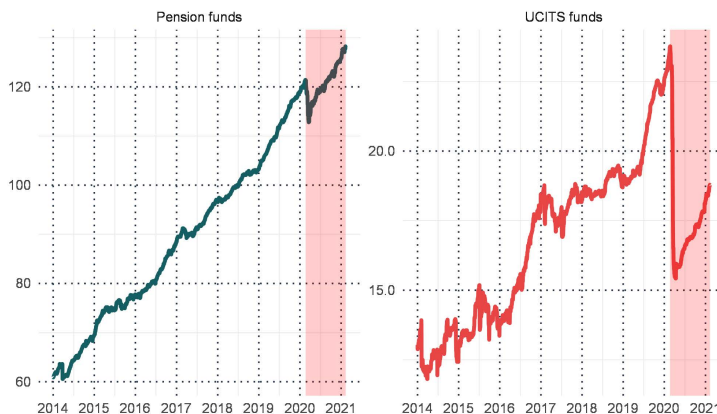
Source: CNB

In a period of only a few weeks, the value of net assets of investment funds decreased by more than 30% and amounted to 15.9 billion HRK in mid-May, which is 7 billion HRK lower than at the end of 2019 (Croatian Financial Services

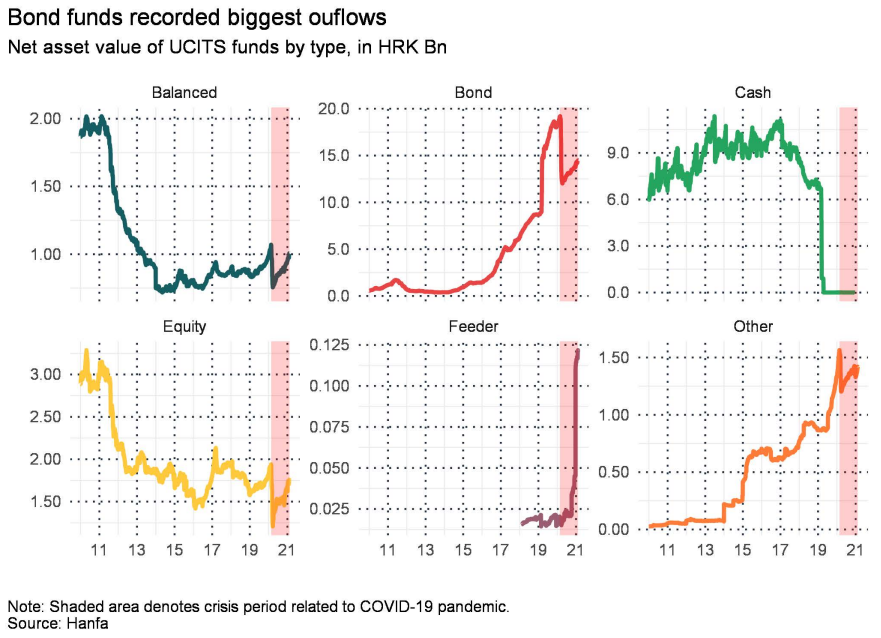
Supervisory Agency, 2020). The decline in net assets was recorded in all types of investment funds, but in bond funds, this was mostly due to net disbursements, while the decline in assets in equity funds was largely due to falling stock prices.

Multi-year stable growth of funds was temporarily stopped in mid-March 2020.

Net asset value of pension and UCITS funds, in HRK Bn



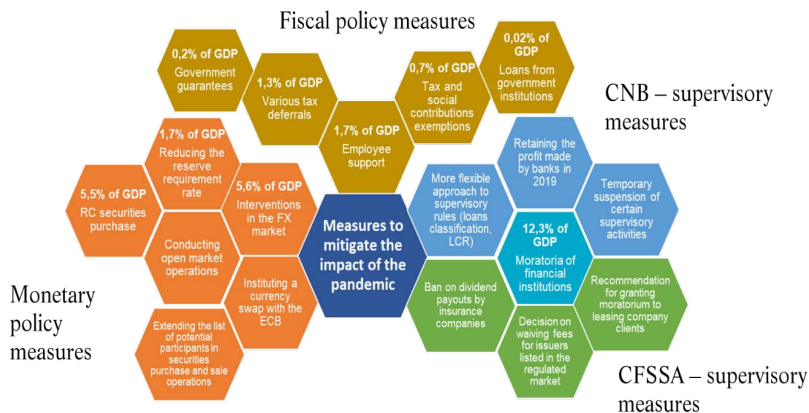
Note: Shaded area denotes crisis period related to COVID-19 pandemic.  
Source: Hranfa



**Figure 4.** Investment funds – strong decline in assets and value  
**Source:** Hanfa, 20202.1. Reactions of the CNB, the HANFA, Government, and state agencies to the consequences of the coronavirus pandemic in Croatia

The aforementioned developments in the domestic economy required extremely rapid reactions from the domestic financial market regulators. Therefore, this chapter describes the reactions of the CNB and the HANFA in the period after the appearance of the first infected person in Croatia, until the end of 2020 (Figure 5). The measures undertaken by these two institutions went in the direction of calming the panic in financial markets and keeping them liquid, reducing pressures for certain smaller market segments that

encountered liquidity problems, and ensuring the liquidity of the overall financial system so that it can provide financing for the real sector on favorable terms. In addition, the chapter describes the most important activities of the Government, government agencies, and commercial banks that have had effects on financial stability (Figure 5). It should also be noted that the measures taken and their effects on financial stability have been discussed at meetings of the Financial Stability Council.



**Figure 5.** The most important measures of Croatian institutions to mitigate the consequences of the coronavirus pandemic

**Note:** Shown as a share of the estimated GDP in 2020 (CNB projection).

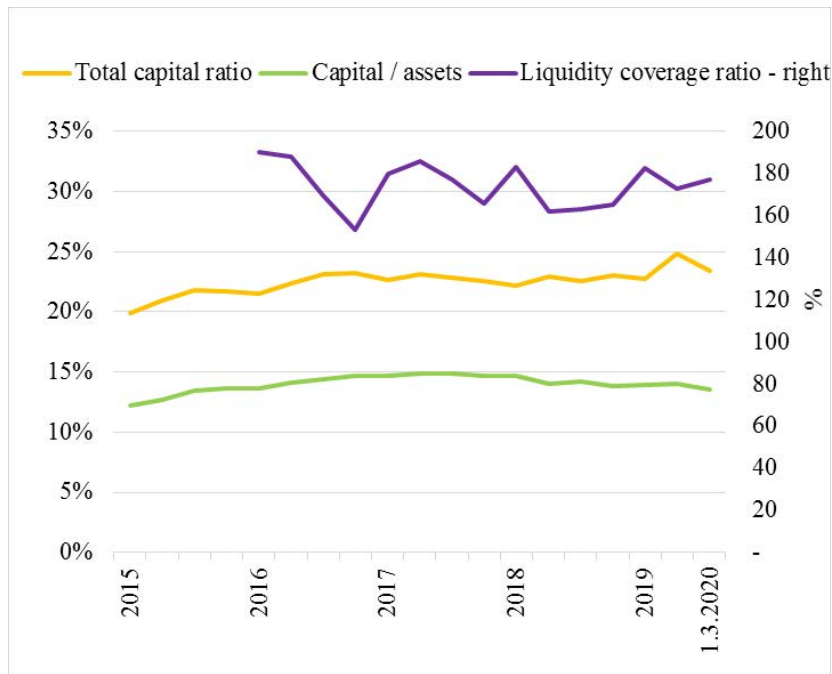
**Sources:** CNB, HANFA, Tax administration, Croatian employment service, HBOR, HAMAG-BICRO; Vujčić, B., 2020, “Go on, choose a number, you will surely fail! Macroeconomic projections in times of pandemic”, presented at the conference “Challenge of Change” organized by The Zagreb Stock Exchange and the Association of Pension Fund Management Companies and Pension Insurance Companies, Rovinj, 22 October 2020.

## 2.1. Activities of the Croatian National Bank

Given the strong depreciation pressures and the importance of the stability of the kuna against the euro for the stability of the overall financial system, one of the main CNB objectives was to calm the foreign exchange market. In addition, the CNB undertook several activities aimed at ensuring kuna and foreign currency liquidity and

stabilizing conditions on the domestic bond market. These goals were achieved through monetary and supervisory measures, while classical macroprudential measures have not been used at this stage (CNB, 2020a). Such an approach to this crisis was possible, because of the counter-cyclical policy, conducted in the period before the great global financial crisis, when high reserves of capital and liquidity were built at the level of the banking system (Figure 6).





**Figure 6.** Banking sector capitalization and liquidity

Source: CNB

Pressures on the weakening of kuna against the euro began right after the detection of the first corona-positive person in Croatia. Given the rapid spread of fear and the extreme uncertainty about further economic activity, especially in the tourism segment, a swift and sharp response by the CNB has been needed to assure all market participants that the central bank would do “whatever it takes” to defend the stability of the domestic currency. For this purpose, the CNB conducted several publicly announced foreign exchange interventions and a few bilateral transactions with commercial banks. That way, in a very short time, the system was supplied with about 2.7 billion EUR. The exchange rate stabilized, while the confidence among citizens and market participants in the stability of domestic currency increased. The overall high level of international reserves, which in early 2020 exceeded 18 billion EUR, has also

contributed to public trust. In addition, the establishment of a currency swap between the European Central Bank and the CNB has been particularly important, especially from the psychological point of view, as it enabled the CNB to supply the system with an additional 2 billion EUR in an extremely short period if needed.

To “return” kuna liquidity withdrawn through foreign exchange interventions and further strengthen the high liquidity of the banking system, the CNB decided to reduce the general reserve requirement rate from 12% to 9%.

A special problem in the market arose due to a significant decrease in liquidity in the domestic government bond market. This prompted the CNB to start buying government securities of the Republic of Croatia on the secondary market for the first time through fine-tuning operations. However,

according to the regulations in force at that time, only credit institutions had access to such operations, while the most significant players on this market have been non-bank financial institutions. To enable access of all relevant institutions to this source of liquidity, the CNB expanded the list of institutions entitled to participate in these operations to pension and investment funds, as well as insurance companies.

In addition to monetary policy, the CNB used several supervisory measures aimed at preserving financial stability (CNB, 2020a). To further facilitate credit institutions' liquidity management, the CNB has temporarily allowed them to use a liquidity coverage ratio below the prescribed minimum of 100%. Moreover, to ensure the high credit potential of banks and to facilitate the position of clients who serviced their liabilities properly until the outbreak of the corona crisis, the CNB temporarily allowed credit institutions greater flexibility in applying supervisory rules for classifying existing and new exposures according to their collectability. In other words, clients who were assessed as risk-free at the onset of the crisis (end of 2019), and who needed to refinance or defer payment of their obligations, could be treated as risk-free. This reduced the pressure on capital that would result from the growth of bad loans. In addition, the CNB ordered credit institutions to retain the profits generated in 2019 and to adjust the payments of variable receipts, which has further contributed to maintaining their liquidity and solvency.

## **2.2. Activities of the Croatian Financial Services Supervisory Agency**

Following the escalation of the coronavirus pandemic, the HANFA undertook several activities aimed at facilitating the

operations of financial services institutions while protecting the interests and rights of users of these services and the public interest. The measure with the most significant potential effect on financial stability has been the ban on the payment of dividends to insurance companies until 30 April 2021, which ensured the retention of their profits in Croatia, as additional liquidity support.

Moreover, HANFA activities included the decision to exempt issuers of shares, listed at the regulated market, from paying fees in 2020, a decision to extend the deadlines for submitting certain reports and to simplify some procedures that are difficult to implement, due to special business conditions during the pandemic, as well as various decisions which provided operational relief for supervised entities (deadline extension for submission of statements and relevant documentation related to petitions, failure to take supervisory measures in case of delays in publishing financial statements of issuers on the capital market, etc.).

Another measure that had an extremely strong impact on the capital market was the temporary suspension of trading in all financial instruments on the regulated market, managed by the Zagreb Stock Exchange on 12 March 2020 (Croatian Financial Services Supervisory Agency, 2020).

Among other measures that had positive effects on the position of debtors of non-bank financial institutions, most relevant have been the following: postponing forced collection for regular clients of leasing companies whose inability to pay liabilities has been determined, and whose business is affected or will be affected until 31 March 2021; HANFA recommendations regarding the possibility of contracting a moratorium for a period longer than three months, the cessation of charging accrued interest during the moratorium, the suspension of

all forced collection procedures during the contracted moratorium period for previously regular leasing users; a series of recommendations to insurance companies to increase tolerance to deferred payment, delaying the forced collection of premiums for regular clients, ensuring business continuity, etc.

### **2.3. Activities of the government, state agencies, and commercial banks with effects on financial stability**

In addition to measures, taken by the CNB and HANFA, fiscal policy measures accompanied by numerous other activities of the government and state agencies, as well as initiatives by commercial banks that tried to ease debtors' situation, played an extremely important role in mitigating the negative effects of the coronavirus pandemic.

The main goal of fiscal policy measures was to ease the position of non-financial corporations and households through various forms of government guarantees, favorable loan conditions, and deferrals or complete exemptions from certain tax payments and social contributions (CNB, 2020a). A particularly important goal was to preserve jobs and the most important measure in this context was the payment of compensation to employees for activities whose operations were threatened by epidemiological measures. These measures significantly reduced pressures on the real sector, but at the same time led to a strong increase in budget expenditures.

Furthermore, the position of debtors has been additionally eased by the introduction of a moratorium on their obligations by commercial banks, non-bank financial institutions, the Croatian Bank

for Reconstruction and Development (CBRD), and the Croatian Agency for SMEs, Innovations, and Investments (HAMAG-BICRO).

All these measures have had a significant direct and indirect impact on financial stability. This has also been recognized at the EU level through the ESRB Recommendation 2020/8 on monitoring the impact of the moratorium on debt on financial stability, and the system of state guarantees and other measures of a fiscal nature taken to protect the real economy in response to the COVID-19 pandemic (ESRB, 2020). It has been realized that, for ensuring the effectiveness of these measures, it is necessary to create an efficient monitoring framework. This has encouraged the CNB to collect the available data from all counterparts to have a clear view of the scope, volumes, and overall strength of specific measures (CNB, 2020b).

## **3. MODEL ASSESSMENT OF THE EFFECT OF THE SUSPENSION OF TRADING ON THE ZAGREB STOCK EXCHANGE**

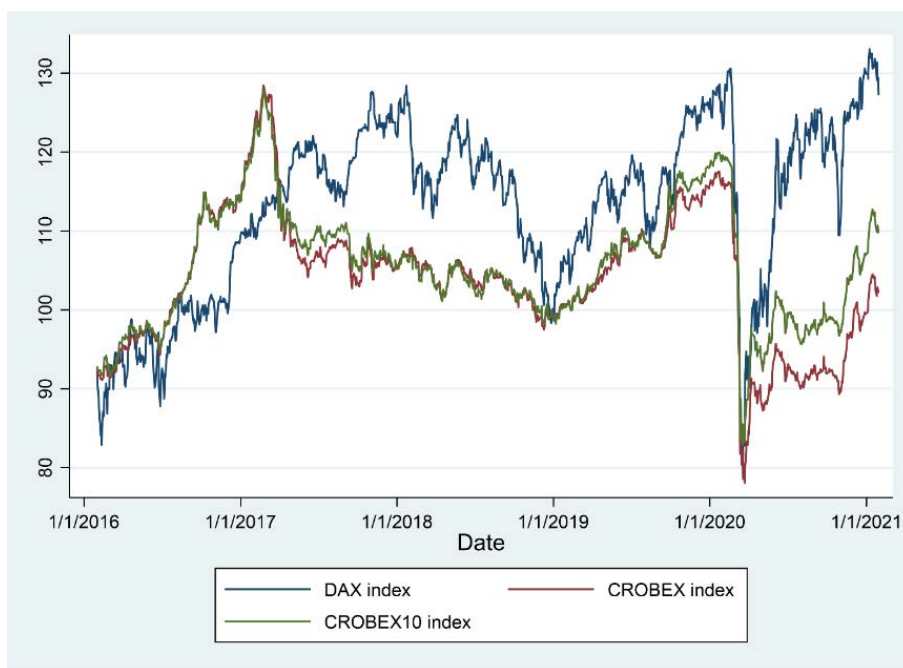
Given the variety of measures and the fact that the crisis is still ongoing and that their effectiveness can be explored only after some time, the analytical part of this paper shows the effect of the suspension of trading on the Zagreb Stock Exchange.

After relatively successful 2019, stock markets started 2020 with news about the COVID-19 pandemic in their focus (Figure 7). Prices on global stock exchanges fell significantly on Monday, March 9<sup>th</sup>, after it became clear that lockdowns would become inevitable in many countries around the world. Several large market declines

followed in the second and the third week of March 2020. As expected, stock prices were acting as leading indicators, reflecting investors' concerns regarding the consequences of pandemic and lockdown on the overall economy.

In early 2020, prices on the Zagreb Stock Exchange (ZSE) followed positive developments in major European markets, marked by favorable expectations about economic growth and the Eurozone entry process. This changed abruptly when it became clear that COVID-19 was developing into a serious

pandemic. The ZSE also experienced a strong decline in stock prices on March 9<sup>th</sup>, 2020 and although the circuit breakers embedded in the ZSE rules temporarily halted trading, strong selling pressures continued. On March 12<sup>th</sup>, 2020, following the activation of another stock exchange circuit breaker, HANFA decided to halt the trading on the ZSE for the remainder of that day. In the official decision published on that topic, market volatility that could jeopardize the interests of investors was quoted as a reason for the trading halt.



**Figure 7.** DAX, CROBEX and CROBEX10 indices normalized (1.1.2019 = 100)  
**Source:** Börse Frankfurt and Zagreb Stock Exchange

The market supervisors' objectives are not stock market valuations or market developments. Its actions are a signal to investors about market failure that is being corrected. Due to this signaling effect, there is a potentially significant difference between an automated trading halt that is usually present on all stock exchanges around

the world and an unexpected halt by the regulator.

To assess the effects of trading halts on March 9<sup>th</sup> and March 12<sup>th</sup> we have conducted an event study, following the methodology developed by Pacocco, Vena, and Venegoni (2018). The analysis aims to

assess the effects of trading halts on market returns to show whether there are any statistically significant abnormal returns on the market, following trading halts. Abnormal returns ( $AR_{CROBEX,t}$ ) are defined as returns above the ones expected by some market model ( $E(R_{CROBEX,t})$ ), given the information set  $X_t$ :

$$AR_{CROBEX,t} = R_{CROBEX,t} - E(R_{CROBEX,t} | X_t). \quad (1)$$

In this case, we use a single index model that builds on the correlation between DAX and CROBEX indices. In other words, DAX, being a major European index, acts as a benchmark measure for CROBEX. First, the relationship between the ZSE index, CROBEX, and DAX is estimated, using the data that precedes the event. Estimated coefficients are then used to predict the movements of the CROBEX index around and after the event date in several event windows. Abnormal returns, which are defined as the difference between actual and expected daily returns of CROBEX are then calculated. Finally, to get the total effect in the event window we calculate cumulative abnormal returns by cumulating daily abnormal returns. Naturally, we also calculate test statistics to check whether these returns are statistically different from zero.

Our initial expectations are that the effects of the temporary circuit breaker, introduced into the ZSE rules, will have no effect on market developments. This is because these kinds of breakers are automatic and market participants usually perceive them only as a warning mechanism. Ackert,

Church and Jayaraman (2001) corroborate this, stressing further that market participants also advance trades before such temporary market closures.

On the other hand, we expect to obtain positive abnormal returns after a temporary trading halt introduced by the supervisor (HANFA) on March 12<sup>th</sup>, 2020. This is because new information is introduced to the market and market participants then internalize this information into their decision-making. Moreover, this decision was a surprise for market participants, preventing any preemptive trades in the advance of the decision. Furthermore, the decision itself does not rest on any preannounced quantitative limit as it is discretionary. By observing market behavior, the supervisor concluded that regular market conditions were not met for trading to continue. Finally, by using a theoretical model, Subrahmanyam (1995) shows that closures triggered by discretion are more effective than price-triggered closures.

The results of this event study (Table 1) verify prior findings in the literature and our base hypothesis, showing that automatic temporary circuit breaker did not have any positive effects as measured by the change in prices on the exchange. On the other hand, the rules-based supervisor's decision had a significant positive effect on trading on the main market (as measured by CROBEX10) in the short and the long run. The effect was less pronounced on the broad market which also includes many illiquid stocks (measured by broad market index CROBEX).

**Table 1.** Cumulative abnormal returns after circuit breaker trading halt (9 March 2020) and supervisor trading halt (12 March 2020)

		Cumulative abnormal returns in the period listed below:				
		(1-3) trading days	(1-10) trading days	(1-20) trading days	(1-60) trading days	(1-80) trading days
Zagreb Stock Exchange Circuit Breaker, 9 March 2020	CROBEX	<b>-14,6%</b>	<b>-19,7%</b>	<b>-5,7%</b>	-3,6%	-5,5%
	p-value	(0,0000)	(0,0000)	(0,0078)	(0,3690)	(0,2346)
	CROBEX10	<b>-14,1%</b>	<b>-15,0%</b>	-0,8%	-0,4%	-2,2%
	p-value	(0,0000)	(0,0000)	(0,7146)	(0,9189)	(0,6459)
Supervisor (HANFA) temporary trading halt, 12 March 2020	CROBEX	0,1%	-0,1%	<b>9,0%</b>	<b>10,9%</b>	8,3%
	p-value	(0,9286)	(0,9635)	(0,0000)	(0,0072)	(0,0750)
	CROBEX10	<b>2,1%</b>	<b>3,8%</b>	<b>12,7%</b>	<b>13,7%</b>	<b>11,8%</b>
	p-value	(0,0141)	(0,0159)	(0,0000)	(0,0016)	(0,0178)

**Note:** Bold values and shaded cells represent statistically significant results, using Kolari and Pynnönen's (2010) test.

## 4. CONCLUSION

In an unprecedented crisis that hit most of the world's economies simultaneously and caused a general panic among the population, prompt reactions from governments and financial system regulators were key to calming the panic, stabilizing financial markets, and ensuring unhindered capital flows to the real sector.

Events that unfolded after the start of the COVID-19 crisis show there are several key ingredients to successful crisis management in the financial sector. First, coordination between supervisors, including both fast dissemination of relevant information and data and frequent discussions about possible policy moves. Second, crisis managers' readiness to employ unorthodox moves if necessary. Finally, all these actions must be prompt and timely.

The analysis presented in this paper confirms that decisive and quick actions taken by regulators marked the COVID-19 crisis in Croatia. The crisis management by the CNB and HANFA has been marked by a

set of timely, well-communicated activities to ensure the stability of the domestic financial system, which was reflected, among other things, in stabilizing the financial stress index and its relatively rapid return to pre-crisis levels. The effectiveness of one of such moves – the halt of trading in the ZSE – has been confirmed in this paper. Another example of very efficient coordination among institutions was the CNB's actions that supported liquidity on the government bond market.

Finally, regarding the unorthodox moves, in this crisis regulators encouraged financial intermediators (primarily banks and leasing companies) to make extra efforts to better understand difficulties faced by their clients. By easing the burden for customers that experienced an unprecedented shock to their business model, financial intermediaries also invested in their public image and accepted part of their social responsibility for keeping the society stable, although legal provisions in the contracts allowed them to act much more aggressively. This can be compared to the

opposite approach in the crisis that erupted after significant appreciation of the Swiss franc versus kuna and subsequent problems with loans linked to the Swiss franc, which significantly tarnished the public image of banks. Hopefully, this crisis will result in additional awareness regarding efficient crisis management conducted by public institutions, as well as in a much higher awareness of the importance of social responsibility of financial institutions and of focusing not only on short-term gains but also on long-run performance and benefits they provide to the society.

Although the crisis is still ongoing and it is too early for more detailed analyses of the effectiveness of individual measures on financial stability and economic recovery, there is no doubt that this episode will result in several useful insights and will be the subject of numerous future studies. In this context, it will be particularly interesting to study the effectiveness of fiscal aid on economic growth and the overall financial stability, as well as the effect of the moratorium on commercial banks on future lending activity and bad loans.

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## KRIZNI MENADŽMENT U JAVNIM INSTITUCIJAMA – HRVATSKI FINANCIJSKI SUSTAV I PANDEMIJA COVIDA-19

### Sažetak

Krizni menadžment je posebno značajan u kontekstu javnih institucija, s obzirom na moguću, vrlo veliki utjecaj posljedica sistemskih kriza na društvo kao cjelinu. Suboptimalno ili presporo odlučivanje javnih institucija obično pogoda mnogo veći broj ljudi, organizacija, odnosno gospodarskih i financijskih ishoda, nego kada se radi o kriznom menadžmentu u jednom poduzeću, čak ukoliko je ono od sistemskog značaja. Ovaj se rad usredotočuje na aktivnosti Hrvatske narodne banke i Hrvatske agencije za nadzor financijskih usluga i njihov odgovor na krizu, uzrokovanu pandemijom koronavirusa te pruža pregled najznačajnijih aktivnosti vlade, vladinih

agencija i komercijalnih banaka, koje su imale utjecaja na financijsku stabilnost. Analitički dio rada prezentira efekte zabrane trgovanja na Zagrebačkoj burzi na dan 12. ožujka 2020 i njegove implikacije za tržište. Iako je prerano za donošenje završnih procjena, s obzirom na trajanje pandemije, raspoloživi podaci govore da su aktivnosti domaćih institucija do sada bile učinkovite u održavanju financijske stabilnosti u Hrvatskoj.

**Ključne riječi:** krizni menadžment, financijska stabilnost, pandemija, financijska regulatorna tijela