

# CENTRAL BANK INDEPENDENCE AND FINANCIAL STABILITY: ORTHODOX AND HETERODOX APPROACHES

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*This study argues that post-crisis discussions on central bank independence are less about a choice of a level of independence but more about a relation between the independence and the central bank mandate in financial stability. An offered hypothesis states that an increasing role of financial factors in the macroeconomic policy agenda has led to emerging of two approaches to the central bank independence. Within the orthodox approach, responsibility for the financial stability is a challenge to the accepted model: one mandate – one goal – one instrument. Interference into the financial cycle impairs transparency and distorts responsibility, while deflation bias risks get in conflict with price stability principles, adherence to which is exactly what central banks are granted independence for. In terms of the heterodox approach, a wider responsibility of central banks for financial stability requires more independence to protect the legitimacy of interference into the financial cycle and implementation of a more prudent regulatory regime. Orthodox view is contradictory in its nature, while the vulnerability of the second approach lies in quality of institutional environment. Price stability mandate is argued to remain the first priority, while the financial stability issues should be institutionalized in a clearer way to secure independence.*

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## I. INTRODUCTION

New macroeconomic phenomena and financial turbulence after the global crisis have long been calling for concentration of researchers' attention to the role of central banks in the "new" context. At the moment, the established "new normal" phenomenon following the rethinking macroeconomic policy leaves the question open on a desirable institutional functioning of monetary authorities. Implementation of nonconventional monetary policy programs has had an impact on changes in its operational design which resulted in further actualization of question how new features of central banks' operation and environment correlate with the central bank status. At the same time, post-crisis developments in central banking and emergence of new responsibilities only emphasize that traditional challenges do not go away but instead are reinforced with the new ones. In post-crisis reality discussions on central bank independence become more pronounced, with financial stability being their integral expression.

The problem of defining a role of central bank independence in the area of financial stability is attributed, to a large extent, to the fact that achievements of price stability and financial stability are not always the same thing. Deficiency of the quantitative basis for the latter, lack of tool-kits for achievement of predictable results, discrepancies in the policies are only a few items on the long list of their differences. Despite huge differences between the substance of the two, however, they still have a wide range of issues in common. Among those common grounds are, in particular, the problems of political pressure, dynamic inconsistency, and quality of institutions.

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In light of the established views in the publications on the problem of independence and critical thinking on the subject in the context of the new reality of central banking after the crisis, the author offers a hypothesis on existence of two basic approaches: the orthodox one where responsibility for the financial stability is a challenge to the classical central bank independence model: one mandate – one goal – one instrument; and the heterodox approach under which the principle of central bank independence should be applied to the financial stability tools in a similar way to its use for the price stability purposes. Therefore, this article is an attempt to systematize any disputable questions on connection between financial stability and central bank independence with the aim to deepen the theoretical understanding of such connection. This deepening is structured in the following ways: comparative analysis of price and financial stability in the context of tool-kit for central bank independence analysis; problem of dynamic inconsistency in financial stability; issue of proactive and reactive policies in light of monetary authorities' status; optimal design of macroprudential regulation. The above areas are studied for correlation between quality of institutions and financial stability etc.

The article is structured as follows. Section II offers analysis of publication sources that have been used as the basis for separation of the pre-crisis dominants from the post-crisis ones in analysis of connection between central bank independence and financial stability. Section III focuses on differences between price stability and financial stability, potential conflicts in achieving them, and their consequences for monetary policy and central bank independence. Section IV covers the topic of dynamic inconsistency in the area of financial stability policy and the respective institutional design of central banks. Section V deals with institutional design of macroprudential policy and summary on orthodox and heterodox views on independence of central banks in the area of financial stability.

## II. CENTRAL BANK INDEPENDENCE, FINANCIAL SHOCKS, AND MONETARY RESPONSE: PUBLICATIONS OVERVIEW

### 1. Underlying view on the problem

The well-documented empirical correlation between the level of central bank independence and inflation Grilli et al. (1991), Cukierman (2008), Crowe and Meade (2008), Arnone et al. (2006), Arnone et al. (2008) co-existed with an equally early opinion that exercise of functions beyond monetary policy scales down their autonomy. It stands to reason that when calculating the canonic GMT-index, endowing central bank with banking supervision functions was considered good enough grounds to reduce the index figure Grilli et al. (1991). The rationale is as follows. Inclusive information on the banking system conditions generated during exercise of the supervisory functions is an incentive to perform the role of the lender of last resort in contradiction to the inflation targets. Extending political pressure to the central bank has also been offered as a reasoning. Such political pressure is associated with "lobbying" certain banks. It is also caused by perception of the banking regulation burden, which, by strengthening financial stability due to certain macroprudential procedures may, however, reduce the profitability of the banking business because of the tougher requirements to lending standards. The main conclusion based on the above comes to the point that wide functions of central banks in the area of financial stability restrict their independence and constitute a threat of a higher inflation level.

At the same time, this conclusion adopted as the principle of building independence indices has opened a way to a wider discussion which can be tentatively divided into three parts: connection between price stability and financial stability; empirical analysis of functions of central banks' reaction to financial shocks; empirical analysis of correlation between the independence level and the financial stability.

As regards the connection between price stability and financial stability, different views can be clearly distinguished. According to Smets (2014) they are the following: price stability and financial stability are identical; advanced achievement of financial targets is a trigger of macroeconomic volatility; price stability and financial stability are in conflict with each other. Based on such approaches one can see two basic modalities of monetary policy participation in ensuring financial stability: clearing the market through increase of liquidity supply after a financial shock; raising the rates "to prick the bubble" before it to avoid macroeconomic deterioration in future (IMF, 2015). The two mentioned policies have been called reactive and proactive approaches, respectively, to central bank's reaction to financial instability with the help of monetary instruments (as a reminder, macroprudential instruments had not been actively discussed before the crisis).

Empirical researches of the reaction function also produce ambiguous results. One can observe a general tendency that central banks react to financial stress by lowering the rates compared with the ones that could have been considered optimal based on the Taylor's rule calculations. The outcome of this is a higher level of inflation after the crisis (Bauducco et al., 2008). Cecchetti and Li (2005) emphasizes the importance of the cycle phase and the procyclical effects of microprudential regulation, however, they confirm the rates' undervaluation. Bulir and Cihak (2007) also point to lower rates as a reaction to a financial shock but at the same time stress the importance of the economy's structural features. Reactive policy is more typical for closed economies. Borio and Lowe (2004) reveal the dominance of the reactive policy. Although, this does not directly prove that "supervisory functions reduce the independence level, and exclusive information about the banking system conditions

induces a softer policy which results in higher inflation". However, it is the description that was given in a later publication (Cihak, 2010).

Contrary to the analysis of reaction function, the results of which can be classified as indirect confirmation (built on logical conclusions) of the hypothesis that cases of financial instability and dealing with its consequences have an impact on reduction of monetary autonomy, while empirical researches of correlation between the independence index of central banks and such instability show a different picture. For example, researches by Garcia Herrero and Del Rio (2003) and Cihak (2007) ascertain a direct relation between a chosen independence index and financial stability. In both cases the latter is associated with banking stability and the respective variable is used in panel regression. Klomp and de Haan (2009) reveal the inverse relation between the independence index and financial instability for 1985 – 2005 period for a wide selection of countries. Their research is characterized by the use of several specifications of independence index and a wide range of financial instability indicators. Thus, their understanding of the latter implies the use of variables that characterize both banking and much wider financial crises. The most important result of their research is the conclusion that financial instability is closer inversely correlated with political independence of central banks than with the economic one. This can be interpreted as the central bank ability to withstand political pressure that could lead to a policy incompatible with financial stability. Such conclusion contrasts with the research line started by Debelle and Fischer (1994) who state that for maintaining price stability the role of instrumental (economic) independence is more substantial.

At the same time, the conclusion made by Klomp and de Haan (2009) has several fundamental political and economic consequences. The authors indirectly point to the quality of institutions and the ability to withstand political pressure as well as self-responsibility of a central bank with a strong autonomous status. Here the conflict between price stability and financial stability is also removed because the independence level has a positive impact on the both over the long term. This conclusion should be considered as more institutional. The key role of political independence in the area of financial stability indirectly correlates with conclusions of the second generation research of the relation between monetary autonomy and inflation where the main emphasis is laid on quality of institutions and democracy level as drivers of public choice in favor of more independent central banks (review of the problem is offered in researches by Bodea and Hicks (2012), Dincer and Eichengreen (2014), and Koziuk (2016).

## 2. Post-crisis experience: an increasing lack of theoretical consensus

The global financial crisis has prompted the revision of probably one of the most strongly established views about distribution of roles in achieving price and financial stability, whereby monetary policy ensures the achievement of the first goal, while microprudential policy through supervision of individual financial institutions safeguards the financial stability goal. Following of the Tinbergen Rule has "conveniently" suited to the conceptual view of central bank independence because it opened a way to the orthodox approach of "one mandate – one goal – one instrument". However, precisely the review of such an approach and the necessity to introduce policy instruments addressing systemic risks, which is being emphasized in a number of well-known papers of Blanchard et al. (2010, 2013), Eichengreen et al. (2011), Bayoumi et al. (2014), was the starting point for the post-crisis debate about the role of central bank independence in financial stability.

The analysis of relevant literature on the topic enables to pinpoint important issues in view of the fact that the traditional orthodoxy is being revised. Even if maintaining within the boundaries of the traditional mandate is acceptable, the operational expansion across those boundaries is already an accomplished fact (Caruana, 2013), Koziuk (2015). Reflections upon the consequences of the global financial crisis and emergence of a "new normality" have centered around the following ideas.

First, it is the financial crises that are driving forces behind a change of mandates of monetary authorities. Such events are fostering a sense of responsibility for financial stability within the mandate, which specific definitions vary in time (Reinhart and Rogoff, 2013). The survey of central banks' officials have confirmed this viewpoint. The role of financial stability in macro-strategies and in empirical focus of monetary authorities' activity has strengthened significantly, even in the absence of actual changes in the mandate (Carre, 2012). On the other hand, exaggerated expectations of society and key economic actors regarding central banks' "almightiness" make the former extremely vulnerable to political pressure. Aggressive stimulating steps with their long-term repercussions, being either dubious or destructive in nature, are posing a threat Blinder (2012), Cecchetti (2013), Caruana (2013), Orphanides (2013), Rossi (2013).

Second, the issue whether a central bank's mandate should explicitly pursue a goal of ensuring financial stability is relevant not only to the interpretation of an analytical framework of the independence concept, but also from the perspective of finding the correlation between price and financial stability. It is precisely this aspect that is being fervently debated. The differences between price and financial stability in the extrapolation of political interpretation of the mandate and the results for political assessments of central bank performance make the search for theoretical consensus more difficult. In this regard, it is possible to single out the following alternatives:

– safeguarding the price and financial stability has to be the prerogative of separate independent bodies Svensson (2012, 2016);

– the financial stability has to be explicitly included into the mandate of a central bank, with the former enjoying a sufficient level of independence, transparency and accountability (Eichengreen et al., 2011);

– financial stability may not be explicitly defined. What matters is the ability of central banks to pursue a proactive policy while preventing the anti-crisis measures from being viewed as wealth distribution and subjection to fiscal targets (Koziuk, 2015);

– in a deflationary environment, the mandate issue is not a matter of principle (Does Central Bank Independence Still Matter, 2008). Increasing inflation targets may be viewed advisable for broadening a zone of lower rates necessary for an effective stabilization (Blanchard et al., 2010).

Third, the issue of organizational design is becoming crucial regardless of whether financial stability is an explicit element of the mandate, or it implicitly impacts a central bank's decisions amid considerations about how financial shocks affect deviations of inflation and GDP gaps from target levels. There is a lack of consensus in scientific papers that place emphasis on the organizational design, that is whether the macro-prudential supervision should be included into a central bank's competence or delegated to a separate body. In the absence of coordination breakdown, and provided there is a flexible exchange of information about aggregated risks and system vulnerability, the architecture of bodies responsible for financial stability is not a matter of principle. However, in the event of institutional imperfections with regard to the coordination process, the best approach is the consolidation of functions within a central bank (Bayoumi et al., 2014). An alternative approach envisages a quasi-fiscal nature of instruments of the macro-prudential regulation, therefore, the best choice will be to delegate financial stability functions to a separate body that would be closely cooperating with the Ministry of Finance (Georgsson, 2015). Such an approach toward the organizational design correlates with a view outlined in the paper of Svensson (2012, 2016). However, when it comes to delegation of the macro-prudential regulation powers to an independent central bank, political and economic arguments get to play an important role (Eichengreen et al. (2011), BIS (2011), Acharya (2015)). It shows the departure from a traditional orthodoxy "one mandate – one goal – one instrument" and the emergence of some sort of alternative in a theoretical analysis between independence of central banks and financial stability.

At the same time, authors Masciandro and Volpicella (2016) in their papers bring forward the empirical argument in support of a traditional approach. They do not play down the importance of macro-prudential regulation in the post-crisis economic architecture. However, whether a central bank would likely be granted such powers depends on the fact whether it is already performing micro-prudential regulation, and whether its mandate gives less political independence and less restrictions with regard to the monetary policy. The key issue here is that a lower level of political independence correlates with a higher probability of additional macroprudential regulation functions being delegated to a central bank. The same conclusion was made by Masciandro et al. (2008) arrive at the same conclusion as to the role of the quality of institutes and a level of independence of a central bank in financial supervision. They point to even a stronger correlation between the effective performance and more accountable supervision bodies. Ensuring independence of financial supervision does not itself guarantee better results, regardless whether it is performed by a central bank or a separate regulatory body.

Building on the findings about a positive relationship between the institutional quality, central banks' independence and transparency (Dincer and Eichengreen, 2014), findings of Masciandro et al. (2008, 2016) underscore a fundamental importance of institutional determinants concerning both price and financial stability. Although such findings speak in favor of the traditional orthodoxy. However, a higher level of inflation in the countries where a central bank is tasked with the micro-prudential regulation (Bayoumi et al., 2014), and an inverse correlation between central bank's independence index and the probability of financial stress (Cihak, 2010) expose vulnerabilities of the New-Keynesian approach to macroeconomic policy. Cihak (2010) also states that the central bank independence index is in an inverse correlation with crisis early warning indicators, but in direct correlation with an indicator reflecting the reliability and completeness of financial stability reports, as well as with the index of compliance with Basel Core Principles. Thus, the level of independence is important for ensuring financial stability. In other words, if the central bank functionality can (and must) be directed at financial stability, an issue of departing from the model "one mandate – one goal – one instrument" has to be theoretically analyzed more thoroughly.

The hypothesis about the existence of orthodox and heterodox approaches to the role of central banks' independence in financial stability will help structure more efficiently theoretical differences and polar proposals regarding the nature of the policy and its institutional support in the area of macrofinancial regulation. Accordingly, it is necessary to make understanding of the central bank status as regards to ensuring financial stability more profound in terms of comparative characteristics of price and financial stability, risk analysis of the dynamic inconsistency of the policy addressing financial stresses and systemic risks, the selection of proactive or reactive modality of monetary decisions, macro-prudential regulation, institutional determinants of pressure on the central bank and so on.

### III. PRICE AND FINANCIAL STABILITY: NATURE OF CONFLICT, PROBLEM OF MANDATE INTERPRETATION, STATUS OF CENTRAL BANKS

#### 1. Different views on macroeconomics

Generalization of the experience of 1970–1990s shows that maintaining price stability was sufficient to ensure financial stability, at least theoretically. With the promotion of the rational expectations hypothesis, the nature of interpretation underwent some changes. According to the opinions set forth in the paper by Schwartz (1995), economic agents include the financial system conditions into an expected level of inflation, thus the additional control over financial variables is not required. Maintaining price stability is sufficient. One could assume that such state of affairs has created preconditions for a dominant position of the orthodoxy for a long time, according to which if a central bank best succeeds in curbing inflation, it will be the least sophisticated institutional solution aimed at ensuring financial stability.

However, in a low and persistent inflation environment, or even deflation, the situation looks differently. Downward deviations from the inflation target, accompanied by corresponding rate reduction and liquidity expansion, as well as the "search for yields" and "risk appetite" become a starting point of the dilemma of whether the monetary policy must be proactive or reactive. The same applies to an issue of intersection of monetary, macro- and micro-prudential policy functions. All can affect the aggregate loan dynamics in the economy and play an important role in sustaining such transmission channel of the monetary policy as risk-taking channel. The absence of a theoretical consensus concerning the modality and optimal coordination among those policies feeds discussions about the institutional format for ensuring price and financial stability, and therefore the independence of a central bank and its mandate, in particular, becomes a key focus of attention.

In this way, in accordance with the New-Keynesian approach set out in papers of Bernanke and Gertler (1999), as well as Svensson (2012, 2016) – any decisions made by central banks not in response to deviations of inflation and GDP from the target values result in their excessive variations sending misleading signals to economic agents. The loss caused by a proactive intervention will always be high, with monetary authorities' reputation being undermined. The reputation damage may be palpable, since a failure to identify a bubble in asset or credit markets in real time raises an issue about what has prompted a central bank's deviation from the declared policy goals. If independence is best ensured through a rigid price stability mandate, the determination of an inflation target and the use of an instrument, which relation to the target is foreseeable, then the deviation from the announced targets will come to be a serious argument regarding the monetary authorities' responsibility. If the reaction to financial imbalances is able to subject a central bank to greater political vulnerability, it is viewed as better either to delegate a correspondent instrument to a specialized body or differentiate "offices" within a central bank in a way that each of them will be pursuing relevant targets, applying specific instruments, thereby building up independent communication strategies and bearing independent responsibility.

It is easy to notice that a risk of losing a "part of economic growth" due to the reaction to a probable (and not necessarily inevitable) event in the future is transformed into the so called macroeconomic fetish. Paradoxically, but the traditional New-Keynesian rhetoric about the undesirability of reaction to the behavior of variables other than inflation and GDP, opens the way for a narrow vision on central bank independence. The orthodox approach "one mandate – one goal – one instrument" has been formulated from a dominant view of determinants of macroeconomic fluctuations, in which the financial sector is not given a critical role.

On the other hand, as the global financial crisis have demonstrated, the clean-up of the markets through pursuing unconventional monetary policy is a way out of traditional boundaries of this orthodoxy. Without a change in the mandate, the transformation of goals, as well as modification and expansion of instruments result in a situation when assessment of the level of independence of monetary authorities using a standard orthodox approach proves extremely difficult. Deflation risks prompt the search for sophisticated methods of influencing expectations (for example, forward guidance), encourage an unprecedented presence on the asset market, expansion of the scope of institutions at which the liquidity policy is being aimed. But this legitimizes a departure from the orthodox approach in terms of central bank independence, according to which financial stability concerns are not to be taken into consideration in monetary decision making. Underlining the importance of addressing the financial stability issue with the help of a special instrument helps only moderate the original position of the orthodox approach, but does not solve the issue of its intertemporal vulnerability. In other words, on a long-term horizon with an unequally distributed risk of the systemic financial stress, the orthodox view on the central bank independence undergoes dynamic inconsistencies.

Alternative to the New-Keynesian orthodoxy are the views of representatives of the Bank of International Settlements. A policy of response to unwinding a spiral of financial imbalances (commonly known as "lean against the wind") has a significant advantage in the sense that it prevents the transformation of a bubble into the crises, the effects of which have to be overcome with unconventional approaches, which are regarded as part of the problem or its source, rather than a solution. Apologetics concerning the market clean-up disregard the fiscal losses and structural distortions in financial behavior focusing on the central bank's ability to tackle most of the issues within the framework of a liquidity proposition at an extraordinary scale. It is namely due to criticism of dominant views on the reactive nature of monetary policy as an acceptable one, that the revision becomes possible of perceptions regarding central banks' arsenal and their response function, thereby laying the foundation for a broader look at their independence.

At this, perceptions have evolved as to the instrumental formulation of policies of connecting price and financial stability. For example, Borio et al. (2003, 2004) first underlined the importance of monetary responses. Interest rate hike was expected to restrict liquidity expansion and financial imbalances build-up. Later, the focus shifted onto a specialized set of instruments aimed at the systemic financial vulnerability which is called macroprudential regulation (Borio, 2006). However, later Borio (2014) proposed a more integrated model (BIS, 2016), whereby monetary, macro- and microprudential policies combined with the fiscal policy need to be operating on a long-term horizon and in a coordinated manner so that to minimize pro-cyclical and destabilizing effects of each of them.

If within the orthodox approach there can be revealed an apology of the standard approach toward central banks' independence and the possibility of going beyond the boundaries of "one mandate – one goal – one instrument" model under the pretext of counteracting deflation risks and deepening of a negative GDP gap, then the assessment of BIS approach will not be straightforward. When remaining within the framework of the categorical apparatus of the orthodox approach, the coordination of at least four economic policies poses a challenge to independence and creates a prerequisite for the enhanced central bank's vulnerability in communication domain. Expanding a range of possible political interpretations of its actions can provoke a risk of an arbitrary manipulation of efficiency assessments with regard to measures taken and the relevance of set targets. Similarly, one can see that a principal role assigned to financial stability can be interpreted as an emergence of "financial dominance" (along with an "expectations dominance" phenomenon within the framework of unconventional policy implementation) to which monetary, regulatory and fiscal targets are subordinated. On the other hand, a central bank's extended functionality does not rule out that new responsibility areas must fall under the ambit of independence principles. An ever increasing role of the coordination approach toward ensuring financial stability does not necessarily mean that a central bank deviates from the targets it has set, rather to the contrary, it speaks to the strengthening of a central bank position's in cooperative architecture. It can be formulated in the following manner. If a government (and its stakeholders) is not interested in short-term risks of recession in response to a stricter monetary and regulation reaction addressing the pro-cyclical nature of the financial system and its systemic vulnerability, then its propensity for taking into consideration these risks while determining the optimal trajectory of the primary budget balance would be expected to enhance. Certainly, it does not mean that the government that has no formal commitments to financial stability is ready to deviate from its fiscal targets, which do not cover macro-financial risks, at least for reasons of electoral limitations. At the same time, a stronger position of central banks in the coordinated approach to ensuring financial stability deems possible provided its higher level of independence, and not on the contrary. At this, a higher level of political independence, and not only operational one, is implied, which corresponds to the logic of researches revealing empirically a positive correlation between the former and financial stability (Klomp and de Haan, 2009), Cihak (2010).

## 2. Difficulties with interpreting elements of central banks' independence

Although the connection between financial and price stability remains the issue of ongoing theoretical debates, when it comes to financial stability a conceptual view on central banks' independence is exposed to a number of limitations. Despite the validity of assumptions about the need to expand independence followed by functional expansion of central banks, there is a number of technical issues emerging when it comes to the mandate specification, its political interpretation, responsibility and transparency. If such an assumption is not valid, the issue of status, organizational design and responsibility becomes even more relevant. The urgency comes from the fact that central banks have actually expanded their responsibility for financial stability implicitly, while informal approval of policymakers have echoed the common interest in overcoming consequences of the crises and preventing deflation expectations from getting into the grip of secular recession. However, precisely the relateness of unconventional policy results generates risks, either heading in the direction of enhancing responsibility for financial stability "in a wrong way", or conservation of an implicit "gray zone in the status quo". This is an institutional problem which becomes a determinant of central banks' architecture. A set of constituent elements of central bank's independence is suitably designed to counteract inflation. While a set of elements constituting central bank's independence in financial stability domain is either absent, non-determined or relative (Table 1). Most visibly it can be evidenced by a definition itself, a relevant policy goal, instruments, transparency model and responsibility (accountability).

**Table 1. Elements of central bank's independence and their relevance for price and financial stability**

<i>Elements</i>	<i>Price Stability</i>	<i>Financial Stability</i>
<i>Mandate (key objective) (political independence)</i>	The higher level of its specification is as to conflict-free safeguarding of price stability, the better. The existence of equally important key tasks makes central banks vulnerable to a political pressure in terms of achieving any of them	Explicit inclusion into the mandate expands not so much the scope of responsibility, but political interpretation of measures. Implicit inclusion, or non-equal importance with regard to the key task does not eliminate the problem of political pressure. On the other hand, both options strengthen a central bank's position when implementing unpopular regulatory measures

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<i>Selection of final objective (political independence)</i>	Its delegation to the central bank improves financial stability prospects. In the event of distributed responsibility or delegating the achievement of an objective already set, the room for political maneuvers is narrowing, with the final objective becoming a subject of political compromise	The quantitative determination is not easy to make, and therefore a central bank will always be susceptible to a political pressure, and so will it be able to call for the necessity to take financial stability into consideration in the current policy, regardless of the architecture of institutions tasked with ensuring such stability.
<i>The procedure for appointing the management and its responsibility (political independence)</i>	The appointment of management for a term longer than an electoral cycle, as well as a clear procedure for defining responsibility for the policy, dismissal from the office, etc. foster prospects for implementing the price stability policy	Appointing management for the term longer than an electoral cycle has similar effects. However, the non-availability of clear criteria for financial stability assessment makes a procedure for assessing performance and dismissing the management politically sensitive
<i>Choice of instruments (operational independence)</i>	It is essential for safeguarding price stability	Ensuring financial stability may be achieved through several policies at a time, and therefore to correlate the relevance of applied instruments and undefined targets seems very difficult. At this, it does not rule out the possibility for a central bank to operate based on the principle of structurally separated offices, enabled to select appropriate instruments and conduct independent communication policy
<i>Prohibition to finance budget deficit (operational independence)</i>	This has a positive effect on price stability, thereby offsetting any fiscal dominance	When a crisis escalates, the coupling of government debt position and the banking system performance diminishes possibilities of the policy aimed at supporting liquidity, which, however, conflict with the policy designed for price stability
<i>Prohibition to purchase financial instruments other than state securities (operational independence)</i>	This has a positive effect on price stability, thereby eliminating moral hazard	Diminishing possibilities of supporting liquidity of specific markets or classes of financial instruments, although mitigating a contradiction with regard to inflation targets
<i>Transparency</i>	It is a key element in shaping relevant expectations and building confidence	Total transparency in financial stability domain is able to reinforce speculative or panic sentiments, although may contribute to improving assessments of systemic risks by private sector. Yet, the relevant assessment is possible given a fully-fledged financial system, effective institutions and trust
<i>Accountability</i>	It is a key element of ensuring a proper fulfilment of the mandate and eliminating a politically motivated pressure	A vague and interpretative nature of the financial stability definition, the absence of a clear quantitative objective and a specified operating framework makes an objective assessment of actions impossible. This weakens the central bank's independence making it politically vulnerable
<i>Provisioning under asset side operations (financial independence)</i>	Making a choice-of-instruments issue irrelevant, while, most importantly, reducing vulnerability to a potential possibility of transferring profit to the budget	Likewise. While the volume of provisions can be at such a level that reducing the amount of profit before transferring it to budget may give rise to fiscal and political conflicts
<i>Covering loss using budget funds (financial independence)</i>	It ensures that fiscal considerations will have no effect on the nature of policy relating to the mandate fulfilment	A level of loss may be significant, augmenting the central bank's vulnerability in terms of a fiscal and political conflict

Note 1. Prepared by the author.

Thus, a definition of price stability is defined and consisting in maintaining a low and relatively stable level of inflation, measured through the consumer price index. The definition of financial stability provides for whole sets of options for definitions and, most importantly, the structure of the financial system itself does not always play a key role in generating systemic risks (i.e., the domination of banks in the financial system does not rule out that a source of instability may be a bubble in the real estate market, or substantial external borrowing of the real sector, etc.), but it remains important for a true understanding of those risks (for example, in the case of dollarization of liabilities, related party lending, etc.).

An issue regarding a policy goal is the continuation of the definition problem. If in the first case, the goal can be determined on a quantitative basis and the quantitative base itself is already an element of a specific operational framework, then, in the second case, no specific target or the quantitative base for its determination exist. There is a theoretical vision that a deviation of a financial variable from medium- or long-term trend may suggest imbalances, while a prolonged deviation that transforms into an exponential trend may herald a bubble. The situation looks even more complicated with regard to the term structure of interest rates or profitability indicators. The compression of spreads can occur relatively slowly, but their expansion may take place instantly. While profitability of the financial sector is peaking at times when systemic risks are getting most accumulated. The picking out of some indicator that best ascertains financial stability, or the analysis based on the financial conditions index is always an issue of interpretation.

The situation looks similar with regard to the instruments. Price stability is achieved through a traditional set of tools, whereas there is not any established set of tools addressing financial stability. Moreover, the latter can be ensured through a set of policies that can complement each other, but may as well conflict with each other. A possible "assignment" of policies to separated agencies also implies that a central bank is not a guarantor of financial stability of last resort.

A more serious situation with regard to responsibility is revealed. The absence of a defined objective results in a lack of the quantitative base, and a set of instruments allows for wide interpretations of the methodology for their use, with a political responsibility for financial stability being something rather relative. In countries with sound instruments, the scope of relateness becomes narrower in the light of "debates in substance", while in other instances such a responsibility is instrumental in nature. Against this background, the relateness in the definition of financial stability may easily transform into arbitrariness, which profile will be determined by political expediency.

It might be expected to help explain higher propensity of developed countries to include financial stability component into the mandate. The fact that it cannot be discerned in its pure form probably implies a stronger causality between price and financial stability, while in developed countries counterposing price and financial stability requires an adequate response from regulators. In other words, in the event of a politically expedient interpretation of the results of the policy, the nature of the mandate may be of secondary importance, while in the case of a political interpretation "in substance", the mandate issue becomes a part of an institutional design.

This problem can also be analyzed from another perspective. Those democracies that enjoy strong institutions will tend to seek a balance between independence, transparency and responsibility, which components become subject of political debates "by implication". Should financial stability conflict with price stability, a response on the part of institutional design will provide for full consideration of all possible risks and threats. A specific choice of a nature of the mandate and institutional design may turn out to be random in terms of countries. Its mixed character has been pointed to in the paper of Bayoumi et al. (2014). But behind it some specific traditions and political practices may stand (Masciandro et al., 2008). Two options may be used in the countries with weak institutions. A) A formal status is invariant. The most significant is actual control. In other words, the choice of institutional design will be determined by the fact to what extent it will enable the implementation of control over the financial system. B) The formal status may allow for a low level of independence whereby control can be exerted over the institution's policy. In both cases, financial and price stability will unlikely be antagonists, since the "capture" of the institution or manipulation of its policy will have a similar negative effect.

Similarly, the financial system structure may influence a political modesty of the central bank's status and design. Certain patterns may be singled out with regard to its policy. For example, during and in the aftermath of a crisis, a central bank may generate implicit subsidies to the financial sector through various unconventional measures or relaxation of regulatory requirements under the pretext of preventing the credit crunch shock. Amid the boom a central bank may be reluctant to take measures to curb the procyclicality of the financial system. As a result the overheated financial sector will be regarded as a source of rapid economic development. Market-based or banking-based models, and a level of their concentration will have a significant impact on a political and economic choice of politically exposed persons. In systems with dispersed ownership, as well as in systems with concentrated ownership, a motivation behind the regulation profile may differ. In the first case, monetary policy and financial regulation may be more distanced from each other. The opposite holds true in the second case. Concentrated ownership of the financial system will contribute to the fact that the regulation capture will generate lower transaction costs in the political process as a wide range of functions will be localized within the same structure. The higher will be the correspondence between weak institutions and concentrated ownership of the financial system, the more likely will be the concentration of powers relating to monetary policy and financial stability, which will encourage a tendency towards stronger control regardless of the formal status.



#### IV. DYNAMIC INCONSISTENCY AND FINANCIAL STABILITY: DOES THE STRUCTURE OF MANDATE MATTER?

##### 1. The nature of the conflicting objectives in the short and long term

The conflicting objectives of the policy on the different time horizons (dynamic inconsistency) leads to its deterioration even before the start of its implementation. In case of the monetary policy it is an inflation bias (Kydland and Prescott, 1977). On the global monetary level this problem is also possible. In terms of expansion of liquidity the world is faced with a choice between faster growth of energy prices and greater financial vulnerability (Koziuk, 2009). In net extrapolation on financial stability, Cihak (2010) provides reasons why regulatory and anti-crisis aspects of the respective policies of the central bank fall under dynamic inconsistency. To this end, some assumptions are made. The growing level of financial instability generates expectations of crisis. Expectations of crisis generate the moral hazard problem. One cannot completely rely on the quality of the institutions, therefore a number of financial institutions activate the so-called "gamble for resurrection". The central bank affirms that it will be tough during crisis. However, economic agents do not trust the promises of the central bank supposing that instead of the promised toughness (publication of information about the real situation in the financial system, strict adherence to regulatory norms, the observance of all procedures of banking supervision, absence of supporting liquidity injections, etc.) it will be lenient. Such leniency means soft or flexible interpretation of the regulations, pumping of liquidity, shying away from the actual state of the financial system and connivance of risky business models etc. As a result, the lack of confidence in the central bank's tough policy in the area of financial stability will mean that during the crisis it will behave as expected. And this in its turn will allow a reasonable choice of moral hazard behavior which will result in accumulation of systemic vulnerability of the financial system. In the strategy game the central bank will always be a loser, except when its promises are trusted.

Cihak (2010) shows significant difference between dynamic inconsistency between price and financial stability. The monetary policy is a repetitive game which allows identifying the type of central bank behavior relatively quickly. Similarly, the game where the moves of participants are frequently repeated allows gaining trust quickly. Financial stability is time-expanded, and cases of crises are not frequently repetitive. In such circumstances it is difficult to track logic of central bank actions, and it is even more difficult to gain confidence, because it may be impossible to define how long it will take for economic agents to form such opinion.

For countries where financial instability is rare this issue is simpler. Usually, the sources of instability in such countries are inadequate macroeconomic policy and / or weak institutions. In such circumstances, the normalization of the situation goes hand in hand with a general trend towards an increased independence of the central bank and improved quality of institutions. At that, the latter is often the key to successful consolidation of the central bank status, and the first is a trigger for deeper reforms in other areas of public sector. However, strengthening of the central bank independence does not exclude the worsening situation, for example, in terms of public debt, if there are no parallel reforms in other parts of the institutional structure of the country (Acemoglu, 2008).

However, the dynamic nature of inconsistency in the area of financial stability is more complicated (see Table 2).

**Table 2. Comparative characteristics of dynamic inconsistency in terms of monetary, fiscal, and financial stability policies**

<i>Elements of the dynamic inconsistency problem</i>	<i>Monetary policy</i>	<i>Fiscal policy</i>	<i>Financial Stability Policy</i>
<i>Socially optimal policy in a long-term</i>	Maintenance of price stability	Support of sovereign solvency	Maintenance of the financial system stability, elimination of causes for accumulation of systemic risks, counteraction to the pro-cyclical behavior of the financial sector, prevention of financial imbalances, ensuring of an adequate regulatory environment
<i>Socially optimal policy in a short-term</i>	Creation of unexpected inflation to stimulate employment	Stabilizing response to a shock or change in the preferences on the structure and amount of expenditures and taxes	Support of the liquidity of financial institutions and / or flexible application of regulatory requirements

<i>Macroeconomic nature of conflicting objectives</i>	Maintaining price stability in the long run contradicts the trend towards creation of unexpected inflation in the short term	Activist policy or changing fiscal and redistributive preferences in the short term are contrary to maintaining debt sustainability and sovereign solvency in the long term	A) Monetary policy. Raising interest rates in the short term rather generates destabilizing effects, while in the long run the probability of crises and systemic risks lowers. B) Macro- and microprudential policy. More strict requirements in the short term exacerbate procyclicality of the financial system, and in the long term they weaken it due to risk assessment, the nature of the response of loan supply (liquidity) to the regulatory requirements etc.
<i>Response of economic agents</i>	Lack of confidence in inflation promises of the central bank and faster price increase according to the awareness about the presence of conflicting objectives in short term and long term policy horizons	Lack of confidence in promises of a balanced budget and keeping from public debt increase according to the awareness about conflicting objectives in short term and long term policy horizons	Lack of confidence in strict anti-crisis promises and / or the declared policy aimed to prevent moral hazard, coupled with expectations of liquidity injections
<i>Policy shift</i>	Inflation	Deficit	Accommodative
<i>The nature of the deviation from equilibrium</i>	Higher inflation compared to the optimal one	Higher budget deficit and, consequently, public debt, compared to the optimal ones	Higher levels of systemic risk, higher propensity to risky behavior, behavioral distortions
<i>How to overcome</i>	Implementation of policy based on quantitative rule (sustainable growth of the money supply, zero inflation, the range of acceptable inflation), compliance with which will induce the confidence of economic agents	Implementation of policy based on quantitative rule (balanced budget, quantitative limits on budget deficit/public debt), compliance with which will induce the confidence of economic agents	Rules of behavior at the time of crisis But it is difficult to define them. The independence of the authority responsible for financial stability. However, formal independence does not guarantee addressing the problem of dynamic inconsistency. Also, financial stability is not confined solely to one type of policy. This means that there is no conventional way to solve this problem

Note 1. Prepared by the author.

The variant presented in Cihak's research (2010) shows policy's details, which, except for liquidity injections, do not directly relate to monetary actions. In the light of the issue on whether / how the central bank should respond to financial imbalances via monetary instruments, dynamic inconsistency should be extended to the monetary policy problem from the standpoint of financial stability. In this context, the conflict between optimal monetary decisions over short and long periods is based on the difference in financial sector responses and, respectively, probability of transformation of vulnerability into disruption. In other words, in the short period, when the signs of imbalances accumulation have already appeared, after-effects of raising the rates, which is related to the monetary response to the problem of instability, are opposite to those in the long period, during which maintaining of the rates at an adequate level creates the fundamental precondition for financial stability (Table 3).

**Table 3. Differences in impacts of a rise in interest rate on macrofinancial processes in a short and long period**

<i>Effects of a rise in interest rates in a short period</i>	<i>Effects of a rise in interest rates in a long period</i>
Enhancing of negative aspects of the balance-sheet effect	Decreasing of a risk appetite and focusing on "good" investment

Tightening of lending conditions	Decreasing of a leverage level. Releasing decisions concerning capital structure from expectations of a downward path of interest rates. Forming a macroeconomically neutral capital structure
Increasing the burden of interest payments	
Decreasing the banks' propensity to borrow	
Shifting the portfolio structure towards less risky instruments	Forming more adequate risk and term interest rates structure
Expansion of spreads	
Decreasing the distance to default	Displacing behavioral distortions that are parasitic on expectations of the accommodative policy and weakness of regulating institutions

Note 1. Generalized by the author based on IMF (2015) and Bulir and Cihak (2008).

Naturally, in such conditions, non-conventional practices of central banks should have a logical endpoint. However, in the event that during carrying out of the non-conventional policy their status will change towards weakening of independence in response to transvalued results of actions beyond the scope of the mandate of maintaining price stability (for example, for carrying out such policy on a permanent basis), further actions on ensuring financial stability may face serious political opposition. As a result, the policy with respect to financial stability will be changed from the dynamically inconsistent policy into a consistent riskogenic one. Despite the fact that this is an extreme case, the question on how to limit the dynamic inconsistency of central banks in the area of financial stability is not trivial.

## 2. Significance of a mandate

Formulation of a mandate in the area of financial stability as a precondition for preventing dynamic inconsistency is quite problematic.

First, if you start from the logic of an orthodox view on central bank's independence, the fact of dynamic inconsistency in implementing the price stability policy is reasonable grounds for extending this principle to financial stability. However, an analogy between "one mandate – one goal – one instrument" cannot be deemed to be a benchmark for analysis. It derives from the fact that the issue on the mandate structure arises, whereas the goal in the financial stability area as well as a set of instruments cannot be clearly specified. In the context of an orthodox approach, the more dual is the mandate, the less independent is the central bank. At the same time, in the context of heterodox approach, going beyond the bounds of the dilemma: "expansion of the mandate narrows independence, whereas the policy in the area of financial stability needs it" looks more attractive. For example, Acharya (2015) describes this problem in the following way. The mandate for ensuring financial stability is required to overcome the political pressure in the event of proactive policy that restrains economy during the boom, and not to go beyond the bounds of an inflation target during the anti-crisis support to the financial sector after the crisis has already occurred.

At the same time, the standard expansion of the mandate will not appear to be an optimal decision, because, as it has been demonstrated, price and financial stability may be conflicting goals. In other words, the issue is related not to mandate expansion, but to finding such its specification that would make it impossible to combine a common principle of protection of central bank's independence with separation of actions and concerns regarding the monetary, macro- and microprudential policy. However, price stability should remain the central task for its crucial importance for healthy macroeconomic environment for financial sector functioning, its Pareto-neutral nature, and clear and recognized identification criteria.

Financial stability should be considered rather as a parallel goal than a subordinate one, taking into account warning about the fact that the basis of its achievement is implementation of several policies that need to be coordinated with each other, have separate offices and a reporting and communication system which does not exclude the possibility for integrated communication. This will make it possible to implement and explain proactive actions in response to financial sector overheating in a situation when, for example, given a great deflation shock of productivity, political actors and markets will wait for policy easing by a central bank. In light of the fact that the global integration changes inflation processes and increases its disinflation profile, the traditional orthodox model of central bank's independence may be functionally and politically vulnerable. Under disinflation provoked by global factors, policy easing may cause unwelcome processes of unwinding of the spiral of imbalances, whose transformation into a systemic crisis followed by deflation and recession will bring to life an interest in reducing central banks' independence to combat them.

Second, the risks of the direct and traditional inclusion of financial stability in the mandate, due to which the latter will be deemed to be dual, come down to a known set of nuances. Out of them one can find the following:

- a traditional conflict between price stability and lending of last resort, carried out as a part of the financial stability policy. This may not seem critical in the countries where the exchange rate and the balance of payment do not restrain the macroeconomic policy. This applies also to the countries with strong institutions and consistent financial regulation. However, for the countries that are vulnerable to exchange rate fluctuations and reverse processes in capital flows and face the challenges

of institutional distortions, lending of last resort may become an additional factor of macrofinancial instability resulting in considerable reputational losses for a central bank;

– a difficulty to identify the financial stability and evidence of its antipode generate considerable difficulties in interpretation of central banks' actions and interpretation of the grounds for political responsibility. At that, financial instability determinants may change, requiring from a central bank the wide discretion to choose the instruments whose linkages with the goals are not always obvious or not always obvious in a short period. The same applies to the problem of a cross impact of the monetary, macro- and microprudential policy on the price and financial stability. An exchange rate is the most striking example. It influences the price stability via carryover effect, and the financial stability — via balance sheet effect. However, the rate itself very often depends on the factors outside the central bank's influence. Exogenous shocks that determine reallocation of global capital flows are an example of this;

– essential differences in the horizons of the price and financial stability policies, as well as a difference in a frequency of deviation from them, deepens the problem of confidence. In addition, during different time periods, confidence in one policy may increase confidence in another one. This does not preclude an extremely optimistic assessment of separate aspects of central bank's activities and drifting in assessment of factors that lead to deviation from the goals. For example, the financial stability may be taken for granted under price stability, and deflation may be assessed as a result of insufficient support for the financial sector during the stress. In the first case, confidence in one of the policies will generate positive externalities for another one, and in the second case — vice versa;

– concentration of power, where the result is achieved by separate policies and different instruments, may create a problem of instruments combining. For example, requirements for regulatory capital adequacy or requirements for provisioning under asset-side operations may be reduced in reaction to heavy political pressure with respect to a decrease in interest rates. Meanwhile, this may have redistributive effects. Differences in the asset structure of different financial institutions imply that the ones will be in better conditions than the others. This will create political intentions regarding additional control over the central bank, because concentration of power will be considered by some groups as additional redistributive possibilities in the event of "capture of the regulator", whereas another groups will be interested in minimizing of selectivity, thereby creating pressure towards formation of institutional preconditions for rigorous monitoring with ambiguous political ways to use its results, etc.

Third, the problem of spillovers is very important. Growth of global cross-border capital flows shows to what extent unwinding of the spiral of imbalances in one country may be associated with global centric factors or with changes in the policy of one or another big country. Central banks should be always ready for such-like shocks, whereas the scale and speed of changes in global flows can make the measures to support the financial sector relative. This raises a question of whether the political responsibility for failure to achieve financial stability should be focused on the central bank's management, if the epicenter of its origin is abroad.

Forth, as already mentioned, the lags and frequency of events have very different duration in the event of the price and financial stability. In the first case, within even a half of tenure of central bank's management, one can discuss the specific effects of those actions, not to mention the cases when the effects of inflation actions make themselves evident, in a few months, whereas in the event of financial stability, the situation differs. Moreover, the differences can also be projected onto the monetary policy that was passive with respect to unwinding of the spiral of imbalances as well as onto macro- and microprudential regulation. The effects of failures in the policy as regards the financial stability may become evident years later. The case of frustration of regulation, which results in appearing of institutional distortions, is typical. However, the situation when the policy regime changes will be highly problematic for the political responsibility of central bank's management. The response to such a change can cause not just the political opposition but a complicated multi-period game, in which stability of financial institutions will be only an episode of more complex strategic plan to return to the redistributive status quo. In other words, the change in the policy regime following the change in the central bank's management may be a precondition for addressing imputations to it concerning failure to reach financial stability just because a new policy changes the institutional equilibrium of rent distribution related to the activity withholding evident captive business models. It is clear that this is a situation of countries with weak institutions. However, even in developed countries, the opposition to all-encompassing regulation does not seem to be an exception, especially in the context of speculating on procyclical effects of stricter requirements for financial stability institutions. As these requirements are usually introduced after a crisis and may coincide with recession, a short-term shrinkage of credit supply is a typical example of manipulating interpretations about what is financial stability and how it should be achieved. The basic conclusion that one can make — the responsibility for financial stability should be based on an extended set of interpretations that would take into account a temporal problem and broadened policy horizon and in this way narrow the area of political interpretation of central bank's effectiveness.

Consequently, combating the dynamic inconsistency in the area of financial stability needs more independent regulator; however, a direct analogy with the orthodox approach with respect to the price stability is not relevant. The conflict with the latter is one of the reasons, while the dual mandate is politically vulnerable. More complex mandate structure with an allowance for maintaining a price stability status looks like some compromise, in terms of which the task concerning financial stability and responsibility for its achieving need additional interpretations separated from the key task.

## V. FINANCIAL STABILITY AND INDEPENDENCE OF THE CENTRAL BANK: STYLIZED CASES

### 1. Independence and proactive versus reactive policy

It is a well-known discussion (lean vs clean) on what is better: respond early to imbalances and pierce the bubble by rising rates (lean against the wind) or clean-up the market through the unlimited supply of liquidity (clean), lasts for about 20 years. Although it does not affect the status of central banks directly, it has an obvious institutional correlate. What design should be envisaged and maintained in order to have minimum losses from either proactive or reactive policy. At the same time, to speak theoretically, the situation is not so simple. We can assume that orthodox central bank the independence of which falls under strict specification "one mandate – one objective – one tool", will choose the option of the priority of target trajectory of inflation, complementing it with clean-up of markets if needed. But this points to the fact that orthodoxy is not a direct synonym of independence. The same applies to heterodox central bank, although, according to the orthodox approach it is a priori less independent.

Wagner and Kissmer (2013) point out that if financial stability is associated with smooth cycle in asset prices, central bank independence is contrary to it. The main reason for this is exactly in the orthodox interpretation of the independence itself. The central bank will evade from the response to the rising trend of asset prices. Also, the reason that pushes a central bank to neutral reaction to financial imbalances is a lower level of inflation after financial stress. In the same study, Wagner and Kissmer (2013) state that the independence of the central bank should relate not only to the fact of reaction to the asset prices behavior, but also to what profits and losses are brought by negative inflation gap after the episode of financial instability to the central bank itself. For more independent central bank it means inability to achieve inflation target, which finds itself above the actual one; for the less independent it is an opportunity to solve the problem of inflationary shift.

In its turn, Borio (2014) denies the link between formal status (or how mandate is worded) and the nature of the choice among proactive or reactive policies. The way the central bank acts is more important than its status. Mentioned in some works, namely Cihak (2010) and Klomp and de Haan (2009), tighter link between political independence and financial stability can be interpreted as a manifestation of the fact that exactly this type of central bank may go beyond the approach to definition of its independence in the traditional sense. In a situation like this, only a more independent central bank can "lean against the wind" (Koziuk, 2015).

However, these discussions indicate several issues, namely how price stability and financial stability correlate; what is central bank independence – a mechanical adherence to the mandate, or willingness to act and take responsibility in the political environment. This environment can be characterized by the domination of position envisaging monetary policy overload with objectives of economic recovery. And maybe by the domination of politically motivated intentions regarding the arbitrary interpretation of how a status correlates with macro financial environment of different actions, or lack thereof. One can draw some conclusions (aggregated in Table 4). First, it is necessary to combine two options in the analysis, namely: when maintaining the price stability conflicts with maintaining the financial stability, and when such opposition does not exist.

Second, it is important how the central bank integrates a financial content into macroeconomic model. In many cases it will define how narrowly or broadly it will interpret the mandate, even if the mandate is to define a single goal – price stability. In other words, the fact how strictly the new Keynesian model will be opposed to BIS approach to a large extent will define whether the independence will be measured using classic approach "one mandate – one objective – one instrument", or going beyond that limits will mean the willingness to be active and responsible.

Third, post-crisis inflation and the associated state of aggregate demand are important as they shape the profile of the central bank assessment by the political actors and, accordingly, how the latter will ask the central bank about the return to pre-crisis trajectory. More independent central bank in the orthodox sense can lean to reactive policies without regard to the risk that falling inflation and stagnation after the crisis will cause pressure on it. A less independent central bank, which also tends to pursue a reactive policy, may not resort to it, being aware of the risks of political pressure over the following periods. At the same time, a less independent central bank may not be proactive as it will be under political pressure when trying to "prickle the bubble" because such policy is perceived as a challenge to faster economic growth.

Fourth, if the response to the unwinding financial imbalances does not depend on the status, it would hardly mean that its motivation is different. Similarly, if such response is analyzed in the light of the effects on inflation, the incentives to be proactive or reactive shift towards what method of interpretation and assessment of the actions of the central bank dominates and, respectively, the realization of its responsibilities. This means that in case of political preferences unevenly distributed in time, the incentives are also displaced in either direction, bringing back the issue of what constitutes independence of the central bank.

In this situation we can only note that the more the price and financial stability are antagonists and the less the principal (society, parliament, government) is prone to opportunistic behavior, the more the central bank can count on the adequacy of the orthodox approach. Otherwise, independence should be more comprehensive than the model "one mandate – one objective – one tool" assumes. That is why, in developed countries there is a strong link between operational independence

and low inflation, and political independence is often lower than in emerging markets, whereas financial stability better corresponds to the political independence, as the examples of the large sample of countries show DeBelle and Fischer (1994), Cihak (2010), Klomp and de Haan (2009), Dincer and Eichengreen (2014), Balls et al. (2016).

The case of emerging economies also suggests that a conflict between the price stability and the exchange rate stability could have serious secondary effects in the form of financial instability. Higher vulnerability to negative balance sheet effects of exchange rate fluctuations (excessive propensity to leverage amidst higher exchange rate, increase of debt burden as a result of lower exchange rate etc.), coupled by the problem of the regulatory institute quality questions the possibility to rely solely on the orthodox approach. Where the quality of institutions in terms of financial behavior is low, monetary and regulatory policies must take into account the risk of further political pressure on prudent response to imbalances or pressure toward redistributive design of incentives during markets clean-up. And price stability and financial stability policy should allow for the option of cross-response, when the former or the latter will be under more pronounced pressure of opportunistically minded principal.

**Table 4. Incentives and response options for central banks, depending on the nature of the relation between price stability and financial stability**

<i>Ideal type and incentives for responses</i>	<i>Price stability and financial stability are antagonists</i>	<i>Price stability and financial stability complement each other</i>
<i>Orthodox option "one mandate – one objective – one tool" (Ideal type)</i>	Independence is not considered in the context of financial stability, as the latter can be a part of other policies implemented by separate agencies. However, the response to financial instability undermines the ability to be independent after achieving price stability	If there is no conflict between price stability and financial stability it is assumed that the traditional approach to independence is sufficient to guarantee them both
<i>Heterodox option: extended interpretation of mandate even if the latter envisages the price stability (ideal type)</i>	Independence allows responding within a wide macrofinancial range. Temporary deviations from the target trajectories of inflation and GDP are neither a challenge for interpretation nor the grounds for independence	Independence is an important prerequisite for achieving price and financial stability, a means to neutralize political pressure, but solely monetary response may not be enough. Independence also enables the implementation of other types of macrofinancial stability policy, increasing efficiency of them all
<i>The choice of more independent orthodox central bank</i>	With financial instability signs, reactive policy has more benefits. The apparent losses from future response to a probable event are always higher than the expected present benefits from the prevention of the likely event. Inflation target is a dominant. Post-crisis risk of deflation is not considered as a challenge to the current status. Example – the Riksbank	In case of signs of financial instability monetary response should ensure neutralization of transformation of financial shock into price shock. However, when a crisis has already occurred, expansion of liquidity may be restricted to avoid triggering inflation. Example – ECB before 2012
<i>The choice of less independent orthodox central bank</i>	The response to signs of financial instability is not considered appropriate because it is perceived as risky in this political environment. Clean-up of markets may be more aggressive because of the need to prevent political pressure in the respective area and because of likely need to prevent deflation. Example – Bank of England before expansion of macroprudential powers	Opting for a proactive policy can be complicated by political opposition to actions that could slow the economic growth. However, overcoming the effects of the financial crisis may be accompanied by higher inflation. Example – most southern EU countries before entering the euro area
<i>The choice of more independent heterodox central bank</i>	Financial imbalances are a challenge to future macroeconomic stability and temporary problems of downward inflation deviation from the target is not a barrier to proactive responses. Downward deviation of inflation should not be considered as grounds for "liquidity injection" because it encourages a new financial cycle. Monetary policy and macro- and microprudential regulation should complement each other. Example is not yet defined	Coordinated work of monetary policy and macro- and micro-prudential regulation will enable to better cover the area of macrofinancial instability. The reaction to financial imbalances is likely to be prudent, given the awareness of the risks of future dilemma: to support either price stability or financial stability in the event of a crisis. Example – emerging markets with independent central banks

*The choice of less independent heterodox central bank*

The response to signs of financial shock will occur on the basis of the instrument, for which the conflict with the dominant political forces is the least likely. The same applies to priority of price stability or financial stability in the event of a crisis. Example – emerging markets with moderate monetary autonomy and considerable financial openness

The response to signs of financial shock will allow the combination of tools so that its subsequent political pressure was graduated optimally. In the event of a financial stress, the response profile will be determined by the behavior of the principal prioritizing either price or financial stability in restoring them both in the future. Example – emerging markets with moderate monetary autonomy and vulnerability to fluctuations in the exchange rate and capital flows

Note 1. Prepared by the author.

From these generalizations one can conclude that the profile of proactive or reactive modalities of behavior is significantly influenced not only by the status itself, but also by the way the central bank generalizes macrofinancial economic model. Independence can be very useful in achieving both price and financial stability, while financial factors are seen as significant drivers of macro-instability. Its narrower interpretation can, on the contrary, lead to over-simplification of monetary policy environment, which, however, does not exclude more complex view to the "special" structures aimed at ensuring financial stability. The issue of optimal design accordingly moves the focus to the issue of independence, but does not deny it, as shown below.

### 2. Independence of the central bank and macro-prudential competencies

Once macroprudential regulation was recognized as a specialized type of policy aimed at financial stability, the question arose what should be optimal design of an agency that would pursue it. At the same time, it also raised the question of a degree of independence of an authority empowered to carry out macroprudential regulation. In the event when macroprudential regulation is delegated to the central bank, it should undergo institutional changes to incorporate the responsibility for financial stability, define anti-crisis functions and tools, and arrange cooperation with other agencies and policy makers. Those so-called "new functions" should be clearly manifested and be of justifiable nature, otherwise the issue of democratic control, accountability or concentration of power will inevitably arise (Balls et al. (2016), Achrya (2015), Bayoumi et al. (2015)).

However, the optimal design of the agency does not remove the issue of its independence. One can see that the definite difference between heterodox and orthodox approaches also covers the delegation of the central bank's mandate on macroprudential regulation. According to the first one, like in bank supervision, competence for which reduces the level of independence in accordance with the theoretical foundations of GMT-index construction, macroprudential regulation will narrow the central bank's independence. Most likely, it will be delegated to the central bank that already performs macroprudential regulation, and which has a lower level of political independence (Masciandro and Volpicella, 2016). In other words, under the "one mandate – one objective – one tool" model, expanding the central bank's functionality inevitably entails extension of political responsibility and therefore extension of political pressure. The combination of this model with responsibility for financial stability based on a strict split of functions in the field of monetary policy and macroprudential regulation allows "assimilating new functions", but at the cost of partial loss of independence.

However, such perception of the problem should be recognized as appropriate only when there is really an actual underlying conflict of objectives of maintaining price and financial stability. Failure to ensure that externalities of macro-prudential policy will not affect the area of responsibility for price stability, leads to a situation where more advanced view on the drivers of macro-financial instability conflicts with institutional choice of agency design. For example, restraining expansion of credit of strengthening macroprudential requirements may affect the compression of demand which will decline inflation down to the target area. Reduced rates as a response may, however, enhance propensity to risk. In both cases, the individual response is optimal, but it is so only in the narrowed interpretation of the mandate and assessment of risks of political pressure for no actions, the need for which is generated by the optimal response of the other policy. This example clearly indicates the limitations of the orthodox approach.

The example suggested by Ueda and Valencia (2012) is similar. They show that when a change in macroprudential instruments cannot be as fast as monetary ones, there will always be a risk of dynamic inconsistency. The central bank may tend to maintain the inflation target ex ante, but to deflate private debt through higher inflation ex-post. Moreover, a higher political independence here can play a negative role because "failure" of one policy can be offset by sub-optimal result of the other. However, the status of an "umbrella" for coverage of failures cannot be considered as optimal multiple-period strategy, because on the long-term horizon we will see actions on the political responsibility or actions aimed to change the status depending on which political and economic ideas and interests dominate in this or that time. And here the quality of institutions is especially important. Reduced independence may envisage increased control with redistributive purpose and the reason for this – failures in one of the policies, despite the fact that the other can demonstrate an adequate level of social optimality.

Political and economic factors taken into account allow us to see a different picture. It is more consistent with the experience of institutional protect of the monetary policy from political pressures. The most typical examples here are situations of conflict between more strict measures in the area of financial stability and electoral considerations of political players. Such measures can be described in more details. If a central bank estimates increasing of systemic risk, the change of respective instruments may have a short-term deterrent effect. And it applies both to macroprudential and monetary instruments. Political opposition to such steps should be associated with direct deterrent effect and with the fact that opportunities to increase profits in the financial sector decrease. The latter does not exclude creation of certain lobbying movements oriented to criticize the central bank.

But, it may manifest most prominently in case of the change of regulation regime. Thus, the concept of financial regulation (especially banking) has not principally changed for a long time; therefore a kind of institutional balance was reached. Situation changed after the global financial crisis, which caused a change in the nature of regulation. The introduction of macro-prudential mechanisms of limiting the pro-cyclicality in conjunction with the Basel III approaches have in general increased regulatory burden of the banking business. By countries, the transition to more strict regulatory practices (risk assessment, requirements to the regulatory capital, liquidity buffers etc.) showed that it does not always goes smoothly. Political resistance to change is generated exactly basing on speculations about the short-term effects of compression of aggregated loan. Thus, low trajectory of lending resumption is often perceived as grounds for the reluctance to introduce stricter regulatory requirements within the framework of financial stability policy. Therefore, if a central bank does not have sufficient independence to change the regulatory regime, can it be responsible for financial stability at all? Reverse political pressure may aim to slower regulatory innovations, as well as it may relate to the creation of compensators in the form of lower rates and liquidity expansion. And this raises the question of whether the central bank will be able to achieve price stability. In both cases, no matter how mandate is specified and no matter how the responsibility for price and financial stability was distributed among structural subdivisions of the central bank itself, if both policies are not subject to joint protection of the fundamental principles of independence, their implementation will always be under pressure. Moreover, the possibility to cross-compensate the consequences of one policy with the measures of another one considerably undermines transparency and distorts responsibility. In this case, it is not about the optimal coordination. Not only aspects of policy change will be aspects of higher risk of political pressure. Without sufficient protection the risks of such pressure will always intensify following the electoral cycle or in response to stress, which can distort the electoral picture in the future.

Another example is a typical short-terminism. Financial cycle is longer than business cycle. Specification of instruments of the macroprudential policy and their nature may deviate from the business cycle, causing restrictions and political accusations. Global determinants of the internal financial cycle only deepen the problem. For example, implementation of macroprudential instruments aimed at limiting internal lending can be partially offset through external borrowings. In such circumstances, the question arises, either about the extension of macroprudential influence, or monetary response in the form of strengthening the exchange rate and / or increasing rates. It is clear that if such actions coincide in time with relatively stable inflation (better say coincide with politically neutral / acceptable level of inflation) prudent opinions of the central bank will not be supported by individual interest groups. Duration of policy horizon and duration of monitoring of the regulator's actions exercised by political actors will be different. Solely communication measures may not be enough to neutralize the pressure against the actions in response to the risks seen by the central bank, but not by others.

Another important issue is the trust in the asymmetric information environment. The central bank typically has a wider range of information than other market participants, and sometimes – than other agencies. This makes it a monopolist owner of aggregated information. It raises the issue of transparency in handling a monopolist status. In the area of financial stability the transparency is limited by the bank secrecy, on the one hand, and the risk to stir panic on the other. Given the lack of uniform access to aggregated information on financial stability, there is a question of overconfidence, transformation of which into credibility is based on actions which should be guaranteed by the independence.

Also the question of the perimeter of regulation is important. Where the central bank is competent to apply macro-prudential tools only to a certain group of financial institutions, its ability to maintain financial stability decreases. However, it raises the question, to what extent the central bank can extend its macroprudential influence to certain financial institutions when they are not subject to macro-prudential supervision. On the one hand, in the case when there is a separate supervision of individual financial institutions, macro-prudential regulation can seem limited and therefore potentially ineffective. The example of so-called shadow banking system is classical. On the other hand, the concentration of supervisory functions solely to improve the efficiency of macroprudential regulation can also cause concerns. A compromise option may be expanding macroprudential powers and institutionalized enforcement of coordination within the anti-crisis policy. It stands to reason that modalities of changes in the central bank when implementing such a policy may require a separate specification in the legislation (Balls et al., 2016), Acharya (2015).

It brings a question whether it decreases the central bank independence. According to the orthodox approach – yes. However, when in case of crisis the central bank has to go beyond a single mandate, establishment of it may be accompanied by changes in the status that will be more dangerous. Yet, within the heterodox approach, the answer is likely to be somewhere



in the middle. To protect actions in the area of financial stability, especially when they are at odds with the electoral process, reservations on the options of changes in the activity of the central bank may be more necessary. They can be seen as insurance against pressure, following of which could lead to the consequences, elimination of which will lead to the results though oriented to restoration of financial stability, yet be contrary to the price stability.

Also Acharya (2015) emphasizes the rules that would have settled the lending of last resort during systemic crises and prevented generation of moral hazard problem. On the one hand, the existence of rules is the easiest way to solve the problem of discretionary behavior limitation. Financial crises and relevant central bank's non-conventional practices open a wide space for actions that eventually are interpreted as non-transparent, selective and targeted at individual market participants. This creates a dangerous precedent for political pressure in terms of tightened control over the central bank in the area of financial stability. Naturally, the rules in case of anti-crisis measures will allow narrowing the range of actions on the grounds that they require status change for increased control. But, do they guarantee flexibility of operational ability to eliminate crisis adverse effects? On the other hand, the rules of behavior in the area of financial stability do not guarantee the central bank efficiency, especially when it is about dynamic deployment of stress that absorbs financial institutions one by one rather than all at once. In such circumstances, any ex ante design of rules will not be optimal ex post, which, in principle, is the familiar analogy with the debates about monetary rules.

One of the very dangerous aspects in cascade-like patterns of crisis deployment is a change of motivation of financial institution owners and managers, when each next stage of crisis changes the motivation whether to stay in the market or leave it. Institutional weakness of microprudential regulation will be here a problem trigger. Leaving the market through outsiders looting is possible through non-reflection of actual financial standing and erosion of risks through related operations. Time concentration of microprudential failures followed by changing motivation of owners and managers regarding the extension of the presence in the market generates a deep crisis and a crisis of confidence in the central bank. This raises the question of whether the rules of conduct in one segment of the anti-crisis policy can always help if there are institutional distortions in the other segment. Such asymmetries discredit the principle of independence. It can be used by the central bank as an "umbrella" so that positive aspects of right decisions in one segment of policy compensate the negative aspects of another one. But it also can be used by policy makers as a prerequisite for creating a new redistributive configuration rather than for improving the institutional environment for regulator. These examples show that responsibility and transparency should be the intentions of both the central bank and society. Otherwise, the interpretative nature of financial stability will always be a reason for the central bank independence to be in the midst of political and economic negotiations.

### 3. Comparison of approaches to central bank independence and its outcome in Ukraine's context

The conducted analysis has shown that an issue of central bank independence has gained new importance. Apart from theoretical approaches towards determinants of levels of independence, no less important is a central bank's own vision of macroeconomics. Without such a vision, it would be difficult to understand why it is necessary to ensure one or other level of independence for implementing a socially optimal policy. The complexity of the issue emanates from the fact that financial stability continues to be an interpretative category, and its connection with price stability remains a debating point. However, there are two approaches emerging that equally highlight the importance of a high level of independence of a central bank, yet suggesting different interpretations thereof, partially due to the interpretation of criteria and different views on the role of financial factors in macroeconomic instability. At this, there is no consensus on the dual nature of the mandate even among representatives emphasizing the need of a more active role played by a central bank in the financial stability domain. The comparison between such approaches, which we call the orthodox and the heterodox approach, is provided in Table 5. It does not look into the interpretation of independence elements (their consideration against the backdrop of the global financial crisis is provided by us (Koziuk, 2015) from a perspective of the approaches.

**Table 5. Central bank independence and financial stability: comparison of orthodox and heterodox approaches**

	<i>Orthodox approach</i>	<i>Heterodox approach</i>
<i>Basic macro-model</i>	New Keynesian: stabilization policy effects amid confidence in the price stability policy; business fluctuations caused by stochastic shocks; financial frictions act similar to price inflexibilities; by narrowing down inflation variations a central bank minimizes GDP variations, and in some cases it combines this (over a longer policy horizon)	New Keynesian model should be supplemented with macrofinancial view: the financial system is pro-cyclical; accumulation of systemic risks and financial imbalances pose a threat to macroeconomic stability; the financial cycle and the business cycle are not the same; risk attitude is important; cross-border flows, financial sector gross positions, asset prices and credit dynamics are important indicators of systemic risks; expansion of liquidity unwinds imbalances rather than stimulates aggregate demand per se

<i>Basic model of central bank independence</i>	There must be a high level of independence, and the model "one mandate – one goal – one instrument" is the most effective way to identify the adequacy of the central bank's actions in ensuring price stability	There must be a high level of independence, however: A) there is a sufficient mandate for price stability, but actual steps to dampen the macrofinancial risks should be protected from external pressure; B) the dual nature of the mandate is necessary to safeguard measures aimed at ensuring financial stability
<i>Main options for expanding the basic model of independence</i>	A) Dualization of the mandate, enhancing responsibility for financial stability, the legalization of "new functions" (dealing with debt management, anti-crisis policy, etc.); B) Functions of ensuring financial stability have to be taken out of scope of the institution responsible for price stability	Legalizing authorities in the area of macroprudential regulation can be variable in terms of details
<i>Interpretation of the conflict between price stability and financial stability</i>	The conflict may arise: A) an implicit or explicit mandate for financial stability may encourage higher inflation as a result of overcoming consequences of the crisis (large-scale liquidity injections); B) a lack of measures to bolster the financial sector may pose a threat in terms of a deflationary shift, which undermines financial stability	Price stability is not sufficient for ensuring financial stability, but the former is a fundamental precondition for the latter to materialize. Against the background of a significant decline in actual rates, price stability gives rise to the "paradox of confidence" and encourages higher risk appetite
<i>Interpretation of deflation and deflation risks</i>	Deflation poses a higher risk than a temporal upward deviation of inflation from the target. Major risk: rates at a zero lower bound become ineffective; secular stagnation; unemployment	Deflationary pressure should not be regarded as a precondition for a reckless expansion of liquidity. What matters is the cause of deflation, rather than a formal downward deviation of inflation from the target. Major risk: expansion of liquidity initiates a new financial cycle
<i>Position regarding lean vs clean</i>	Market clean-up is better	Response toward unwinding of imbalances is better
<i>Assessment of gains and losses of a proactive policy</i>	The benefits are questionable in the light of inability to identify bubbles on a real-time basis, while losses could be significant affecting GDP and employment	Benefits are significant in view of the need to consider the "price" of the crises, risks of public debt growth and moral hazard. Losses are exaggerated. A more flexible economy adjusts to an increase in rates creating prerequisites for healthy investment
<i>Assessment of gains and losses of a proactive policy</i>	The market clean-up will contribute to the restoration of the financial sector, and losses due to extending support for it should be comparable with the loss of GDP and employment in the conditions of a proactive response	The market clean-up itself already evidences a "policy failure". It generates additional risks of extending in time the deleveraging process, but does not offer a solution for a search-for-yields issue
<i>Role of political and operational independence</i>	Operational independence is more important for price stability	Political and operational independence both are essential. Political independence is, however, crucial for financial stability
<i>Macroprudential functions and their impact on independence</i>	Influencing independence in a way that it is narrowed. Complex organizational models of separate reporting, communications and responsibilities designed to delineate responsibilities for price and financial stability so as they do not affect one another due to the risk of political interpretation with regard to the latter	Independence is increased due to the lack of opportunities to exert pressure on a central bank when it is tightening its macroprudential requirements contrary to political preferences of socially active persons

<i>Main vectors of a political pressure</i>	Insufficient measures to overcome consequences of the crises which result in enhanced tendencies to deflation and recession	Excessive measures designed to ensure financial stability
<i>An issue of effective institutions</i>	The effectiveness of the present model is ensured through efficient institutions. Amid institutional weaknesses, the pressure exerted on a central bank will mostly be about the scale of incentives for the economy	The present model needs efficient institutions. Within weak institutions: A) there is a mounting risk of "capture" of authorities with extended powers; B) asymmetrical efficiency in price and financial stability encourages abusive practices with regard to interpreting performance of a central bank

Note 1. Prepared by the author.

The approaches provided in Table 5 may be regarded as certain ideal types. However, a tendency to establish bodies, responsible for systemic risks and macrofinancial stability (Bayoumi, 2015) that have a complex organizational design indicates that practical policies need a better understanding of both of them. Extrapolation of these approaches to domestic practices, however, have a number of reservations. First, post-crisis inflation rates in Ukraine show no indications of deflation shift. On the contrary, inflationary jump, flat disinflation trajectory and enhancing transmission effect demonstrate the existence of traditional threats to financial and price stability inherent in low- and middle-income economies. Second, in Ukraine, macrofinancial vulnerability to commodity prices and fluctuations in the global liquidity actualize the issue of a broader view on the domestic macroeconomics. The financial sector being sensitive not only to cross-border capital flows, but also to internal fluctuations in demand for safe assets (i.e. foreign currency cash) generates fundamental risks in those cases when a policy would disregard the credit cycle phenomenon and the linking between internal and external imbalances. Third, a low GDP per capita and a non-dynamic crisis-recovery trajectory against the background of continuing hostilities is regarded as a pretext for more expansionary policy conducted by the NBU. Given excessive institutional distortions in the domestic economy and its quasi-commodity nature, stimulating measures that lack confidence in them will result in even a greater crisis. It means that the NBU's independence is a key factor in ensuring price stability as a prerequisite for the restoration of economic potential based on healthy expectations. Structural reforms should reinforce the policy focus on price stability, otherwise it will be perceived as detached from macroeconomic fundamentals, thus causing permanent downward pressure on the level of regulator's independence. Forth, the banking supervision reform and implementation of macroprudential tools is perceived in connotation of a risk of a short-term aggregate credit crunch, while the scale of growth, such as car loans in 2016, points to the contrary. Accordingly, political independence of the central bank is a key prerequisite for financial stability, the idea that has actually been proved empirically by Klomp J., de Haan J. (2009). Fifth, considering a tight correlation between price and financial stability in Ukraine, the current mandate that the NBU has been provided with may be deemed as an optimal one. Progressing on the way of balancing between inflation targeting policy and macroprudential regulation will aim to more efficiently offset systemic risks, which are resonating with virtually each and every global or domestic distress amid institutional distortions. At this, the flexibility of inflation targeting regime in Ukraine and the introduction of macroprudential regulation necessitates further structural reforms and institutional renewal of the financial sector.

## VI. CONCLUSIONS

The global financial crisis affected the changes in the ideas about central banks' independence and the elements that determine it. At the same time, the bottom line of the discussion is not the choice between more or less independent central banks but correlation between such independence and explicit or implicit expansion of powers in the area of financial stability. A pre-crisis view on monetary authorities' autonomy foresaw that competences in the area of banking supervision weakened independence in achieving inflation targets. This view, being integrated in the neo-Keynesian macrotheory, became the basis for formation of the orthodox view that is central bank's independence. The "one mandate – one objective – one tool" model was found an institutional continuation of the neo-Keynesian macrotheoretical doctrine.

Such a model should be recognized as contradictory, because ignoring the problem of financial imbalances leads to the fact that the clean-up of the markets after the crisis may require unconventional policy to such an extent that it, by its sense, will come beyond the frames of the mentioned model, undermining its macroeconomic and institutional legitimacy. In the context of this model, the central bank prefers to abstain from intervening in the financial cycle and carry out monetary expansion in response to the shock by reason of the fact that such actions are in contradiction to the principle of correlation between the mandate on price stability, the inflation target, and the relevant monetary instrument. A deflation risk is considered to be essential with respect to macroeconomic losses of the economy, failure to achieve the inflation target, and political pressure on the score of more accommodative policy.

The heterodox approach assumes that financial factors are key drivers of macroeconomic instability; therefore, interventions in the financial cycle are the precondition for ensuring both price and financial stability. In the context of this approach,

independence is taken as necessary institutional protection of the central bank whose shares in the financial stability area can conflict with political players' preferences. At the same time, this central bank is highly vulnerable to distortions in the institutional environment, because the "benefit of capture of the regulator" with extended powers increases, and the asymmetric effectiveness of the price stability and financial stability policies may be considered as a precondition for manipulative perception of responsibility.

The lack of consensus on reasonability of mandate dualization brings together both approaches. At the same time, maintaining the price stability mandate, as a key task, needs broader interpretation of competences, accountability, and responsibility for financial stability. This will make it possible to reduce the problem of political interpretation of asymmetries as regards the efficiency of ensuring of price and financial stability and narrow the possibilities of cross application (or the pressure concerning it) of the monetary and macroprudential (and/or even microprudential) instruments in opposition to socially optimal targets. The necessity of having higher level of central bank's independence results from the issue of dynamic inconsistency and elimination of pressure under substitution of the policy regime for the tighter one. However, difficulties with an optimal institutional design of the financial stability policy are still based on the fact that the latter is essentially interpretative. In many cases there is no matter of choosing between the orthodox and heterodox approaches. A crucial point is how the central bank envisages the macroeconomic model and identifies the role of financial factors in it.

Discussions in Ukraine as regards weakening of the NBU's independence have no grounds and contradict to the world best practices searching for balance between proactivity, transparency, and responsibility for financial stability that is not only seen on a short-term horizon, but is of intertemporal nature, and has a complicated relation to the price stability and its implementation.

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