Institutional learning by DNB: financial crises of 2001 & 2008

Master thesis

Abstract

This thesis analyses how institutional learning at DNB had altered monetary policy making during the financial crises of 2001 and 2008. After the completion of the European integration, DNB had entered the polis. Monetary policy making had been transferred to the ECB and DNB became dependent on the cabinet to steer the economy. In 2008 this new institutional landscape had been acknowledged by the cabinet. As is apparent from the data DNB did not go through complete institutional learning: only up and until the second order. This implied new policy variables and policy tools for DNB. Policy variables had altered by entering the polis in which electoral political costs became more important than rationality. The dependence on the cabinet made new policies available for DNB to interfere in.

MSc Public Administration – Economics & Governance 2019 – 2020
Supervisor Leiden University: Natascha van der Zwan
Student: Charlotte Koning, 2679051

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Chapter 1 – Introduction

When presenting the annual report 2019 of De Nederlandsche Bank (DNB) in 2020, the president of DNB, Klaas Knot, stated that the world was experiencing a crisis and that economic decline would be certain (Knot, 2020). This entails a situation wherein historic low interest rates are accompanied by an economy which is on halt due to the Covid-19 crisis of 2020. Consequently, monetary policy will need to be adjusted to these developments in order to drive recovery and limit financial harm, which could be done through applying conventional or unconventional measures. During the crises of 2001 and 2008, DNB had to implement *conventional* and *unconventional* monetary policy measures. The crisis of 2001 was a concurrence of the dot-com bubble burst and the terroristic attack on 9/11 (Friedman, 2004). The crisis of 2008 was mainly fuelled by consumers being able to borrow excessively through opaque mortgage packages and the lack of regulation and control mechanisms in banking activities (Kleinnijenhuis, 2018). A striking feature of both crises is that the run up towards the economic tipping point was characterised by a *stock hausse*, which indicates a strong and sudden growth in the valuation of stock markets.

In order to recover from the financial crisis, central banks all over the world had to increase the money supply through conventional and unconventional monetary policy. Normally, central banks only operate through conventional monetary policy. This includes all monetary measures that do *not* comprise of direct lending from the central banks to the private market or government (Croushore, 2015). An example of a conventional policy measure is the lowering of interest rates. This measure has, an indirect influence on the money supply of the private market and therefore affects the *inflation rate*. The indirect effect of lowering interest rates is that lending becomes cheaper and therefore potentially easier which has an expansionary effect on the money supply. An increase in the money supply therefore has a direct positive effect on the inflation rate.

When conventional measures are taken too often, or include drastic alterations, this set of instruments can lose its effect. For example, when interest rates are approaching the *zero-bound*, then interest rates cannot be lowered anymore through conventional monetary policy because the interest rate is (near) zero (Eggertsson & Woodford, 2003). In this situation conventional monetary policy is limited in its capacity to stimulate economic growth. Consequently, conventional monetary policy reaches its lower limit and therefore its vigor (Haan, Hoeberichts, Maas & Teppa, 2016). When facing this problem, central banks can implement unconventional monetary policies. This type of monetary policy is meant to provide liquidity to the private market to stimulate economic growth. One way to embody this type of measure is, amongst others, through *quantitative easing*. This instrument increases the money supply by purchasing long term securities from the private market by a central bank (Croushore, 2015).

The reason why the inflation rate is an important matter of attention, is because it determines both the *price stability* and *purchasing power* of a country's currency. If society expects a favourable rate of inflation, people will make long term financial agreements, which generates an environment whereby money supplied by savers and money demanded by borrowers is in balance (Financieel Stabiliteitscomité, 2020).

How these monetary policies are decided upon, has changed drastically during the beginning of the 21st century with the establishment of the *Economic and Monetary Union* (EMU). The introduction of the EMU subsequently led to the establishment of the European Central Bank (ECB) and the corresponding euro. This institutional shift entailed that monetary policy decision making had been transferred from national central banks (such as DNB) to the ECB. The residual tasks of DNB consisted of supervising financial institutions and calculating economic forecasts. As a consequence, DNB had to learn how to manoeuvre in this new institutional context. The manner in which DNB responded to this shift will be the focus of this thesis by way of an analyses of the behaviour of DNB during the two most recent financial crises.

1.1 Problem portrayal

The main goal of a central bank is to maintain a stable economy (Horváth & Vasko, 2015). However, in times of crises, the economy is not stable. Then, central banks often act as an intermediary actor and have an important role in controlling and monitoring the crisis (Schnabel, 2016). For DNB this power has been delegated towards the ECB which leaves DNB with less methods to intervene. How DNB, in its revised function, responded to the most recent financial crises (2001 and 2008) will be the central theme of this thesis.

1.2 Purpose

''To analyse whether DNB has learned from former experiences during the financial crisis of 2001 in the financial crisis of 2008 regarding the inflationary targeting framework.''

1.3 Research question

How has institutional learning contributed to DNB's monetary policy making during the financial crises of 2001 and 2008?

1.4 Relevance

Central banks have a monopoly to print money and are expected to be politically independent in their implementation of monetary policies. A central bank president is not democratically chosen (Jones & Matthijs, 2019). Therefore, it is insightful to analyse their point of view during financial crises. This research is *socially relevant* because the power of the central bank has an effect on the functioning of economical markets, upon which a society depends. By learning about the responsiveness of- and the point of view of DNB insights can be gained into the manner in which future crises may be handled by DNB.

The current Covid-19 crisis functions as an immediate illustration for the reaction in terms of monetary policies enacted by the ECB and other central banks such as DNB. For example, former Dutch minister Hans Hoogervorst highlights, amongst others, the (mis-)use of Modern Monetary Theory

(MMT)[1] by central banks (Hoogervorst in Hofs 2020). He warns for the potential positive effect on inflation of this type of monetary policy. This illustrates that the behaviour of central banks in relation to the inflation target is still socially relevant to understand.

This research is *scientifically relevant* because existing literature has spent limited attention to how political factors during a crisis are influencing the monetary policy making of central banks. Instead, literature on monetary policy making looks extensively to objective economic factors such as a country's openness to trade, resource allocation or exchange rates (Capoccia, 2016). Besides these objective factors, it is likely that political factors influence monetary policy making as well. This relates to the impact of social unrest, which is highest during financial crises, and its direct impact on political factors (Campbell & Pedersen, 2015; Pierson, 2016). By analysing political factors that influence monetary policy making, insights can be gained to add value to the existing scientific literature (Samarina & De Haan, 2014).

1.5 Research methods

This is a single case study wherein DNB is the central case that will be analysed with regard to its monetary policy making, in terms of the inflation targeting framework, during two financial crises of 2001 and 2008. The research of this thesis will be conducted by a *co-variational analysis*, which will make use of historical documents to construct the causal path through process tracing, in order to construct the public debate during- and subsequent to the crises of 2001 and 2008 (Blatter & Haverland, 2012; Toshkov, 2015).

1.6 Reading guide

Firstly, the theoretical framework based on existing research will be explained in chapter 2. After the variables of this research have been explained, the expected relation between them will be illustrated in the conceptual framework (figure 1) in chapter 2.5. Thereafter, the used research methods are clarified and motivated in chapter 3. Chapter 4 contains an overview of the analysed public debates according to the framework of Stone (2011). Chapter 5 illustrates the connection between the insights of chapter 4 with the literature. Finally, a summary is provided in chapter 6, the conclusion.

[1] MMT: This is a recently developed theory which states that governments can finance their expenses with money printed by central banks on demand of the government. During the crisis additionally printed money is in theory spent by the government to lighten the burden of the economic crisis. However, economists warn for the longer term positive impact on inflation (Hofs, 2020).

Chapter 2 – Theoretical Framework

In this theoretical framework, it is analysed how institutions change and what the implications are for monetary policy making. More specifically, the goal of this theoretical framework is to gain insight in the process that influences monetary policy-making regarding the inflation targeting framework. In order to analyse institutional change, *historical institutionalism* (HI) is applied. The expected relation is presented in figure 1.

2.1 Economic schools of thought

The main goal of the central banks is to provide financial stability and a manner of payment. In order to achieve the former, conventional and unconventional monetary tools may be applied by the central bank. To limit political steering in the central banks operational activities, the institution had to become *independent*. Before the 1970s, political steering was sometimes done before the election in the form of pressuring central banks to stimulate the economy. Through short term boosts to the economy, voters became optimistic about the economy. This optimistic attitude influenced voting behavior which led to skewed political outcomes. With higher independence, central banks became *accountable* for their operations. The institutional accountability was achieved through extensive reporting in order to explain policy decisions. Consequently, this development leads to higher transparency towards the public, which when applied properly, leads to lower economic uncertainty (Crowe & Meade, 2007).

However, the formulation of these policies is subject to the prevailing economic schools of thought or knowledge regimes of that time (Campbell & Pedersen, 2015). Economics has been divided into separate categories and the different economic schools all capture different ideologies. The most distinguished modern schools of thoughts are: the *Monetarism school* and the *Keynesian school* (Clift, 2019).

2.1.2 Neoclassical school & Monetarism

The precursor of the neoclassical school was the *classical school* from the 18th and 19th century. This school advocated economic freedom and liberty. Before central banks were institutionalized, this school believed that the economy does not need government intervention because a market can restore economic balance by itself (Croushore, 2015). This theory is captured through the *invisible hand* as theorized by Adam Smith. According to this theory the economic equilibrium will always be restored because consumers will only consume what they need depending on the price at which a good is available, acting in line with their self-interest (Gabor, 2010). However, Adam Smith himself and critics of the school noted that this only applies when *market failures* are not a part of reality and when a market is of a smaller scale. Because market failures are a part of reality, this ideology did not prove to be suitable for real life application.

The neoclassical school, which developed in the early 20th century, states that goods and services provided in the market are determined by a constantly adjusting balance in supply and demand. The main theory of this approach is to rely on the balance restoring power of the market. This school theorizes that monetary policy is ineffective and that output and unemployment are not adjustable since people will act rationally and markets are efficient (Braun & Downey, 2020). However, this economic theory was undermined by the Great Depression in 1929.

After the crisis, the neoclassical school had to be revised to remain relevant. The American economist Milton Friedman reintroduced the neoclassical school as *Monetarism* in the 1950's. Due to the economic crisis, market failures could not be denied and the existence of crises had to be admitted. Monetarists assign this imbalance due to mismanagement of the money supply (Fiebiger & Lavoie, 2018). The revised school still argues that government intervention needs to be limited. This is argued because government intervention has a lagged effect (Bernanke, Laubach, Mishkin & Posen, 2001). A lagged effect implies that the corrective effect of monetary policy is delayed, and according to Monetarists therefore undesirable. According to Milton Friedman, central banks should only intervene in order to secure a steady money supply growth. In Monetarism, this variable is the main indicator to determine the phase in the business cycle. Due to its lagged effect, expansionary fiscal policy measures will result in lower money expansion and therefore direct money expansion should be preferred (Friedman & Schwartz, 2008). Regarding the inflation rate, the theory argues that central banks should only focus on price stability since inflation is always the result of money expansion.

2.1.3 (Neo-) Keynesian school

After the Great Depression of the 1930s, it was widely believed that the neoclassical school could not explain how the crisis could have developed (Hall, 2013). This led in the 1930s to a new economic stream which incorporated explanations for economic imbalances, the *Keynesian school*. The founder of this school was British economist John Keynes. This school concluded that the free *laissez-faire* approach of the neoclassical school and Monetarism needed market intervention. The Keynesian school argues that demand is not stable and that governmental measures are needed to achieve efficient market outcomes. In Keynes' (1936) *General Theory*, John Keynes describes that unemployment and low investments are a natural phenomenon. Therefore, a government should lower taxes in order for society to make more investments and thereby enhancing economic growth. Measures that makes people spend their income would result in the *multiplier effect*, which yields more growth subsequent to the initially taken measure. Because Keynesians rely on monetary policy, they want to avoid a *zero-bound* situation wherein economic stimulation becomes less impactful (Fiebiger & Lavoie, 2018).

However, the Keynesian school could not explain the period of stagflation in 1970 (Hall, 2013; Campbell & Pedersen, 2015). Stagflation is a period of high inflation combined with high unemployment, resulting in a suboptimal aggregate demand. Hence, the Keynesian school had to be revised. This led to the *new Keynesian school*. This school includes *sticky wages* in order to explain the deviations in 1970. This implies that the balance in demand and supply would not naturally restore itself because wages do not adjust quickly to the new economic situation. The most recent advocate of this derived school is Ben Bernanke, who eventually became chairman of the Federal Reserve System in 2006. Ben Bernanke is especially vocal on the usage of the inflation targeting framework by central banks. He argues that price stability should be the most important long run goal of monetary policy since it enables the achievement of other monetary goals (Bernanke, Laubach, Mishkin & Posen, 2001). He describes its function as twofold: (i) the inflation targeting framework serves as a policy framework for making choices; and (ii) it serves as a tool for communicating the central bank point of view towards consumers (Bernanke, 2003). Hence, the framework functions as an constrained decision making tool. The characteristics of this framework will further be explained in the next section.

Summarizing, both economic schools of thought have been revised to remain relevant in recent history. The neoclassical school has been changed into Monetarism by Milton Friedman in order to account for the existence of financial crises. A characteristic of this school is that it minimizes intervention from central banks through monetary policy. The Keynesian school has changed into the new Keynesian school which accounts for stagflation by recognizing rigid wages. Because of the existence of natural economical distortions, this school advocates for intervention by central banks through monetary policy. Importantly, the new Keynesian school advocates the often used inflation targeting framework (Bibow, 2010).

2.2 Inflation target frameworks

After the Maastricht treaty in 1992, the task of the ECB and domestic central banks was to pursue price stability as their main goal (Bernanke & Mishkin, 1997). This was executed by using the *inflation target framework.* The framework is a monetary policy which pursues low and stable inflation. For example the ECB pursues an inflation rate of 2% (Crousehore, 2015). Other central banks pursue similar inflation goals. The framework enables monetary policy makers to communicate their economic expectations towards the market and consumers. It also offers a certain amount of flexibility since short term deviations from the framework are not harmful for a central bank's credibility because the inflation rate is not affected immediately. This implies that the institutional goal of a central bank is not neglected and therefore not harms the credibility on the short run. (Bernanke & Mishkin, 1997; Samarina & De Haan, 2014). However, the framework cannot account for unanticipated shocks.

The usage of inflation targeting should be interpreted as a framework and not as a rigid rule according to the Keynesians (Bernanke & Mishkin, 1997). They argue that perceiving the framework as a rigid rule may cause 'tunnel vision', causing negligence of other important central bank responsibilities such as employment- and exchange rates. Instead, Monetarists prefer to view inflation targeting as a rule. They prefer this because it will constrain policy makers from implementing nonefficient long term policy measures. Monetarists are relatively critical of the inflation target framework since it gives monetary policy makers more discretionary power. In contrast, according to the Keynesians, it is this discretionary power that assigns the exceptional character of this mechanism,. The perception of constrainedness in this discretionary power is of great importance. According to Keynesians, discretionary power exists to give central banks a certain flexibility to pursue stable short term outcomes (Ibid).

The inflation targeting framework targets the medium or long term. This is done because long run inflation is negatively correlated with economic growth. Short term inflation is positively correlated with economic growth. Short term inflation causes a brief window wherein the purchasing power increases before both prices and capital have fully adapted to the inflation rate. Consequently, in the short term, people can purchase more and therefore stimulate economic growth. This mechanism makes it attractive to use monetary decision making to increase short term inflation in cases were economic growth benefits certain situations, such as political elections. Long term policy goals, such as stabilizing prices through long term inflation, often have short term costs such as not being able to impact economic growth.

Because of the appealing effect of stimulating short term economic growth, it is important that this option is guarded. Therefore, the discretionary power which policy makers have in pursuing price stability leads to an *inflationary policy bias*. This is why the inflation target framework is needed to constrain this discretionary power (Tuladhar, Fernández-Ansola, 2005). This constraining characteristic ensures the commitment towards a low and steady inflation rate in the long run. This combination is helpful because managing stable short term outcomes is most effective when inflation expectations are anchored in society and everyone knows what to normally expect (Bernanke, 2003). A related advantage is that the use of this framework clarifies the central bank's intentions and therefore increases their transparency. Therefore, it becomes clearly visible when monetary policy makers would aim to apply short term economic stimulation. The framework enhances the visibility of divergence from the framework by policy makers. Hereby, the central bank's accountability could be discussed in the public debate, which lowers the possibility of an *inflationary policy bias.*

Braun and Downey (2020) argue that inflation targeting was, at least in the scientific literature, for a long time the only adjustable variable in the power of central banks and that monetary policy should instead be seen as a '*Swiss army knife'*. This approach took over when, after the period of the *trente glorieuses* years in 1945-1973 which was characterised by high welfare, the *time of moderation* came which was a period of low economic growth due to the oil crisis in 1973. Due to this crisis, monetary measures had to be taken in order to stimulate the economy. This was the moment in which the inflation targeting framework was implemented. Since then, the framework remained the rule of thumb for good central banking. However, after the banking crisis of 2008, this conventional monetary instrument was not adequate enough anymore in stabilizing the economy due to the zero-bound interest rate situation. The authors argue that the inflation target framework is context- and time dependent and therefore leaves room for political decisions. Braun & Downey (2020) highlight that economists such as Bernanke have admitted the limitations of monetary measures and that, consequently, the focus is aimed at long term price stability. The authors suggest that this could be due to the fact that underlying political interests have shifted, which caused monetary schools to be revised periodically.

The adoption of the inflation targeting framework depends, according to Samarina and De Haan (2014), upon several macroeconomic factors. External factors have an influence on the adoption of the framework because a country's openness to trade determines its exposure to external risks. If a country depends on external foreign financing it is likely that the country wants stable exchange rates. A country's external exposure therefore has a negative impact on the adoption of the inflation target framework. Financial factors also influence the decision to adopt this framework. When a country is financially instable, it is unlikely that the country adopts the framework. During financial instability, interest rates cannot be controlled and the central bank could chose for liquidity injections instead. The degree of development of the financial system therefore determines the suitability of the framework. Lastly, institutional factors also influence the adoption of the inflation targeting framework. The authors emphasize that especially instrumental independence is important. This implies a the central bank is independent from the government, not only according to its mandate, but also in choosing their policies. Banks that have this independence, are more likely to adopt the inflation target framework (Samarina & De Haan, 2014). Since institutional factors are not analysed into the same depth as the other factors, this thesis contributes to the relative absence thereof.

Summarizing, the interpretation of the inflation targeting framework differs between Monetarists and Keynesians. The debate is about whether the framework has too much discretionary power, which could lead to the inflationary policy bias. However, the Keynesians argue that deviations become more visible due to the clear baseline in the framework. This will enhance accountability and lowers the impact of possible biases. Due to the framework's lack of impact in 2008, Braun & Downey (2020) argue that it is exposed to political influences. When looking at which countries adopted the framework, institutional and political factors are being overlooked.

2.3 Institutional change

The changes in prevailing economic thoughts have consequences for monetary policy executed by central banks. Clift (2019) and Campbell and Pedersen (2015) argue that certain events, such as crises, are responsible for institutional modifications. Changes could be incremental or could be more abrupt due to new available information, which could lead to institutional learning. These sources could explain the shifts in and between economic schools in recent history and the adoption of the inflation targeting framework. Therefore, it is important to understand how institutions and the framework have changed, have been influenced, and to understand the implications of these changes on monetary policy making.

2.3.1 Historic institutionalism

Historical institutionalism (HI) is a scientific approach which explains the continuity and change of existing institutions. According to this view, institutions have trouble changing and learning over time due to *path dependency*. This implies that institutional decisions are of large influence for determining the remaining path of institutional developments. In this approach institutions are organizations, public policies, political regimes and formal rules (Cappocia, 2016). HI accounts for the historical development of institutions over time in order to explain the status quo. The events and order of the antecedent timeline of an institution determines the propulsion of current institutions. Even seemingly non-significant events can have a significant influence in shaping an institution's path in the beginning.

Especially during times of institutional stability, institutions are difficult to change (Thelen & Conran, 2016). The actors belonging to existing institutions want to preserve their interest which has been captured in institutional designs and want to prevent institutional learning. The indefinite survival of their interests is also called the *status quo bias of institutions* by Pierson (2000). Involved actors are committed towards existing traditions, which implies that change is unlikely to come from within. HI argues that if change happens, it develops during a slow moving and iterative process. This process is often counteracted by the actors who are responsible for the institutional path by providing positive feedback and reproduction. More specifically, if institutional change happens, this occurs through the either *displacement*, *layering* or *drift*. Displacement implies the exchange of existing rules with new rules. This is often accompanied with a shift of power. Layering of rules is adding new rules on top of existing regulation. Lastly, drift is the biggest change. This process changes the environment of the institution which entails that the original purpose of an institution is altered (Hacker, Pierson, Thelen, 2013; Lodge & Wegrick, 2012).

When a *critical juncture* happens, a window of opportunity occurs in an otherwise rigid path. Such an event is characterized by a situation wherein uncertainty about an institution's future path is high and institutional openness occurs (Capoccia, 2016). Decisions made during such times have long lasting effects on institutional designs. Such an event gives opportunity to alter the existing institutional path since it provides numerous alternative routes (Pierson, 2000; Pierson & Skocpol, 2002). During this time, new information can be taken into consideration that could possibly lead to institutional learning. Even though a different route can be taken, the advocators of the status quo can choose to stay in their lane and dodge institutional change. This window of opportunity is often followed by a period of institutional stability.

A critical juncture could be, for example, a common exogenous shock such as a crisis. A result could be the divergence between institutions since their paths have altered differently. Another possible outcome could be that the general ideology dominating the institution is altered due to the critical juncture. Blyth (2002) calls this the *politics of ideas*. The idea which eventually becomes dominant is determined during this ideational battle. During this battle the critical juncture becomes political in nature. The actors whose views have won, determine the (path of the) institutions that are set up to resolve the critical juncture. Critical junctures are not standalone circumstances but should be viewed through a set of underlying ideas (Blyth, 2002). In order to resolve the crises, new institutions are proposed by the actors coming out of existing institutions that were impacted by the critical juncture. This is done, according to Blyth (2002), to reduce social uncertainty and maintain existing institutions.

Pierson (2016) and Campbell and Pedersen (2015) acknowledge the role of the politics of ideas as defined by Blyth (2002). Besides the importance of the politics of ideas, Campbell and Pedersen (2015) add that political and economic institutions determine policy making. Pierson (2016) calls the actors who are formulating the initial idea the *third power dimension*. These actors are often key cultural institutions that drive the emergence of ideas through, for example, the media and think tanks. Sequentially, the ideas are picked up and framed by existing institutions and influenced by their knowledge regimes in order to present solutions. The net result of change (with)in institutions often remain low because the founders of new institutions are also the leaders of the old institutions (Boxenbaum & Jonsson, 2017). How these ideas are constructed has been described by Stone (2011). Ideas are told as narrative stories that appeals to emotions in order to gain support or opposition, depending on the objectives of the storyteller. For example, to gain political support a politician can frame a policy initiative of its opponent as harming to its target audience to mobilize support for his or her proposed policy. Besides the importance of formulation as a tool to convince support, Campbell and Pedersen (2015) argue that the ideas originate from knowledge regimes.

According to Hall (1993), the drivers for *social learning* are (i) policies from the past; and (ii) experts. He defines social learning as the process of adjusting institutional goals following new information, which eventually leads to policy change. This change has taken place when an institutional instrument is altered and when the corresponding goals have become aligned. Institutions adopt a new idea, if the new idea is integrated in overarching institutional goals. This is called a *third order change* which reflects a paradigm shift. Other degrees of institutional changes remain more shallow. A *second order* change is characterized by Hall (1993) through the use of new policy instruments. A *first order* change is characterized by only altering the policy variables. The latter change often develops incrementally whereas the second order is more often powered by strategic action. The first two degrees of changes are also more likely to occur in a closed policy network in contrast with the conditions of a third order change. For a third order change to happen, often an event is needed which exposes policy failures (Hall, 1993).

Sequentially, if the proposed solution is being received as institutional change, new investments are made by institutional actors to develop skills and technology. This increases opportunity costs of an institution, which implies higher fixed costs when switching to other institutional arrangements in the future and thus increasing institutional rigidity (Capoccia, 2016).

Events that enable a third order change, powering institutional learning, are often crises and/ or unique events that are characterized by undefined interests and an unpredictable future (Blyth, 2002). In such cases, institutions can only change through collective action. If a crisis is uncertain due to institutional complexity, ideas explain the causal narrative which gives *grip* and lowers (social) uncertainty. Blyth (2002) explains that these ideas enable institutional agents to redistribute interests and perceptions which leads to parties coming closer. In forming this narrative *political entrepreneurs* have an opportunity to enter the discourse. These are actors with innovative ideas which were not considered before.

In relation to the financial industry, Kalaitzake (2018) analysed the policy making process. He argues that the interests divided over a central bank's policy problem are often involved in lobbying. The actors who are most involved in the causal story, and therefore have the most change to steer, are financial actors. These actors are operating within the prevailing knowledge regimes, including the economic schools of thoughts as referred to in chapter 2.1 (Campbell & Pedersen, 2015). The financial industry has a monetary *regulatory capture* at the point of origin of the institutional path (Lodge & Wegrick, 2012; Makkai & Braithwaite, 1992). According to Kalaitzake (2018) this takes place through several mechanisms. Firstly, he argues that influence is exerted through *revolving doors*. This means that professionals of central banking are taking up positions in the private financial industry and vice versa. The existence of this mechanism does not directly mean uncompetitive power in policy making, but a threat that should be filtered out by the bureaucratic system. A second mechanism which enhances capture is the *closed policy circle* (Kalaitzake, 2018). It is argued that central banks pursue private interests because they possess market information, the power of approval and have professional experience which is needed for policy making. In their collaboration, these groups reinforce trust building among the actors, which influences the policies taken. However, the conservation of a knowledge regime may be broken in times of crises (Campbell & Pedersen, 2015).

Summarizing, HI moves back on the institutional timeline in order to explain how the institutions developed. The approach argues that institutions favour the interests of actors involved that started the institution. Consequently, these actors provide positive feedback and institutional reproduction which enhances institutional rigidity. The resulting path dependency will only open up for institutional alternatives when critical junctures or crises happen. During this window of opportunity, several powers may battle for winning a dominant idea. However, often the institutional founders remain influential and present new institutions to resolve the issue at stake to safeguard their own interests instead of institutional renewal. To which degree institutions will learn from their experiences depends on the actions that should be undertaken. According to Hall (1993) an institution has fully learned when the institution applies a third order change, which entails altering institutional goals because new information has become available in the policy making process.

2.4 Expectation

Figure 1: Conceptual model

Figure 1 visualises the expected relations which could be the outcome of the thesis and are derived from the described scientific literature in chapter 2. When a critical juncture occurs the ideational debate determines the institutional outcome. However, the accessibility of this debate for several actors depends on the way in which the critical juncture is experienced. If the financial crisis enables an ideational debate, and when it includes all interested actors to openly vocalize their point of view, then certain levels of institutional change is realized (*outcome I*). Change is the result of new insights that are included in the due course of an institution. If the financial crisis enables an ideational debate, it does not imply that this debate is balanced. When the financial crisis does not succeed to mobilize all interests equally, the status quo is likely to regain the upper hand. This implies that (part of) the different points of view are supressed, which enables the advocators of the status quo continues their actions. Hence, institutional change will not happen (*outcome IIa*). It is also possible that status quo advocators succeed in preventing an ideational debate. When this happens, there is no opportunity for change advocators to vocalize their point of view. This implies that the dominance of status quo advocators from the beginning of a discourse limits the opportunity, or makes it more difficult, for other actors to fully enter the debate (*outcome IIb*). Hence, change will be absent.

However, the independent variable, namely financial crises, includes the variation which is in this case is the period surrounding the in 2001 newly introduced EMU. It is argued that due to the attained experience, through the European integration in 2008 as compared to 2001, that the societal force for institutional change generated by the financial crisis of 2008 became more powerful. This force decreases the possibility of skipping or manipulating the ideational debate. During the ideational debate the status quo advocators are increasingly less able to escape from their accountability. This results in a balanced ideational debate and therefore increases the probability for institutional change and learning.

Chapter 3 – Research design

For this thesis, a *single case study* is conducted wherein DNB is the central case (Toshkov, 2016). This case will be studied by comparing two moments in time, the financial crises of 2001 and 2008. For the financial crisis of 2001, a 5-year period is analysed from 2001 until 2005. The same is done for the financial crisis of 2008, which entails the 5-year period from 2008 until 2012.

Because the research analyses how the independent variable *financial crises* impacts institutional characteristics, a *co-variational* analysis will be applied (Blatter & Haverland, 2012). This research method analyses whether there is correlation by analysing the effect on the dependent variable on the basis of the variance in the independent variable. The causality that is relevant for this method is *deterministic causality*. This implies that the independent variable only causes the dependent variable if the independent variable is sufficiently available. The independent variable needs to be sufficiently available and necessary in order to impact the selected case (Blatter & Haverland, 2012). In other words, reversed causality is excluded if all else is equal (ceteris paribus).

The co-variational analysis will be executed through a document research. Documents that could be selected for analysis are selected from multiple sources such as speeches from financial leaders, policy documents of DNB and financial papers to secure triangulation. By conducting this research, the goal is to gain an in-depth understanding of the two financial crises and how DNB learned from these. Because the independent variable varies in time and not in place, the cases will be compared according to an *intertemporal comparison*. This method allows to attain an insight in the causal path that leads to a potential institutional change (Blatter & Haverland, 2012). Attaining an insight is especially relevant when the co-variational method is combined with *process tracing*. This process is supplemental to the co-variational analysis since it adds detailed information with respect to the causality and sequential order between the independent and dependent variable. Namely, the co-variational analysis only shows whether the dependent variable occurs if the independent variable is sufficient and necessary. Constituting the causal narrative will be done by using the model of Stone (2011) on the public debate that was held during the 5 year periods following the financial crises.

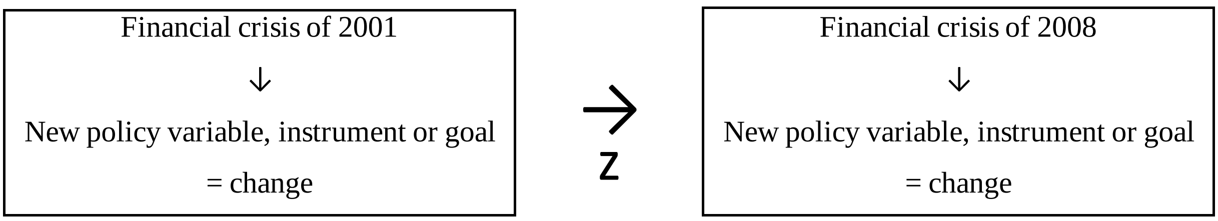
3.1 Case selection

Only one case, namely DNB, has been selected for this thesis in order to enhance comparability. The selection for the case of DNB has been made because, unlike commercial banks, DNB has the mandate to determine monetary policy measures, notwithstanding the transfer of monetary policy making to the ECB. The cases will be compared for both financial crises to test whether DNB has learned from the prior crisis. The sample choice of the crises of 2001 and 2008 was made because these two crises are the most recent financial crises and therefore reflect DNB's most recent point of view in terms of policy making.

It is insightful to understand which point of view DNB takes in the public debate since the institution is limited in its ability to release certain statements because it should not steer the financial market. This could potentially happen when such an important entity makes a statement. However, the perspective DNB takes in the public debate could also provide information with respect to their point of view regarding monetary policy making. This cannot be traced by the policy making process of the ECB because it operates with a certain secrecy given that the votes of European central bank presidents remain confidential. Therefore, the public does not know which point of view their national central bank takes in the decision making process. This is maintained because the presidents of the European central banks are not allowed to publicly criticize monetary policy of the ECB. To make an attempt to attain insight in the contribution of the president of DNB towards ECB policy making, the statements of the president of DNB will analysed for divergent statements.

The case selection for DNB has not been done randomly because the independent variable should contain variability. This variation excludes the possibility of reversed causation when all else is equal (ceteris paribus). Without this variation, the effect of the presence of the *factor of interest* could not be measured (Blatter & Haverland, 2012). Because of the sequence of the financial crises, the 2001 financial crisis could have induced possible institutional learning during the 2008 financial crisis. The potentially gained experience from the first financial crisis of 2001 can be used towards the financial crisis of 2008. Hence, the variability in the independent variable is the *timing* of financial crises. It is important that the only variation is in the independent variable in order to measure the effect of the factor of interest (Blatter & Haverland, 2012). How this difference in timing has consequences for DNB's institutional learning during the financial crisis of 2008 will be researched by tracing down the process indicated by *Z*.

Figure 2: Object of interest Z



3.2 Operationalization

3.2.1 Independent variable: financial crisis

The independent variable of this thesis, is *financial crises.* A characteristic of this event is that the valuation of assets decreases very rapidly. Prior to this bust an asset boom occurred. Often, a financial crisis is accompanied by very low consumer confidence in the economy (Knot, 2011). The societal impact that a financial crisis has, is visible through rising unemployment rates, loss of purchasing power, lack of innovation and a rising pressure on pension funds (Croushore, 2015). Because the focus of the thesis lies on the behaviour of DNB, the financial crisis should be relevant to the Dutch economy, which will be derived from the collapse of stock market valuations. This means that the Dutch stock market needs to be negatively impacted in order to be defined as a '*financial crisis'*. Besides a decrease in the value of the Dutch stock market, other indicators of a financial crisis include (i) the decline of *innovative investments;* (ii) *deregulation* of specific policy fields; (iii) the usage of *economy stimulating monetary measures* such as a decrease in the interest rate; and (iv) a drop in *consumer confidence* in the economy (DNB, 2001; 2008).

3.2.2 Dependent variable: institutional learning

The institutional change that is referred to in this thesis, is *institutional change regarding the inflation targeting framework*. The framework could be interpreted as a stiff rule or as a framework. The former limits the discretionary space and the latter sees this as advantageous. The implementation of this framework could be affected through critical junctures such as financial crises. By comparing the two crises, deviations and adjustments can possibly be found. These changes can be of Monetarism- or Keynesianism nature (Bernanke, Laubach, Mishkin & Posen, 2001; Fiebiger & Lavoie, 2018). In order to determine which school of thought dominates DNB's policy making with regard to the inflation targeting framework, three determinants will be used: (i) *the interpretation of inflation targeting;* (ii) *sort of monetary measures taken;* and (iii) *the main goal of DNB which upon decisions are based.* If it is apparent that DNB's policies with regard to the inflation target framework are interpreted as a stiffer rule as compared to the respective policies prior to the crisis, then the institution has adjusted positively towards the Monetarism school of thought. In this case policies will include stricter boundaries, consist of less unconventional measures and will induce DNB to take decisions based on the degree of money supply growth. DNB could also have learned from the former financial crises and thereby could manage monetary inflationary policy making according to the Keynesian school of thought. This will become evident (i) if inflation targeting will be implemented as a framework; (ii) if DNB uses unconventional monetary measures; and/ or (iii) if DNB makes decisions based on the advancement of price stability.

3.2.3 Causal path tracing: *Polis model*

In order to analyse whether DNB has gone through institutional change, the public debate is going to be analysed. This will be done by applying the framework of Stone (2011). The framework analyses how societal problems are portrayed and how actors try to mould a general perception in order to present their policy idea as the preferred solution. In Stone's framework, policy is seen as a bundling of ideas, storytelling and arguments rather than rational or objective decision making. Policy is being made according to the *polis model* instead of the *market model* (Ibid.). In the former collectiveness is the central aspect, whereas in the latter individual welfare is considered the most important aspect. The two models are counteracting which results in collective action problems. Accounting for both interests is the main difficulty in developing policies. Therefore, it leaves room for strategic information in order to push forward an actor's point of view. This strategic informational battle is also called *boundary work*, which is a battle for attention.

Focus events attracts attention, which enables actors to assign this attention towards their proposed solution (Stone, 2011). For example, if there is a focus event, such as oil pollution, actors who are invested in renewable can take the stage to present their policy as ultimate. This fight for agenda setting is exploited during critical junctures from HI and in constituting societal expectations from II. By portraying a collective problem a certain way the actor gains supporters. Such a portrayal often includes a narrative story. This could be a *story of change* or a *story of power*. The story of change claims that a situation becomes worse if action is postponed. The story of power instead emphasizes the helpless position of victims. These narrative stories further are made appealing for support by using *synecdoche's, metaphors*, and *ambiguities* (Ibid.). Synecdoche's focus on a small part of a problem and enlarge the actual impact. Metaphors make comparisons with equivalent events. And ambiguities contains two interests in the same message. To invigorate the causal story, actors make use of symbols and numbers.

How a policy proposal is perceived depends largely on the told causal narrative. Often, such stories are portrayed by *political entrepreneurs* (Stone, 2011). This is a political actor promoting an innovative policy proposal. Policy entrepreneurs are actors who have high technical knowledge of the problem and know how to formulate this politically. The causal stories are told to challenge existing institutions, to assign blame to others, to seeks for supporters or to portray themselves as fixers of the problem. Logically, information has an important function in the contest for the problem portrayal. This is often used to influence the political agenda (Weiss, 1992). One way to use information strategically is to gain policy support. Information could also function to alarm with respect to other portrayals, to give guidance for selecting a better policy alternative or to reframe the problem.

When looking for a cause, the polis also looks for assigning responsibility for critical junctures or focus events. Therefore, the causal story contains *oppressors* and *victims* (Stone, 2011). The story formed in the polis is independent from evidence. To distinguish causal stories, the author defines four types. Firstly, *mechanical cause* which consists of intended consequences and unguided actions. Secondly, *intentional cause* which has intended consequences and has guided actions. Thirdly, *accidental cause* which has unintended consequences and unguided actions. Lastly, the fourth causal story is the *inadvertent cause* which is unintended in its consequences but has guided actions (Ibid.).

However, these stories do not allow for a complex interplay of actions stemming from multiple institutions. Therefore, Stone (2011) adds a fifth causal story, *complex causal story*. The first type is *complex systems*. This variant of complex causal story argues that interactive decision making systems are too complex. This implies that decisions that are made in a complex framework, have unforeseeable side effects. This complexity has as a consequence that blame cannot be traced back. A second type of complex causal story is *institutional complexity* (Ibid.). This type assigns failure from the obscure designs of institutions and the connections between them. The consequence is that policy, which is made in several institutional levels, is not being aligned properly. However, blame can be assigned to multiple sources which leads to no one bearing the consequences of failing institutional targets. The last type of complex causal story is *historical complexity*. This type argues that due to past institutional design flaws, policy can be barely altered.

Table 1: Narrative causality tools in Polis (Stone, 2011)

Instruments	**Mechanism**
Sources of change	Ideas, persuasion, alliances, pursuit of power, welfare and public interest
Symbolic devices	Narrative stories, synecdoche, metaphor
Facts	Scientific, emotional, indoctrination
Causal theories	Mechanical cause, accidental cause, intentional cause, inadvertent cause
Interests	Costs (diffuse vs. concentrated) X benefits (diffuse vs. concentrated)
Powers	Voters, decentralization vs. centralization, private
Decisions	Goals → selecting alternatives → controlling political meanings → evaluation

3.3 Data collection

When conducting a document analysis, the research depends largely on existing *secondary data*. This is already processed data instead of information coming directly from the source. Because the majority of data is secondary data, judgements from authors who have written these documents are captured. Therefore the message as presented through the document could be biased. However, since the focus of this research is the ideational debate, opinions are not harmful but valuable. When looking for qualified sources to base the research upon, the selection is contaminated by one's own judgement. This could lead to the *investigator* or *selection bias* (Thies, 2002). To limit this bias, the data selection will be as transparent as possible. The choice for documents and sources that are used in this research will be explained and listed in the reference list. In addition to this, the selectivity of previous studies will be taken into account during the analysis. The *sampling strategy* will be one of maximum variation. This choice is made because if there is a general pattern found during the analysis of the existing documents this will be considered an important common pattern. By only focussing on homogeneous documents such patterns may be overlooked. However, since events are being documented extensively, documents that are suitable for this research needs to meet one *criterion*; the subject of the document needs to be devoted to Dutch monetary policy with regard to the selected periods for the crises of 2001 or 2008.

The data selection will take place at the website of LexisNexis, which is an online research database for universities. This is done to ensure the reliability of the analysis of the subjective variables. The search terms in online search engines will be: internet bubble of 2001, credit crisis 2008, banking crisis 2008, inflation targeting framework DNB 2001 or 2008. The documents that will be used originate from DNB, the Dutch government, financial newspapers and opinion papers. To increase the transparency, *micro-archiving* will be applied. This implies that the transparency of the data analysis is increased by including the online source and the search term in the reference list (Mosca, 2014).

3.3.1 Data analysis

Following the data collection, the data is inspected according to the operationalized variables. During the document analysis, attention is paid to the manner in which the causal path is intertwined. This is done by focusing on the way in which the ideational debate in both financial crises has developed according to the framework of Stone (2011). This implies that the above discussed *narrative causality tools* are tracked down in the documents that are analysed in order to determine the causal path (Blatter & Haverland, 2012). During the exploration of the causal path, the focus lies on the three determinants of the dependent variable: (i) *interpretation of inflation targeting*; (ii) *sort of monetary measures taken; and* (iii) *the main goal of DNB which upon decisions are based*. Subsequently, the debate that leads to these outcomes is examined.

The content of the selected documents is analysed for matching themes, opinions, consequences etcetera. Sequentially, these documents are coded according to the content. For example, if it is apparent from multiple sources that the inflation targeting framework is interpreted as a framework by DNB, these sources are labelled as ‘Keynesian interpretation’. After the codes are assigned to the content, the causal path is determined. Finally, the causal path as found is translated into scores for the dependent variable (Blatter & Haverland, 2012). These patterns are discussed in chapter 4.

3.4 Validity & Reliability

The conducted research should be reliable so that if the analysis had to be reproduced, the same conclusion could be drawn (Toshkov, 2016). The reliability is increased by keeping track of the online search and reporting the online sources as used in the reference list. If there would be any biases in this research, it should be apparent from this list. Furthermore, by selecting these two relatively similar financial crises, the factor of interest, namely experience from financial crises, can be precisely measured. Because the research has a narrow scope and gives insight in the data collection, the causal path will be controllable. This reproducibility of the research enhances the reliability (Ibid.). However, it is noted that the derived results are dependent on the conceptualization and the inclusion of all variables even as possible measurement errors. If another researcher has other theoretical or methodological views, then it follows that the research as done in this thesis becomes less replicable. In order to allow for ease in replicability, online research has been added to the reference list and the conceptualization has been explained through chapter 3.

Also, the variables that the research uses have to be very precise and resemble reality in order to be valid. This co-variational research method allows for a detailed analysis of the context because of the focus on only one crisis. This characteristic allows to include all relevant insights which enhances the validity of the research. The insights are gained from multiple sources as describes above. This triangulation will also enhances validity. The validity is increased because of the accuracy that the variance in the independent variable enables. However, because of the narrow scope of this research, the relevant validity is the *internal validity* (Toshkov, 2016). This implies that the *external validity*, also called generalizability, is lower since the measurement is context-specific. This focus results in a high validity for the central case of this thesis.

Chapter 4 – Case Study

In the following section, the data described in chapter 4 is analysed to determine whether DNB went through institutional learning, in accordance with the framework of Stone (2011).

4.1 Financial crisis of 2001

In 2000 the DNB reported that after a decade of high conjuncture a slowdown in economic growth in America had occurred. However, the Dutch economy still experienced very high economic growth averaging 4% on an annual basis, accompanied with 4.9% inflation in 2001. DNB reported that since the introduction of the inflation target in the treaty of Maastricht of 1992 the difference among European inflation rates had not seen such divergence. The Dutch inflation rate was twice as high as the average inflation rate of the Economic and Monetary Union (EMU) (Slagter, 2001). The divergence of the Dutch economy led to a *victimized narrative* in the Dutch media regarding average citizens.

The cause that sparked this indignation was the '*irrational exuberance'* of the stock market at the time as declared by Greenspan (Bekkers & Vermeulen, 2001; Volkskrant, 2001). Greenspan was the chairman of the FED from 1987 until 2006. He had a different position with regard to monetary interference as compared to many other investors at the beginning of the crisis. Whereas investors did not foresee any liquidity problems, Greenspan did. Therefore, Greenspan lowered the interest rate with 0.5%, which led to confusion among investors since cheaper money was '*not yet needed'* due to the high stock values (Bekkers & Vermeulen, 2001; Volkskrant, 2001). Dutch politicians also did not see a reason to intervene. The optimism that was experienced in the stock market only drove up the bar from which to fall after the bubble imploded. For the cabinet this implied that politicians had to measure up to high economic standards which voters became familiar with.

Effects of European integration

In combination with the falling stock market valuations and the related economic downfall, the European integration had a strengthening negative impact on the Dutch economy which fuelled the victimized causal narrative even more (Slagter, 2001). In context of the Dutch deviating inflation rate compared to other European economies journalist Slagter (2001) said: *'From that (lowering interest rates by the ECB) results a monetary climate which is suitable for the average European. The Dutchman is not an average European. This push is even inconvenient when looking at the inflation rate'*.

An important result of European integration for DNB is that national monetary policy had become a matter of politics. DNB was left with no independent powerful monetary tools and was reliant upon the Dutch cabinet for the remaining economic steering tools to serve the interests of the Netherlands. Additionally, the ECB could not deliver '*customization'* for the Dutch economy since the ECB was trying to succeed in European integration across all countries according to the '*one size fits all*' policy (Osch & Hoorn, 2002). The consequence of this shift was that the president of DNB requested the cabinet to introduce several policy measures to steer the domestic economy. The programmes which should have been initiated according to Wellink are discussed later in this chapter.

Another factor of insecurity surrounding the ECB was the lack of previous experience for EMU-member state countries with the ECB. Therefore, in 2001 markets and the domestic economy did not know what to expect from the behaviour of the ECB (De Haas, 2001; FD, 2001). This uncertainty was also expressed by a central actor in the monetary network, Lex Hoogduin. He advised Duisenberg during the establishment and the early years of the ECB and had worked at DNB as a director for several years. Hoogduin declared: '*The main challenge was not the formulation of rules of the bank but rather the practical implications, since the ECB did not have any history'* (Wilbrink, 2002).

DNB relied more on the cabinet after the introduction of the EMU than ever before. However, both powers had different institutional goals. DNB's only goal is price stabilization. However political actors' highest concern is to get re-elected, which is often facilitated by a favourable economic climate for voters (Tuladhar & Fernández-Ansola, 2005). The risk related to pursuing economic short term gains in order to receive more votes is the *inflationary policy bias* for which Monetarists warn (Ibid.).

The challenges that were a result of the financial crisis and the European integration for the cabinet were twofold. On the one hand, the government made an enormous decision to join the EMU. And on the other hand, the politicians and civil servants wanted to protect the status quo by selecting specific economic policies to secure their re-election. By joining the EMU, the existing *path dependency* of the government and DNB formally had been broken up. In that sense, the formation of the EMU functioned as the *critical juncture* rather than the financial crisis of 2001. However, the pursuance of fiscal policies that favour the chance to get re-elected by voters was not in line with the newly taken institutional path anymore. This implied that the new institutional landscape had not yet been adopted throughout the Dutch government. The intertwinement was important because the new institutional landscape, following from the transfer of power from DNB to the ECB, was strongly characterized with a prominent role as given by the cabinet towards fiscal policy.

DNB vs. Dutch politics

During the time of high inflation the government increased its budget partly to allow for an increase wages. In this context, Wellink argued that this was unfavourable for the market since it would stimulate inflation and undermine the Dutch international trade position, which had been a focus in the years prior to the crisis. Wellink was president of DNB during the years between 1997 and 2011. He declared that his aim was not to focus on the '*specific cause of inflation'* but instead on how to get rid of high inflation rate (Schinkel, 2002). He focused on moderating the inflation rate because '*if the developments continue, the international trade position of the Dutch economy will be hollowed out'*. Initially Wellink proposed two alternatives to slow down the inflation growth. The first option was to do nothing. This would result in a disadvantageous international competition position for the Netherlands which eventually would lead to an underperformance of the domestic economy and consequently would lower domestic incomes.

This development would result in the slowing down of the Dutch economy's contribution towards international trade. Lower domestic wages also meant less money circulating in the economy, hence lowering the inflation rate. However, this effect could take a minimum of 5 years (Schinkel, 2002).

The second alternative was to intervene with monetary tools (Schinkel, 2002). However, this option had disappeared with the introduction of the euro and the ECB. It implied that the only domestic sources left over that could function as an inflation instrument would be *governmental spending* and *wage moderation*. Wellink expressed criticism towards Minister Zalm for not acting enough in aiming to limit the inflation growth through these means. During this crisis Zalm was Minister of Finance for the Dutch cabinet. Instead, he increased governmental spending and did not take steps towards enabling the demand for wage increases (Asselt, 2001). The divergence between both actors showed the competing institutional goals within the same political field.

Zalmnorm

Wellink served as the *controlling power* of the cabinet and, on the basis of scientific facts, vocalized that times of economic comfort and security were (Stone, 2011). The debate between DNB and the Dutch cabinet mainly focused on whether the *zalmnorm* and the *poldermodel* should be used and which policy should be introduced to induce economic stability for the diverging Dutch economy.

According to Wellink the earlier often used budgetary tool, the Zalmnorm as devised by Minister Zalm, should not be applied in the inflationary climate of the time (Schinkel, 2002; Haas & Leering, 2002). By applying the Zalmnorm during times of inflation, the government would not experience a restrained budget. Normally the expenditure ceiling, which is characteristic of this norm, limited spending. However, inflation increased this ceiling (in the short term, before the relative value of money depreciated). In the context of HI this benefit was protected by the cabinet to serve their governing interest; the status quo and their institutional path.

The average citizens supported Zalm since they sought to increase their wages with higher prices. Due to this increase of welfare, citizens were willing to increase the level of risk they wanted to accept. However, Wellink did not support the policy ideas of Zalm. The citizens, especially those relying on Dutch health care, criticized the plans of Wellink by declaring that they did not want to serve as a '*buffer'* during hard economic times (Bomhoff, 2001; Schinkel, 2002; Haas & Leering, 2002). The group who vocalized this were people with average incomes, for example, they stated that managers should earn less than them. Wellink and Hoogduin responded by arguing that buffers were needed (Pen, 2001). They could make such a statement since they did not have the goal of re-election and electoral costs. Instead, the reaction of the cabinet was principally driven by the objective of re-election, by offering voters a favourable economic climate in the short term. Hence, in this context citizens and the cabinet reinforced each other in their search for a solution.

From the above considerations it becomes apparent that the cabinet sought to make governing easier with more budget to spend. Therefore, it could be argued that political actors intentionally did not want to receive DNB's advice and wanted to protect the status quo. An important implication is that, due to the transfer of DNB's monetary means to the ECB, the Dutch cabinet received more domestic institutional leeway to defend the interest of the *status quo*. As a consequence the Dutch cabinet was able to protect the original path dependence. This entailed that the benefits for the cabinet had become even more concentrated while the costs had become more diffused through the establishment of the ECB, to which the blame could be passed on (Stone, 2011).

Tax law

Another source of income for the Dutch cabinet was the in 2001 newly implemented tax law *inkomstenbelasting*, which enabled the inflation rate to grow even more. DNB already had warned the Dutch government for this effect three years before its implementation (Gool & de Haas, 2001). The introduction of the law in 2001 caused higher prices and thereby inflation. The media reported to this as '*clumsy'* and called the Dutch scenario an '*inflation bump'* (NRC, 2001). The newspaper declared that the cabinet of prime minister Kok had reached a new milestone, reaching the highest inflation rate in over ten years. They blamed political party The Hague for not calculating the effect of the new tax law with enough accuracy and for not listening to the warnings of DNB. They called the strategy '*plainly awkward*'.

When inflation indeed rose after expanding the governmental budget and implementing a new tax law, the average citizen became the '*victim'* of Zalm's policy choices. Immediately, the media criticized Zalm's lack of responsiveness and for being '*too purple'* and *'clumsy'* (Cann, 2001; Gool & de Haas, 2002; NRC, 2001; Oomkes, 2001). However, Zalm persistently declared to be in *control*. Therewith suggesting he could still be able to offer voters economic *security*. In contrast to DNB, the cabinet is a political institution which can give a sense of security by fuelling psychological feelings through delineating a narrative (Stone, 2011). The different incentives, nature and views of both DNB and the cabinet with regard to providing economic security could not have been more opposite. The conflicting views between the polis and the rational DNB left the media and citizens confused in their judgement.

Guilder

What became clear was that all policies that were introduced by Zalm and the cabinet had induced to procyclical developments. This effect could not be easily reversed due to the side-lined position of DNB (Beetsma & Wijnbergen, 2005). The measures taken to prevent economic uncertainty resulted in the opposite desired effect: more uncertainty through higher inflation. At this time, the media concluded that the high inflation was an stealth method for a new taxing policy, higher wages and a higher government budget. Likewise the media concluded that DNB had failed because it had '*sold'* the guilder poorly relative to the euro (Gool & de Haas, 2002; Damen-I, 2005; Damen-II, 2005).

Several economists implied that the devaluation by way of transferring from the guilder to the euro had been agreed to, such as to enable short term competitive advantages in terms of international trade. This short term advantage should have been accompanied with a tighter government budget policy in order to limit inflationary harm (Beetsma & Wijnbergen, 2005). However, Zalm had increased governmental spending. Later, in 2003, this shortcoming was admitted by Wellink (Wynia, 2003). In 2005 former director of DNB, Brouwer, also admitted this mistake and confessed that the institutional goals were indeed mixed, were the dominant goals were that of price stability and low inflation. This confession was followed by criticism directed towards DNB for being too '*technocratic'* (Wynia, 2003).

Before the confession of the miscalculations which led to the entrance of the Netherlands to the EMU, DNB was already held accountable by the media for not complying with their institutional goals. If the subjective interpretation of several economists in the public debate were true, with regard to the policy decision having been made to induce a short term boost to the economy, then Monetarists theory could have predicted the right end after all. Parallel to this discretionary decision; other *political decisions* for example with regard to government spending, a new tax law and wage agreements further enforced procyclical developments (Beetsma & Wijnbergen, 2005). The friction between the institutional goal of DNB and the politically made decisions, highlights the different goals in the two institutional spheres (Stone, 2011).

Poldermodel

The badly timed policies caused '*unnecessary'* high inflation and opened up the opportunity for Wellink to emphasize his proposition to limit government spending and to halt wage increases. Wellink tried to open up space to introduce his policy alternatives by using the *frame of alienation* of Zalm by attacking the '*invention'* of the purple cabinet the *poldermodel* instead of focussing on the specific source of inflation (Schinkel, 2002; De Haas, 2003). Wellink requested abandon the '*expired'* poldermodel in order to stimulate fast decision making (Hofland, 2001). He requested this change by highlighting the importance for the Netherlands to remain in a favourable international trade position. By not acting fast enough the Netherlands could lose its position like '*snow melting for the sun'*. The metaphor implied higher *costs* for society (Wollerich, 2001). Thus, Wellink transformed the debate by highlighting the global trade position of the Netherlands.

According to the media and Wellink, the political goal was not to gain consensus but to make decisions. The method for decision making by the previous purple cabinet had become a '*myth'* for policy making (Hofland, 2001). Little by little, Wellink's point of view gained support by other political parties, such as PvdA, and by journalists.

Altogether, the *relative welfare* of the Netherlands was negatively affected as compared to the rest of Europe during and after the European integration. Some months before, the promise of the new technology, the internet, had increased both *material* as well as *symbolic welfare*. This meant that the introduction of the internet as a productivity increasing instrument had the function of stimulating the perception of unlimited future growth. In turn this perception translated in the perception of future increases in (material) welfare. This symbolic value also led to the term the '*New Economy'* which implied an economy dominated by modern technology (Bekkers & Vermeulen, 2001; Volkskrant, 2001). This situation again showed that the *welfare- efficiency goal* was a trade-off due to moral hazard, which in this case was deregulation, the relaxation of enforcement and most importantly for the Dutch economy the implemented procyclical fiscal policies (DNB, 2001; Valliere & Peterson, 2004; Morris & Alam, 2012). These developments enabled moral hazard since it encouraged people to behave badly when their welfare is secured.

Despite efforts of Wellink to intervene in fiscal policy, the ECB pursued counteractive policies with respect to Dutch interests due to the diverging inflation rate relative to other European countries (Snels, 2003). This put Wellink in a difficult position because of his position at the ECB. However, he could not be held accountable because votes of central bank presidents were kept secret. Therefore, Wellink tried to control the narrative by highlighting the importance of moderation but his *narrative* lost meaning and support when the ECB did not act in favour of the Dutch economy (Ibid).

Whilst DNB is a rational institution, by transferring (part of) domestic monetary policy to the polis the decision making process became *less rational*. Decision making in the polis is dependent upon *goals* which are directly related to the dominant political party. The tensions between DNB and dominant political powers during this crisis were most evident from their public debate. An important characteristic of these debates was that, whilst DNB mostly participated in the debate, it was the cabinet that was initially held accountable by the Dutch media.

Overview

From the perspective of the media, the preamble to the high inflation is of *intentional cause* for both DNB and the Dutch cabinet (Stone, 2011). Both actors sought short term economic stimulation at different times driven by different goals. First, DNB incorrectly exchanged the guilder for the euro, which eventually victimized citizens. Second, the cabinet pursued a favourable economic climate for voters through fiscal policies which resulted in procyclical developments. Since high inflation was the result of multiple decisions and actors, it was difficult to assign accountability and therefore had been passed around among the two actors.

Hence, the dominant complexity was of *institutional* nature (Stone, 2011). This complexity is characterized by large institutions that all have different rules of the game and behaviour patterns which do not efficiently go together. Therefore, blame can be placed on every component of this institutional web. This also applies to the crisis of 2001 as is apparent from the public debate, since actors, policies, norms and institutions were all blamed. Potential reasons include, policymakers at DNB could be *bad apples* by taking advantage of their discretionary power, leaders of DNB could have had *mixed interests* or constraints in a multi-level governance environment, politicians could be too slow to respond properly to monetary developments or the ECB favours other countries over the Netherlands.

DNB and the cabinet both had different narratives to contest policy problems and solutions. The cabinet's narrative was a story of being in control while DNB's narrative was focussed of stymied progress. The bottom line was that not one cause had won in the polis. It was the interplay of accusations that led the media to report that both actors intendedly or inadvertently harmed society at one point in the crisis. Inadvertent harm refers to the consequences of formulated policy which were perhaps not intended but could have been foreseen by its initiators.

Whereas DNB warned for high insecurity and risk while experiencing no electoral costs and having a rational institutional goal, the cabinet was experienced the opposite of DNB. The cabinet experienced electoral costs and did not have rational institutional goals, which gave them the possibility to persuade voters with a sense of security. DNB's solution was to moderate economic policies whilst the cabinet saw their own governing as the solution to hard financial times. Despite the different goals, solutions and costs, the two institutions had become dependent upon each other.

4.2 Financial crisis of 2008

In 2008 the EMU already had have the time to further move towards integration and therefore it is expected that the revised role of DNB had become more institutionalized. Whether this is indeed the case should become apparent from the subsequent analysis.

As of the beginning of this '*abrupt and global'* crisis (DNB, 2008), there was a more global dominant narrative as evidenced from the public debate. The cause of the crisis was the American mortgage market which was characterized by taking too much risk, which led to liquidity shortages. As a result, '*dominant'* financial institutions became vulnerable (DNB, 2008; FD, 2008). The dominant narrative could have already been prepared in advance since the consequences of the financial crisis were first felt in America before harming the Dutch economy. The dominant causal story was characterized by *failure* of the financial sectors, especially the banks, in relation to a combination of lack of- and noncompliance with regulations (DNB, 2008; FD, 2008). Therefore, the main message was to reform regulation and to enhance financial control (FD, 2008; Haenen, 2008). The intended regulatory reform and financial surveillance symbolized more *security*. This narrative became the dominant story due to the '*bandwagon effect'*. Meaning that, even though the declared narrative could be prone to errors, it became more widely believed the more people adopted the storyline (Stone, 2011). This could explain why citizens influenced the public debate to a lesser extent as compared to DNB during this crisis.

The financial performance of investment banks before the crisis started were already below par. According to Stone's framework it is easier for remaining interests to blame an actor who has left the political arena, which in this case were the bankrupt banks. Therefore, the narrative that was told was of *intentional cause* in which the actors that wilfully did not comply to regulation were the *bad apples* of the financial industry. Therefore, from the beginning on the narrative threatened the existing order.

Trust

At the beginning of the crisis in the Netherlands, the most dominant narrative was told by DNB. The institution declared that the core problem of the American crisis was one of declining *trust* of consumers in the markets (DNB, 2008). Therefore, DNB professed that trust needed to be restored to limit the economic damage. In contrast to 2001, during this crisis DNB had chosen the most subjectively interpretable variable to persuade the public with their causal narrative, namely trust. Herewith, DNB mirrored the *polis* in the public debate. From this it can be deduced that DNB had become more familiar with the new institutional landscape.

In order to restore trust in the financial system DNB provided transparency. To this end, DNB introduced a Social Report in 2009. However, this report was only published in Dutch and was not published annually. Besides writing reports, DNB committed itself to changing the institutional culture to a more *integrity* oriented culture, whilst still protecting economic freedom. Both Wellink as well as his successor, Klaas Knot, were committed to these goals (DNB, 2008; Knot, 2011). Since 2011, Knot has been president of DNB. Knot even spoke about restoring trust as the *ammunition* that was needed. From this it can be derived that the social awareness and the importance of integrity had been transmitted to the new period as led by Knot. The '*story of control'* was accomplished by declaring that reform was needed and was put central by DNB (Knot, 2011).

Shortcomings

What was particular about this public debate was that no actor tried to protect the existing regulation. All actors advocated for regulatory change, probably to remain credible in the newly revised financial sector (DNB, 2008; Schinkel, 2008; Oomkes, 2008; Kalse, 2008). That was why, asides from advocating trust in the economy, DNB also portrayed themselves as one of the '*fixers'* of the problem. Wellink used a metaphor in which he compares DNB to the police that tried to prevent crime, while it were the burglars that operated the crime. During this crisis the '*burglars'* were the banks that did not comply to existing regulation and the supervisory institutions that condoned this misuse (Battes & Clashen, 2008). By assigning the responsibility of the problem to the '*burglars'*, DNB avoided potential claims of blame from other actors for not detecting the structural errors in the financial system which caused the financial crisis. By placing blame on the noncomplying banks DNB counteracted the feelings of insecurity potentially positively impacting consumer trust in the financial sector. DNB portrayed itself as a fixer by declaring the need for reform and by recognizing shortcomings of existing regulation.

Wellink's contributions to Bassel II[2] had soiled the reputation of DNB in 2001 when the shortcomings of the policy became clear in 2008. It is noteworthy that Wellink admitted these shortcomings since he helped formulating the Basel II agreement, by declaring: *In the current regulation are incentives that did not foresaw the risks of new financial instruments'* (Kalse, 2008). Wellink was able to admit this shortcoming since there were no electoral costs at stake for him. However, by having admitted his failure, he labelled his intentions as being 'good' and that the unfortunate outcome was not intended. According to Wellink Basel II was not designed accurately enough due to time pressure and because of

[2] Basel II: This agreement is the subsequent of Basel I. The agreements were formulated to make financial statements of banks all over the world more comparable. Basel II was formulated to restore the shortcomings of Basel I. In addition to Basel I, Basel II includes guidelines for; (i) financial supervisors; and (2) for information exchange by banks (BIS, 2006).

long negotiation processes. With the latter he clarified that he was still not fond of the '*poldermodel'* and stated that this caused regulatory shortcomings. He claimed back his authority through the narrative that he detected the harmful shortcomings in the financial system (in the American market) with regard to the subprime mortgages. When he inquired with respect to the cause of the crisis his American colleagues at the *Fed* responded that it was just a '*common wave'* (Battes & Clashen, 2008).

Benink, the chairman of the European committee for financial regulation, supported the narrative of blaming poor financial regulation and banks. In contrast to Wellink, he pointed out which wrongdoings were the most harmful for the financial industry. Benink declared that monetary regulation, especially Basel II, implied *unwritten* monetary rules that increased unnecessary risk taking in the banking sector. Benink accused the banking sector for *moral hazard* because the government '*would have been helped anyways'*.

'*How central banks supervises, stimulates commercial banks to take greater risks… There is an explicit guarantee that deposits are guaranteed by central banks. But there is also an implicit guarantee in the financial system that implies that central banks do everything to prevent a commercial bank from falling out of fear for a crisis'.* (Quote by Benink in Kalse 2008).

When the crisis hit the Dutch economy, the first reaction was that '*cold showers'* were needed to stop the market from overheating even further (Schinkel, 2008). However the, at that time perceived, '*powerless'* Wellink needed to intervene in some way because '*torrential rain'* was unnecessary. Despite the fact that these statements criticized Wellink, he used the same metaphor to highlight the behaviour of the Fed. Wellink was asked why the ECB did not lower the interest rate when inflation grew in 2008. He responded that the ECB and the Fed did not have the same goals. He explained that it was legitimate for the Fed to increase the money supply during uncertain times because the Fed has economic growth as an additional institutional goal besides protecting price stability. Wellink added that his American colleagues confessed that their task would be easier with solely price stability as a goal. Thus, allowing for a '*cold shower'* to happen was not in line with the institutional goals of the Fed (Kalse & Schinkel, 2008). By underlining this limitation in the American monetary framework and by referring to the preference of his American colleagues for the European practice, Wellink made the European system look better (Stone, 2011).

Change of guards

In 2009 the debate arose within the ECB as to whether unconventional monetary policy should be applied. Eventually, the ECB decided to provide support for the banks by buying their bonds (De Hen, 2008; 2009; Hinrichs, 2009). In this public debate Wellink had come forward as being '*save'*. In public he supported the decision of the board of the ECB, which exists of all the presidents of the European central banks. Despite the support of Wellink for the ECB, his actual position in the matter had remained a secret. Therefore, the public could not judge Wellink's intentions with accuracy. Because the ECB had chosen to help banks, the statement made by Benink that explicit and implicit rules exist which are in place to help banks, remained relevant.

Later in 2011 at the end of Wellink's term, his image was still not seen as '*radiant'* (Damen, 2011). In that same year Knot became the new president of DNB. In contrast with Wellink's behaviour, Knot did express criticism towards the board of the ECB. It was noteworthy that Knot dared to raise his criticism because the board of the ECB only announces final decisions to the public. Following up on his statement, Knot pursued an *emotional narrative* referencing back to his own experiences from his childhood, in which he portrayed himself as an '*innocent victim'*. Knot expressed his critique to the ECB for not limiting mortgage interest and thereby not providing enough pressure on house owners to pay off their mortgage more quickly (Schinkel-I, 2011). He referred to the loss of his parental house in the seventies due to an earlier housing bubble and publicly stood for preventing households from experiencing this trauma. By sketching this '*story of helplessness'*, Knot positioned himself publicly for having good intentions. This intrinsic motivation aided Knot in going against the status quo rule which does not allow for criticising the board of the ECB. His statement boosted his image as he was labelled as *'transparent, pragmatic and vocalizes his opinion'* (Nods, 2012). By this change of the guards, a '*fresh air'* ran through DNB.

Comparisons

It had been expected that the financial crisis of 2001 functioned as a critical juncture. However, the European integration, which happened a few months earlier than the crisis, functioned as the critical juncture instead. Therefore, it was visible which path dependencies were applicable in this crisis. It was remarkable that Hoogduin did advocate the use of a poldermodel-like tool to jointly keep inflation low (Den Brinker, 2008). He advised to implement *moderated Monetarism*, as was also done in the 1980s during the Wassenaar agreement. This meeting had been held between labour unions and political actors in order to negotiate about wages in times of high inflation. The consensus oriented debate became known globally as the '*poldermodel'* (Schinkel, 2001).

Another difference in 2008 as compared to 2001 was that Wellink and former director of DNB Brouwer confidently stated that the country still had other monetary means left after having transferred the '*interest weapon'* to the ECB (Telegraaf, 2008). Another notable statement of Wellink was his confidence in the debate regarding the position of DNB. He declared that the paradoxical interest rate tool was not that required in the Netherlands due to anticyclical economic forces including unemployment benefits (DNB, 2008). Another difference with the former financial crisis of 2001 was that during the 2008 crisis it had been decided to postpone the new VAT (tax) law on the basis of DNB's advice. DNB advised to postpone the planned tax increase in order to *'prevent what happened in the first years of this century'* (Broekhuizen & Kalles, 2008).

What remained unchanged was that Wellink still did not want to use the Zalmnorm for governmental spending. In 2001 Wellink requested the government to limit the use of the Zalmnorm and to stop wage increases. Even in 2008 he struggled to get the cabinet to realize that governmental spending could cause financial harm to the economy. A difference during the crisis of 2008 was that he had a political ally. The entrance of Mark Rutte into the political arena altered the way upon which the government budget was determined. During the financial crisis of 2008 Rutte was the party leader of liberal party VVD and became the prime minister in 2010. He introduced the idea to consult experts instead of using the disputed Zalmnorm (Oomkes, 2008; Lalkens, 2009). This statement manifested authority because it was based upon scientific advice, whilst Rutte was just like Zalm, a member of VVD.

In the polis, information is ambiguous and never complete (Stone, 2011). By approaching experts to make statements about the policy problem, the information attains the support of a credible group which positively impacts voters. This does not imply that all statements made by experts are the truth. Contradictory information and support can potentially be- or at least can be tried to be kept a secret since it is not strategic to highlight nuances in information.

The actors that were vocal in this public debate were mostly the same actors that also contributed to the public debate of 2001. However, at the end of Wellink's term he had been replaced by Klaas Knot, to the dismay of Hoogduin. Hoogduin was already a very active actor during the crisis of 2001. During this time he had been the adviser of Duisenberg, who was the first president of the ECB. Hoogduin also had worked as an analyst at Robeco and at the time of Knot's appointment Hoogduin was a director at DNB. He was unpleased with the appointment of Knot because it was speculated that Hoogduin would be a suitable successor for Wellink. Instead, Hoogduin was labelled as being too much of an '*insider*' by the ministry of Finance, the latter appointed the president of DNB (Kools, 2011). It was this shared *idea* that implemented institutional change (Stone, 2011). Despite the fact that the appointment of Knot was unexpected, it did contribute to the goal of reforming towards a more socially responsible institution. By selecting an outsider for the administrative function, the *revolving door* principle could be prevented. The dominant idea of pursuing institutional change or reform formed the *boundary* which excluded Hoogduin as being part of the revised idea.

Following the appointment of Knot, the debate whether DNB was still politically independent started (Schinkel, 2011). This debate related to the difficult position in which DNB found itself subsequent to the European integration of the 2001 period. Journalist Schinkel declared in 2011 that, due to reliance on unconventional monetary measures, political independence was at stake. She warned about the attractiveness of giving inflation more leeway and being the '*easy way out*'. Journalist Joosten (2011) and professor Boot (Boot in Joosten 2011) both argued that the financial support which the ECB offered to countries was '*support through the backdoor without democratic back cover*'.

During this financial crisis several new actors entered the arena. Most visually was the entrance of Knot as the new president of DNB. Also Rutte became an important actor leading up to the position of Wellink. An important contribution of Rutte was to consult scientists in the determination of economic policy. Later on in the debate even more professors and scientists spoke their mind about the practices of DNB, such as Benink.

Summary

Whereas the financial crisis in 2001 for DNB was an adoption process to the European integration, the public debate of the financial crisis of 2008 was more focused on the reform within DNB as an institution. In 2008 DNB was more familiar with their institutional position in the polis.

The crisis of 2001 did not serve as a critical juncture because the European integration served as a moment in which path dependency had been determined. This path dependency continued during the crisis of 2008 due to the formal binding rules that determined the course for DNB. In 2008 DNB complied more to these rules because it, together with the institutional landscape, had become more aware of the monetary means. Other progress that had been made was in terms of the cooperation with the cabinet and DNB. Whereas the two actors could not cooperate in the first crisis, this was different in the second crisis in which Rutte and Wellink shared their views with regard to governmental spending. Sequentially, the entrance of Rutte also meant the entrance of scientists and experts into the debate. Together with the appointment of Knot it could be argued that the ideational debate accepted new actors. The appointment of Knot allowed DNB to enter a new path of governance. Especially since the choice of '*new leadership*' had been made by the ministry of Finance, an important actor for the functioning of DNB. Therefore it can be concluded that institutional change occurred within DNB following the financial crisis of 2008.

Chapter 5 – Analysis

What was most evident from the data from chapter 4 was that DNB had entered the *polis*. DNB had become political as a non-political institution following the introduction of the EMU in 2001. The crisis of 2008 was needed for the Dutch cabinet to fully acknowledge the new political landscape. It was through this crisis that DNB and the cabinet became aware of each other's monetary means and institutional goals. They sought cooperation to resolve the financial crisis of 2008. At the end of the financial crisis of 2008, in 2011, there was a notable institutional transition within DNB. The Ministry of Finance selected Knot to be the successor of Wellink, who was not an '*insider',*

Another important insight stemming from the former chapter was that political individuals were important for the structure of the public debate. As already expected by Samarina and De Haan (2014) external factors have influence on the adoption of the inflation targeting framework. Although not stated by Samarina and de Haan (2014), political individuals were the external factors which determined the elaboration of the framework. The impact of political influences on the framework was also suggested by Braun and Downey (2020).

5.1 Inflation targeting framework

The clearest implication of the inflation targeting framework occurred in the financial crisis of 2001 in which short term economic gains were pursued by the cabinet. The cabinet sought short term economic boosts by implementing procyclical fiscal policies such as the tax law and governmental spending. During this crisis the discretion of the framework had been exploited to prevent electoral costs. The danger of the framework had been highlighted by the Monetarists. This meant that the *inflationary policy bias* had been realized during the crisis of 2001. At the time DNB already warned the cabinet for the disadvantageous effects of these policies but was not able to intervene due to the establishment of the EMU. The cabinet did not accept DNB as an advisory organ yet. Hence, the cabinet did not consider the advice of DNB when they were warned of their harmful fiscal policies. On the basis of the cabinet's misuse of their discretionary power it could be argued that the inflation targeting framework was interpreted as a framework instead of a rigid rule in 2001. However, DNB tried to persuade the cabinet to adhere to the framework according to the Monetarist school. Eventually, the cabinet experienced significant critique from the media when the disadvantageous effects became noticeable.

The interpretation of the inflation targeting framework was less visible during the financial crisis of 2008. However, by analysing the public debate it became apparent that compliance with the inflation target had been altered. This time, DNB and the cabinet were able to cooperate. This entailed that the actors coordinated with each other to determine which policies were possible to implement without formulating procyclical policies. This indicated that DNB received institutional space to function as an advisory or controlling organ for the Dutch cabinet, giving DNB the institutional space to protect the

Dutch economy. Because of this acknowledgement of the '*new*' role of DNB it became less likely that political actors would pursue short term economic gain in the years after this crisis.

When comparing the two financial crises with each other it seems that DNB and the cabinet had undergone an institutional learning curve. This is based on the different ways in which compliance with the inflation target were reached during the two crises. Whether institutional learning was applied during the crises was analysed with process tracing. The overview of these patterns are illustrated in figure 3.

Figure 3: Overview of the case

European integration ↓ Economic short term gain ≠ change	→ Z: Institutional dependence	Financial crisis of 2008 ↓ New policy variable (trust), instrument (fiscal/ political policies) = change

5.2 Historical Institutionalism

A striking difference between the two crises was the protection of the status quo. Whereas the cabinet anxiously tried to hold on to the old institutional landscape in the financial crisis of 2001, a need for adaption was recognized during the financial crisis of 2008. From this it was apparent, contrary to my expectation, that the financial crisis of 2001 did not serve as a critical juncture. Instead, the commitment that was made to the European integration a few years earlier functioned as the critical juncture of that period. This transition required adaptation from both the cabinet and DNB. However, due to the different institutional goals of the two actors this was not easy. Unlike the cabinet, DNB could formulate unpopular advice since DNB was not burdened with electoral costs.

The decision towards European integration determined the officially binding path dependence which the cabinet was still in ignorance of in 2001. Therefore, the principle of Pierson, namely the *status quo bias of institutions*, was relevant for the Dutch cabinet in this crisis. Pierson argued that change was unlikely to come from within due to positive feedback loops and institutional reproduction. In this case another reinforcing factor that led to this bias was the possibility of re-election, which increased the electoral costs at stake. Due to the electoral costs which politicians had to deal with, it was tempting for them to pursue short term economic gains in order to collect public support. This possibility induced the cabinet to implement procyclical fiscal policies in order to collect votes. By realizing short term economic windfalls, the voters gained confidence in the ruling government. Thereby the cabinet protected the status quo. These procyclical policies were harmful and risky because only the cabinet had the means left to steer the Dutch economy subsequent to the European integration, whilst the cabinet used these means in a political- rather than rational manner.

In 2008 the crisis did function as a critical juncture. This did not imply that the European institutional rules, that were introduced shortly before 2001, were altered. Instead, it implied that the institutional rules and behaviour of the financial sector were reformed. The crisis served as a critical juncture because the continuity of the institutional path of DNB and the financial sector was in danger. The continuity of the institutional path was at stake because the crisis was caused due to failure and noncompliance from the whole financial sector. This threat gave reformers the possibility to enter the debate and to change the route of the financial sector, and therewith also the institutional rules of DNB. Because all actors narrated the idea of reform, no insider could pretend that change were not necessary.

During this time, DNB was able to portray themself as the '*fixers*'. By highlighting the advantages of the European monetary approach, Wellink renounced any association with the place of crime: the American market. Just as Pierson described that existing institutions would embrace the dominant idea or narrative from the third power dimension DNB fully embraced the dominant narrative of reform.

In 2008 the crisis did function as a critical juncture. This did not imply that the European institutional rules, that were introduced shortly before 2001, were altered. Instead, it implied that the institutional rules and behaviour of the financial sector were reformed. The crisis served as a critical juncture because the continuity of the institutional path of DNB and the financial sector were in danger. The continuity of the institutional path was at stake because the crisis was caused by failure and noncompliance on behalf of the whole financial sector. This threat gave reformers the possibility to enter the debate and to change the path of the financial sector, and thereby also the institutional rules of DNB. Because all actors narrated the idea of reform no insider could pretend that change was unnecessary.

During this period, DNB was able to portray itself as the '*fixer*'. By highlighting the advantages of the European monetary approach, Wellink renounced any association with the original cause for the crisis, namely place of crime: the American market. Pierson (2002) described that existing institutions would embrace the dominant idea or narrative from the third power dimension; and in line with this description, DNB fully embraced the dominant narrative of reform.

The crisis of 2008 brought about institutional change. At the end of the financial crisis the principle of *revolving doors* had been deterred through the selection of Klaas Knot, an 'outsider', as the successor of the president of DNB. This shift of power was a characteristic of *displacement*, namely a shallow institutional adaption. Reforming existing regulation and adding new supervising rules were a testament of *layering*. A final characteristic and a more integrated form of change was *drift*, which meant that the institutional environment had been altered. Whether this applied to the institutional changes within DNB can only be determined over a longer period than the period as addressed in this thesis. However, it could also be expected that this form of change was applicable because (i) DNB became more seriously viewed as an advisory organ and (ii) financial supervision regulation around the globe had been revised.

In table 2 a brief overview of the characteristics of each public debate, based on the framework of Stone (2011) is shown.

Table 2: Narrative causality tools in Polis

Instruments	**Mechanism**	
	Financial crisis of 2001	*Financial crisis of 2008*
Sources of change	Alliances: non Welfare: uncertainty vs. economic security	Ideas: reform & trust Alliances: DNB & cabinet
Symbolic devices	Metaphor: - citizens to function as *buffers* - The cabinet being too *purple* - Past efforts would *melt like snow for the sun*	Metaphor: - Knot childhood trauma (innocent victim) - Intervening to prevent *torrential rain* - Banks as *burglars*, DNB as *police*
Facts	Numerical	Scientific
Causal theories	- Being in control (Zalm) - Alienating purple decisions (Wellink) - Intentional cause (media)	- Intentional cause from financial industry (media) - Story of control and fixers (Knot/ Wellink) - Scientific approved policies (Rutte)
Interests	Costs: electoral for cabinet, for DNB none	Benefit: to attain a reliable financial sector
Powers	ECB, Wellink, Hoogduin, Zalm (status quo advocate), voters, media	ECB, Scientific experts, Wellink, Knot, Rutte, voters, media

5.3 Process of institutional learning

Hall (1993) defined social learning in orders: first, second and third order change. Social learning was most likely to take place when new information entered the debate. Since the financial crisis of 2001 did not function as a critical juncture, this research was not able to indicate institutional change or learning.

Noteworthy was that the first and second order of change was applicable to the financial crisis of 2008. The first order change applied to DNB because during this crisis it had used a more subjective variable in their public reports as compared to the previous crisis, namely *trust*. This contrasts to the financial crisis of 2001, in which rational policy variables were central such as the variable of middle to long term inflation. The second order of change applied to the crisis of 2008 because new policy instruments had been used by DNB in its collaboration with the Dutch cabinet. It could also be argued that the third order of change had been implemented within DNB since DNB attempted to further integrate integrity and transparency into its institution. As an example, this was executed through the publication of a social report. However, the continuity of this report was inconsistent which could be a signal of simulated institutional change. On the other hand, the appointment of Knot is a clear testament to this reform. Knot's statements were different from the status quo even as his vision regarding mortgages and taxation.

However, new information did not become available during the financial crisis of 2008. Therefore the way of debating did not shift. The inevitable realization of the shortcomings of the financial regulation led to a story of reform. For the status quo advocators these shortcomings became undeniable since it were *their* institutions that went bankrupt, aiding in paving the way towards realising the needed reform.

It was noteworthy that during the debate of the financial crisis of 2008 scientific experts were allowed to participate and influence the existing knowledge regime. This invitation had been given by Rutte to substantiate the use of the Zalmnorm. The interference of experts is in contrast with the debate during the financial crisis of 2001, which was more characterized by the debate between Wellink and Zalm. Remarkable was that no political entrepreneurs besides Rutte had entered the public debate. Another albeit not a new actor that had also entered the debate was Knot as the new president of DNB.

From this it can be derived that monetary and fiscal policy making took place in a relatively closed policy circle, which could promote *regulatory capture* (Lodge & Wegrick, 2012; Makkai, 1992). However, due to the pressure from the media in the public debate, institutional change and learning was positively impacted. This could explain why the most integrated forms of institutional change (drift) and institutional learning (third order change) were not convincingly integrated during the financial crisis of 2008. Therefore, I would argue that institutional learning at DNB was reasonable but was not yet completed.

This thesis analysed whether the financial crisis of 2001 and 2008 (independent variable) had led to institutional learning for DNB (dependent variable). Whether institutional learning was realized was analysed through method of process tracing of the public debate during these crises. Both public debates have been compared to each other. The dependent variable, institutional learning with regard to the inflationary target framework, could take the form as a rigid rule (Monetarism) or as a framework (Keynesian). From the data it is evidenced that the process that caused the eventual institutional change had been enforced by the political dependence which DNB experienced after the EMU (figure 3). Through this important institutional shift DNB entered the polis. This forced DNB and the cabinet to rely on each other in order to secure the stability of the Dutch economy. Because of this inevitable cooperation, DNB attained the policy tools of the cabinet. Namely, influence over the fiscal policies which indirectly steer monetary indicators such as inflation. By entering the polis, DNB had to become less rational to mobilize support for their advice in order to align with the goals of politicians. An important *weapon* for DNB is therefore story telling or the framing of their advice, something that Knot had proven to understand during the financial crisis of 2008 (Stone, 2011).

Chapter 6 – Conclusion

This thesis aimed to provide insight into the behaviour of DNB during financial crises with respect to the inflation targeting framework. Therefore, the research question that was central in this thesis was as follows:

How has institutional learning contributed to DNB's monetary policy-making during the financial crises of 2001 and 2008?

It is insightful to gain understanding of the execution of the inflation targeting framework by DNB since different economic schools approach this policy instrument differently. Whereas Monetarists interpret the framework as a rigid rule, Keynesians interpret the method as a framework (Keynes, 1936; Bernanke & Mishkin, 1997; Fiebiger & Lavoie, 2018; Clift, 2019). According to the Monetarists there is a threat of misusing the discretionary power that policymakers have. Instead, the Keynesians see this leeway as an advantage to pursue also other monetary goals.

Which interpretation DNB choses, depends mainly on the decisions taken in the past regarding this framework (Capoccia, 2016; Pierson, 2016). Therefore, this path dependency is usually rigid. It often takes a critical juncture to welcome institutional change (Hacker, Pierson, Thelen, 2013; Lodge & Wegrick, 2012; Capoccia, 2016). A critical juncture makes the continuity of an institution uncertain. During a critical juncture new voices could enter the political arena, which may possibly enable institutional change. However, change is difficult since already active actors in the arena want to protect their own interest or the status quo. How a response is formulated to a critical juncture is determined through the public debate (Blyth, 2002). During this debate an ideational battle is held to determine which dominant idea wins. Which idea wins determines how the cause of a problem (critical juncture) is perceived by the public. This persuasion forms the basis for the eventual adopted policy solution. Whether the policy solution leads to integrated institutional change depends on the level of change that is adopted (Blyth, 2002).

In order to research DNB’s behaviour during the financial crises, a single case study was conducted (Blatter & Haverland, 2012). The variables that were central in this thesis were institutional learning (dependent variable) and the financial crises (independent variable). The co-variational analysis has been performed through document analysis (Ibid.). These documents dated between 2001-2005 and 2008-2012 and were analysed by applying process tracing as based on the framework of Stone (2011).

Answering the research question cannot be done without nuances. As is evidenced from chapter 5 only the financial crisis of 2008 resulted in institutional learning in the form of a first and second order change (outcome *I* of the conceptual model, figure 1). Because of the impactful establishment of the EMU, ECB and the euro, the financial crisis of 2001 could not function as a critical juncture. Hence, the influence of this institutional shift became more determinant for the path dependency of DNB. This shift was fundamental for DNB's policy making as DNB could not formulate its own monetary policy, therefore relying on the ECB. DNB became dependent upon the cabinet for enacting policies in order to steer the economy and therefore had to manoeuvre in the polis. However during the financial crisis of 2001, the polis did not accept DNB in the new institutional landscape (outcome *IIa* of the conceptual model, figure 1).

DNB advised against the implementation of procyclical policies, because it would impact the economy negatively (Beetsma & Wijnbergen, 2005). The cabinet ignored the advice and implemented the policies to stimulate an economic favourable voting climate in order to be re-elected to protect the status quo and their own interest. This behaviour suggested that the cabinet interpreted the inflation target as a *framework*, in line with the Keynesians. Whereas DNB's interpretation was a Monetarist view. During the financial crisis of 2008 DNB had been acknowledged as an advisory organ and succeeded to present the framework as a rigid rule to the cabinet (Broekhuizen & Kalles, 2008). Hence, policy cooperation had been established. This implied that DNB had to alter its rational narrative in order to align with the institutional goals of the cabinet whilst continuing to pursue DNB's own institutional goal: price stability.

Institutional learning had occurred at DNB during the financial crisis of 2008. However it is not with certainty that change had fully been integrated. Institutional change had been achieved through *displacement* and *layering* of rules (Hacker, Pierson, Thelen, 2013; Lodge & Wegrick, 2012). Drift may have also been achieved due to the global reform of financial regulation and the new institutional goal of DNB: integrity (DNB, 2009). Whether this goal had been fully included should be analysed in further research which studies a broader time range. Social learning had been integrated into the first- and the second order. The first order contained the usage of trust as *new policy variable*. The second order was relevant over the financial crisis of 2008 because the Dutch cabinet gave DNB (indirect) *new policy instruments* (Hall, 1993).

This thesis has proven its scientific relevance by analysing political factors. Political factors that were neglected in existing research, regarding monetary policy making, are in this thesis individual leaders of DNB and the cabinet.

The public debates were battles for ideas in which several storylines were narrated. Notable from these debates were the personal interactions instead of institutional interactions. Whereas DNB was in constant debate with the cabinet about who was right during the financial crisis of 2001, DNB could participate in the battle of ideas during the financial crisis of 2008. In the latter, DNB portrayed themselves as fixers of the critical juncture and declared that trust needed to be restored (Battes & Clashen, 2008). Which causality tools had been deployed in both public debates have been explained in chapter 4 and in table 2.

For this opinion based research it is of importance to secure reliability (Blatter & Haverland, 2012; Toshkov, 2016). However, the document selection which constitutes the answer to the research question was subject to my personal opinion with regard to whether a source was useful or not, whilst keeping the academic literature in mind. To this end, I systematically selected the documents from LexisNexis, where it is noted that there was an abundant amount of documents available to include in this thesis. To provide as much transparency as possible, I have included the search terms used together with the documents used.

With regard to validity, multiple sources contained the same meaning. This made eliminating the excessive documents more easier and process tracing none the less complete. It is unfortunate that the financial crisis of 2001 did not serve as a critical juncture because this adds another variation in the independent variable besides timing. This may lead to a skewed display of results (Blatter & Haverland, 2012). However, due to the completion of the European integration in 2002 through the introduction of the euro, these events have overlap in their data.

For further research I would recommend analysing whether the last level of institutional change, *drift*, and the level of social learning, *third order change*, nowadays have been fully integrated by DNB. From the case study it appeared as if this was the intention of DNB. According to Hall (1993) a third order change is likely to take place when a critical juncture exposes shortcomings of regulation which did occur during the financial crisis of 2008.

In addition to this I would suggest researching the one-on-one relationship between the cabinet and DNB more intensely. It is insightful to know because it exposes the real monetary power of DNB in domestic fiscal policy making. It could also be useful on behalf of the financial industry to know whether the cabinet or government are aware of their power with respect to monetary factors, especially shortly before election.

Most importantly I would recommend to analyse the period prior to the establishment of the EMU more into depth. As this decision had such important effects on DNB and European monetary policy making, it would be insightful to learn how the relations and decision making power between DNB and the Dutch cabinet would have been different prior to the establishment of the EMU. This could possibly explain why the Dutch cabinet was ignorant of the advisory function of DNB during the crisis of 2001 for example.

For future policy I would recommend DNB further its efforts in becoming transparent, in order to ameliorate its positioning as integrity and trustworthy. This could be done by continuing (i) social reports; (ii) by making more policies publicly available; and (iii) by for example reporting DNBs contribution to political policies. Via this way the building blocks of DNB, as introduced by Knot, would be fully integrated to the deepest level of institutional change and social learning (Hall, 1993; Hacker, Pierson, Thelen, 2013; Lodge & Wegrick, 2012).

Chapter 7 – Reference List

7.1 References chapters 1-3

Bernanke, B. & Mishkin, F. (1997). Inflation Targeting: A new framework for monetary policy? *Journal of Economic Perspectives,* 11(2), 97-116

Bernanke, B., Laubach, T., Mishkin, F., & Posen, A. (2001). *Inflation Targeting: Lessons from the International Experience*. Princeton, New Jersey: Princeton University Press

Bernanke, B. (2003). *A perspective on inflation targeting. Accessed* at 25 March, 2020, retrieved from https://www.bis.org/review/r030325d.pdf

Blatter, J. & Haverland, M. (2012). *Designing case studies: explanatory approached in small-n research.* New York, United States: Palgrave Macmillan.

Blyth, M. (2002). *Great transformations: Economic ideas and institutional change in the twentieth century*. Cambridge: Cambridge University Press.

Bibow, J. (2010). A Post Keynesian Perspective on the Rise of Central Bank Independence: A Dubious Success Story in Monetary Economics. *Levy Economics Institute Working Paper Collection*, 625.

BIS. (2006). *International Convergence of Capital Measurement and Capital Standards*. Accessed at 20 June, 2020, retrieved from https://www.bis.org/publ/bcbs128.pdf

Boxenbaum, E. & Jonsson, S. (2017). Isomorphism, Diffusion and Decoupling: Concept Evolution and Theoretical Challenges. In Greenwood, R., Oliver, C., Suddaby, R., & Sahlin, K. (Eds.), *The SAGE Handbook of Organizational Institutionalism* (2nd Ed.), pp. 79-104. Thousand Oaks, United States: SAGE.

Braun, B. & Downey, L. (2020). Against Amnesia: Re-Imagining Central Banking. *Council on Economic Policies*. Accessed at 25 March, 2020, retrieved from https://pure.mpg.de/rest/items/item_3193159/component/file_3193160/content

Campbell, J. & Pedersen, O. (2015). Policy ideas, knowledge regimes and comparative political economy. *Socio-Economic review, 13*(4), 679-701.

Capoccia, G. (2016). Critical Junctures. In Fioretos, O., Falleti, T., & Sheingate, A. (Reds.), *The Oxford Handbook of Historical Institutionalism*. Oxford, United Kingdom: Oxford University Press.

Clift, B. (2019). The hollowing out of monetarism: the rise of rules-based monetary policy-making in the UK and USA and problems with the paradigm change framework. *Comparative European Politics, 2019*, doi.org/10.1057/s41295-019-00186-1

Crousehore, D. (2015). *M&B*. Stamford, Connecticut: Cengage Learning.

Crowe, C. & Meade, E. (2007). The Evolution of Central Bank Governance around the World. *Journal of Economic Perspectives, 21*(4), 69-90.

DNB. (2001). *Jaarverslag*. Retrieved at 1 May, 2020, accessed from https://www.dnb.nl/binaries/jv2001_tcm46-146949.pdf

DNB. (2008). *Jaarverslag*. Retrieved at 1 May, 2020, accessed from https://www.dnb.nl/binaries/JV%20DNB%202008_tcm46-214840.pdf

Eggertsson, G., Woodford, M. (2003): 'The zero bound on interest rates and optimal monetary policy', *Brookings Papers on Economic Activity, 1*, 139–233.

Financieel Stabiliteits comité. (2020). *De gevolgen van een langdurig lage rente en een eventuele rentestijging*. Accessed at 25 March, 2020, retrieved from https://www.dnb.nl/binaries/FSC%20rapport%20lage%20rente%2009032020_tcm46-387834.pdf

Fiebiger, B. & Lavoie, M. (2018). Helicopter Ben, monetarism, the New Keynesian credit view and loanable funds. *EconStor, 20*.

Friedman, M. & Schwartz, A. (2008). *The Great Contraction 1929–1933*. Princeton: Princeton Univesity Press.

Friedman, T. (2004). *The 9/11 Bubble*. The New York Times. Accessed at 16 April, 2020, retrieved from https://www.nytimes.com/2004/12/02/opinion/the-911-bubble.html

Gabor, D. (2010). The International Monetary Fund and its New Economics. *Development and Change, Vol.41(*5), pp.805-830

Haan, J., Hoeberichts, M., Maas, R., & Teppa, F. (2016). *Belang en betekenis van inflatie in het eurogebied*. DNB. Accessed at 25 March, 2020, retrieved from https://www.dnb.nl/binaries/1605493_OS14-3_NL_v4_tcm46-346543.pdf

Hacker, J., Pierson, P. & Thelen, K. (2013). Drift and conversion: hidden faces of institutional change. *American Political Science Association Annual Meeting*. Accessed at 6 April, 2020, from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2303593

Hall, P. (1993). Policy Paradigms, Social Learning, and the State: The Case of Economic Policymaking in Britain. *Comparative Politics, 25*(3), 275-296.

Hall, P. (2013). Brother, Can You Paradigm? *Governance, 26*(2), 189-192.

Hofs, Y. (2020, 15 mei). *Hans Hoogervorst: 'Als de centrale banken zo doorgaan, loopt het geheid slecht af'*. Accessed at 30 may, 2020, retrieved from https://www.volkskrant.nl/nieuws-achtergrond/hans-hoogervorst-als-de-centrale-banken-zo-doorgaan-loopt-het-geheid-slecht-af~bbec1a69/

Horváth, R. & Vasko, D. (2015). Central bank transparency and financial stability. *Journal of Financial Stability, 22,* 45-56.

Jones, E. & Matthijs, M. (2019). Rethinking Central-Bank Independence. *Journal of Democracy, 30*(2), 127-141.

Keynes, J. (1936). *The General Theory of Employment, Interest, and Money*. United States, New York: Springer International Publishing

Kleinnijenhuis, J. (2018, 16 September). Tien jaar na de val van Lehman Brothers: wat er (niet) is geleerd van de financiële crisis. Accessed at 20 April, 2020, retrieved from https://www.trouw.nl/nieuws/tien-jaar-na-de-val-van-lehman-brothers-wat-er-niet-is-geleerd-van-de-financiele-crisis~b61d75d5/?referer=https%3A%2F%2Fwww.google.com%2F

Knot, K. (2011). *Monetair beleid en de Grote Financiële Crisis Derde jaarlijkse Nyenrode Finance Day*. Accessed at 25 April, 2020, retrieved from https://www.dnb.nl/binaries/Speech%20Nyenrode%20Finance%20Day%20final%202_tcm46-260594.pdf

Knot, K. (2020, 27 March). *Inleiding President bij de persconferentie over het Jaarverslag DNB 2019*. Accessed at 28 March, retrieved at https://www.dnb.nl/nieuws/nieuwsoverzicht-en-archief/persberichten-2020/dnb388012.jsp

Kalaitzake, M. (2018). Central banking and financial political power: An investigation into the European Central Bank. *Competition & Change, 1*, 1-24.

Lodge, M. & Wegrich, K. (2012) *Managing regulation: regulatory analysis, politics and policy*. Basington: Palgrave Macmillan.

Makkai, T. & Braithwaite J. (1992) In and Out of the Revolving Door: Making Sense of Regulatory Capture. *Journal of Public Policy, 12*(1): 61-78.

Mosca, L. (2014). Methodological Practices in Social Movement Online Research. In Della Porta, D. (Ed), *Methodological Practices in Social Movement Research*. Oxford, United Kingdom: Oxford Scholarship Online.

Pierson, P. (2000). 'Increasing returns, path dependence, and the study of politics', *American Political Science Review 94*(2): 251-267

Pierson, P. (2016). Power in Historical Institutionalism. In Fioretos, O., Falleti, T., & Sheingate, A. (Reds.), *The Oxford Handbook of Historical Institutionalism*. Oxford, United Kingdom: Oxford University Press.

Samarina, A. & De Haan, J. (2014). Right on target: Exploring the factors leading to inflation targeting adoption. Contemporary Economic Policy, 32(2), 372-389.

Schnabel, I. (2016). What role for central banks in safeguarding financial stability? *Sveriges Risk bank Economic Review, 3*, 49- 54.

Skocpol, T. & Pierson, P. (2002). '*Historical Institutionalism in Contemporary Political Science'*, in Katznelson I. and Milner H.V., Political Science: State of the Discipline.

Stone, D. (2011). Policy Paradox. The Art of Political Decision Making, New York: W. W. Norton & Company, 3rd edition.

Toshkov, D. (2016). *Research Design in Political Science*. London, United Kingdom: Macmillan Education UK

Thelen, K., & Conran, J. (2016). Instiutional Change. In Fioretos, O., Falleti, T., & Sheingate, A. (Reds.), *The Oxford Handbook of Historical Institutionalism*. Oxford, United Kingdom: Oxford University Press.

Thies, C. (2002). A Pragmatic Guide to Qualitative Historical Analysis in the Study of International Relations. *International Studies Perspectives, 3*, 351-372.

Tuladhar, A. & Fernández-Ansola, J. (2005). *Governance Structures and Decision-Making Roles in Inflation-Targeting*. Accessed at 3 April, 2020, retrieved from https://www.imf.org/en/Publications/WP/Issues/2016/12/31/Governance-Structures-and-Decision-Making-Roles-in-Inflation-Targeting-Central-Banks-18477

Weiss, C. (1992). *Organizations for Policy Analysis: Helping Government Think*, Thousand Oaks: California. Sage Publications.

7.2 References chapter 4.1

Asselt, R. (2001, 2 June). *Inflatiebestrijding: Zalm te zwak*. Accessed at 11 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=43593241-0e38-404b-9fa9-bad4a75868a5&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A435S-1WD0-00MJ-53T6-00000-00&pdcontentcomponentid=211589&pdteaserkey=sr48&pditab=allpods&ecomp=kb63k&earg=sr48&prid=901aadf5-d687-454a-aa9f-706c72290a01 [LexisNexis; Nederlandsche bank beleid; inflatie]

Beetsma, R. & Wijnbergen, S. (2005, 25 May). *Zalm heeft fout financieel beleid gevoerd*. Accessed at 13 May, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=3c9c5287-7527-491d-97dc-29ed3d58d284&pddocfullpath=%2fshared%2fdocument%2fnews%2furn%3acontentItem%3a4G7V-DH00-0150-W13M-00000-00&pdcontentcomponentid=259064&pdteaserkey=sr226&pditab=allpods&ecomp=kb63k&earg=sr226&prid=31f348a4-127d-4aa6-80fb-e77fad99c457&aci=la&cbc=0&lnsi=4639c902-ec41-46ee-82c5-8dc23386f468&rmflag=0&sit=null [LexisNexis; Nederlandsche bank beleid; inflatie]

Bekkers, A. & Vermeulen, R. (2001). *De Fed, de ware mondiale supermacht*. Accessed at 10 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=b4036bd6-15a0-4865-984a-2dadea6f39f7&pddocfullpath=%2fshared%2fdocument%2fnews%2furn%3acontentItem%3a48KK-PFP0-0150-X3JD-00000-00&pdcontentcomponentid=294298&pdteaserkey=sr21&pditab=allpods&ecomp=kb63k&earg=sr21&prid=57d991e0-6f88-4f1c-b170-650065ce0177&aci=la&cbc=0&lnsi=5293d7b3-57d8-4061-b724-9431b9da5787&rmflag=0&sit=null [NexisLexis; DNB beleid]

Bomhoff, E. (2001, 16 June). De burger als buffer. Accessed at 10 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=a6bf70df-45ac-49cc-a407-3f659786dafd&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A48KT-9K70-0150-W035-00000-00&pdcontentcomponentid=259064&pdteaserkey=sr99&pditab=allpods&ecomp=kb63k&earg=sr99&prid=ad05d065-b472-48a4-b856-9a6d10118177 [NexisLexis; DNB beleid]

Cann, G. (2001, 29 May). *CDA verwijt paars schuld van opgelopen inflatie*. Accessed at 10 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=632f5d0b-dc48-4d07-8cd5-4d18b337138b&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4350-2YX0-00MN-107W-00000-00&pdcontentcomponentid=208267&pdteaserkey=sr80&pditab=allpods&ecomp=kb63k&earg=sr80&prid=001e6fd0-f6dc-4d8b-b63b-354f461fc348 [NexisLexis; DNB beleid]

Damen-I, T. (2005, 26 May). *Verhaal goedkope gulden is juist*. Accessed at 13 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=bb537a87-fbc2-4120-a7db-3891a112786a&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4G82-JJ90-01HD-V4YP-00000-00&pdcontentcomponentid=256089&pdteaserkey=sr228&pditab=allpods&ecomp=kb63k&earg=sr228&prid=31f348a4-127d-4aa6-80fb-e77fad99c457# [LexisNexis; Nerdelandsche bank; inflatie]

Damen-II, T. (2005, 2 May). *Verzwijgen onderwaardering gulden was fout*. Accessed at 13 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=0675a941-6506-4897-a877-806f81dc3d05&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4G2Y-JGH0-01MH-P0HP-00000-00&pdcontentcomponentid=149020&pdteaserkey=sr207&pditab=allpods&ecomp=kb63k&earg=sr207&prid=220cde82-211c-4f19-a799-28b39f4fb67f [LexisNexis; Nederlandsche Bank beleid; inflatie]

De Haas, B. (2001, 25 July). *ECB legt inflatiedoel nog een keer uit*. Accessed at 10 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=3dcfe201-d80d-42fb-810d-4a08bb0ad479&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A43K4-H1J0-00MN-145H-00000-00&pdcontentcomponentid=208267&pdteaserkey=sr119&pditab=allpods&ecomp=kb63k&earg=sr119&prid=3d244d1d-fbd7-410d-a50b-060559f59316 [NexisLexis; DNB beleid]

De Haas, B. & Leering, R. (2002, 23 May). *Voor Wellink is loonmatiging onvermijdelijk*. Accessed at 12 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=7e9b2a53-0089-4871-8f79-04d43a477455&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A45WH-PG00-00MN-14XV-00000-00&pdcontentcomponentid=208267&pdteaserkey=sr100&pditab=allpods&ecomp=kb63k&earg=sr100&prid=9c1da5c0-3040-4373-a39f-ad02ca7920ca [LexisNexis; Nederlandsche Bank beleid; inflatie]

De Haas, B. (2003, 1 May). *Het moddermodel*. Accessed at 10 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=92f27951-d489-4ac0-8a33-b89a5f0a2383&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A48GN-WPC0-00MN-14JD-00000-

00&pdcontentcomponentid=208267&pdteaserkey=sr477&pditab=allpods&ecomp=kb63k&earg=sr477&prid=26b5c88c-dfad-416d-b6b2-dd2c65697998 {NexisLexis; DNB beleid]

DNB. (2001). *Jaarverslag 2001*. Accessed at 1 May, 2020, retrieved from https://www.dnb.nl/binaries/jv2001_tcm46-146949.pdf [DNB; Jaarverslagen]

DNB. (2009). Maatschappelijk verslag. Accessed at 1 May, 2020, retrieved from https://www.dnb.nl/binaries/Maatschappelijk%20verslag%202009_tcm46-233747.pdf

FD, (2001, 17 May). *Wellink: ECB faalt in uitleg van haar rentebeleid*. Accessed at 10 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=1160f3e3-c7fc-480a-917a-016c852f300a&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A432R-N4V0-00MN-14H9-00000-00&pdcontentcomponentid=208267&pdteaserkey=sr62&pditab=allpods&ecomp=kb63k&earg=sr62&prid=6660caf9-4c5b-454d-bd7e-601784a17ce4 [Nexis Lexis; DNB beleid]

Gool, M. & de Haas, B. (2002, 1 March). *Paars heeft inflatie te lang weggewuifd*. Accessed at May 10, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=7f20fb4b-77cb-4926-a1eb-3d9c103d6aeb&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A457V-37X0-00MN-11C6-00000-00&pdcontentcomponentid=208267&pdteaserkey=sr50&pditab=allpods&ecomp=kb63k&earg=sr50&prid=9e189143-84ce-4483-bfb5-69c46a2ace25 [NexisLexis; DNB beleid]

Hofland, H. (2001, 31 December). *Onze polder: slopen of renoveren*. Accessed at 12 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=a8c78650-2aa9-4688-8eff-e04ff39679f7&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A48KT-9NW0-0150-W30B-00000-00&pdcontentcomponentid=259064&pdteaserkey=sr78&pditab=allpods&ecomp=kb63k&earg=sr78&prid=71a952dc-0a49-4d42-9376-ba2268c56c7a [NexisLexis; DNB beleid]

Morris, J. & Alam, P. (2012). Value relevance and the dot-com bubble of the 1990s. *The Quarterly Review of Economics and Finance, 52*, 243-255. [Leiden UB; internet bubble – peer reviewed]

Oomkes, L. (2001, 31 May). *Kabinet veel te laks met bestrijden hoge inflatie*. Accessed at 11 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=f2ae620c-2988-4c1b-b542-6039ad4764a1&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A48KT-VD40-0150-Y2S4-00000-00&pdcontentcomponentid=259069&pdteaserkey=sr42&pditab=allpods&ecomp=kb63k&earg=sr42&prid=901aadf5-d687-454a-aa9f-706c72290a01 [LexisNexis; Nederlandsche Bank beleid; inflatie]

Osch, B. & Hoorn, F. (2002, 22 June). *De Euro-Illusie*. Accessed at 12 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=e8dcbb2f-0cf8-48c7-a090-596c069cf64b&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4PN6-VKF0-00MJ-53KB-00000-00&pdcontentcomponentid=211589&pdteaserkey=sr107&pditab=allpods&ecomp=kb63k&earg=sr107&prid=9c1da5c0-3040-4373-a39f-ad02ca7920ca [LexisNExis; Nederlandsche Bank beleid; inflatie]

Pen, J. (2001, 20 March). *Is Duisenberg postkeynesiaans?* Accessed at 13 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=3adf43a1-81dd-4495-b447-be0d1608ba79&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A48KT-YVW0-0151-01D4-00000-00&pdcontentcomponentid=259062&pdteaserkey=sr8&pditab=allpods&ecomp=kb63k&earg=sr8&prid=09271c17-d5b3-4bf1-ac16-51566f2ad973# [LexisNexis; Nederlandsche Bank beleid; inflatie]

Schinkel, M. (2001, 17 May). *2 Gulden per euro was beter geweest*. Accessed at 11 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=065d24ac-0866-497e-8748-6c8deedb7a70&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A48KT-9JW0-0150-W0TC-00000-00&pdcontentcomponentid=259064&pdteaserkey=sr27&pditab=allpods&ecomp=kb63k&earg=sr27&prid=bc4498a6-826e-4eee-95e7-24f60c5081f3 [LexisNexis; Nederlandsche bank beleid; inflatie]

Schinkel, M. (2002, 22 May). *Sleutel inflatie ligt bij lonen; President Wellink van de Nederlandsche Bank*. Accessed at 10 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=5caf2ea8-50a0-4a13-b672-1f03bc3f964a&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A48KD-6SS0-0150-W3X7-00000-00&pdcontentcomponentid=259064&pdteaserkey=sr72&pditab=allpods&ecomp=kb63k&earg=sr72&prid=64db4445-8d52-499c-8d4e-bd5abece56b8 [NexisLexis; DNB beleid]

Slagter, J.M. (2001, 2 January). *2001: 365 Dolle Dwaze Dagen*. Accessed at 11 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=8d347a47-7803-41a1-9690-72122ab2603d&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A421R-H5Y0-00MN-1264-00000-00&pdcontentcomponentid=208267&pdteaserkey=sr0&pditab=allpods&ecomp=kb63k&earg=sr0&prid=09271c17-d5b3-4bf1-ac16-51566f2ad973 [LexisNexis; Nederlandsche Bank beleid; inflatie]

Snels, B. (2003, 20 December). *Nederland blijft achter*. Accessed at 13 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=7c81c961-fec9-4f75-b430-9ac4b982b8c7&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4B90-6510-00MJ-52P8-00000-00&pdcontentcomponentid=210599&pdteaserkey=sr164&pditab=allpods&ecomp=kb63k&earg=sr164&prid=90c6cad8-6592-4d31-ab5d-9644ecb06f52 [LexisNexis; Nederlandsche Bank beleid; inflatie]

Valliere, D. & Peterson, R. (2004). Inflating the bubble: examining dot-com investor Behaviour. *Venture Capital, 6* (1), 1-22. [Leiden UB; internet bubble – peer reviewed]

Volkskrant. (2001, 6 january). *Bush en Greenspan*. Accessed at 10 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=370df041-c246-4617-9c9c-61fee9322e9b&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A48KK-SXJ0-0150-V3VW-00000-00&pdcontentcomponentid=259070&pdteaserkey=sr27&pditab=allpods&ecomp=kb63k&earg=sr27&prid=57d991e0-6f88-4f1c-b170-650065ce0177# [NexisLexis; DNB beleid]

Wilbrink, M. (2002). *Europese Centrale Bank groeit beter in haar rol.* Accessed at 10 May, 2020, retreieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=548dd5ec-3343-4301-ae8f-ff5d34fc0122&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A48KK-SK40-0151-11J1-00000-00&pdcontentcomponentid=294311&pdteaserkey=sr39&pditab=allpods&ecomp=kb63k&earg=sr39&prid=563dd1b2-2b13-477b-8d14-548d0a8e52c1# [NexisLexis; DNB beleid]

Wollerich, H. (2001, 17 May). *PvdA en VVD Eisen actie tegen explosie lonen*. Accessed at 11 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=4678ecf3-7da8-4122-895c-6c8012c5de66&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4K1G-3HX0-TX55-0284-00000-00&pdcontentcomponentid=277856&pdteaserkey=sr25&pditab=allpods&ecomp=kb63k&earg=sr25&prid=bc4498a6-826e-4eee-95e7-24f60c5081f3 [LexisNexis; Nederlandsche Bank beleid; inflatie]

Wynia, S. (2003, 1 November). *Wellinks Bekentenis*. Accessed at 10 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=eac41418-ba4a-4f58-8538-81dc799c89f4&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A49XX-T620-00MJ-554Y-00000-00&pdcontentcomponentid=211589&pdteaserkey=sr609&pditab=allpods&ecomp=kb63k&earg=sr609&prid=44e281d1-a9c8-4a04-8360-ec554bcce3c9 [NexisLexis; DNB beleid]

7.3 References chapter 4.2

Battes, P. & Clashen, A. (2008, 21 August). *De gevolgen van de kredietcrisis reiken veel verder dan die van de internetcrash*. Accessed at 15 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=3f36077d-be33-41b7-a27f-6f884be99236&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4T86-0690-TXKH-6016-00000-00&pdcontentcomponentid=208267&pdteaserkey=sr50&pditab=allpods&ecomp=kb63k&earg=sr50&prid=77da0129-3b30-472e-9493-e2c45f17c217# [LexisNexis; Nederlandsche Bank beleid; inflatie]

Broekhuizen, K. & Kalles, B. (2008, 13 August). *Tegenvallende groeicijfers extra reden voor uitstel hogere btw*. Accessed at 15 May, 2020, retrieved from. https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=f9e436bf-93e9-4204-8fc2-a090fb2485a0&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4T6G-6N60-TXKH-602W-00000-00&pdcontentcomponentid=208267&pdteaserkey=sr48&pditab=allpods&ecomp=kb63k&earg=sr48&prid=b80a6279-ebf2-4230-b47a-602d0ccf3c0c# [LexisNexis; Nederlandsche Bank beleid; inflatie]

Damen, T. (2011, 29 January). *De directeur heeft nul besef van financiële markten*. Accessed at 15 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=3252e0bf-6e4e-40a1-b724-1ebf67c1b8bb&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A522B-8831-JC8W-Y2V2-00000-00&pdcontentcomponentid=259062&pdteaserkey=sr167&pditab=allpods&ecomp=kb63k&earg=sr167&prid=1d154707-38ec-480f-9e1d-03d1da34ab14 [LexisNexis; Nederlandsche Bank beleid; inflatie]

De Hen, P. (2008, 19 July). *Help, inflatie*! Accessed at 15 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=796990f5-ffae-44ae-aaa0-e5a266b18e3d&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4T0N-Y8S0-TY22-K16B-00000-00&pdcontentcomponentid=211589&pdteaserkey=sr38&pditab=allpods&ecomp=kb63k&earg=sr38&prid=2d96c543-c17a-4219-a1a2-c40da68b60e7# [LexisNexis; Nederlandsche Bank beleid; inflatie]

De Hen, P. (2009, 16 May). *De ECB neemt voor het eerst onconventionele maatregelen, riskant*? Accessed at 15 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=6a713e10-4284-4420-bd89-251e3ec6f664&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A7VNV-WBR0-YBK0-N1SY-00000-00&pdcontentcomponentid=211589&pdteaserkey=sr109&pditab=allpods&ecomp=kb63k&earg=sr109&prid=dc18325d-4302-4db5-ad9a-dfb97b3fd256# [LexisNexis; Nederlandsche Bank beleid; inflatie]

Den Brinker, G, (2008, 4 January). *Robeco voorziet hoge inflatie*. Accessed at 15 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=d0ce9b7d-cfd4-4619-8e78-aadf528d629b&pddocfullpath=%2fshared%2fdocument%2fnews%2furn%3acontentItem%3a4RH6-TDY0-TXDS-71F3-00000-00&pdcontentcomponentid=208267&pdteaserkey=sr0&pditab=allpods&ecomp=kb63k&earg=sr0&prid=c30a94b6-d00d-4f9f-9792-e9f2602336eb&aci=la&cbc=0&lnsi=b970a884-3743-4475-ac11-299a28c92403&rmflag=0&sit=null [LexisNexis; Nederlandsche Bank beleid; inflatie]

FD. (2008, 23 September). *IMF pleit voor hervorming rentebeleid centrale bank*. Accessed at 15 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=7b2f624f-596b-45f3-bcbd-935d098311c5&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A7WP5-7H01-2R54-T13X-00000-00&pdcontentcomponentid=208267&pdteaserkey=sr122&pditab=allpods&ecomp=kb63k&earg=sr122&prid=93b4fec6-9ad4-4aec-b5fa-5d1f2b873333 [LexisNexis; Nederlandsche Bank beleid; inflatie]

Haenen, H. (2008, 29 December). *Ultieme test financieel system leert toezichthouder lessen in stabiliteit*. Accessed at 15 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=3c15aef1-bd31-483e-a568-441d41cee424&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4V80-C5K0-TX38-70YW-00000-00&pdcontentcomponentid=208267&pdteaserkey=sr91&pditab=allpods&ecomp=kb63k&earg=sr91&prid=c2671315-5720-49d6-9694-d550a42b7988 [LexisNexis; Nederlandsche Bank beleid; inflatie]

Hinrichs, J. (2009, 15 May). *Openlijke onenigheid in ECB over verdere monetaire verruiming*. Accessed at 15 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=5f188f40-0c72-4683-8389-e6321889999f&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A7VP7-28M0-Y9M6-H3RS-00000-00&pdcontentcomponentid=208267&pdteaserkey=sr108&pditab=allpods&ecomp=kb63k&earg=sr108&prid=dc18325d-4302-4db5-ad9a-dfb97b3fd256 [LexisNexis; Nederlandsche Bank beleid; inflatie]

Joosten, C. (2011, 10 September). *Verziekt door de politiek*. Accessed at 15 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=4f0e20f6-f5e6-4e72-83fb-1c20786f4b11&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A53RM-KF31-DXG5-Y1HC-00000-00&pdcontentcomponentid=211589&pdteaserkey=sr207&pditab=allpods&ecomp=kb63k&earg=sr207&prid=0739d4d8-1d1d-441a-a3a6-c153d8199cbd [LexisNexis; Nederlandsche Bank beleid; inflatie]

Kalse, E. (2008, 2 February). *Banken moeten failliet kunnen gaan*. Accessed at 15 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=732848a7-d46f-468b-ba3b-7f563ddae908&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4RRD-H360-TXJ3-T1J4-00000-00&pdcontentcomponentid=259064&pdteaserkey=sr12&pditab=allpods&ecomp=kb63k&earg=sr12&prid=66bd16e9-7fb8-4ed9-a0c9-eaea9568386f# [LexisNexis; Nederlandsche Bank beleid; inflatie]

Kalse, E. & Schinkel, M. (2008, 3 April). *De crisis maakt het leven lastiger voor ons allemaal*. Accessed at 15 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=5beae17a-cdbd-4c65-9f15-d380654f4057&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4S6H-FYF0-TXJ3-T183-00000-00&pdcontentcomponentid=259064&pdteaserkey=sr25&pditab=allpods&ecomp=kb63k&earg=sr25&prid=72abe4bc-76ce-4ac6-8fd7-f957a8786dcd# [LexisNexis; Nederlandsche Bank beleid; inflatie]

Kools, M. (2011, 17 December). *Ik ben zowel een insider als outsider*. Accessed at 15 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=af53ea04-9f87-47af-ba0c-99ee8b944182&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A54GT-3761-F108-D00F-00000-00&pdcontentcomponentid=273960&pdteaserkey=sr257&pditab=allpods&ecomp=kb63k&earg=sr257&prid=efe59e77-b39b-4229-ba71-7d5319929e6e [LexisNexis; Nederlandsche Bank beleid; inflatie]

Lalkens, P. (2009, 14 September). *Toezichthouders moeten meer open staan voor wetenschap*. Accessed at 15 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=a4d7d999-e0f9-4040-bf5c-4c1049902d10&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A5112-3S31-DYRY-N19R-00000-00&pdcontentcomponentid=208267&pdteaserkey=sr150&pditab=allpods&ecomp=kb63k&earg=sr150&prid=9c66c784-d2c3-43c2-97eb-98eee3c74d7e# [LexisNexis; Nederlandsche Bank beleid; inflatie]

Nods, R. (2012, 28 April). *Geen blad voor de mond*. Accessed at 15 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=c066c1a8-19de-42b9-89c5-86db663464b2&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A55GW-VWR1-JB14-74DF-00000-

00&pdcontentcomponentid=211589&pdteaserkey=sr280&pditab=allpods&ecomp=kb63k&earg=sr280&prid=cb28f8da-7547-4898-952e-ae727676387a [LexisNexis; Nederlandsche Bank beleid; inflatie]

Oomkes, L. (2008, 24 January). *VVD-leider wil af van Zalmnorm*. Accessed at 15 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=afb24e49-1032-4913-88d2-c39d42481d16&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4RNG-HKW0-TXJ3-T0YG-00000-00&pdcontentcomponentid=259069&pdteaserkey=sr3&pditab=allpods&ecomp=kb63k&earg=sr3&prid=c30a94b6-d00d-4f9f-9792-e9f2602336eb# [LexisNexis; Nederlandsche Bank beleid; inflatie]

Schinkel, M. (2008, 21 January). *Een koude douche voor de economie*. Accessed at 15 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=95715e1c-582e-485b-a29b-d9d5ef35e346&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4RMX-G110-TXJ3-T0NS-00000-00&pdcontentcomponentid=259064&pdteaserkey=sr1&pditab=allpods&ecomp=kb63k&earg=sr1&prid=c30a94b6-d00d-4f9f-9792-e9f2602336eb# [LexisNexis; Nederlandsche Bank beleid; inflatie]

Schinkel, M. (2011, 31 May). *Is onze centrale bank nog onafhankelijk?* Accessed at 15 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=f66ba931-ed40-4727-a1fe-2539e4a43795&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A530B-P411-JC8W-Y04B-00000-00&pdcontentcomponentid=259064&pdteaserkey=sr196&pditab=allpods&ecomp=kb63k&earg=sr196&prid=76ffb5f3-fbfb-4f93-aa81-ca1fdb687a63 [LexisNexis; Nederlandsche Bank beleid; inflatie]

Schinkel-I, M. (2011, 4 November). *Klaas Knot zei het H-woord*. Accessed at 15 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=2e349ea7-1dfe-4f06-aa48-0dd8ee9033ff&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A545V-8FC1-JC8W-Y1BD-00000-00&pdcontentcomponentid=259064&pdteaserkey=sr251&pditab=allpods&ecomp=kb63k&earg=sr251&prid=efe59e77-b39b-4229-ba71-7d5319929e6e [LexisNexis; Nederlandsche Bank beleid; inflatie]

Telegraaf. (2008, 3 Augustus). *Taak Nederlandsche Bank verzwaard*. Accessed at 15 May, 2020, retrieved from https://advance-lexis-com.ezproxy.leidenuniv.nl:2443/document/?pdmfid=1516831&crid=6c3ea945-9f0b-4536-b0f3-e6be2d9fd71d&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4T4F-33R0-TXKH-60WH-00000-00&pdcontentcomponentid=168873&pdteaserkey=sr44&pditab=allpods&ecomp=kb63k&earg=sr44&prid=b80a6279-ebf2-4230-b47a-602d0ccf3c0c# [LexisNexis; Nederlandsche Bank beleid; inflatie]