Chapter 5
Monetary Policy Communication at the National Bank of Rwanda

5.1 Introduction

Central banks’ communication journey has evolved from an era of mystery to an era of transparency, openness, and accountability, leading monetary policy communication to become a distinct tool for monetary policy implementation. Prior to the 1990s, central banks were hesitant or shared little about their policies, living actions speaking for themselves. At the time, central bankers guarded this mystery as essential to their success (Woodford 2005), with the conviction that monetary policy was effective by surprising and not informing the market. This was explained by different factors including the absence of clear monetary policy frameworks; the desire for central banks to maximize power and prestige and avoid accountability (Mishkin 2004); the desire to ensure maximum policy discretion by trying to be free of constraint, including constraints that might arise from prior statements by central banks (Cecchetti 1999; Cecchetti and Schoenholtz 2019); and a way of limiting pressure for excessively accommodative monetary by politicians leading to time inconstancy problem (Kydland and Prescott 1977; Calvo 1978). Time horizons for politicians are shorter due to their objectives of implementing short-term popular policies than the optimum time horizon needed for monetary policy focusing on achieving long-term stability.

Different factors have contributed to the push for more transparency and accountability for central banks, including the role of expectations in economic behaviour that gained widespread attention in the thinking of economists since 1970s and the development of more democratic systems pushing different institutions to be more open and transparent. As pointed out, expectations played an important role in the behaviour of economic agents, by taking into account all possible unknown future economic events while making their decisions (Kryvtsov and Petersen 2013). For example, expectations about future income, interest rate, and inflation rate influence the households’ decisions about consumption and saving and firms’ decision about making investment and production.
The important role of expectations in monetary policy transmission mechanism emerged over time and according to Blinder (1998), performance of monetary policy results from effective management of expectations rather than influencing overnight interest rates. Indeed, changes in central bank rate affect only the short-term liquidity that commercial banks obtain from the central bank. The objective of central banks was to have those changes in central bank rate transmitted to other interest rates that affect the economy as a whole. This generally occurs through market expectations about future monetary policy and crucially depends on the extent to which public understands current policies and future ones. This explains why monetary policy becomes gradually the art of managing expectations through communication (Haan et al. 2004). A good illustration is the role played by central banks’ communication in advanced countries, during the global financial crisis where the effects of unconventional monetary policy were transmitted mostly through expectation channel.

In exceptional circumstances such as global financial crisis and Covid-19, central banks act in order to eliminate panic from the financial markets and sectors by providing liquidity to ensure functionality of the credit markets and prevent the collapse of systemic financial institutions. This is generally achieved by reducing central bank rates. However, when interest rates hit their zero lower band, communication becomes a policy tool used by central banks to manage public expectations by maintaining confidence of the financial markets participants and central banks’ credibility, and thus contributing to stimulate the economy (Tsuiji 2016; Nier 2009). Central bank communication is defined as the provision of information that the central banks make available to the general public on the objectives of monetary policy, the monetary policy strategy, the economic outlook, and the future policy decisions (De Haan and Jansen 2007; Blinder 2008). However, due to the interest for central banks to work with, rather than against markets, central bank communication becomes progressively a two-way process, involving genuine listening and engagement with different audiences, rather than simply one-way broadcasting of central bank announcements (Haldane and McMahon 2018; Powell 2019).

The increasing need for more transparency and accountability pushed central banks to seek clearer policy frameworks and led to the development of new monetary policy strategy in many countries, focusing on single goal of controlling inflation using a single instrument, either the quantity of central bank money such as base money, for countries with less developed financial market or the value of central bank money (policy rate). In many advanced economies, inflation targeting (IT) with floating exchange rates emerged as the new monetary policy framework of choice with the Reserve Bank of New Zealand (RBNZ) becoming the first central bank to adopt IT in 1990 and this move marked the start of a more open central banks.

Key characteristics of IT framework are the public announcement by central banks of medium-term numerical targets for inflation; firm commitment to price stability as the primary, long-run goal of monetary policy and to achieve the inflation goal; the existence of an information inclusive strategy in which many variables and not just monetary aggregates are used in making decisions about monetary policy; transparency of the monetary policy strategy through communication with the public and
the markets about the plans and objectives of monetary policymakers; and increased accountability of the central bank for attaining its inflation objectives (Mishkin 2000). As it can be understood, under IT framework, communication becomes crucial in bringing the expectations of economic actors closer to goals announced by central banks by helping the public understanding of central banks’ reaction function.

For central bank, anchoring public expectations around the objective of monetary policy is crucial to ensure that reactions of economic agents to the macroeconomic shocks remain in line with the path of adjustment that the central bank wants the economy to follow. Indeed, by determining the long-term interest rates, expectations of inflation and of the future path of short-term (real) interest rates influence investment and consumption decisions and, ultimately, medium and long-term price developments. Thus, the understanding of expectations about future central banks behaviour by the public provides the essential link between short-term rates and long-term rates, which is key for central banks to influence the aggregate demand in the immediate future, given the forward-looking nature of economic agents (Blinder 1998). Communication plays an important role to help the public understand that central banks’ policy actions are not a response to current conditions rather to medium-term trends of objective, because the impacts of monetary policy on the economy and on inflation occur with a lag. In other words, the decision today by central bank about its monetary policy stance is not to deal with current inflationary pressures rather to keep the inflation rate closer to its target after a certain period.

To help the public to anticipate the direction of monetary policy, central banks communicate not only its policy stance but also its assessment of the current economic condition as well as its most likely evolution in the future using its assessment of future economic trends and how monetary policy relates to these trends. Thus, the more the central banks use effective communication to provide a useful and clear path of the future trajectory of interest rates to market participants, the more would be the impact on long-term interest rates (Issing 2005).

The existing literature on monetary policy communication focuses mainly on advanced and emerging countries with more developed financial markets. However, there is increasing interest in improving communication strategies in developing countries’ central banks with the aim to improve monetary transmission channels by trying to anchor public expectations around monetary policy objectives. This is due to different factors including the development in financial systems and their link with the real economy, the breakdown of the links between monetary aggregates and prices leading to the adoption of more market-based monetary policy instruments and the increasing pressures on central banks to be transparent in their operations and be accountable to the public and governments. Due to the expected impact of central bank policy actions on the economy through its influence on aggregate demand, the need for central banks to provide an explanation on their decisions and the rationale underlying these decisions contributed to the increased importance of communicating with different economic agents such as financial sector players, other economic policymakers, the business community, households, researchers, and journalists.
A good example is the case of the East African Community (EAC). The harmonization and strengthening of monetary policy communication across partner states’ central banks is one of the priorities in enhancing monetary policy transmission mechanism as they transit to a price-based monetary policy framework. EAC central banks adopted a harmonized monetary policy communication framework in 2010 and the respective central banks’ governors recommended that partner states’ central banks develop harmonized tools for assessing the effectiveness of monetary policy in November 2014.

There is great commonality on how monetary policy decisions are taken and communicated in Rwanda, Kenya, Uganda, and Tanzania. In the four countries, the monetary policy making organ is the monetary policy committee (MPC) whose mandates are clearly articulated in the bank act of those countries. Governors chair monetary policy committees in the four countries while the composition of MPC varies, with the National Bank of Rwanda, Bank of Tanzania, and Central Bank of Kenya having both internal and external members in their committees but the Bank of Uganda having only internal members. Press conferences are the primary mode of communicating MPC decisions. Other channels are also used including bi-annual monetary policy statements in all EAC central banks, except the Bank of the Republic of Burundi, and meetings with different economic actors as well as different publications by central banks on their website.

The 20th ordinary monetary affairs committee meeting of Governors in July 2016 decided that partner states’ central banks should expedite the assessment of the effectiveness of monetary policy communication in their countries and in 2018, it was decided to: (i) convene a communication symposium to exchange ideas on how to develop a regional communication policy framework by bringing together different teams from central banks and expertise from other central banks and institutions, and (ii) to continue sharing experiences on the status of implementation of their policy communication frameworks. The Central Bank of Kenya hosted a symposium in March 2019 to exchange ideas on how to develop policy communication frameworks and hence, a policy communication framework for the region is under development. Different tools are used by EAC central banks to assess the impact of their communications on their main target groups including market intelligence (e.g. informal discussions with market participants); formal surveys of market participants; and empirical studies in some banks that try to quantify the impact of various monetary policy communication efforts on managing expectations.

The adoption by central banks of more clear monetary policy strategies brought two additional important dimensions to the monetary policy communication. Not only central banks announce and explain their monetary policy decisions when they are taken but also they communicate about their assessment of the current economic situation and its most likely evolution in the future. This is because good financial decisions of households and firms which are key for the efficiency of monetary policy highly depend on information about the central bank’s assessment of the economy. Furthermore, the importance of working with the markets was progressively recognized as crucial in ensuring the effectiveness of monetary policy. To have the monetary transmission mechanism working smoothly, the public (households, businesses
5.1 Introduction

and financial market participants) has to better understand the objective pursued by central bank in conducting monetary policy; the tools that are used to achieve that objective, and the central bank’s view of the economy that support its actions.

One of the current debated issues about how to help the public understand the future behaviour of central banks is whether to what extent and how the central bank should signal its future policy intentions. Academics have emphasized that it may be important for central bank to provide market participants with precise quantitative indications about the likely future path of policy interest rates and to help align market expectations more closely with those of the central bank. However, the feasibility and desirability of announcing a specific likely future path of policy rates poses serious concerns for central banks. In a world of uncertainty surrounding the future evolution of a large number of exogenous variables that may affect the economic outlook and the risks to the attainment of the policy objectives, it is difficult to support the idea of providing markets with a likely future path of policy rates, particularly beyond the short-term horizon. Doing so may undermine the initial intention to support the public in making informed economic decisions by reducing the uncertainty about the future course of economic activities and inflation.

In a particular case of monetary policy, this type of uncertainty increases with the length of the forecast horizon, making it difficult to determine the explicit path of interest rates in a reliable manner. Finally, because there is high probability of future policy rates often deviating from the subsequent actual path of interest rates, this may undermine the central bank’s credibility. This explains why many central banks around the world have refined the way they communicate decisions related to the stance of monetary policy as well as their assessment of economic conditions supporting those decisions.

In general, central banks communicate about at least four different aspects of monetary policy: their overall objectives and strategy, the motives behind a particular policy decision, the economic outlook, and future monetary policy decisions (Blinder 2008). Because the laws establishing central banks clearly indicate their objectives and mandates, the most important communication of central banks with the public is about their monetary policy decisions.

The channel through which central banks communication is passed on through the public is either via qualitative communication instruments (e.g. press releases, public speeches, publications, statements and minutes), or quantitative communication instruments, such forecast on inflation and other macro variables. For central banks mainly those implementing price-based monetary policy or those called inflation targeters press releases to announce the policy rate decision, and a monetary policy report or an inflation report are currently considered as standard communication vehicles. In addition, most of those central banks hold press conferences to explain their policy decision.

In addition, in an effort to promote transparency in some countries, parliamentary hearings, and an open letter in the event that inflation misses the target by a prespecified amount, serve as accountability mechanisms to ensure that central banks are holding their missions. Furthermore, central banks organize other communication events with the public, via speeches, interviews, and meetings with the private sector.
businesses, as well as outreach programmes with colleges and universities, community groups, local associations, and so on to further explain their decision and what it was based on.

Central banks’ websites have also become a major communication vehicle, where big amounts of information for general and specialized audiences are posted such as research-based publications, press releases, speeches related to monetary policy, as well as statistical information. In some advanced central banks, short, direct背景，and animated and interactive presentations are also available explaining various aspects of monetary policy and other central bank functions. Central banks with currency museums have also developed materials and products for students of different ages. With these communication efforts, more emphasis has also been placed on straight talk and plain language to facilitate access to monetary policy messages to a broad public audience as possible.

About the assessment of the impact of communication, studies in developed countries show that communication by central banks has contributed to reduce volatility of financial markets by increasing transparency and reducing uncertainty (Knutter et al. 2011). Different studies on the impact of central bank communication tools on financial markets and asset prices show that the most effective in terms of influencing markets are the statements and press conferences that follow rate decisions. The two tools contribute to form expectations for market players for the course of short- and long-term interest rates, increase predictability particularly at times of uncertainty, and have a general positive impact on asset prices. The record of votes is third, followed by the meeting minutes, the tapes, press conferences, and research papers (Knutter et al. 2011; Born et al. 2013).

5.2 Monetary Communication in National Bank of Rwanda

NBR communication journey started in 2005 when the Governor presented the first monetary policy and financial stability statement to the public. The next step was the improvement of the way monetary policy decisions are taken, moving progressively from the Governor as single decision maker to the establishment of the Monetary Policy Committee (MPC) in 2008 composed of more members in addition to the Governor. Changes in NBR’s decision-making process and improvement in communication were in line with the effort of the bank to increase its transparency, credibility, and accountability, as well as making the monetary policy more predictable. The predictability of monetary policy is the ability of financial markets and the general public to correctly anticipate the next monetary policy decision of a central bank and predict the broader future course of monetary policy. Thus, more focus has been to increase the transparency about how monetary policy decisions are taken, implemented, and communicated, particularly after the adoption of a price-based monetary policy since January 2019, from the use of a monetary targeting framework that was exercised since 1997.
The improvement in NBR institutional framework reinforcing its independence and related accountability has contributed to this change. For instance, in article 4 of the Law no. 48/2017 of 23 September 2017 governing the National Bank of Rwanda that provides special legal status to NBR, it is stated that the bank has legal personality as well as administrative and financial autonomy. It is clearly indicated that NBR is not subject to any directive from any person or institution in the exercising of its powers or in performance of its mission. It is important to note that this independence brought an obligation for the NBR to be more accountable to ensure that delegated responsibilities by the government to the bank are properly executed. It is in the same vain that the article 68 of the law governing the National Bank of Rwanda states that within four months after the closing of each financial year, the governor submits to the President of the Republic and to the Parliament, both chambers, the NBR’s annual activity report.

To improve the monetary transmission mechanism, NBR has also invested more effort in engaging a wider audience, to improve its understanding about monetary policy tools used to manage the liquidity in the banking sector, the bank actions, as well as its assessment of the economy that support those actions. In the bank’s communication strategy, NBR has to take into consideration that the public it targets is composed of groups with different levels of education and knowledge about the use of financial systems, contrary to advanced countries where big percentage of people work with banks and financial markets.

Based on FINSCOP (2020) survey, 93% representing about 7 million adults in Rwanda are financially included, using both formal and informal financial products and services. Banked population growth has increased by 1.1 million since 2016 and the bank uptake and usage are driven by transactional products, as more people are receiving their income through banking accounts. For example, about only 25% of banked adults use digital payments; this is up from 6% in 2016. The survey indicates that key barriers to the uptake of mobile money relate to lack of product knowledge and lack of interest in the product. The same survey reveals that only 9% of adult population in Rwanda have knowledge about credit reference bureau, 4% about bank cards, 12% about deposit guarantee funds, and 32% about agriculture insurance. As financial products and services are always in constant evolution, it is imperative to offer financial education among adults because the knowledge level of adults regarding financial products significantly influences their decisions.

Therefore, financial education is an important part of NBR communication strategy aiming at accelerating financial inclusion which is the access and usage of financial products by all population. In addition, the information to be communicated to the public in an effort to increase the proportion of the Rwandan population that follows the NBR’s communique has to be clear, simplified, and adapted to the audience. Thus, the identification of target groups is crucial to help NBR designing channels and tools of communication depending on what is being communicated and the targeted audience. Currently NBR targets the following groups when communicating with the public: the financial system, business community, households, think tanks, media, youths, academia, NBR staff, parliament, and other stakeholders including public authorities and international organizations.
Table 5.1 Key NBR communication documents and frequency of release

| Key communication documents                                      | Frequency     |
|-------------------------------------------------------------------|---------------|
| MPC press release                                                 | Quarterly     |
| Financial stability committee press release                       | Bi-annual     |
| MPC working document                                              | Quarterly     |
| Financial stability report                                        | Bi-annual     |
| Monetary policy and financial stability statement                  | Bi-annual     |
| Quarterly inflation report                                        | Quarterly     |
| Daily economic update                                             | Daily         |
| NBR annual report                                                 | Annual        |
| NBR economic review                                               | Bi-annual     |
| News and data on NBR website                                      | Regular       |
| The banker                                                        | Bi-annual     |

Source: NBR, communication division

5.2.1 NBR Communication Strategy

After the adoption of the price-based monetary policy framework, the NBR board of directors adopted the bank’s communication strategy in September 2020 aiming at creating awareness about the bank’s policies and how they relate to the public; enhancing the bank’s engagement with policymakers, sector players, and the general public; protecting the bank’s image and institutional reputation; and ensuring the availability of a broad range of financial education initiatives that promote financial literacy, financial inclusion, and consumer protection.

As mentioned before, in developing countries like Rwanda a big part of the population does not work with the formal financial system and does not have information about the importance and the ways of accessing formal financial products. This therefore emphasizes why communication at NBR shall not just be a matter of openness and transparency, but also of education, guidance, dialogue, listening, and learning. While communication to target groups will be regular and consistent through the identified communication channels, a clear agenda of major policy decisions and communication is as presented in Table 5.1.

5.2.2 Monetary Communication Tools

A variety of tools used by NBR to communicate its monetary policy were adopted progressively as a response to the need of improving the communication with the public, which has been further enabled by technology advancement and penetration in Rwanda. These tools include MPC press releases; press conferences by the Governor; central bank publications; the use of social media such as, Twitter, YouTube, Instagram, Facebook, Email, WhatsApp Group with Journalists and Slido App; and a
semi-annual Monetary Policy and Financial Stability Statement held every February and August.

In addition, NBR also organizes regular meetings with stakeholders in the financial sector to discuss key issues relevant to the central bank missions of achieving price stability, sustaining the financial sector stability, and supporting government development programmes. NBR also uses its website to publish plenty of information accessible by many stakeholders and users, and also use it as a platform to ensure the bank’s transparency by familiarizing the public with the work of NBR. The information published on the website includes NBR’s economic reviews, the Rwandan banker, Governor’s monetary policy and financial stability statements, NBR’s annual reports, press releases, and different statistics.

NBR relies heavily on the media to get their key messages out to the public, be it through newspapers or magazines, television and radio, or the wire services. The media acts as a filter, deciding which central bank statements they will feature. It also interprets the banks’ policy decisions, comments on how they see the central bank fulfilling its mandate. Therefore, the way the media interprets the bank’s information is key to avoid misunderstanding of the central bank’s communication. Hence, the need for the media to be well informed about monetary policy and its complexities and conditional nature. For this reason, NBR devotes considerable resources to media relations including training journalists.

**Communicating MPC Decision on Monetary Policy Stance**

MPC meets on a quarterly basis: February, May, August, and November. A day after the MPC, a press conference is organized to allow the media an opportunity to ask questions during the press conference. During the press conference, a press release is shared to journalists and posted on NBR’s website for the public. In the press release, the NBR indicates the decision by MPC on monetary policy stance as well as economic development and forecasts supporting the MPC decisions. Figure 5.1 illustrates the National Bank of Rwanda (NBR) communication model, which is derived

![Fig. 5.1](image.png) **Fig. 5.1** NBR communication model. *Source* NBR communication division
from the original simple Shannon’s 1948 telecommunication model. In telecommunication, transmission is easier since it is mostly a telephone call from one party to another, therefore there is no much room for anything to be lost in transmission.

However, for central banks, considerable resources are devoted to sending the right signals in a timely manner and to various constituencies, such as other policymakers, government officials, financial markets, and the general public (Filardo 2008). With the development of new technologies allowing for new ways of interaction, a deep understanding of the entire communication process from central bank at the sending end, the intermediation, and interpretation of messages sent by the central banks via markets, media, analysts, politicians, to the perception thereof by the recipients become crucial for policy decisions.

While admittedly simple and pedagogical, the Shannon model sheds light on various aspects of the communication channel of monetary policy. In a nutshell, the central bank starts by taking stock of information about monetary policy that it wants to share with the public (left-hand side of Fig. 5.1, point A). This includes information about the policy framework, the decision-making process, the policy decision, assessments of the economy, future predictions, and so on (Filardo 2008).

In line with NBR’s policy decision-making, at point A, NBR’s team from the Monetary Policy and Research Directorate (MPRD) conducts preliminary analyses to support MPC decision-making process. These analyses include current economic trends and projections and their implications on the domestic economy as a whole and on inflation in particular. The economic analysis covers development in global economy as well as in domestic economy (real sector, external sector, and monetary sector).

Given the enormous and the intensity of the information at point A, NBR carefully chooses its communication strategy at point B. Following the technical meetings, the monetary policy committee chaired by the Governor is held to decide on monetary policy stance reflected in the review of the central bank rate. After the decision on the central bank rate, several steps are taken to inform the public about the monetary policy stance. Following the MPC decision, the main channel used at NBR is a press conference, not only to provide detailed information on monetary policy stance but also offer the media an opportunity to ask different questions in a direct and open manner. Questions by different media generally in line with information provided in the press release, or related to other domestic and international economic issues, are directed to the governor but can be answered by any other MPC member (Fig. 5.2).

Following the press conference, a press statement is released to the public. In drafting the press release, NBR communication team makes sure it is brief, clear, and the information is communicated in layman language. Point C emphasizes on the possibility that no matter how carefully a central bank has crafted its message with respect to content, timing, and modalities, there is the potential for miscommunication. It can arise from a number of causes, including, misstatements, bad timing, and miscalibration of messages to different audiences (Filardo 2008).

The bottom line is that there are limits to transparency from a practical perspective, hence leading to a serious muddling of the signals from the central bank. Finally, misinterpretation of the signals by the intended recipients (points D&E) is always
possible, especially when different groups of recipients are seeking different types of information. Moreover, differences in their abilities to absorb and interpret information and different levels of interest in the details of the conduct of monetary policy reduce the effectiveness of a one-size-fits-all communication strategy. Furthermore, the recipients of the messages are not all passive consumers and transmitters of information; some, such as the press, may have their own agenda when passing on the information to various audiences.

The current intense activity to communicate monetary policy stance by NBR is a reflection of the increasing demand for an open and frank exchange of views between the bank and representatives of the media on one side but also NBR’s effort to make the public understanding its actions. During the press conference that is held in English, NBR governor makes a summary of key decision in Kinyarwanda, the national language spoken by all Rwandans. Communicating in Kinyarwanda overcomes potential cultural, linguistic, or other national barriers of communication experienced in countries with various languages and bringing NBR policy closer to the people.

In addition to the press conference with journalists, a meeting is organized between the Governor and other senior staff of NBR with managing directors of commercial banks and non-banks financial institutions in the evening of that day to discuss the monetary policy stance along with the bank economic analysis and forecasting. On the second day after MPC meeting, the chief economist and other staff from monetary policy and research directorate meet all NBR staff to share MPC decisions. Different
social media are also used to communicate MPC decision during the press conference. They include twitter; YouTube; Instagram; Facebook; email; and WhatsApp Group with journalists (Fig. 5.3).

The press release shared with media and published on NBR website serves local and regional media to publish their own news, comments with views of different analysts, or institutions on the MPC decision or related economic analysis and forecasting. From August 2019 MPC meeting to February 2020 MPC meeting, we recorded 413 engagements using all media channels talking about MPC decisions and other related bank activities. In addition, 12 media houses reported about the bank’s work 314 times, including MPC and Financial Stability Committee (FSC) decisions, cashless campaign and other bank’ activities, and 17 interviews were conducted by Governor or in same occasions by Deputy Governor or senior staff with different media houses on MPC decisions and other NBR activities. Details on media coverage of bank activities are presented in Appendix 5.1. The monetary policy report which provides national economic status, global economic developments, the bank’s projections, and the major risks that could affect the inflation outlook is published on NBR website, one week after the MPC meeting.

**Monetary Policy and Financial Stability Statement (MPFSS)**

The first NBR Governor’s Monetary Policy and Financial Stability Statement was done in March 2005 in Kigali to a big audience composed of cabinet members, representative of business community, chief executive officers of financial institutions, representatives of international institutions in Rwanda, academicians, and NBR staff. To reach more people, the statement is extended to other provinces and universities out of Kigali since 2010. For a given year, MPFSS made in February gives the policy orientation of the year after reviewing the achievements and challenges of the previous one, while the second made in August is a mid-term review of the performance over the first half of the year and sets out the perspectives for the remaining period of the year. Fifteen years after, tremendous improvement has been realized in terms of organization, number of participants and institutions represented, and the
The statement is published as booklet, distributed to all participants, and posted on NBR website. As shown in this paragraph, information shared during the MPFSS is key for different policymakers in the country and international partners in their decision-making process. To allow for a big participation to MPFSS, including people in the region and other countries who not only can follow the presentation and discussion by participants in the meeting room but can also send questions to panellists (Governor, Deputy Governor, Chief economist and Executive Director of financial stability directorate), different channels have been used. Those channels include YouTube, Twitter, and Facebook and slido application. As shown in the table in Appendix 5.1, from August 2019 MPFSS to February 2020 MPFSS, 226 viewers were recorded using YouTube; 1875 engagements via twitter; 259 people followed the Governor’s presentation on Facebook; and 207 joined the conversion, including asking questions using slido application, which was introduced in February 2020; 44 questions were asked and 129 liked using the app. During the MPSS, two other important publications of the bank are distributed to the participants: NBR economic review and the Rwandan banker (Fig. 5.4).

**Periodic Economic Reports**

As for many central banks, the most important reporting vehicles in NBR include regular central bank publications on the bank website. They include monetary policy report which is published one week after each monetary policy committee meeting and contains detailed economic analysis that underlies the MPC’s decisions and
presents the Bank’s assessment of the prospects for inflation over the monetary horizon period. As previously indicated NBR economic review is published twice a year on the bank website and contains research papers published by NBR staff and covering different topics in applied economics.

Those researches provide key input in NBR decision-making process, not only in the area of monetary policy but also in other domains linked to the mandates of NBR such as financial stability, financial sector development, payment system, and financial inclusion. The bi-annual publication also avail information on various topics to the public, including academicians and research community. The Rwandan Banker Magazine is a bi-annual magazine published by NBR as one of the tools to communicate to the public. This publication aims to bring into context what NBR Staff do on a daily basis, in a bid to raise awareness about the work of the bank and ensure the public understands what the bank does.

**Engagement with Stakeholders**

The NBR also conducts outreach programmes dubbed NBR Engage to provide different platforms for the bank to engage with the public on issues related to the economy, in an effort to create a better understanding of what the bank does. Financial literacy occupies a centre stage in the quest to achieve an overall strategy of financial inclusion, which has a strong bearing on financial stability, economic growth, and development. For this to happen, it is essential for the public to understand and develop the ability to evaluate financial products and services and also transact in the financial markets.

It was noted that individuals are increasingly faced with a number of financial decisions as a result of changes in the market and economy which requires sound knowledge and efficient use of financial services. The public needs to know about fees, charges/commissions, interest rates, regulations, payment services, and other contractual terms associated with financial transactions to enable them make right decisions. The number of policies, regulatory arrangements, institutional provisions, channels, and delivery methodologies/technology have been on the increase. Services such as remittances, mobile payments, pension and insurance, savings, and credits are gaining increasing diversity and complexity and this requires consumers to be appropriately informed about their rights to take adequate advantage of the opportunities that they offer.

The NBR communication team in collaboration with other departments of the bank has put in place different initiatives targeting different stakeholders ranging from students in secondary schools, university students, to the public. Through these initiatives, NBR staff educates the public on different economic concepts through hosting and leading the discussions with public. NBR engage programmes include: NBR economic clubs, NBR quiz challenges, NBR visit day, NBR with media, NBR in conversation, NBR debates, NBR monetary policy challenge, and NBR youth dialogue.

The economic clubs are channels through which economic and financial matters are shared with the students to help the young generation gain skills that will help them make informed financial decisions in future. In these clubs, NBR staff discusses
in details the core functions of the central bank especially on monitoring the economy, formulation and implementation of monetary policy, and ensuring a sound and inclusive financial sector. It is through the NBR economic clubs that the bank team follows up with the economic clubs and discuss the topics that are issued by the NBR and the Government in regards to the economy and financial sector at large.

The NBR also organizes a competition that brings together economic clubs from different schools. The objective of this competition is to educate secondary school students and test their knowledge on the economy in general. Prior to the competition, the NBR team coaches the students on how to take part in the competition and facilitate them with different reading materials in preparation for the competition. There is a specific programme for university students called monetary policy challenge. Universities participating in the challenge are given the chance to step into the shoes of the Monetary Policy Committee, analyse economic data and make a recommendation on what the central bank rate should be. Furthermore, there is a platform for the youth generation to have discussions with NBR management, including Governor and Deputy Governor on different economic and financial topics (Fig. 5.5).

In addition, the NBR has a visit day which is an open day for the public to visit NBR premises and interact with the staff of the bank. Different groups of people are received during the bank visit day. On this day, the public gets a chance to interact with the bank staff on main concerns related to core missions of the bank and have presentations on the bank’s common roles; for instance, monetary policy, regulatory roles, financial markets operations, payment systems, currency and so on. Furthermore, every year, NBR organizes a four-day training for journalists, communication staff, marketing, and public relations staff from different financial institutions and stakeholders. The main objective of the training is to provide skills

Fig. 5.5 BNR Quiz challenge to secondary school students. Source NBR, communication division
that will assist in improving their professionalism while reporting on economic and financial matters. NBR also has a session called NBR in conversation, where the bank staff meet with the public to give clarity to what might be a burning issue regarding new developments within the economy.

### 5.3 Monitoring the Impact of Monetary Policy Communication

The international experience shows that central banks have not only developed their strategies to communicate with markets but they have also invested in receiving feedback from the industry, economic sectors, the market and the public about the impact of monetary policy communication. Feedback from the market contributes to improving internal deliberations about monetary policy and promoting the formulation of more effective policies. The assessment of the impact of central banks’ communication is mainly achieved using surveys and econometric modelling. However, with the development of technology, text mining, web scraping, and machine learning techniques are used in some banks with adequate skills.

NBR uses informal discussions with market participants (market intelligence) and formal surveys to assess the impact of its communication on their main target groups. NBR staff have also conducted few empirical studies that try to quantify the impact of various monetary policy communication efforts on managing expectations. The financial market operation committee (FMOC) which meets every working day collects information through bilateral phone calls with treasurers of commercial banks. These discussions with external contacts provide additional insights beyond analysis of data alone. They help to ensure that the NBR’s policy decisions are made and implemented with a detailed understanding of the financial market context in which the bank operates. The market intelligence not only contributes to feeding into internal analysis on policy relevant issues, decision-making, policy implementation, and communication, it also collects feedbacks from treasurers about how they view NBR’s interventions on the money market.

Regarding formal surveys, their purpose is to capture market views on the work done by NBR. The main survey conducted by NBR as a tool of assessing the impact of its communication is the survey done during the MPFSS. All participants respond to a questionnaire (see Appendix 5.2) distributed in the meeting room and results from the survey are discussed in an internal meeting. The results from this survey have contributed a lot to improving the quality of the MPFSS. Findings from the surveys covering 11 MPFSSs show that on average 90.2% of participants were satisfied with the time allocated for the governor’s presentation, 90.6% of participants were very satisfied (excellent and very good raking) with the content of MPFSS (Fig. 5.6).

In the questionnaire used to assess the views of participants in MPFSS, two important questions are asked to assess the extent to which policymakers use the MPFSS in their decision-making process. The findings of the survey show that on average,
80.1% of participants confirm that they use MPFSS as key source of information in their regular works and 90.9% of participants on average are satisfied with the content provided as pointed out (Fig. 5.7).

As indicated, communication is a key instrument in ensuring monetary policies are contributing to anchoring expectations around the policy objective. While NBR is not committed to a single inflation target, it has clearly considered and communicated for the last 10 years that its medium inflation benchmark is 5%. NBR also communicated to the public its strategy to maintain price stability and the way the bank monetary policy responds to shocks, aiming at keeping inflation around the benchmark. The results from the survey showed that on average, 96.8% of participants in 11 MPFSSs are satisfied by the way NBR has been achieving its objective of price stability (Fig. 5.8).
In an effort to gauge if the journalists that attend the MPC meeting comprehend the analysis behind the central bank decision, in March 2020, a survey regarding the central bank rate prediction by the journalists was conducted. From the survey results, 70% of the journalists had attended the monetary policy meetings for more than two times. 60% of all the journalists that attended the meeting attempted to predict what the CBR would be prior to the meeting. From the journalists who attempted to predict NBR decision on CBR, 28% were right in their predication about the direction of CBR, 42% somewhat right with differences in the way journalists explain the economic development supporting their prediction, and 30% were wrong. Given that the media plays a big role in the communication of the central bank’s decision, it is therefore critical for the bank to keep investing in training of journalists in an effort to reduce miscommunication.

In addition, in an effort to assess if the public can predict the monetary policy decision, another survey was conducted in August 2020, a day prior to MPC meeting. This time around, the targeted audience was the public that follow the bank’s twitter account. Of the 130 respondents, 40% anticipated correctly the MPC decision by anticipating a reduction of CBR, 34% said the bank would maintain its rate, 11% anticipated its increase, while 15% indicated that they were not sure about what the MPC decision will be.

With the development of technology in Rwanda, we have used text mining techniques to analyse big data created from twitter about the sentiments of the public from communication following MPFSS. Sentiment analysis is the phenomenon of extracting sentiments or opinions from views expressed by users over a particular subject, area, or product online. The advancement in text mining algorithms provides for a powerful procedure to analyse the content of documents using a computer-based approach. The use of these techniques to analyse monetary policy documents is documented in recent literature (Bholat et al. 2015; Shirota et al. 2015; Bruno 2016; Kahveci and Odabas 2016; Luangaram and Wong-Wachara 2017; Park et al. 2019; Shapiro and Wilson 2019).

In this analysis, we have used data from twitter through a developed twitter application programming interface (API), about the MPFSS released in August, 2020. We have extracted 1345 tweets from the NBR tweet account but restricted to the
ones written in English only. After preprocessing and preparing the unstructured text data for further analysis, we used the emoticon dictionary, acronym dictionary, and a special lexical dictionary (SentiWordNet) to attribute the emotions and sentiments to the extracted tweets. To obtain prior polarity of word, we used the WordNet dictionary which has assigned to each word the related pleasantness score ($\epsilon \in \mathbb{R}$) between $-1$ (Negative) and 3 (Positive). Words with polarity $<0.5$ are considered as negative, those with polarity higher than 0.8 as positive, while the rest is considered as neutral.

Findings from this analysis are presented in Fig. 5.9 and show that 63.8% of NBR twitter followers expressing positive sentiment about MPFSS released in September 2020, 15.3% expressed negative sentiment, and the rest was neither positive nor negative. This is a clear indication on how the public view NBR communication following MPFSS and the findings can contribute to improve the way NBR communicates to increase the proportion of the followers with positive sentiment on the message communicated by NBR.

There are two empirical studies published in NBR economic review, which assess the impact of NBR communication on the volatility of interest rates (and/or exchange rates) using GARCH model (Karangwa et al. 2017; Nyalihama et al. 2018).

The model is specified as:

$$Y_t = \mu + \epsilon_t$$

(5.1)

where the time series $Y_t$ is the first difference of interbank rate/exchange rate and $\epsilon_t$ is the error term.

To ensure that the value of the variance $\sigma^2_t$ depends both on the past values of the shocks captured by the lagged squared residual terms ($\epsilon^2_{t-j}$), and on its own past values, the following asymmetric GARCH model (i.e. TARCH model) is used:

$$\sigma^2_t = \mu_0 + \sum_{i=1}^{p} \gamma_i \sigma^2_{t-i} + \sum_{j=1}^{p} \mu_j \epsilon^2_{t-j} + \beta_1 d_{1t} + \beta_2 d_{2t}$$

(5.2)
$d_1$ and $d_2$ are dummy variables used to capture the impact of NBR’s decisions, that is change in central bank rate and NBR’s intervention on FX market, respectively. Since the MPC meeting is done on quarterly, $d_1$ takes one during the last month of the quarter and zero elsewhere. The dummy variable $d_2$ takes one when NBR intervenes on the foreign exchange market and zero otherwise.

On the one side, results of the TGARCH model show that the dummy variable for communication about monetary policy stance is significant at 10% and the sign of its coefficient is negative, indicating that increased NBR communication of its policy stance has helped to reduce volatility in money market interest rates. On the other side, results of the EGARCH model show that the dummy variable of exchange rate is also significant at 10%, with a negative sign indicating that over the past years, the interventions of the NBR on the foreign exchange market have helped to smooth out excessive volatilities in the exchange rate and those interventions have had a significant impact in terms of stabilizing the exchange rate in Rwanda. Using the same methodology with a larger sample period that comprises the most recent data, results from the study of Nyalihama et al. (2018) are almost similar to what Karangwa et al. (2017) found. The results show that the effect of NBR’s communication on reducing interest rates volatility is relatively stronger, whereas the effect of NBR’s actions or signal on stabilizing exchange rates are somehow moderated relative to Karangwa et al. (2017) results.

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