



Report
on the implementation of the Plan of Activities of the National Bank of the
Republic of North Macedonia for 2018

February 2019

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Introduction

The Plan of Activities of the National Bank for 2018 (hereinafter: the Plan of Activities) is a detailed elaboration of the ten strategic objectives set in the Strategic Plan of the National Bank of the Republic of Macedonia for 2018-2020, SP No. 02-15/IV-1/2017 of 25 May 2017 (hereinafter: the Strategic Plan).

The Plan of Activities is implemented within one calendar year, from 1 January to 31 December.

The Plan of Activities includes activities related to the implementation of the primary objectives of the National Bank mainly related to the monetary policy, supervision, banking regulation and financial stability, financial markets, foreign reserves management, research development, issuance and management of banknotes and coins, payment systems, statistics, as well as other activities that support the primary functions of the National Bank of the Republic of North Macedonia (hereinafter: the National Bank) such as finance and accounting, information technology and corporate governance. Moreover, the Plan of Activities also includes activities aimed at harmonization of the legal, organizational and resource requirements of the National Bank in the process of accession to the European Central Bank (ECB) and the European System of Central Banks, which is consistent with the recommendations contained in the report "National Bank Needs Analysis", prepared within the project funded through the Instrument for Pre-Accession Assistance (IPA).

The Plan of Activities contains 129 program activities. Most of the program activities cover regular work processes directly related to the strategic goals and tasks of the National Bank and implemented during the year. The Plan of Activities also includes a large number of projects (51), that introduce changes in the operations such as increasing efficiency, quality, transparency and reliability, compliance with the new legal requirements, European regulations, international standards and the requirements of the International Monetary Fund (IMF). The projects during 2018 were implemented in accordance with the determined dynamics, within the planned financial and human engagement¹.

An explanation of the implementation of the planned program activities is given below.

¹ From the planned projects, 31 project has been fully implemented, the implementation of 13 projects is under way, while seven projects have been postponed for the next period (out of which, four software development projects) due to the need for implementing other more priority activities (activities related to the FSAP mission, establishing a statistical data warehouse, statistical web portal, a new system of the Customs Office for foreign trade, checking and confirming the National Bank compliance with the new mandatory controls from the Customer Security Controls Framework of SWIFT), as well as due to the conditionality of adopting regulations and of the dependence on the activities of outsourcers.

Performance of the planned program activities by strategic objective

Maintaining price stability through a stable exchange rate of the denar against the euro

The first strategic objective, maintaining price stability through a stable exchange rate of the denar against the euro, was implemented through several activities with different planned dynamics of execution by the Monetary Policy and Research Department, the Financial Market Operations Department and the Chief Economist.

Planned activities
<ul style="list-style-type: none">• Preparing macroeconomic forecasts.• Making analyses of the sustainability of public and external debt, balanced real exchange rate and monetary transmission used when making monetary policy decisions.• Conducting surveys.• Developing ad hoc analyses.• Producing regular reports.• Regular conducting of monetary operations and maintaining balance in the foreign exchange market.• Taking measures as required by the denarization strategy for the economy (project)

During the year, the activities for further improvement of the analytical infrastructure of macroeconomic forecasts continued. Thus, the National Bank set the bases of two new approaches for short-term GDP forecasting - Mixed Data Sampling Regression Model MIDAS². Also, the basic structural model for short-term inflation forecast was revised and improved, and during the year the process of improvement of the features of the MAKPAM model continued as well³. In order to expand the selection of models for forecasting, simulations and for research purposes, within the bilateral technical assistance from the central bank of the Czech Republic, in September, the National Bank worked on the initial activities for setting a dynamic stochastic general equilibrium (DSGE model) for the Macedonian economy.

After the implementation of the macroeconomic forecasts in October, the National Bank made the regular revision of the assessments of the sustainability of external debt, as well as of the sustainability of public debt, which is under way. At the same time, the indicators for the vulnerability of the Macedonian economy and for the individual countries in the region were discussed. During the year, the National Bank updated the analyses of the main indicators underlying the existing monetary strategy by reassessing the monetary transmission through the interest rate channel with newer data and assessment of the harmonization of the real effective exchange rate with its fundamentals by applying the two approaches (BEER⁴ and FEER⁵).

Due to the need for obtaining important input elements when forecasting the future macroeconomic flows, the National Bank regularly conducted the Bank Lending Survey, the Surveys on Inflation Expectations and Expectations for the Movement of the Real GDP. At the same time, for the needs of the balance of payments forecast, in April and October, the National Bank conducted surveys of the business plans of the largest exporters and importers.

Considering the changes in the environment and their effects on the economy, the National Bank worked on internal analyses and researches on several current topics. At the same time, the National Bank prepared several research papers, as well as brief macroeconomic analyses in the form of analytical appendices within the regular quarterly reports, on the following topics:

² Mixed Data Sampling Regression Model.

³ Macedonian Policy Analysis Model - MAKPAM.

⁴ Behavioural Equilibrium Exchange Rate.

⁵ Fundamental Equilibrium Exchange Rate.

- Investment and Finance, Challenges for the CESEE Region⁶,
- Alternative Beveridge curve,
- GDP data revisions,
- Changes in the structure of the industrial output,
- Calculation of core inflation using the method of reduced average,
- Sectoral decomposition of labor productivity dynamics and unit labor costs,
- The impact of the new export-oriented companies with foreign capital on the change in the structure of foreign trade.

Besides the numerous analyses, in order to perceive the latest developments in the Macedonian economy as a whole and in individual sectors of the domestic economy, as well as assess their implications on the monetary policy, the National Bank prepared its regular monthly and quarterly reports, as well as the annual report on its operations. In the context of the need for ensuring monetary policy transparency, the National Bank regularly prepared and published press releases and presentations intended for the public, which gave a detailed review of the expectations for the next period and their effects on the monetary decisions.

In terms of the operational monetary policy, the National Bank actively managed the liquidity in the banking system through the current set of monetary instruments in accordance with the movements of the liquidity potential. Based on a prepared analysis of the efficiency and market benefits of the application of the monetary framework since 2012, in the second half of the year, remuneration for the reserve requirement in euros was introduced. At the same time, the National Bank regularly monitored and analyzed the macroeconomic developments and changes in the monetary frames of selected central banks, for which semiannual information is available on the web site of the National Bank.

Within the activities for further encouraging the Denar savings in the banking system, the draft-version of the national Strategy for Denarization was reviewed and harmonized with the institutions competent for the implementation of the envisaged activities. During December, the Strategy was adopted and published by the Government of the Republic of North Macedonia⁷.

Maintaining a stable and reliable banking system as the main prerequisite for financial stability and sustainable economic growth of the country

The strategic objective maintaining a stable and reliable banking system as the main prerequisite for financial stability and sustainable economic growth of the country, was implemented through several program activities of the Financial Stability and Banking Regulations Department, the Off-Site Supervision and Licensing Department, the On-Site Supervision Department and the Advisor to the Governor on IFSR.

Planned activities
<ul style="list-style-type: none"> • Drafting and adopting regulations in the area of banking operations and bank supervision. • Analyzing and monitoring banking and financial system developments. • Taking measures for implementing strategy for dealing with NPLs (project). • Harmonization of the forms of time series cases and their aggregation in ERI application by changing the regulation (project). • Regular off-site activities. • Improvement of the internal risk assessment methodology and the aggregate bank risk profile (postponed project). • Increasing the transparency of supervision to banks (project). • Preparation of reports produced by the ERI application, needed for off-site analysis of banks and savings houses (postponed project).

⁶ Paper published on the [web site of the National Bank](#) prepared for the EUROFI Financial Forum, 2018

⁷ [Strategy for Denarization of the Republic of Macedonia](#)

Planned activities

- Preparation of Credit Registry reports needed for off-site analysis of banks and savings houses (project).
- Preparation of tables for the off-site supervision reports - quarterly financial analysis and semiannual risk profile (project).
- Conducting regular on-site examinations.
- Improvement of liquidity risk assessment procedures (project).
- Application for conduct of on-site examination - examination reports (project).
- Application for conduct of on-site examination - risk assessment procedures module (project).
- Assessment of the sectoral risk arising from money laundering and terrorist financing to banking and non-banking institutions supervised by the National Bank (project).
- Participation in the development and adoption of by-laws (project).
- Strengthening the resilience of the banking system against digital attacks.
- Activities related to the FSAP assessment mission (project).

To further harmonize with the Basel principles for effective banking supervision, the Basel 3 standards and the relevant European regulations CRD/CRR⁸, in 2018, the National Bank adopted several bylaws. The National Bank developed and updated the methodologies for credit risk management, for determining capital adequacy, as well as the methodology for determining impairment and special reserve by the Macedonian Bank for Development Promotion. Along with the amendments to the by-laws, the National Bank implemented the project for the harmonization of the forms in the ERI application with the amendments to the Decision on the chart of accounts that came into effect at the beginning of the year and with the amendments to the regulation on credit risk management. At the same time, during the year the National Bank actively worked on the by-laws on liquidity risk management, on exposure limits, on the interest rate risk in the banking book, on the risk management, as well as on the manner of functioning of the Credit Registry that should be adopted during 2019.

In the area of financial stability and banking regulations, the National Bank also participated in the development of several laws, including the Law on Anti-Money Laundering and Combating the Financing of Terrorism, which was adopted in June 2018. Taking into account the legal decisions, the National Bank amended the by-laws on managing the risk arising from money laundering and terrorist financing, thereby complying with the recommendations of the FATF⁹. At the same time, in order to assess the sectoral risk arising from money laundering and terrorist financing, questionnaires were submitted to the banking and non-banking institutions supervised by the National Bank. During the first quarter of 2019, the National Bank will analyze the received responses and develop Instructions for assessing the sectoral risk arising from money laundering and terrorist financing.

Within the activities for implementing the Non-Performing Loan Resolution and Management Strategy, the National Bank discussed several aspects related to the emergence and dynamics of non-performing loans, the activities and measures from all relevant institutions for further improvement of the process of collection of these claims, and also discussed the EBA¹⁰ documents for the sale of the banks' assets and the development of the claims market.

In order to monitor the movements in the banking and financial system, as well as assess the banks' resilience to shocks, the National Bank made several monthly and quarterly analyses and reports on the banking system, vulnerability indicators, sensitivity tests and scenario analyses. The National Bank regularly prepared the reports on the risks in the banking sector, and the content of the Financial Stability Report was improved and enriched

⁸ Capital Requirements Directives - CRD / Capital Requirements Regulation - CRR.

⁹ Financial Action Task Force - FATF

¹⁰ European Banking Authority - EBA.

with new annexes for the changes in the banks' business models according to the structure of their income, for the maturity and currency transformation of the banks' balance sheets, for the banks' dividend policies, for the largest borrowers by activity, as well as for the volume and quality of household loans. In order to improve the operations, the National Bank continued to cooperate with the other supervisory and regulatory authorities in the country and abroad by holding periodic meetings with financial regulators.

Besides the introduction of a large number of novelties in the operations, the National Bank regularly conducted the off-site supervisory activities, the preparation and monitoring of the corrective measures on the basis of identified non-compliances and irregularities in the operations of banks and savings houses, the assessment of the PIC¹¹ of banks, as well as the activities for licensing of banks, savings houses, exchange offices and fast money transfer service providers.

Within the supervisory review and evaluation process¹², and in order to further increase the transparency of the supervisory function and bring the supervisory framework closer to the guidelines/methodology of the EBA and the practice of the European Central Bank, a so-called supervisory dialog with banks was conducted for the first time. Namely, before the final determination of the minimum required level of capital for banks for 2019, the supervisory assessment of the aggregate bank risk profile and the initial assessment of the required level of capital were disclosed to the banks. The banks were given an opportunity to state their own opinion, i.e. to submit their possible remarks on these assessments to the National Bank. Based on this established process, in December 2018, the National Bank informed the individual banks of the minimum required level of capital that they should maintain during 2019.

In 2018, systemically important banks for the first time were required to develop and submit recovery plans to the National Bank. The National Bank carried out an assessment of the plans, on the basis of which it submitted recommendations for their further improvement to each of the systemically important banks. The recommendations for improvement are expected to be taken into account in the preparation of the next recovery plans that systemically important banks will submit in October 2019.

Within the regular supervisory controls, the National Bank conducted on-site risk controls in 12 banks and two savings houses. The National Bank conducted controls of compliance of the operations with the regulations in 13 banks, two savings houses, three fast money transfer service providers, five subagents and 167 controls of authorized exchange offices. At the same time, during the year, the National Bank improved the software solutions that enabled improvement of the quality and effectiveness in the conduct of the on-site controls.

During the year, the National Bank worked on strengthening the resilience of the banking system against digital attacks. For this purpose, the National Bank participated in the joint project with the Banking Association and the Financial Intelligence Office in order to define early warning indicators for digital attacks.

At the same time, the National Bank conducted several activities related to the assessment mission of the World Bank and the International Monetary Fund for the Republic of North Macedonia - FSAP¹³ for assessment of the financial stability. Taking into account the recommendations from the mission, the Plan of Activities for 2019 defines several activities for further improvement of the operations of the National Bank in the field of banking supervision, banking regulations and macro-prudential role.

¹¹ Internal setting of the required capital adequacy ratio of banks

¹² Supervisory Review and Evaluation Process – SREP.

¹³ Financial sector assessment program – FSAP.

Efficient management of the foreign reserves of the Republic of North Macedonia relying on the optimal balance of the principles of safety, liquidity and return on investment

The Financial Market Operations Department is the department responsible for the activities related to the management of the foreign reserves of the Republic of North Macedonia.

Activities
<ul style="list-style-type: none">• Management of the foreign reserves of the Republic of North Macedonia.• Risk management (project).• Organizing International Conference on institutional investors on global financial markets (project).

The management of the foreign reserves in 2018 was promoted from several aspects. At the beginning of the year, according to the tactical distribution of the foreign reserves for 2018, the share of the US dollar in the foreign reserves was reduced. At the same time, in order to preserve the value of foreign reserves and avoid concentration of the investments in instruments with negative yield, the National Bank made amendments to the internal foreign reserves management and investment guidelines, which equaled the minimum credit rating for exposure to instruments of countries and central banks with the lowest allowed credit rating in the Foreign Reserves Management and Investment Policy, thus expanding the list of countries where foreign reserves are invested. In the second quarter of the year, in circumstances of uncertainty on the international financial markets, the National Bank reexamined the expectations for the future movement of the yields in the euro area, thus increasing the tactically adjusted durations of the two portfolios in euros and gradually reducing transactions with futures. At its regular meeting held in June, the Investment Committee discussed the basic perceptions of a possible investment in Chinese yuan on the basis of which one concludes that the escalation of trade tensions between the USA and China and the increased risk of trade wars, may cause an unstable movement in the yuan and a possible depreciation of its value against the US dollar. Within the advisory function of the World Bank - RAMP¹⁴, a visit of experts from the World Bank was organized, directed towards application of futures contracts when actively managing the foreign reserves portfolios. The mission made a contribution to further improving the active management of foreign reserves by using interest rate futures contracts, as well as to improving the return on investments per unit assumed risk. By the end of the year, the National Bank also worked on improving the manner of monitoring the countries in which the foreign reserves are invested, in order to obtain additional information in the foreign reserves investment process.

In order to further improve the risk management, the National Bank introduced new information tools for improving the results from the management of foreign reserves, more active monitoring of risks, minimizing the risk of exceeding the set exposure limits when placing foreign reserves and the methodology for distributing the budget for risk by strategy and its optimization was applied, activities that are also recommended in the cooperation with the World Bank (RAMP).

The National Bank also organized a high level international conference on institutional investors on global financial markets titled: "A new normal? The global economic expansion, inflation dynamics, financial stability and its meaning for global asset management", held on 16 February 2018 in Skopje. The conference contributed to the extension of knowledge, the acquisition of new information and the exchange of experiences with other central banks and international institutions, which ultimately contributes to further strengthening of the institutional capacity and successful implementation of the mandate of the central bank to conduct the monetary policy and to manage the foreign reserves.

¹⁴ Reserve Advisory Management Program – RAMP.

Supporting the development of domestic financial markets

The strategic objective for supporting the development of domestic financial markets was implemented through several activities, within the competence of the Financial Market Operations Department.

Activities
<ul style="list-style-type: none">• Participating and supporting the domestic financial markets development.• New application "FX market analyses" (project).

Within these activities, the National Bank regularly monitored the interbank trading in deposits, in foreign currency assets, as well as the secondary securities market and published the data and information on the financial markets developments on its official web site. At the Annual Assembly of ACI - Financial Markets Association, the National Bank presented the concept of the new coverage of information and data that will be published on the web site of the National Bank.

At the same time, in order to improve the quality and coverage of information on transactions on the foreign exchange market and their more efficient monitoring, the National Bank worked on the new software solution which allows enrichment of the analytical reviews in accordance with the current needs.

Increasing the efficiency of the system of supplying and processing of banknotes and coins and increasing the quality and functionality of currency in circulation.

The Banknotes Department is the department responsible for the activities related to the strategic objective for increasing the efficiency of banknotes and coins supply and processing system and increasing the quality and functionality of currency in circulation.

Activities
<ul style="list-style-type: none">• Supplying banks and cash centers with banknotes and coins.• Upgrading of Trezor2 application (project)• Controlling the implementation of cash operations standards and criteria in banks and cash centers.• Preparation and providing technical instructions to the cash system participants for electronic submission of cash operations data (project).• Manufacturing/purchasing banknotes and coins, coin blanks, commemorative coins and collector coins.• Sale of commemorative coins, collector coins, banknotes and coins for numismatic purposes and blank bills.• Activities for the needs of the National Bank, government institutions and administrative bodies.

Within the activities related to the supplying of banks and cash centers with banknotes and coins, and in order to ensure greater functionality of currency in circulation, the National Bank regularly managed cash flows by regulating and balancing the denomination structure and maintaining cash reserves at an optimal level. In the area of logistic operations, there was a more active involvement of cash centers, where three commercial banks redirected their activities related to the cash supply process. In order to maintain cash reserves at an optimally stable level, banknotes in denomination of 10, 50 and 100 denars, as well as coins in denomination of 2 denars, were delivered. At the same time, the National Bank conducted a promotional campaign to fully familiarize the public with the new polymer money, their security features and the advantages of polymer in relation to paper money. Within the activities for prevention of counterfeiting, the National Bank exchanged experiences with relevant domestic institutions and conducted several seminars and trainings of staff that were organized by foreign central banks. Towards the end of the year, the National Bank started activities for implementing the Twinning Light Project "Strengthening the capacities of the system for fight against counterfeiting" funded by the European Union.

During the year, the National Bank undertook several activities for controlling the implementation of cash operations standards and criteria in banks and cash centers. According to the determined dynamics in the Action Plan for controlling banks and cash centers, the National Bank conducted on-site controls in seven commercial banks and in the two cash centers. At the same time, the List of successfully tested machines, which is published on the web site of the National Bank, is currently updated according to the validity of the issued certificates of successfully tested money processing machines by the National Bank. During 2018, the National Bank continued with the training for staff in banks and cash centers operating with cash, to raise the performances for checking the authenticity and fitness of currency in circulation. For that purpose, the National Bank organized 21 training course and trained 547 workers involved in the work of the cashier's desks and vaults of banks and cash centers in the Republic of North Macedonia.

Within the regular activities, the National Bank monitored the demand for effective foreign currencies for the needs of the National Bank, government institutions and administrative bodies and intervened in a timely manner to adequately meet the needs.

In the area of numismatics, the National Bank continued issuing collector coins, making significant contribution to the promotion of our national, historical, cultural and spiritual values in the country and abroad. Taking into consideration the interest of numismatists and collectors, this year the National Bank enriched the product supply with uncut sheets of polymer banknotes in denomination of 10 and 50 denars. The demand was significant, especially for the sheets with lower denomination that were fully sold immediately after their putting into circulation.

Maintaining the highest level of safety, soundness and efficiency of domestic payment systems, promoting cross-border payments and accelerating the digitization process of the domestic economy

The strategic objective, the highest level of safety, soundness and efficiency of domestic payment systems, promoting cross-border payments and accelerating the digitization process of the domestic economy, was implemented through several regular and project activities the responsible department of which is the Payment Systems Department.

Activities
<ul style="list-style-type: none"> • Processing and settling transactions related to foreign reserves management and to monetary policy implementation, monitoring and supporting the settlement of transactions on OTC markets. • International payment operations on behalf of the government and administrative bodies. • Support to MIPS¹⁵ participants and processing of forced payment orders. • Drafting payment service and system reports. • Overseeing payment systems. • Implementation of the new regulation transposing the EU directives in the field of payment services (project). • Improvement of the payment statistics application (project). • Upgrading and improvement of the E-banking application (project). • Upgrading of the E-execution application (project). • Organization of the 11th Conference on payments and market infrastructure (project).

Within the regular activities for processing and settling transactions related to foreign reserves management and to monetary policy implementation, monitoring and supporting the settlement of transactions on OTC markets, the National Bank continues to improve the back office according to the practices and standards of work of the ECB. At the same time, in the area of the execution of the international payment operations, the National Bank improved the E-banking application for the execution of the international payment operations in order to increase the range of electronic services it provides for the government and

¹⁵ Macedonian Interbank Payment System.

administrative bodies, thereby affirming its commitment for digitization in the field of payments. In terms of the statistics in the field of payment services and systems, the National Bank undertook several activities for further improvement of payment statistics and compliance with the standards of the payment statistics of the BIS¹⁶. During 2018, in order to apply the international standards for operating the entities of financial market infrastructure, the National Bank continued with on-site and off-site supervision of payment system operators for the purpose of proper and consistent application of the standards. At the same time, the National Bank produced the first annual report on payment system oversight for 2017, with special emphasis on the results of the oversight in the period from 2008 to 2017 and it was presented to the National Bank Council.

Besides the regular activities, the National Bank together with the Ministry of Finance worked on a draft-text of the new Law on Payment Services and Payment Systems introducing the Directive on payment services in the internal market (2015/2366/EC), the Directive on settlement finality in payment and securities settlement systems (2009/44/EC), the E-Money Directive (2009/110/EC), the Directive on the comparability of fees related to payment accounts, payment account switching and access to payment accounts with basic features (2014/92/EC), the Regulation on interchange fees for card-based payment transactions (2015/751) and part of the provisions of the Regulation establishing technical and business requirements for credit transfers and direct debits in euro (260/2012). The new regulation is expected to achieve a high level of harmonization with the European Union in the payment area. Also in the next period, the National Bank will be devoted to the enforcement of this law in terms of the development of the by-laws and public consultation with all concerned parties.

In the second quarter of 2018, the National Bank implemented a SWIFT tool as an extraordinary project, which primarily meets the requirement for monitoring transactions in terms of financing of terrorism. Also, during the fourth quarter of 2018, the National Bank prepared and launched an anti-money laundering application. This application is for monitoring suspicious transactions in terms of money laundering and/or financing of terrorism for the payment operations in euros for commercial banks through MIPS of the National Bank. The need for introducing the tool for monitoring transactions in terms of financing of terrorism and the anti-money laundering application arose from the requirements of la Banca D'Italia for introducing policies, procedures and systems by the National Bank for anti-money laundering and combating the financing of terrorism in relation to the use of MIPS for processing transactions in euros of the commercial banks in TARGET2¹⁷. At the same time, the establishment of this system is for the purpose of meeting the requirements of the new regulation on anti-money laundering and combating the financing of terrorism, as well as the requirements for maintaining continuity with the foreign correspondent banks. The National Bank will make efforts to further develop these applications in order to adopt the high standards of operations in the area of cross-border payments that will also include cross-border transactions for the needs of the government and administrative bodies.

In June 2018, the National Bank in cooperation with the Central Bank of the Netherlands successfully organized the 11th International Conference on Payments and Market Infrastructures under the name of "Let's Get Digital". The representatives from the domestic commercial banks and 21 central bank followed and discussed the presentations of the experts from De Nederlandsche Bank, the World Bank, the Bank for International Settlements, la Banca D'Italia, the National Bank of Belgium, the ECB, the ICC¹⁸ banking commission and the National Bank of Serbia. The exchange of experiences and knowledge

¹⁶ Bank for International Settlements in Basel (BIS Basel).

¹⁷ Payment system for settlement in euros in real time on gross basis operated by the Eurosystem.

¹⁸ International Chamber of Commerce (ICC).

have great importance to the participants in the further digitalization of payment services, whereby the National Bank fulfills its development and catalyst role in the area of payment systems and payment services.

Development of research activity

According to the Research Program for the period 2018 - 2020, adopted in mid-2017, the National Bank's research activities were directed towards the areas that support the decision-making process and timely consideration of future challenges, in order to achieve the main goals of the operations and further strengthening of the institutional capacity. The Monetary Policy and Research Department and the Chief Economist carry out most of the research activities. Within this segment, the National Bank worked on setting the DSGE model for analysis of the policies in the Republic of North Macedonia, an empirical analysis was made to apply new methods for current and short-term GDP forecast, and the research of productivity factors through the use of microdata, with special emphasis on the differences in productivity between exporters and companies that are most active on the domestic market, is in a terminal phase. At the same time, the National Bank also started researches on the impact of trade in services on the economic growth, on the indebtedness of the corporate sector in our country based on analysis of microdata, as well as on the impact of the credit market on apartment prices in the Republic of North Macedonia, that should be completed during 2019.

Within the activities for development of research activity, the National Bank organized an international research conference on the occasion of the celebration of the anniversary of the monetary independence of our country. At the Conference, research papers of representatives of the central banks of Poland, the Czech Republic, Indonesia and Austria, the European Central Bank, as well as from prominent academic institutions from Italy, Sweden and North Macedonia, were presented. Discussion on the topics of the research papers was held by representatives of the London School of Economics, the European Central Bank, the University of Orleans, France and the National Bank. At the same time, the National Bank also held two panel-discussions followed by speeches by the governors of several central banks, then the Regional Resident Representative of the IMF for Central and Eastern Europe, the Director of the Joint Vienna Institute and the Vice Governor from the Bank of Slovenia. Within the Conference, the National Bank awarded the annual prize for best paper written by a young researcher in the field of macroeconomics and banking.

Providing quality statistical data, fully consistent with international and European statistical standards, taking into account the reporting burden and their effective, timely and easy dissemination to users.

The department responsible for most of the envisaged regular and project-oriented program activities related to the implementation of this strategic objective is the Statistics Department.

Activities
<ul style="list-style-type: none"> • Compilation of external statistics. • Compilation of external statistics. • Compilation of monetary statistics. • Compilation of securities statistics. • Coordination of statistics activities arising from membership in international organizations. • Uniform sectoral division of institutional units nationwide. • Establishment of financial accounts statistics on financial transactions and balances, in accordance with the System of National Accounts - SNA¹⁹ and the European System of Accounts - ESA²⁰ (project).

¹⁹ System of National Accounts - SNA 2008.

Activities

- Accession to the Special Data Dissemination Standard Plus - SDDS Plus²¹ (project).
- Streamlining of the process of preparing reports on direct investments in the country and abroad (by country and activity) and automatic inclusion of data from the Quarterly Report on the claims and liabilities arising from international commercial operations - KIPO (project).
- Streamlining of the process of collecting international credit operations data by introducing electronic reporting on the turnover from credit operations (project).
- Streamlining of the process of collecting foreign investments data, by introducing electronic reporting (project).
- Development of application for securities statistics compilation (project).
- Activities for establishing a system for managing, storing, processing and handling statistical data, establishing a data warehouse (project).
- Introduction of integrated reporting system by the National Bank, banks, savings houses, for statistical and supervisory purposes - ISIDORA (project).
- Development of a tool for internal analysis of statistical data and statistical web portal for external users of data (project).

During 2018, the National Bank continually collected, prepared and published statistical data in the area of external and monetary statistics. At the same time, during the year the National Bank actively worked on further development and upgrading in certain segments. This applies to both certain methodological aspects and the existing infrastructure, and in order to reduce the reporting burden, to increase the effectiveness in the preparation of statistical surveys, as well as in the dissemination.

In the area of monetary statistics, the National Bank continued with the further harmonization with the international and the European standards, especially in terms of the latest Monetary Statistics Manual of the IMF from 2016. In the period July - August 2018, the National Bank published data on the monetary statistics, the statistics of the other financial corporations and the interest rates statistics, based on a new methodology, with improved sectoral and currency division of the financial instruments. At the same time, the National Bank also prepared a new definition of broad money, with an identical scope as the countries of the European Union. Also, for the purpose of timely, appropriate and quality informing of the users about the novelties, the National Bank issued a previous announcement and press release for the planned methodological changes and made a new structure of the section concerning the monetary statistics on its web site.

In the area of financial accounts statistics, beside the constant improvements in relation to data sources and methodological aspects, in 2018 the National Bank prepared detailed data on the flows of the financial assets and liabilities for the "government" sector by sub-sector, for the period 2014-2017. The preparation of these data are a key input component in the preparation of part of the tables for excessive debt and deficit which the State Statistical Office first prepared and submitted to Eurostat. At the same time, the National Bank performed a second annual transmission of detailed data on the financial accounts (balances) to Eurostat, for the period 2013-2017.

In the area of securities statistics, the activities for software connection of all available databases for domestic and international trade in securities, which is in an advanced stage, continued. The promotion of this statistics creates prerequisites for enriching the data sources and improving the quality of the financial accounts statistics. More specifically, the National Bank prepared data for calculating balances and transactions of government bonds, thereby completing the process of providing data on government securities (bills and bonds) for which the National Bank is a fiscal agent. Also, the National Bank prepared a report on calculating the indicator "investments in debt securities", as one of the additional indicators necessary to fully meet the requirements of the SDDS Plus.

²⁰ European System of Accounts - ESA 2010.

²¹ The Special Data Dissemination Standard Plus – SDDS Plus.

Also, the activities for accession to the latest Special Data Dissemination Standard Plus are being conducted in order to improve the communication with data users. During 2018, the National Bank realized the terminal phase for accession to the SDDS Plus through several activities for technical and qualitative adjustment of the statistical system to the requirements of the Standard. The successful implementation of these activities enabled official accession of our country to the SDDS Plus on 28 January 2019.

Within the activities for increasing the availability and improving the access of external users to statistical data, in September 2018, the National Bank successfully completed the project "Development of a tool for internal analysis of statistical data and statistical web portal to external users", intended for easier browsing through data by users. The portal will allow greater flexibility to users in order to design the form and content of statistical data, adjusted according to their individual needs. This is expected to increase the usefulness of published data and also to reduce the time necessary for browsing through data.

In 2018, the National Bank continued with the activities within the long-term project for establishing integrated reporting system for statistical and supervisory purposes (ISIDORA), which will significantly reduce the reporting burden and will allow a much richer data base for the existing statistical purposes, as well as for further harmonizations with the international statistical requirements.

The long-term project for establishing a single statistical data warehouse for the needs of external statistics, continued also during 2018. The implementation of this project would contribute to the further harmonization with the requirements of the European Union and other international organizations and external users.

Within the continuous activities of the National Bank for improving the communication with reporting entities and reducing the reporting burden, in June 2018, the procedure for recording of credit operations with non-residents was simplified, i.e. the volume of documentation necessary for recording was reduced. Also, during 2018, the National Bank first applied the sample method instead of the previously used census method, when reporting on capital investments in the country, which significantly reduced the reporting burden.

During the year, the National Bank, the Ministry of Finance and the State Statistical Office continued their inter-institutional cooperation in the area of the financial accounts statistics, the fiscal statistics on excessive debt and deficit, consistent sectoral division of economic agents, as well as in the joint technical assistance projects for further development of several statistical domains.

In terms of the additional activities within 2018, we should highlight the activities for adjustment of the IT-system for processing of data on foreign trade in the National Bank to the new system in the Customs Office of the Republic of North Macedonia. The adjustment is significant, as it can have implications on the creation of external statistics data, as well as the solutions for this segment in the data warehouse project.

Preparation of the National Bank for joining and membership in the European System of Central Banks

The activities related to the implementation of the strategic objective for preparation of the National Bank for joining and membership in the European System of Central Banks are carried out by the Governor's Office and several organizational units in the National Bank.

Activities
<ul style="list-style-type: none">• Activities related to the process of accession of the National Bank to the European System of Central Banks.

Within the regular activities, the National Bank actively participated in the development of the National Programme for the Adoption of the Acquis, the Economic Reforms Programme, as well as of the ministerial dialog between the European Union and the ministers of finance and the representatives from the central banks of the Western Balkans and Turkey. At the same time, the National Bank also participated in the implementation of the Stabilization and Association Agreement through the respective subcommittees on economic-financial issues and statistics, the Subcommittee on Internal Market and Competition that are within the Stabilization and Association Committee. Also, the National Bank followed the findings and the recommendations from the EC's Report for the Republic of Macedonia, as well as the implementation of the recommendations contained in the report from the project funded by the Instrument for Pre-Accession Assistance (IPA)²², "National Bank Needs Analysis", realized in 2013.

On the transition between 2018 and 2019, the National Bank submitted an application for the Twinning Project "Strengthening the institutional capacities of the National Bank in the process of accession to the ESCB", funded by the Instrument for Pre-Accession Assistance (IPA II), and the decision of the European Commission to approve the project was received in February 2019. In the context of the projects funded by the Instrument for Pre-Accession Assistance - IPA, the National Bank successfully completed the project for creating an internal analytical tool and statistical web portal to external users.

Following the trends in central banking, strengthening the resilience to changes imposed by the environment, effective risk management in all segments of operations, improving the transparency and social responsibility of the institution

This strategic goal was implemented through a large number of activities in the domain of finance and accounting, corporate governance, information technology, human resources development, public relations and cooperation with domestic and foreign institutions, legal affairs and public procurements, as well as the development of the museum, library and archives.

Finance, Accounting and Control

Besides the regular activities in this domain, the National Bank continues to develop and promote financial recording and reporting in order to enable more efficient financial management, dynamic planning and monitoring of the balance sheet of the National Bank. Starting from 1 January 2018, the National Bank introduced IFRS 9²³ in the part of recognition and measurement of financial assets and liabilities, and conducted activities related to the calculation and recording of the expected credit loss for investments in financial assets recognized at amortized cost value. For this purpose, the National Bank made adjustments to the software solutions. Hence, the National Bank completed the control reports on the investments in financial assets recognized at amortized cost value, by supplementing data on expected credit loss, as well as in order to meet the requirements of the SPPI²⁴ test to establish an appropriate classification category. Besides these reports, in the first quarter of 2018, the National Bank produced reports on controlling and monitoring transactions with derivative financial instruments - futures contracts. Within these activities, during 2018, the National Bank improved the internally developed accounting softwares in

²² Instrument for Pre-Accession Assistance (IPA).

²³ On 1 January 2018, the new standard IFRS 9 "Financial Instruments" came into effect, which replaces the International Accounting Standard IAS 39 "Financial Instruments: Recognition and Measurement". The new standard introduces significant changes in the approach of classification and measurement of financial assets compared to IAS 39 and introduces a new model of "expected credit loss" for impairment of financial assets.

²⁴ Solely Payments of Principal and Interest (SPPI).

the part of the calculation of the wages, wage contributions, income tax and other compensations, the planning and material operations software, thereby enabling more efficient and more integrated operations, as well as harmonization with the latest amendments to the legislation in this area.

Strategic planning, risk management, ensuring business continuity and information security, and data protection

The adoption of the Report on the implementation of the Plan of Activities for 2017, adopted by the National Bank Council in February 2018, ended the planning cycle that began in March 2016 by identifying the strategic priorities, by adopting the Strategic Plan in May 2016 and by determining the program activities in December 2016. Taking into account the analysis of the performances and the analysis of the changes in the internal and external environment, in May 2018, the new Strategic Plan of the National Bank for 2019 - 2021 was adopted. The strategic objectives establish the critical points of the National Bank's operations in the next three-year period, on the basis of which the plans of the organizational units and the Plan of Activities of the National Bank for 2019 were prepared.

The strategic planning process also includes the activities related to project management in the National Bank. During the year, special emphasis was placed on the improvement of the process of managing software development projects, thus constantly monitoring their implementation, the adherence to the timeframes and the preparation of the necessary documentation and reports. At the same time, during November, the National Bank held a workshop and seminar on improving the project management process, whereby, in cooperation with De Nederlandsche Bank, the project management practices were discussed and recommendations for increasing the efficiency in the planning and implementation of projects were given. Based on the technical cooperation with De Nederlandsche Bank, the National Bank will start to apply the new methodology for agile project management by using the SCRUM²⁵ principles.

In the area of operational risk management, at the beginning of the year, the process was additionally improved by adopting the amendments to the Operational Risk Management Policy, and in May a new Guideline on the implementation of the Operational Risk Management Policy was adopted. Considering the established operational risk management framework, as well as the estimated risks from current operations, a new Review of the sources of operational risks of the National Bank was adopted. In the second half of the year, the National Bank updated the Registry of the working processes and their criticality, made a new operational risk assessment and worked out action plans with measures for the operational risk management. The determining of strategies and measures for managing the identified operational risks is under way. In addition, during the year the National Bank made presentations for all 18 organizational units whose main aim was to give a review of the latest trends in the management of operational risks of central banks, familiarization with the amendments to internal regulations, as well as introduction in the operational risk analysis and assessment procedure within the new cycle.

Starting from the Business Continuity Policy of the National Bank, the National Bank provides a system for coordinate planning, updating and testing of measures necessary to ensure continuity in the operations of the business processes in a crisis situation. In the course of 2018, the Business Continuity Plans of the working processes were revised. Furthermore, in order to confirm the completeness and enforceability of the business continuity plans of the critical business processes, during 2018, activities were conducted for the preparation of the necessary documentation, training of the employees and testing the business continuity plans for ensuring the continuity of the business processes in conditions

²⁵ SCRUM - methodology or framework for adjustable (agile) project management, especially software development projects.

of pre-defined crisis scenarios and scope of testing. In this regard, under the supervision of the person responsible for providing continuity in the operations, the business continuity plans of 15 critical business processes were tested by 8 organizational units in the National Bank. For the results of the conducted tests, detailed reports were prepared with appropriate action plans for implementation of the determined measures for improvement of the business continuity plans.

In terms of the activities for ensuring compliance of the relevant internal regulations and the National Bank's operations with the data protection regulations, during the year the National Bank conducted control of the compliance of nine internal regulations with the data protection regulations and assessed the need for amending the regulations for the changes occurred in the environment.

Regarding the information security of the National Bank and ensuring confidentiality and protection of the processing of personal data, the National Bank conducted periodical controls of the enforcement of internal regulations and gave findings and recommendations for addressing the identified shortcomings. At the same time, within the regular activities, the incidents in the operations were analyzed, whereby the annual report on the incidents recorded during the previous year was reviewed by the Information Security Steering Committee. Considering the provisions of the Information Security Policy of the National Bank, training courses for information security, protection of personal data and security of classified information were conducted, which were attended by 103 employees in the National Bank.

After the publication of the document for the National Bank's compliance with the mandatory controls envisaged by the "Customer Security Controls Framework (RBK)²⁶" in the KYC²⁷ application of SWIFT in December 2017, in June 2018, the National Bank checked and confirmed the National Bank's compliance with additional two mandatory controls for which the period of adjustment was by the end of 2018. At the same time, due to the changes in the infrastructure of SWIFT of the National Bank in July 2018, it was necessary to check again the National Bank's compliance with all 16 mandatory security controls from the RBK. The compliance was checked during the fourth quarter of 2018, whereby on 28 December 2018 the National Bank's Report on the compliance with all mandatory security controls from the RBK was adopted and signed and the compliance status was confirmed and published in the KYC application of SWIFT.

Internal audit

During the year, all planned audits were carried out. The recommendations for improving the internal control system were monitored on a regular quarterly basis. The findings of the monitoring suggest that the recommendations are mainly observed and implemented within the given deadlines.

The systematic assessment and giving recommendations for improving the risk management process, the audit of the appropriateness and effectiveness of internal controls, as well as of management processes, contributed to the full achievement of the main goals of the internal audit, giving assurance on the efficient and economical use of resources, on the safeguarding of assets, on the reliability and integrity of financial and other information, as well as on the compliance of operations with laws and regulations, internal policies and work procedures.

²⁶ Customer Security Controls Framework.

²⁷ The "Know Your Customer" application is used to exchange information between SWIFT members.

Legal affairs

During the year, several activities were carried out for providing legal support to the organizational units of the National Bank. Hence, the National Bank prepared legal opinions in relation to proposals for amending legal texts in the field of the National Bank's operations, as well as opinions on general and individual legal acts, legal acts in the field of public procurements and other contracts, memorandums of cooperation, protocols and agreements. At the same time, the changes to the regulations, as well as the recommendations of the audits and controls, required continuous monitoring and control of the legal risk. Hence, starting from the Compliance Plan, the National Bank conducted several controls and gave recommendations and legal advice for addressing the identified risks in the operations.

Public procurements

In the area of public procurements, the National Bank currently implements the planned activities for timely, effective and transparent implementation of public procurements through the full use of the system for electronic public procurements. Also, within the project for construction of the new facility, the National Bank undertook regular activities for monitoring the performance of construction works for construction and carrying out professional surveillance of the new facility of the National Bank, as well as all other activities that have additionally appeared in the realization and are related to the execution of this project.

Information technology

During 2018, efforts were made to improve the SWIFT infrastructure, the systems were upgraded according to the SWIFT recommendations and to the regular annual maintenance, as well as changes in other systems that contribute to the information security. In addition, the National Bank installed a new printing control software, new infrastructure of SAN for MIPS and replaced the central firewall, the software tools for operating databases and the e-mail system. At the same time, the National Bank replaced several telecommunication lines, and introduced a second, backup optic line to the disaster recovery locations. Also, besides the regular activities for managing user names and their privileges, upgrading and maintaining applications, upgrading and maintaining the infrastructure and other equipment, management of IT incidents and the activities related to the testing of the continuity in the operations of the organizational units in the National Bank, a large number of software development projects were implemented. Taking into account the plan of software development projects, 17 projects were fully completed, the development of four projects is under way, while four projects were canceled, at the expense of which a large number of unplanned projects and requests for development and improvement of the applications in the National Bank, were successfully implemented.

The National Bank hosted the International IT Forum, which was attended by thirty-four IT specialists from fifteen central banks. The Forum participants shared their knowledge and experiences on various aspects of the development and maintenance of applications and IT services through presentations and open debate. Some of the discussions put an emphasis on payment processing systems, applications development planning process and project prioritization, managing applications access rights, storing data in central banking institutions and their management, introduction of large database management software and IT-platform for business data analysis.

Human resources management

During the year, we continued with the activities for professional trainings and development of employees through a constant process of training courses, increasing their expert knowledge and strengthening their skills, providing highly educated staff that fights off any challenge encountered in the current operations and contributes to achieving the

goals of the operations. During the year, special emphasis was placed on the training courses for the management, as well as on the training courses for the new employees. At the same time, in order to ensure greater engagement, productivity and utilization of the knowledge and creative potential in the institution, we continued with the activities for improving the evaluation process, by ensuring impartial application of the established framework for evaluating and informing employees about their performance. As every year, these processes require intensive development of the professional and soft skills of the employees and managers in the institution. In order to further harmonize with the basic principles of corporate governance, during the year the National Bank also worked on the promotion of the Code of Ethics according to the practices of the central banks from the European Union, the World Bank, the IMF, as well as the national regulation.

Technical maintenance, security and archive

Activities were undertaken for further improvement of the office and archive operation, upgrading security measures and assets, strengthening and continuous training of employees and improving internal regulations in this domain.

Public relations, cooperation with domestic and foreign institutions, publications and financial education

During the year, the National Bank intensively communicated with the public by publishing numerous contents on its website, timely organizing of meetings and press conferences, preparing press releases, as well as answering questions in the field of the National Bank's operations addressed by legal entities and individuals through the official contact forms.

Within the regular technical cooperation with other central banks and international institutions, the National Bank carried out multiple projects with the central banks of Germany, the Netherlands, Belgium, Poland, Slovenia, as well as with the central banks from the countries in the region. The National Bank hosted study visits to the Central Bank of Kosovo in the area of information technology and museum operations and to the Central Bank of Montenegro in the area of financial market operations. During the year, the National Bank also organized the annual meeting of the Management Board of the Centre of Excellence in Finance²⁸ which was attended by high representatives from the ministries of finance and the central banks of six countries from Southeast Europe. Also, the National Bank carried out many events and activities for developing the educational function and raising the level of financial literacy with the public.

Museum, library and archive

Within the activities of the Museum, the National Bank continued with its regular activities related to the collection and the research work in the field of numismatics. Besides the current working tasks, the National Bank carried out several activities related to education of children and youth by organizing visits to the existing museum exhibition, and several educational materials were produced and published.

In the area of library and archive activity, the National Bank undertook several activities for purchase and maintenance of the library fund of the National Bank, and the archive fund was enriched with digitalized archival material of historical significance arising from the National Bank operations.

²⁸ Centre of Excellence in Finance (CEF).

Conclusion

From the Report, it can be concluded that the Plan of Activities has been successfully completed thanks to the good organization, the efficient utilization of the planned resources and the timely provision of all relevant information. During the year, the organizational units successfully carried out all program activities and followed the planned dynamics of implementation of the Plan of Activities.