Material risks

The Bank carries out management of all kinds of material risks for the Group that are discovered as a result of annual identification and assessment of risk significance.

Credit risk	Market Risk		Operational Risk	Liquidity Risk	Other risks
	Trading book	Banking book			
Credit migration risk	Currency risk	Currency risk	Operational Risk	Physical liquidity risk	Compliance risk
Credit concentration risk	Interest rate risk	Interest rate risk	Legal Risk	Regulatory liquidity risk	Tax risk
Residual risk	Market credit spread risk	Market credit spread risk	Cyber security risk	Liquidity concentration risk	Strategic risk
Counterparty risk on financial market transactions	Commodity Risk				Business risks
Transfer risk	Volatility Risk				Regulatory risk
National economies risk		Real estate risk			Model Risk
					Reputational risk

Credit risks

Credit risk is the risk of losses occurring due to the failure to perform, delay in performance, or incomplete performance by a debtor of financial liabilities under a contract. These financial liabilities may include a debtor's liabilities on obtained financing, including loans to clients and interbank loans; debt securities; other placed assets, including a request for the return of debt securities, shares, or promissory notes provided under a loan agreement; discounted bills; enforced bank guarantees that were not compensated by the principal; transactions for financing against cession of a monetary claim (factoring); rights (claims) obtained under a transaction (claim cession); instruments of pledge acquired on the secondary market; transactions of sale (purchase) of financial assets with deferred payment (delivery of financial assets); paid letters of credit (including uncovered letters of credit); return of money (assets) under a transaction for the purchase of financial assets with the obligation to return them; or claims under financial lease transactions (leasing).
The group of credit risks includes credit migration risk, concentration risk, counterparty risk on operations in the financial markets, and residual risk.

- **Credit migration risk** is the risk of losses associated with complete or partial loss of value:
  - of a financial asset that is not subject to daily revaluation at current fair value (for example, a loan or a debt security held to maturity) due to a default or deterioration in the credit quality of the counterparty/issuer (migration);
  - of a security due to the issuer's default.

- **Counterparty risk in financial market operations** is a risk associated with the counterparty's unwillingness or inability to perform obligations under a transaction completely and in a timely manner. Counterparty risk is a type of mutual exposure under futures transactions that can vary over time in response to market trends or fluctuations in the price of underlying assets. Counterparty risk has two components:
  - presettlement risk, which is the risk of incurring losses in connection with the potential failure of the counterparty to perform its contractual obligations during the period of the transaction;
  - settlement risk, which is a risk of losses in connection with the potential failure of the counterparty to perform its obligation after the Bank has fulfilled its obligation under the contract or agreement (by delivering funds, securities, and other assets) as of the date of mutual settlements.
- **Concentration risk (as regards credit risk) is** a risk related to:
  - the provision of large loans to a single borrower or group of related borrowers;
  - concentration of debts in certain areas of the economy, segments, portfolios or geographic regions, etc.;
  - concentration of investments in securities within certain industries or geographic regions;
  - other liabilities that make them vulnerable to the same economic factors.

- **Residual risk** is a risk arising due to the fact that the methods of risk mitigation used by the Bank can fail to produce the desired effect due to implementation in relation to the security, for example legal risk and liquidity risk.

The purpose of credit risk management is to identify and ensure the level of risk required to ensure the sustainable development of the Group, as determined by the Banking Group development strategy and the macroeconomic parameters.

The credit risk management policy implemented by the Group is aimed at increasing the Group's competitive advantages by widening the range of counterparties and the list of provided credit products and products of the financial markets and by implementing a systematic approach to credit risk management, including one that ensures the maintenance or lowering of the level of materialized credit risks and optimization of the industry, regional, and product structure of credit portfolios.

The Group applies the following methods of credit risk management:
- Preventing credit risk by identifying, analyzing, and evaluating potential risks at the stage that precedes the operations exposed to credit risk
- Planning the credit risk level by evaluating the level of expected losses
- Implementing unified processes of risk evaluation and identification
- Limiting credit risk by establishing limits and/or restrictions for the risk
- Creating provisions for possible losses from loans issued
- Structuring of transactions
- Managing the collateral for transactions
- Using a system of authorities when making decisions
- Monitoring and controlling the risk level

Credit risk is evaluated for the Group in general and in terms of different portfolios of assets exposed to credit risk as well as in terms of individual credit risks of specific counterparties and groups of counterparties, countries, geographical regions, and types of economic activities.

The Group uses a system of internal ratings based on economic and mathematical models of evaluating the probability of default by counterparties and transactions. Assessment of credit risks of the counterparties depends on the types of counterparties:

- Corporate clients, credit institutions, financial companies, small business entities, countries, constituent entities of Russia, municipal entities, insurance and leasing companies—on the basis of the credit ratings system and by building models of predicted cash flow or other significant indicators
- private clients and microbusiness entities—on the basis of the evaluation of the paying capacity and express evaluation on the basis of a scoring model

The credit ratings system ensures a differentiated evaluation of the probability of the nonperformance/improper performance of obligations by the counterparty based on the analysis of quantitative (financial) and qualitative (market factors and factors of external influence, characteristics of management quality, assessment of business reputation, etc.) factors of credit risk and the degree of their influence on the counterparty's ability to service and repay the assumed obligations.

In accordance with the developed macroeconomic scenarios, the Group performs an analysis of the sensitivity of the level of credit risks at the level of individual counterparties and the credit portfolio as a whole, and, based on the results, it detects the macrofactors that maximally correlate to the probability of counterparties' default. For the purposes of stress testing, statistical information on rapid changes in macrofactors is used when modeling the ratings in stress situations.

The system for monitoring and controlling the level of the Group's credit risks is implemented on the basis of principles that ensure preliminary, current, and subsequent control of transactions exposed to credit risks, compliance with the established risk limits, and their timely updating.

A multilevel system of limits for each line of business based on limiting credit risks for loan operations and operations on financial markets has been developed in the Group.

The Group pays close attention to monitoring the concentration of major credit risks and compliance with the prudential requirements of the regulating authority as well as analysis and forecasting of the level of credit risks.

Sberbank has implemented a procedure for daily monitoring of major credit risks. For the purposes of compliance with the requirements established by Bank of Russia with regard to the statutory ratios[1] R6, R21 (maximum risk limit per borrower or group of related borrowers) and R7, R22 (maximum limit of large credit risks), a List of Major and Related Borrowers of the Bank is maintained and monitored.

In accordance with IFRS, the share of loans of 20 major groups of related borrowers for 2016 changed from 22.9% to 23.5% of the Group's credit portfolio before deduction of provision for depreciation. Among the

[1] Bank of Russia Instruction No. 139-I dated December 3, 2012, On Banks' Required Ratios (as amended on October 25, 2013).

Sberbank's major borrowers are representatives from various sectors of the economy; therefore, the default risk is adequately diversified.

To increase credit portfolio quality, credit industry strategies (CIS) are being developed in Sberbank. In 2016, CISs were approved for the main industries, and pilot monitoring of CIS performance with respect to the CIB portfolio was conducted.

The main tool for reducing credit risk is collateral. The need to accept collateral and the volume of accepted collateral depends on the risk of the borrower/transaction and is fixed in the terms of the loan products.

To hedge credit risks, the Bank has developed and implemented a collateral policy defining the basic principles and elements of dealing with collateral in lending. Collateral quality is determined by the probability of receiving cash in the amount of the expected collateral value when enforcing upon or selling the collateral. The collateral quality is indirectly characterized by the list and materiality of risks associated with the collateral and is determined by a number of factors: liquidity, accuracy of determining value, risk of depreciation, exposure to risks of loss and damage, legal risks, etc.

Evaluation of the collateral value is made based on the internal expert evaluation of the Group's specialists or the evaluation of independent evaluators or based on the cost of the collateral in the borrower's accounting statements with a discount. Use of sureties of solvent corporate and private clients and guarantees for adjustment of credit risk indicators requires the same assessment of the risks of the surety/guarantor as of the borrower. The Bank performs regular monitoring of pledged assets to ensure control over the quantitative, qualitative, and cost parameters of the pledged assets, their legal affiliation, and conditions of storage and upkeep.

The Group has a multidimensional system of authorities for determining the level of decision making for every loan application. A risk profile that determines the authority for decision making based on the risk category of the application is assigned to each territorial subdivision/Group bank. In turn, the application risk category depends on the aggregate limit and risk category of the borrower/group of related borrowers as well as the loan product's category. Therefore, the existing systems of limits and authorities help optimize the credit process and properly manage credit risk.

To cover losses from assets exposed to credit risk that are expected from realization of credit risk, the Group forms provisions for possible losses from loans and other possible losses. Provisions are formed in accordance with the requirements of Bank of Russia, bank regulators, and IFRS. In 2016, the volume of loan loss provision formed by the Group increased by RUB 106.9 bln. Formed provisions are adequate to assumed risks.

Credit risk coverage level in Sberbank of Russia under RAS exceeds the indicator for the Russian bank sector as of January 1, 2017:

	Sberbank	**Bank sector**
Ratio of provisions to the total client credit portfolio, %	6.4	8.2
Coverage of overdue debt by provisions, times	2.6	1.6

The Group performs constant monitoring of the collection of problem indebtedness at all collection stages. When triggers of a decline in the level of effectiveness of collection or of distressed portfolio growth in certain regions or client or product segments are detected, the process of recovery and lending are optimized.

The processes of recovery of overdue and troubled debts in the Group are built based on the principle of maximum automation and standardization, which eliminates human factors at different levels of processing distressed debts and makes it possible to apply a uniform approach to the recovery process.

During the settlement of distressed debts, the Group uses a set of tools that correspond to global practices: remote communications, on-site visits, debt restructuring, relations with debt collection agencies, judicial and enforcement proceedings, etc. Application of a certain tool is determined by a flexible strategy, depending on the risk level of the client and the loan.

The Group performs regular studies of the ongoing recovery process to check its conformity to market trends and best international practices. Based on the results of analysis, the necessary amendments are introduced to the process to increase the level of impaired debt collection, to optimize recovery procedures, and to increase the level of client service.

In 2016, the Group implemented a new targeted automated system for distressed debt recovery for the purpose of optimizing and improving the efficiency of distressed debt management and increased the level of process automation. New technologies for interaction with clients for the purpose of settling distressed debts are also being actively developed.

As of Desember 31, 2016, the amount of restructured corporate loans amounts to RUB 1,209 bln, and their share in the book assets is 4.8% (Desember 31, 2015: RUB 1,231 bln and 4.5%).

In 2016, several decision-making process optimization projects were implemented to reduce decision-making time. Furthermore, a project for the management of the corporate client credit portfolio was launched, within the framework of which the bank is transitioning from passive management of credit risk to active management. Active management involves hedging, purchase, and sale of credit risk and management of incoming flow subject to target portfolio metrics that will make it possible to optimize the structure and indicators of the portfolio.

Country risk

Country risk includes transfer risk and national economy risk.

Transfer risk is the risk of losses due to the inability of counterparties from a specific country (except sovereign counterparties) to fulfill their obligations in a currency that differs from the currency of the counterparty's country for reasons other than standard risks (for reasons that depend on the government of the country, not the counterparty).

National economy risk is a risk of loss in connection with the inability or unwillingness of a sovereign counterparty of a specific country or the inability of other counterparties from this country to satisfy their obligations in the national currency for reasons that differ from standard risks (for reasons that depend on the government of the country, not the counterparty).

To limit and manage the risks accepted by the Group with regard to certain countries, the Bank has developed a system of country risk limits. These limits restrict the total concentration of transactions with counterparties from a given country, including sovereign borrowers/issuers and public authorities.

Transfer risk is assessed and capitalized within Sberbank's Capital Adequacy Assessment Process, thus ensuring that sufficient financial resources are available to Sberbank to cover possible losses in the case of the materialization of this risk.

Country concentration of assets and liabilities of Sberbank (RAS), 2015:

RUB mln	Russia	CIS	Countries from the "Group of Developed Countries"[1]	Other countries	Total
Due from credit institutions	7,356	514	328,626	19,489	355,985
Financial assets carried at fair value through profit or loss	176,417	19	21,254	208,288	405,978
Net loans receivable	14,169,959	433,395	1,601,808	664,641	16,869,803
Net investments in securities and other financial assets available for sale	1,774,655	56,010	155,698	329,994	2,316,357
Net investments in securities held to maturity	410,977	5,119	20,376	—	436,472

[1] The countries of the "group of developed countries" include Australia, the Republic of Austria, the Grand Duchy of Luxembourg, the Hellenic Republic, Ireland, the Italian Republic, Canada, the Kingdom of Belgium, the Kingdom of Denmark, the Kingdom of Spain, the Kingdom of the Netherlands, the Kingdom of Norway, the Kingdom of Sweden, New Zealand, the Portuguese Republic, the United Kingdom of Great Britain and Northern Ireland, the United States of America, the Federal Republic of Germany, the Republic of Finland, the French Republic, the Swiss Confederation, and Japan.

Country concentration of assets and liabilities of Sberbank (RAS), 2016:

RUB mln	Russia	CIS	Countries from the "Group of Developed Countries"	Other countries	Total
Assets					
Due from credit institutions	8,603	237	333,431	5,672	347,943
Financial assets carried at fair value through profit or loss	97,087	52	14,019	30,185	141,343
Net loans receivable	14,094,701	252,521	530,692	1,343,708	16,221,622
Net investments in securities and other financial assets available for sale	1,933,195	51,095	126,904	158,419	2,269,613
Net investments in securities held to maturity	411,186	27,820	14,789	2,166	455,961

Financial Market Risks

Market risk means the possibility of financial loss occurring for the Group as a result of unfavorable changes in the exchange rates of foreign currencies, quotations of equity securities, interest rates, prices for precious metals, and other market indicators.

The group of market risks includes interest rate risk, stock market risk, currency risk, commodity risk, market credit spread risk, and volatility risk.

- **Interest rate risk** is the risk of loss or income reduction due to changes in the level of interest rates.
- **Stock market risk** is the risk of loss or income reduction due to changes in the fair value of equity securities (e.g., ordinary and preferred shares).
- **Currency risk** is the risk of loss or income reduction due to changes in the exchange rates of foreign currencies and/or precious metals.
- **Commodity risk** is the risk of loss or income reduction due to changes in the value of commodity assets (not including precious metals).
- **Market credit spread risk** is a risk of losses due to unfavorable changes in the market prices of financial instruments whose current fair value depends on the market appraisal of the credit quality of a debt security issuer/counterparty (of a related name) in the case of the deterioration of the credit quality of the issuer/counterparty, including their default.
- **Volatility risk** is a risk of losses or reduction of profit associated with changes in the volatility of the underlying asset of a financial instrument.

Monitoring of financial market risks is exercised by divisions that are organizationally independent of the divisions that perform transactions in the financial markets. The process of risk monitoring involves continuous supervision of trading operations at all stages of the operational process.

Financial market risk management in the Group is carried out through a system of authorized bodies that make their decisions depending on the risk level and hierarchy of portfolios. This system will ensure prompt and flexible decision making.

Market risk management is performed on a portfolio basis. The main market risk management tool is the setting of market risk limits for separate portfolios. A portfolio consists of financial market transactions with common characteristics, such as admissible risks, currency, types of instruments, applicable limitations, etc. Market risk limits are established in accordance with the requirements of Bank of Russia, the Basel Committee on Banking Supervision, and the best banking practice of market risk management.

Interest rate risk for trading positions. The Group is exposed to interest rate risk of the trading book as a result of change in the value of debt securities and derivative financial instruments with the change of interest rates.

For the purpose of limiting the interest rate risk on debt securities, limits for the securities portfolio structure by maturity, limits of sensitivity to change in interest rates, stop-loss limits, and limits of the value at risk (VaR) for operations with debt securities are set.

For the purpose of limiting interest rate risk on derivative financial instruments, stop-loss limits, limits of the value at risk (VaR), limits of sensitivity to change in interest rates, and limitations for the types and maximum maturity of derivative financial instruments are established.

Market credit spread risk. The Group assumes the risk of losses resulting from the unfavorable change in the market prices for debt securities and derivative financial instruments whose current fair value depends on the market evaluation of the credit quality of the debt security's issuer/the counterparty to the transaction. The Group manages the risk by setting limits on the sensitivity to changes in the market credit spread by the asset's currency, the country of the issuer, and the maturity date. There are also stop-loss limits and limits on the value at risk (VaR) established by the Group.

Stock market risk. The Group assumes stock market risk resulting from the change in the fair value of equity securities of corporate issuers and derivative financial instruments based on them if the Group has open positions in these financial instruments. For the purpose of limiting stock market risk, limits for the total position, stop-loss limits, limits of the value at risk (VaR), and sensitivity limits are set.

Currency risk. For the purpose of limiting the currency risk of financial market transactions, limits for the open currency position for all portfolios of transactions, stop-loss limits sensitive to currency risk, and limits of the value at risk (VaR) are set.

Commodity risk. Commodity risk is limited through the limitation of the list of commodity products for trading in the portfolio, and limits for the amount of investment in specific commodities, limits for maximum loss (stop-loss), and limits for the value at risk (VaR) are set.

Volatility risk. Risk occurs as a result of the Group's position in options for underlying assets: currencies, interest rates, shares, and commodities. Stress-test limits and sensitivity ratio limits are established for the options, depending on the underlying asset. Second-tier sensitivity shall be accounted for in the limits on the value at risk (VaR).

Value at Risk (VaR). The VaR method is used as one of the main methods of market risk assessment. This metric constitutes an assessment of the maximum loss on the portfolio within a predetermined time period and with a predetermined probability (confidence level) on a "normal" market. A "normal" market is characterized by the trends of market factors (quotations of currencies/shares/commodities, interest rates) in the absence of a system crisis in the economy/banking sector of the country or group of countries or negative factors/events that may cause major changes in the market factors and, as a result, in the value of positions in financial instruments.

VaR is calculated based on the following assumptions:
- The range of historical data used for calculation is two years.
- VaR is calculated for a period of 10 working days, within which positions exposed to market risk can on average be closed (or hedged).
- A 99% level of unilateral confidence probability is used, which means that losses in an amount exceeding VaR are expected for one in 100 periods.

A VaR metric at the level of each portfolio is subject to regular back testing in accordance with the formal procedure developed with due regard for the requirements of the Basel Committee on Banking Supervision.

Though VaR allows for risk evaluation, it is also necessary to take into account the following weak points of this method:

- Using previous changes in prices does not make it possible to fully evaluate possible price fluctuations in future.
- Calculation for a ten days' period assumes that all positions of the Group may be closed (or hedged) during this period of time. This estimate may reflect the market risk value inaccurately during periods of reduced market liquidity, when the time needed to close (or hedge) positions may increase.
- Using a 99% level of unilateral confidence probability does not make it possible to assess the amount of losses expected with a probability of less than 1%.
- VaR is calculated based on the positions exposed to market risk as of the end of the day and may not reflect risk assumed during the day.

Taking into account the weak points of the VaR method, the Group will supplement VaR calculation with market risk estimates using scenario analysis and stress testing methodology to get more detailed information on the amount of market risk.

The Group's market risk, 2015

	Market risk, RUB bln	Effect on equity, %	Effect on net profits, %
Risk on portfolio of debt securities	85.0	3.2	36.0
Stock Market Risk	0.3	0.0	0.1
Currency risk	11.7	0.4	4.9
Commodity Risk	0.2	0.0	0.1
Market risk (taking into account diversification)	96.4	3.6	40.8
Effect of diversification	0.6	0.0	0.2

The Group's market risk, 2016

	Market risk, RUB bln	Effect on equity, %	Effect on net profits, %
Risk on portfolio of debt securities	37.5	1.3	6.9
Stock Market Risk	0.1	0.0	0.0
Currency risk	3.3	0.1	0.6
Commodity Risk	0.1	0.0	0.0
Market risk (taking into account diversification)	40.1	1.4	7.4
Effect of diversification	0.9	0.0	0.2

The reduction of market risk as of January 1, 2017, compared to January 1, 2016, is associated with a considerable reduction of the position in currencies and with the repayment of a significant share of bonds in foreign currencies in the banking book portfolio.

Liquidity risk

Liquidity risk means the risk of the Group's inability to finance its activity—that is, to ensure the growth of its assets and/or to discharge its liabilities upon their maturity, subject to compliance with the requirements of local regulators, both in the normal course of business and in stressful conditions.

In the matter of liquidity risk management, Sberbank differentiates the risks of regulatory, physical, and structural liquidity.

Regulatory liquidity risk means the risk of a breach of compulsory standards of liquidity established by Bank of Russia and local regulators in the countries of presence of the Group's participants as well as other regulations and limitations regarding liquidity risk management.

Physical liquidity risk means the bank's inability to discharge its obligations to contractors in a given currency due to a lack of funds: inability to effect a payment, issue a loan, etc.

Structural liquidity risk (concentration risk) means the risk of significant deterioration of physical or regulatory liquidity due to an imbalance in the asset and liability structure, including a strong dependence of the Bank's liability base on one or more clients or funding sources in a certain currency and/or in a certain period.

Liquidity risk management helps secure the Group's capability to perform its obligations to clients and counterparties unconditionally, in due time, and in compliance with the regulations concerning the management of liquidity risk both in normal business conditions and in crisis situations.

The Group is exposed to liquidity risk because it does not accumulate cash and cash equivalents for one-time discharge of all its liabilities. Instead, the Group evaluates an adequate level of cash and cash equivalents and liquidity provisions required to discharge these liabilities at different time horizons based on the current market conditions, assumptions of future trends of the balance-sheet items, and accumulated historical data.

To reduce its liquidity risk, the Group:
- Maintains a stable and diversified structure of liabilities, including resources raised from different groups of investors and clients, both fixed-term and on-demand
- Invests in highly liquid/liquid financial assets diversified by types of currencies and maturity to quickly and effectively fill in unexpected liquidity gaps
- Monitors the use of existing liquidity provisions and initiates their increase, if necessary
- Maintains relations with counterparties in the financial markets to raise funds within the shortest possible time in the event a demand for liquidity occurs.

Management of liquidity risk of the Group is based on the legislative initiatives of Bank of Russia and local regulators as well as on the recommendations of the Basel Committee in the field of assessment of liquidity risk and management tools:

- Forecasting the main balance-sheet items of the Group members broken down by the main currencies to determine the necessary volume of resources to cover a liquidity deficit and to comply with the statutory ratios established by local regulators
- Forecasting the structure of assets and liabilities under different scenarios of the development of the Group's balance sheet to monitor the required level of liquid assets in the mid-term and long-term within the framework of building funding plans
- Monitoring and forecasting of the main indicators of liquidity
- Setting limits for risk metrics of individual Group members and of the whole Group, including without limitation those comprising the risk appetite of the Group
- Stress testing of the liquidity profile by analyzing different scenarios and phases of stress and planning actions to maintain the necessary liquidity level in crisis conditions

The Treasury Office of Sberbank analyzes, predicts, and elaborates proposals for regulating short-term, mid-term, and long-term liquidity with due regard to the needs of all Group members. The Risks Unit elaborates the architecture of limits, sets the values of limits for liquidity risk metrics, and performs regular independent monitoring of the observance of set limits of liquidity, validation of liquidity models, and escalation of breaches of limits to collegiate governance bodies. Organization of supervision of the state of liquidity and fulfillment of liquidity management decisions falls within the competence of the Assets & Liabilities Management Committee. The Bank controls the level of liquidity risk assumed by the Group and controls liquidity at the level of the Group, including coordination of all external borrowings of Group members with due regard to the existing macroeconomic and market conditions and for the purpose of minimizing funding costs.

The management bodies of the Group member banks are responsible for the effective management of the liquidity of the respective banks and monitoring its status as well as for compliance with the limits and limitations established by internal regulations of the Group and requirements of local regulators. Assessment, management, and control of liquidity risk of the Group member banks shall be performed in accordance with the uniform standards of the Group.

The approach to liquidity management during 2016 was largely determined by the existing macroeconomic situation and the state of the Russian financial sector (the sanctions imposed on Russia by the European Union and the USA, the volatility of the exchange rate of the ruble, and other factors). Nevertheless, thanks to a flexible interest rate policy and efficient management of the asset and liability bases, in 2016, the bank completely repaid expensive borrowings from Bank of Russia primarily through raising client funds, leaving funds of Bank of Russia raised as part of a subordinated loan and special refinancing instruments at a preferential rate. Within the framework of in-house balance optimization, Sberbank was able to decrease cash volume. As of January 1, 2017, Sberbank maintains ruble and foreign currency reserves at an adequate level to respond to a deterioration in the liquidity situation.

Since January 1, 2016, Bank of Russia set the Basel III liquidity coverage ratio (LCR, R26) as a prudential norm. The minimum admissible value of the ratio in 2016 stands at 70% and is to increase by 10% annually until it reaches 100% starting January 1, 2019. The ratio for Sberbank shall be calculated at the level of Sberbank Group. Throughout 2016, R26 was observed with a significant reserve. Sberbank's business plan requires strict compliance with the liquidity coverage ratio throughout 2017, despite an increase of the minimum admissible value of R26 to 80%.

January 1, 2018, a new mandatory ratio of Bank of Russia comes into effect: the Basel III net stable funding ratio (NSFR, R28) with a minimum permissible value of 100%. Calculation of the directional summation with simultaneous frequency filtration will be performed at the level of Sberbank Group (analogous to calculation of R26). Sberbank's business plan requires strict compliance with the minimum admissible value of Bank of Russia throughout 2017.

As of January 1, 2017, Sberbank more than complies with both the maximum values of required liquidity ratios established by Bank of Russia and with the internal limits for liquidity risk metrics.

Compliance with liquidity requirements:

Liquidity requirements	Limit established by Bank of Russia	Critical value established by Sberbank	Value of the ratio as of the reporting date	
			2015	2016
Requirements for Sberbank				
N2	>15	>20	116.4	217.0
N3	>50	>55	154.4	301.6
N4	<120	<115	65.5	55.4
Requirement for the Group				
N26	≥70	≥75	—	101.7

Interest rate and currency risks of the banking book

Interest rate and currency risks of the banking book are the risks of Sberbank incurring financial losses under banking-book positions due to a negative change in interest rates and/or the spread between Sberbank's funding curve and the risk-free curve, foreign currency exchange rates, or prices for precious metals.

The main objectives of managing these types of risk are:
- Risk-return optimization
- Minimization of potential losses from fluctuations of interest rates and currency exchange rates at the risk level selected for each of the currencies[1]
- Strengthening of the interest margin regardless of market conditions
- Compliance with the requirements of Bank of Russia.

Interest rate risk of the banking book Sberbank assumes interest rate risk related to the effect of fluctuation of market interest rates and/or change in spread between Sberbank's funding curve and the risk-free curve on cash flows. Interest rate risk in the banking book includes:
- The interest rate risk arising due to maturity mismatches (repricing of interest rates) of assets and liabilities that are sensitive to changes in interest rates when they shift in parallel, changing the slope and shape of the yield curve
- The basis risk arising from a mismatch in the degree of change in interest rates of assets and liabilities that are sensitive to changes in interest rates with similar maturity (interest rate repricing period)
- Early repayment (interest rate revision) risk regarding assets and liabilities that are sensitive to interest rate changes

Currency risk of the banking book. The Group is exposed to currency risk on nontrading assets and liabilities or to currency risk of the banking book as a result of the influence of banking book operations on the open currency position (OCP). The main sources of currency risk of the banking book are:
- Operations for the creation and dissolution of provisions on loan debts in foreign currency
- Operations for loan restructuring with respect to change in the currency of a debt
- Income and expenses in foreign currencies

For the purpose of limiting the currency risk for Sberbank's divisions and individual participants of the Group, limits on the open currency position have been established.

The Treasury Office of the Bank consolidates the total open currency position of the Group and takes measures to reduce the open currency position on banking-book transactions on a daily basis.

[1] For the purposes of managing interest rate risk, different strategies are approved for main currencies proceeding from the possibility and cost of hedging and diversification of risk in those currencies.

To assess the interest and currency risks of the banking book, the Group mainly uses the following metrics:

- The interest gap reflects the overall time structure of changes in interest rates for all balance-sheet and off-balance-sheet items with a breakdown of the nominal volume of assets and liabilities by preset time intervals based on the periods of changes in interest rates subject to the clients' behavior or contractual terms.
- Sensitivity of net interest income enables the qualitative evaluation of possible influence of change in interest rates on net interest income.
- Regulatory OCP reflects the structure of open positions broken down by individual currencies for the Group and Group members, which is calculated as per the requirements of Bank of Russia.
- Economic OCP reflects the sensitivity of profit before taxes to change in currency positions.
- Economic capital required to cover the possible adverse effect on capital of change in interest rates and foreign exchange rates in a stress scenario.

Within the framework of interest rate risk management, a target position on interest rate risk in rubles and target values of the volumes and maturity structure of fixed assets and liabilities to ensure that the target interest position is achieved have been established as part of the business plan of Sberbank Group starting in 2016.

For 2016, as a result of implementation of a set of measures aimed at decreasing interest rate risk, Sberbank decreased sensitivity to change in interest rates in Russian rubles from -31.8 to -25.6 bln rubles.

To measure the interest rate risk, a standardized shock, in accordance with the recommendations of the Basel Committee, is used. Forecasting of possible changes in interest rates is carried out separately with respect to the ruble position and is aggregated by currency position.

Effect of shock changes in interest rates on annual net interest income of the Group

	Decline in interest rates		Growth of interest rates	
	2015	**2016**	**2015**	**2016**
Russian ruble				
Change in interest rates, b.p.	—400	—400	400	400
Change in net interest income, RUB mln	125,510	100,345	—125,510	—100,345
Turkish lira				
Change in interest rates, b.p.	—400	—400	400	400
Change in net interest income, RUB mln	28,157	20,637	—28,157	—20,637
US dollar				
Change in interest rates, b.p.	—200	—200	200	200
Change in net interest income, RUB mln	—12,983	—8,858	12,983	8,858
Euro				
Change in interest rates, b.p.	—200	—200	200	200
Change in net interest income, RUB mln	—4,988	—4,095	4,988	4,095

The change in the interest rate risk in Russian rubles is mainly explained by the replacement of state financing with the fixed-term funds of individuals and legal entities as well as by the increase of funds in banks. The change in the interest rate risk in US dollars is mainly explained by the reduction of the volumes of funds in banks and loans to legal entities.

The cumulative value of the Group's OCPs for the banking and trading books[1]

	2015			2016		
	US dollars	Turkish liras	Kazakhstan tenges	Euros	US dollars	Gold[2]
Open FX position , RUB mln	98,805	57,814	42,700	–21,958	17,998	–6 521
Open FX position, as % of equity	3.68	2.16	1.59	0.69	0.56	0.20

A major change in the open currency position of the Group is associated with the change in the method of calculating the net position for guarantees (bank guarantees), sureties, and letters of credit, which took place as a result of individual permission obtained by Sberbank from Bank of Russia.

Risk of market credit spread of the banking book

Risk of market credit spread of the banking book means the risk of a decrease in the regulatory capital due to a decrease in market prices of debt securities caused by change in the market appraisal of the credit quality of issuers of debt securities that are measured at their fair value and included in the composition of the banking book. In 2017, development of methods for assessing that risk and setting limits is planned.

Operational risk

Operational risk means a risk of losses that may be incurred by the Group as a result of any faults or errors in its internal processes or information systems, unauthorized/unlawful actions or errors of its employees, or any external events.

The operational risk management system is aimed at preventing such risk or maximally decreasing the threat of potential losses (direct and/or indirect) connected to internal process organization and external factors (events), measuring operational risk for the calculation of necessary regulatory and economic capital, and creating an adequate system of internal control.

[1] The table cumulatively shows the three biggest OCP values for the banking and trading books as calculated in accordance with Bank of Russia Regulation No. 509-P.

[2] Open foreign exchange positions as of January 1, 2017, for Turkish liras and Kazakhstan tenges amounted to —118 mln and 208 mln rubles, respectively; open foreign exchange positions for euros and gold as of January 1, 2016, amounted to —16,286 mln and 1,288 mln rubles, respectively.

The operational risk management process in the Group includes the following main stages:

- Identifying operational risk
- Evaluating operational risk
- Analyzing problem zones of processes and elaborating and adopting a decision on optimizing/changing the processes to reduce the level of operational risk
- Monitoring operational risk
- Controlling and/or decreasing operational risk

To perform the stages mentioned above, the Group has implemented such operational risk management tools as collection of internal data concerning losses caused by the materialization of operational risk incidents, self-appraisal of departments, and scenario analysis for operational risks.

Risk coordinators are appointed in all structural units of Sberbank and Group members from among the employees of the units whose functions include, in particular, interaction with operational risk divisions on matters of the identification, assessment, monitoring, and control of operational risk. In particular, risk coordinators report materialized incidents of operational risk and measure potential risks during self-appraisal.

To monitor operational risk, the Group uses a system of reports for the management and collective bodies involved in risk management processes. Operational risk reports are drawn up on a daily, monthly, and quarterly basis.

Data related to risk assessment and incurred losses helps identify risk concentration zones for the subsequent development of measures to mitigate the Group's risk. In 2016, Sberbank continued implementing risk mitigation activities. These activities are aimed both at changing the existing processes and technologies of transaction settlement and at improving the performance discipline of employees. The risk of theft of funds from clients' accounts, the risk of theft of self-service terminals and the cash in them, and the risk of employee errors during analysis of credit applications of corporate clients have been mitigated. The implementation status of measures and the level of residual risks are monitored regularly, both by business units and operational risk subdivisions and by the executives and collegial management bodies of Sberbank and Group members.

To prevent or/and decrease losses that arise from the materialization of operational risk events, the Group has developed and applies appropriate mechanisms and procedures such as overall regulation of business processes and procedures; delimitation of powers; internal control over compliance with the procedure established for operations and transactions and discipline with regard to limits; a complex of measures aimed at ensuring information security and business continuity; improvement of audit procedures and control over the quality of automated systems and the complex of hardware; property and asset insurance; improvement of employees' qualification at all organizational levels, etc.

Risk of losses due to a change in property value

Risk of losses due to a change in real estate value (the "real estate risk")means a risk of losses due to an unfavorable change in the value of the property owned by Sberbank Group.

The purpose of real estate risk management is to maintain an acceptable level of this risk limited by risk appetite and to minimize the losses of the Group associated with the materialization of this risk.

Property risk is assessed and capitalized within Sberbank's Capital Adequacy Assessment Process, thus ensuring that sufficient financial resources are available to Sberbank to cover possible losses in the case of the materialization of this risk. The key risk metric characterizing the level of real estate risk is economic capital, which is calculated using a mathematical and statistical method with a specified confidence factor for a one-year horizon.

The weight of this type of risk in the general structure of the Bank's economic capital remains stably low.

Legal Risk

Legal risk *i*s the possibility of the Group suffering financial losses, unplanned expenses or the possibility of a reduction of projected revenues as a result of:

- Inconsistency in internal regulations or organizational and administrative documents of Sberbank/a Group member with the requirements of legislation, legal acts, and law enforcement practice
- Failure to take into account (ignoring) judicial and law enforcement practice
- Deficiencies of the legal system (contradictory laws, lack of legal norms regulating certain issues arising in the activities of Sberbank)
- Legal errors made in carrying out activities (incorrect legal advice or improper preparation of contracts or Sberbank's internal documents)

The purpose of legal risk management is to ensure the conformity of the activities and products of Sberbank/Group members with the requirements of the law and law enforcement practice.

The main factors/events that can reinforce the impact and scale of legal risk are:

- Changes in legislation, the requirements of regulatory authorities, or judicial and law enforcement practice
- Inconsistency in judicial and law enforcement practice, regulatory collisions
- Complication of financial instruments and strategies and/or the mastering of new products and technologies

To support decision making and to respond in a timely manner to changes in the level of legal risk, the Group provides timely and standardized reporting of instances of the materialization of losses (damages) related to the materialization of legal risk, the current level of legal risk, the legal risk management level, or the current status of measures for minimizing legal risk.

The level of legal risk is compared with the data for previous reporting periods; when there are significant deviations, the reasons for the sharp increase or decrease in the corresponding figure are analyzed, and, if necessary, proposals for amending banking processes are prepared.

Compliance risk

Compliance risk means the risk of legal sanctions or sanctions of regulators, significant financial loss, or loss of reputation of Sberbank or other Group member as a result of their noncompliance with laws, regulations, rules, standards of self-regulatory organizations, or codes of conduct and ethical norms of business.

The main area of the activities of Sberbank and the Group members in compliance risk management are:

- Prevention of misuse of authority and corruption on the part of employees of Sberbank and Group members
- Prevention and settlement of conflicts of interest arising in the course of performance by Sberbank and Group members of their activities
- Counteracting money laundering and the financing of terrorism
- Compliance with license requirements and other regulatory requirements related to financial markets
- Providing for market conduct and fair competition when performing transactions on financial markets and prevention of unscrupulous business practices on financial markets (use of insider information, price manipulation, etc.)
- Compliance with economic sanctions and restrictions established by Russia as well as international organizations and individual countries
- Protection of the rights of clients, including as regards investment activities.

In elaboration of the above areas, Sberbank has developed and approved internal regulatory documents and introduced review procedures. Compliance control is organized systematically, involving all employees of Sberbank and participants of the Group, and it is performed continuously.

Among the key events in the field of compliance risk management in 2016 we can single out the following:

- A new organizational structure of the Compliance Department has been formed to optimize the work process by areas of compliance-related activity:
- additional control procedures have been implemented for the purpose of preventing involvement of Sberbank in processes of legalization (laundering) of proceeds from crime and financing of terrorism.
- A set of measures has been developed to bring Sberbank's activity into line with new legislation (including foreign laws in the financial markets that are of exterritorial effect).
- Additional procedures have been implemented in the field of the management of conflict of interest and countering corrupt practices in Sberbank, and Sberbank's Standards for Disclosure of Potential

Conflicts of Interest and Gift Treatment Procedures have been approved.
- Measures have been implemented to improve identification of the subjects of economic sanctions among Sberbank clients and to update the mechanisms of decision making for potential transactions (operations) directly or indirectly connected with the Islamic Republic of Iran.
- Training courses have been developed and updated by areas of compliance activity, and training has been organized within the framework of those courses for all Sberbank employees on a regular basis, including training in the “Compliance” advanced training course for Sberbank executives (middle and line management) through Sberbank Corporate University.
- The compliance risk level has been monitored, and the maturity of the compliance risk management system in the Sberbank Group has been evaluated.

Regulatory risk

Regulatory risk means a risk that arises if there is a possibility of enactment of any regulation that regulates an activity, operation, or business of the group and that has adverse financial or other consequences.

To create an effective process for managing regulatory risk, Sberbank has adopted internal regulations governing this process and provided for the minimization of regulatory risk with respect to the key draft regulations of Sberbank.

As part of the process of managing regulatory risk, Sberbank has regulated the activity of its officials and subdivisions with respect to preventing and reducing the likelihood of regulatory risk materializing. Sberbank has organized the process of internal interaction when preparing proposals to create a comfortable legal environment for conducting business and to minimize the consequences of detected regulatory risk.

Sberbank has a collegial advisory body, the Working Group on improvement of legislative control and creation of a favorable legal environment to provide for implementation of the Development Strategy. A consolidated position of Sberbank with respect to regulatory initiatives and draft laws bearing regulatory risks is being elaborated in the Working Group.

In 2016, Sberbank worked on forming a consolidated position for key regulatory areas in accordance with the plan of regulatory initiatives.

Tax risk

Tax risk is uncertainty as to the achievement of business goals as a result of the influence of factors associated with the taxation process, which may appear as financial losses or other adverse effects.

The goal of the Group in the area of tax risk management is to limit the negative effects of its implementation (fiscal, reputational, financial, and other) and ensure that members of the Group achieve their business goals in compliance with the requirements of tax laws.

As part of implementation of the development strategy, Sberbank has created a successfully functioning multilevel tax risk management system, which includes, among other things:

- Business tax support "from A to Z" (from a preliminary expert tax assessment of suggested transaction terms to defending the Bank's interest in tax agencies and in court)
- Implementation of internal control procedures for the purpose of prompt discovery and elimination of incorrect application of rules/fulfillment of requirements of laws on taxes and fees
- Discovery and elimination of internal sources of tax inefficiency that indirectly affect the tax load level and, as a result, Sberbank's achievement of set business targets: Processing of primary documents, automation of tax processes, synchronization of the pace of development of the tax function and Sberbank's business
- Continuous monitoring of legislative initiatives and interaction with supervisory, regulatory, and legislative bodies for the development and application of laws on taxes and fees

As of January 1, 2017, the general group processes of tax risk management have been implemented in all subsidiary banks and other consolidated members of Sberbank included in the system scope. Tax risk management is carried out independently by each Group member within the functions and authority assigned to such member and based on common requirements and procedures while taking into account the specific characteristics of its activities and the requirements of local regulators. Information on tax risks assumed at the level of each participant is transferred to the level of Sberbank as the parent organization of the Group through the reporting system.

Following the results of 2016, the current tax risk level in Sberbank and in the Group is within the limits ensuring compliance with the direct requirements of tax laws and retention of the tax reputation of each Group member.

Reputational risk

Reputational risk is the risk arising from the negative perception of Sberbank by its clients, counterparties, shareholders, investors, creditors, market analysts, or regulatory bodies. Reputational risk includes information risk—that is, the risk of an event in the information field of Sberbank occurring through mass communication channels and in social networks, resulting in damage to Sberbank. Information risks are considered probable events in the internal and external environment of Sberbank that have a negative impact not only on the security of information on the activities of Sberbank but also on its quality.

When assessing reputational risk, Sberbank uses the following indicators, a change in the values of which may give rise to reputational risk:

- A substantial change in the financial position of Sberbank, including its main balance-sheet indicators and figures in its Profit and Loss Statement, changes in the structure of the equity (capital) of Sberbank, and key financial indicators
- Dynamics of results obtained following opinion polls among target groups of clients, employees, social organizations and groups of citizens, shareholders and investors, government and executive bodies, etc.
- An increase (decrease) in the number of complaints and claims against Sberbank
- Frequency of failures in the operation of Sberbank's IT systems resulting in the lengthy unavailability of Sberbank's services for a large number of clients
- Negative and positive reviews and reports on Sberbank and its affiliates in the media compared to other banks over a specific period of time
- Detection of illegal actions with regard to Sberbank and its clients
- Changes in the business reputation of affiliates and counterparties of Sberbank
- External economic, political, branch-specific, and social events and trends that may produce a probable negative effect on Sberbank's activity
- Refusal by regular or major clients and counterparties to cooperate with Sberbank

All employees of Sberbank and members of the Group:

- Comply with the requirements of the applicable laws of Russia, instructions, rules, standards of self-regulatory organizations, established codes of conduct, and ethical standards of business adopted by Sberbank and members of the Group. The foreign members of the Group shall comply with the above to the extent not inconsistent with their local law
- Ensure organizational and technical implementation of reputational risk management procedures in accordance with the competence of the unit
- Interact with the Public Relations and Media Communications Office of the Marketing and Communications Department and the Investor Relations Division on implementing procedures and compliance with the requirements for reputational risk management

In Sberbank, the Information Space On-Line Monitoring Service was established and functions for the purpose of early monitoring of possible information risks, implementation of which may result in reputational risk. For employees of press centers, trainings for identification of a potential information risk and its minimization at early stages were held.

Strategic risk

Strategic risk – is the risk of the Group incurring losses in more than 1 year's time as a result of errors made when making decisions determining the development strategy. The errors may involve insufficient consideration of a potential hazard for the Group's activity, incorrect identification of promising lines of business where the Group could achieve a competitive position, or incomplete provision of resources and administrative decisions that should enable the achievement of strategic goals.

Business risk – is defined as the risk of losses that may be incurred by the Group in up to 1 year's time due to changes in the external environment, including changes in the Group's earning capacity, for example, because of a drop in sales or increased operating expenses.

In November 2013, a Sberbank Development Strategy was approved for the period of up to 2018. In developing the Strategy, possible scenarios for the development of the macroeconomic situation were analyzed, and a number of forecast scenarios for development of the Russian economy were elaborated, and the conditions for transition between them were defined.

The Development Strategy landmarks are based on an in-depth study of social, economic, and technological tendencies in Russia and worldwide, an analysis of the attractiveness of some business areas, and an evaluation of compliance of Sberbank's system with world standards.

Operationalization of the Development Strategy's objectives, analysis of the "gaps" between the current and target state, implementation of initiatives related to their elimination, as well as clarification of the tasks in the short term take place in each cycle of business planning implemented on the basis of three-year rolling planning with annual updating. When developing a business plan, special attention is paid to the analysis of Development Strategy implementation to ensure the attainment of the strategic objectives of the Group.

Though the current forecasts for Russia's economic development and banking sector development have worsened compared to the scenario considered during the development of the Strategy, fundamental global technological trends and expectations regarding clients' preferences did not suffer any significant changes. That means the main qualitative transformations set out in Sberbank's Strategy remain relevant and do not need to be revised.

On a regular basis, Sberbank and Group members evaluate the results of implementing the Development Strategy and attaining the targets set in the business plan. The analysis of deviations between actual and target indicators and the forecast of the strategy and business plan fulfillment subject to newly discovered circumstances are, among other things, the basis for decisions on adjusting the strategy or business plan, making it possible to reduce the potential adverse effect from strategic and business risks.

Model risk

Model risk arises from uncertainties (errors) of the results of models (including risk measurement models, models for assessing the value of securities and financial instruments, liquidity or ALM assessment models), including the risk of model parameters changing over the course of time.

The purpose of evaluating the model risk level is to ensure compliance of all quantitative risk assessment models used by the Group with the approved requirements as regards their quality, forecast accuracy, and stability.

The Group has established a procedure for validation of models used for model risk assessment. The purpose of validation is to assess the current effectiveness of the model versus its expected performance or to assess the change in model performance subject to the recommendations of the Basel Committee for Bank Supervision.

Model validation is a multistep process including an information/data gathering stage, model examination, validation sample preparation, and comprehensive analysis of the model resulting in a report stating shortcomings identified in the model and recommendations regarding possible solutions.

In the event of unsatisfactory validation results, recommendations for elimination of the model's shortcomings shall be formulated to improve risk assessment quality.

As of the end of 2016, 309 models (or 54% of the total number of models) had been validated, 62 of which required improvement (27 models of Sberbank and 35 models of subsidiaries and affiliates).

Herman Gref

CEO,
Chairman of the Executive Board