APPENDICES

Assessment of Clarity of Bank of Russia Monetary Policy Communication by Neural Network Approach

Alina Evstigneeva, *Bank of Russia*
Mark Sidorovskiy, *Bank of Russia*

Appendix 1. Popular statistical indicators for text

Textual level	Metric	Research
Syntactic	Average sentence length in words	Flesch (1948)
	Proportion of complex sentences	Golub and Kidder (1974)
	Average length of main clauses in complex sentences	Golub and Kidder (1974)
	Average length of subordinate clauses in complex sentences	Golub and Kidder (1974)
	Proportion of fixed phrases with prepositions on, in, by, for, at, out of, from, to, up	Golub and Kidder (1974)
	Proportion of sentences with gerund, participial, and adverbial phrases	Golub and Kidder (1974)
	Proportion of instances of the division of a verb phrase by minor parts of a sentence	vor der Brück et al. (2008)
	Average number of nouns in a sentence	Schwarm and Ostendorf (2005)
	Average number of verbs in a sentence	Schwarm and Ostendorf (2005)
	Average parse tree height	Schwarm and Ostendorf (2005); Pitler and Nenkova (2008)
	Average number of commas per sentence and punctuation density	Henry (1975); Sowmya (2015)
Lexical	Average word length in syllables/characters	Gray and Leary (1935); Flesch (1948)
	Proportion of multisyllabic words	Gunning (1952)
	Proportion of low-frequency/rare words, or, on the contrary, of the simplest and most frequent; proportion of words not in the dictionary of the simplest and most common words	Dale and Chall (1948); Howes and Solomon (1951); Chall and Dale (1995); Stenner (1996)
	Vocabulary diversity ratios including TTR and VocD (Vocabulary Diversity)	Lively and Pressey (1923); Templin (1957); Ure (1971); McKee et al. (2000)
	N-gram models	Si and Callan (2001)
	Age at which the word is typically learned (age of acquisition)	Sowmya and Meurers (2014)
	Proportion of words differing by one to two letters	François and Fairon (2012)
	Presence of abbreviations and acronyms	Pinker (2015); Barnett and Doubleday (2020)
	Passive voice	Newbold and Gillam (2010)
	Presence of foreign words	Imperial and Ong (2021)
	Number of entities/objects in the text	Feng et al. (2010)
Morphological	Part-of-speech tagging metrics: proportion of modal and possessive words, adverbs, etc.	Vogel and Washburne (1928); Golub and Kidder (1974)
	Proportion of words with suffixes	Hancke et al. (2012)
	Proportion of numeral adjectives/density of numbers in the text	Curto et al. (2015)
Phonetic	Penalties for the use of dissonant combinations of sounds (hissing, the use of several consonants in a row, the presence of vowels at the junction of words, etc.)	Ivanov (2013)
Semantic	Abstractness of the concepts used or, on the contrary, the ease of visualisation of information, the use of prepositional phrases	Lorge (1939); Graesser et al. (2014)
	Density of terms	McClusky (1934)
	Frequency of polysemantic words	Beinborn et al. (2014)

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Textual level	Metric	Research
Discursive	Word reaction time/reading speed	Mikk (1974); Petrova and Okladnikova (2009); Ribeiro et al. (2016)
	Lexical coherence of text: TF-IDF (Term Frequency–Inverse Document Frequency), LSA (Latent Semantic Analysis), SVD (Singular Value Decomposition)	Halliday and Hasan (2014); Foltz et al. (1998); François (2015)
	Deep coherence of text (integrity)	Graesser et al. (2014)
	Semantic load	Kemper (1983)
	Presence of dialogue in the text	Dolch (1948)
	Interactive style	Sheehan et al. (2013)
	Explanation of newly introduced concepts by the author of the text	Krioni et al. (2008)
	Lexical tightness	Flor et al. (2013)

Source: compiled by the authors

Appendix 2.
Selected textual characteristics and their calculation

Textual level	No.	Short name	Description	Calculation/extraction methodology
Syntactic (SYNT)	1	SenLen	Average sentence length in words	Number of words/number of sentences
	2	PTH	Average parse tree height per sentence	Average parse tree height/number of sentences
	3	SubCon	Average number of subordinating conjunctions per sentence	Number of subordinating conjunctions/number of sentences
	4	CoordC	Average number of coordinating conjunctions per sentence	Number of coordinating conjunctions/ number of sentences
	5	NP	Proportion of noun phrases on average per sentence	Number of noun phrases/ number of sentences
	6	VP	Proportion of verb phrases on average per sentence	Number of verb phrases/ number of sentences
	7	NUM	Average number of numbers per sentence	All numbers/number of sentences
	8	DiffSynt	Average number of sentences burdened with participles and verbal adverbs	Participles + verbal adverbs/ all sentences
	9	LSDaoust	Proportion of sentences longer than 25 words	Sentences longer than 25 words/ all sentences
	10	PPos	Average number of words before the subject or predicate per sentence	Words before the subject or predicate/ all sentences
	11	PrepR	Proportion of ':', '(', ')', and ';' among punctuation marks	Number of ':', '(', ')', and ';'/ all punctuation marks
	12	PassVerb	Average number of passive voice or reflexive words per sentence	All passive voice or reflexive words/ all sentences
Lexical (LEX)	13	AvWord	Average word length in characters	All letter characters/all words
	14	AbsWordAA	Proportion of words in the text outside the A2 (basic) list of the lexical minimum of the Ministry of Education and Science	Words outside the A2 list/all words
	15	AbsWordB	Proportion of words in the text outside the B1 (first certification level) list of the lexical minimum of the Ministry of Education and Science	Words outside the B1 list/all words
	16	LFW	Proportion of low-frequency words (conventionally terminology)	(Words with a frequency below 30% in the dictionary of Lyashevskaya and Sharov (2009) + words that are not in the dictionary)/all words
	17	TTR	Type Token Ratio	Number of word types/ number of tokens
	18	RootTTR	Root TTR	Number of token types/ root of the number of tokens
	19	CorrTTR	Corrected TTR	Number of token types/root of twice the number of tokens
	20	HTTR	Herdan Type-Token Ratio	Modification of the TTR metric using a logarithmic function (Herdan, 1960)
	21	STTR	Summer Type-Token Ratio	Modification of the TTR metric using a logarithmic function (Somers, 1966)
	22	MSTTR	Mean Segmental Type-Token Ratio	Modification of the TTR metric using segmentation (Johnson, 1944)
	23	MTLD	Lexical diversity	(McCarthy and Jarvis, 2010)
	24	Lex6	Proportion of words longer than six characters	Words longer than six characters/ all words
	25	Lex8	Proportion of words longer than eight characters	Words longer than eight characters/ all words
	26	Lex10	Proportion of words longer than ten characters	Words longer than ten characters/ all words
	27	Lex12	Proportion of words longer than 12 characters	Words longer than 12 characters/ all words
	28	VN	Proportion of verbal nouns	All verbal nouns/all words

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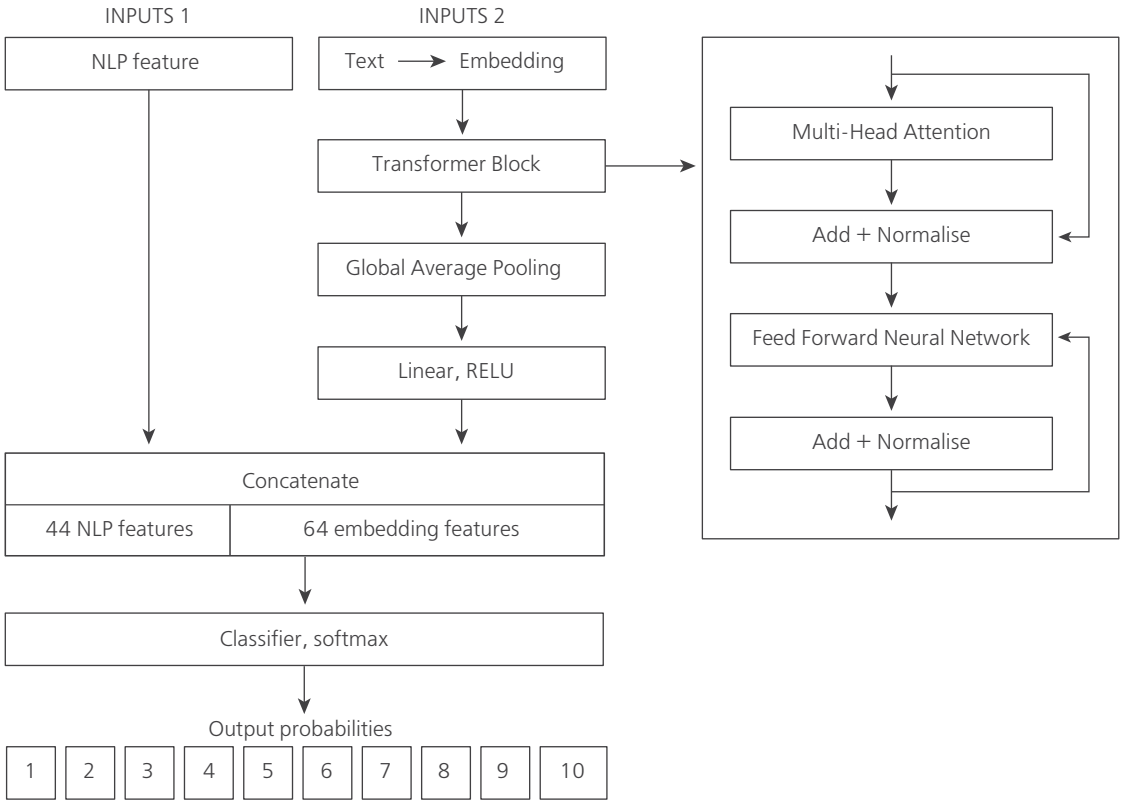
Textual level	No.	Short name	Description	Calculation/extraction methodology
Morphological + POS tagging (MORPH)	29	GenN	Proportion of nouns in genitive case	All nouns in genitive case/all nouns
	30	WLM	Average length of meaningful words[1] in morphemes	All morphemes of meaningful words according to Tikhonov's dictionary (2002)/all meaningful words
	31	POSN	Proportion of nouns	All nouns/all words
	32	POSV	Proportion of verbs	All verbs/all words
	33	POSAdj	Proportion of adjectives	All adjectives/all words
	34	POSA	Proportion of adverbs	All adverbs/all words
	35	POSPr	Proportion of pronouns	All pronouns/all words
Phonetic (PHON)	36	EuphInd	Euphonic Index based on Ivanov (2013)	The methodology is described in Section 2.1
Semantic (SEM)	37	AbsN	Proportion of abstract nouns	All abstract nouns (Mikk, 1981)/ all nouns
	38	Kanz	Weight of constructions with consecutive nouns ('noun strings'), which is one of the main indicators of 'officialese', as well as derivative prepositions	All cases of noun strings + derivative prepositions/all words
	39	Hedging	Weight of uncertainty markers	All uncertainty markers/all words (Hyland, 1998)
	40	WTR	Weight of 'wateriness' markers (stop words that do not carry significant meaning)	All 'wateriness' markers/all words
		Entit	Density of entities, or fixed concepts in the text	All entities/number of sentences
Discursive (DISC) and additional metrics	42	cohLSA	Average cosine similarity between the sentences	Sum of cosine similarities between each pair of sentences/ number of sentences
	43	ARI	Adapted ARI for economic texts in Russian on a scale from one to 10	ARI = 19.025 – 2.184 × average word length – 0.048 × average sentence length (Methodology is described in Section 3.1)
	44	DiscMar	Weight of discourse markers (non-semantic linguistic units)	Discourse markers/all sentences

Source: compiled by the authors

[1] Nouns, verbs, adjectives, or adverbs.

Appendix 3.
Architecture of transformer neural network



Source: specification of the model proposed in Vaswani (2017)

Appendix 4. Corpus Characteristics

Readability level	Number of years of education	Text user characteristics	Corpus composition	Examples of texts	Proportion of economic texts in the corpus, %	Average sentence length (in words)	Average word length (in characters)
10	One to three	Young schoolchildren	Literature for extra-curricular reading, 1st to 3rd grades	*The Cat's House* by Samuil Marshak *The Princess and the Pea* by Hans Christian Andersen *The Tale of the Golden Cockerel* by Alexander Pushkin	0	10.23	4.42
9	Four to six	Older primary school pupils	Literature for extra-curricular reading, 4th to 6th grades	*Alice in Wonderland* by Lewis Carroll *Gulliver's Travels* by Jonathan Swift *Christmas Eve* by Nikolai Gogol	0	11.96	4.88
8	Seven to nine	Middle school pupils	Literature for extra-curricular reading, 7th to 9th grades	*Jane Eyre* by Charlotte Bronte *Scarlet Sails* by Alexander Green *My Childhood* by Maxim Gorky	0	13.81	5.07
7	10 to 11	High school students	Literature for extra-curricular reading, 10th to 11th grades	*Fathers and Sons* by Ivan Turgenev *Oblomov* by Ivan Goncharov *Crime and Punishment* by Fyodor Dostoevsky	0	14.57	5.12
6	11 to 12	School graduates	News, blogs, podcasts, Telegram channels, modern entertainment literature, selected Wikipedia articles (comfortable reading zone for almost any modern adult, the main formats of daily information)	Rg.ru: *'Russians will be Able to Choose Which of the Vaccines to be Vaccinated With'* Tass.ru: *'To Riga with Katyusha. The Song can be Used as the Anthem of Russia at the World Championship'* Lenta.ru: *'The Schedule for the Unified State Exam Has Been Published'* Kp.ru: *'Weather Forecast for Spring'* *A Game of Thrones* by George R.R. Martin *Unclassified Materials* by Daria Dontsova	5	15.24	5.64
5	12 to 14	University students, as well as persons with vocational education (colleges and technical schools)	University textbooks common to all disciplines, popular science books, business literature, contemporary fiction	*The Birth of Complexity* by Alexander Markov *A Brief History of Time* by Stephen Hawking *The 7 Habits of Highly Effective People* by Stephen R. Covey	10	17.43	5.88
4	15 to 16	University graduates with non-economic specialities	More advanced academic literature, fundamental literature on social sciences and humanities, fincult.info website, popular economics blogs in 'personal finance' style	*Society as Object of Sociological Analysis* by Nikolai Vakhnin *The Ego and the Id* by Sigmund Freud *Russian History* by Boris Rybakov	15	18.62	6.05

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Readability level	Number of years of education	Text user characteristics	Corpus composition	Examples of texts	Proportion of economic texts in the corpus, %	Average sentence length (in words)	Average word length (in characters)
3	15 to 16	University graduates with economic specialities	Business media texts requiring special economic knowledge, textbooks on economic disciplines	*Capital* by Karl Marx *The General Theory of Employment, Interest and Money* by John Maynard Keynes *Macroeconomics* by Andrew Abel & Ben Bernanke Kommersant.ru: *'Sanctions Have a Stronger Impact Before, Not After'*	50	22.80	6.10
2	17 to 18	Masters or postgraduate students with economic specialities	Econs.online website, specialised economic and financial publications	Econs.online: *'EU Border Carbon Tax: a Challenge for the Russian Economy'* Banking Review magazine: *'Business Expansion From China'* Nbj.ru: *'It's "Game Over" for US Treasury Bonds'*	75	23.78	6.46
1	19+	Candidates and Doctors of Economics	Purely professional economic literature; laws regulating banking and financial markets and the economic sphere; monographs on macroeconomics and finance	*Increasing the Reliability of Assessing the Risk of Default by Companies on Issued Securities* by Maxim Boldyrev *Development of Methods for Simulation Modelling of Sample Statistical Procedures in Audit* by Aleksei Loginenkov Law *'On Banks and Banking Activities'*	100	32.14	7.80

Source: complited by the authors

Appendix 5.
Assessment of the transparency of the Bank of Russia according to the Dincer and Eichengreen index (2014)

Questions	2013	2014	2015	2016	2017	2018	2019	2020	2021[1]	Source
1. Political transparency	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	
(a) Is there a formal statement of the objective(s) of monetary policy, with an explicit prioritisation in case of multiple objectives? – No formal objective(s) = 0. – Multiple objectives without prioritisaton = 0.5. – One primary objective, or multiple objectives with explicit priority = 1.	1	1	1	1	1	1	1	1	1	Article 34.1 of Federal Law No. 86-FZ, dated 10 July 2002, 'On the Central Bank of the Russian Federation (Bank of Russia)'
(b) Is there a quantification of the primary objective(s)? – No = 0. – Yes = 1.	1	1	1	1	1	1	1	1	1	MPG[2]
(c) Are there explicit contacts or other similar institutional arrangements between the monetary authorities and the government? – No central bank contracts or other institutional arrangements = 0. – Central bank without explicit instrument independence or contract = 0.5. – Central bank with explicit instrument independence or central bank contract although possibly subject to an explicit override procedure = 1.	1	1	1	1	1	1	1	1	1	Article 1 of Federal Law No. 86-FZ, dated 10 July 2002, 'On the Central Bank of the Russian Federation (Bank of Russia)'
2. Economic transparency	**1.5**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	
(a) Is the basic economic data relevant for the conduct of monetary policy publicly available? (The focus is on the following five variables: money supply, inflation, GDP, unemployment rate, and capacity utilisation). – Quarterly time series for at most two of the five variables = 0. – Quarterly time series for three of the five variables = 0.5. – Quarterly time series for all five variables = 1.	1	1	1	1	1	1	1	1	1	Federal State Statistics Service data
(b) Does the central bank disclose the macroeconomic model(s) it uses for policy analysis? – No = 0. – Yes = 1.	0	0	0	0	0	0	0	0	1	The Bank of Russia website, Monetary Policy section
(c) Does the central bank regularly publish its own macroeconomic forecasts? – No numerical central bank forecasts for inflation and output = 0. – Numerical central bank forecasts for inflation and/or output published at less than quarterly frequency = 0.5. – Quarterly numerical central bank forecasts for inflation and output for the medium term (one to two years ahead), specifying the assumptions about the policy instrument (conditional or unconditional forecasts) = 1.	0.5	1	1	1	1	1	1	1	1	MPG/MPR[3]

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Questions	2013	2014	2015	2016	2017	2018	2019	2020	2021[1]	Source
3. Procedural transparency	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	
(a) Does the central bank provide an explicit policy rule or strategy that describes its monetary policy framework? – No = 0. – Yes = 1.	0	0	0	0	0	0	0	0	0	Policy rule is not disclosed
(b) Does the central bank give a comprehensive account of policy deliberations (or explanations in case of a single central banker) within a reasonable amount of time? – No or only after a substantial lag (more than eight weeks) = 0. – Yes, comprehensive minutes (although not necessarily verbatim or attributed) or explanations (in case of a single central banker), including a discussion of backward and forward-looking arguments = 1.	0	1	1	1	1	1	1	1	1	The statement of the Governor provides detailed explanations of the decision taken
(c) Does the central bank disclose how each decision on the level of its main operating instrument or target was reached? – No voting records, or only after substantial lag (more than eight weeks) = 0. – Non-attributed voting records = 0.5. – Individual voting records, or decision by single central banker = 1.	0	0	0	0	0	0	0	0	0	Voting results are not published
4. Policy transparency	**2**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	
(a) Are decisions about adjustments to the main operating instrument or target announced promptly? – No or only after the day of implementation = 0. – Yes, on the day of implementation = 1.	1	1	1	1	1	1	1	1	1	Press releases on the key rate (published since 2013)
(b) Does the central bank provide an explanation when it announces policy decisions? – No = 0. – Yes, when policy decisions change, or only superficially = 0.5. – Yes, always and including forwarding-looking assessments = 1.	1	1	1	1	1	1	1	1	1	Press releases on the key rate (published since 2013)
(c) Does the central bank disclose an explicit policy inclination after every policy meeting or an explicit indication of likely future policy actions (at least quarterly)? – No = 0. – Yes = 1.	0	1	1	1	1	1	1	1	1	The signal appeared in press releases on the key rate in 2014

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Questions	2013	2014	2015	2016	2017	2018	2019	2020	2021[1]	Source
5. Operational transparency	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	
(a) Does the central bank regularly evaluate to what extent its main policy operating targets (if any) have been achieved? – No or not very often (at less than annual frequency) = 0. – Yes but without providing explanations for significant deviations = 0.5. – Yes, accounting for significant deviations from target (if any); or, (nearly) perfect control over main operating instrument/target = 1.	1	1	1	1	1	1	1	1	1	MPR
(b) Does the central bank regularly provide information on (unanticipated) macroeconomic disturbances that affect the policy transmission process? – No or not very often = 0. – Yes but only through short-term forecasts or analysis of current macroeconomic developments (at least quarterly) = 0.5. – Yes including a discussion of past forecast errors (at least annually) = 1.	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	MPR, forecast errors are not commented
(c) Does the central bank regularly provide an evaluation of the policy outcome in light of its macroeconomic objectives? – No or not very often (at less than annual frequency) = 0. – Yes but superficially = 0.5. – Yes, with an explicit account of the contribution of monetary policy in meeting the objectives = 1.	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	MPR, monetary policy contribution is not commented
Total (maximum 15)	**8.5**	**11**	**11**	**11**	**11**	**11**	**11**	**11**	**12**	

Source: authors' estimations

[1] January to April 2021.

[2] MPG means Monetary Policy Guidelines.

[3] MPR means Monetary Policy Report.

Appendix 6.
Assessment of the transparency of the Bank of Russia according to the Al-Mashat et al. (2018) index

Questions	2013	2014	2015	2016	2017	2018	2019	2020	2021[1]	Source
Category A: Transparency about objectives	**1.5**	**2**	**2**	**3**	**3**	**3**	**3**	**3**	**3**	
A1. Is there a formal statement of the objectives of monetary policy emphasising the dual mandate (or multiple objectives), and that inflation is the primary objective? Is it easily accessible on the central bank's website? – Single inflation objective or multiple policy objectives without prioritisation = 0. – Inflation as the primary objective such that any other objective (output, etc.) cannot be inconsistent with the primary objective of anchoring inflation and inflation expectations = 1.	1	1	1	1	1	1	1	1	1	Article 34.1 of Federal Law No. 86-FZ, dated 10 July 2002, 'On the Central Bank of the Russian Federation (Bank of Russia)'
A2. Is the inflation target defined clearly? – No medium-term numerical target over a horizon of two-three years or more (hereafter medium term) = 0. – Inflation target defined as a 'tolerance' or 'control range' target = 0.5. – Inflation target defined as a well-defined point target. If a band is used, it is clearly communicated = 1.	0.5	1	1	1	1	1	1	1	1	MPG. In 2014, there was a clear statement of the target for the first time: 'near 4%'
A3. Might financial stability objectives override the primacy of the inflation (price stability) objective? If the central bank does not have a financial stability responsibility, it should be explicit that it uses the policy interest rate tool to affect financial conditions to the extent that it affects the output gap and hence achieving the inflation target. – The borderlines between the monetary policy and financial stability tools are unclear. This creates confusion about the primary objective of price stability = 0. – The central bank has both monetary policy and macroprudential tools and it is clear how the central bank adjusts its tools to achieve its monetary policy and financial stability objectives = 1.	0	0	0	1	1	1	1	1	1	The Bank of Russia website, Financial Stability section. In 2016, a separate instrument of macroprudential regulation appeared, the national countercyclical buffer
A4. Does the central bank use a loss function evaluation to show how well it has been doing in managing the short-run output-inflation tradeoff? – No = 0. – Yes = 1.	0	0	0	0	0	0	0	0	0	Not used
Category B: Transparency about the FPAS	**1.5**	**3.2**	**4.2**	**3.3**	**3.3**	**3.3**	**3.3**	**3.3**	**3.75**	
B1. Are the basic economic data relevant for the conduct of monetary policy publicly available in a downloadable format from the central bank's website (could also include links to other statistical agencies)? For example, data reported in the monetary policy reports should be made available on the website. – No database is publicly available = 0. – A minimal set of series is publicly available, output gap or other ways of measuring capacity utilisation, inflation, inflation expectations, wages, unemployment, and GDP = 0.5. – All series used in producing the MPR are published in a downloadable format, such as an Excel spreadsheet. These series include at least the seven series above (capacity utilisation (preferably the output gap), inflation, inflation expectations, wages, unemployment, and GDP) = 1.	0	0	1	0.5	0.5	0.5	0.5	0.5	0.5	MPR. Since 2016, the Bank of Russia has stopped publishing estimates of the output gap

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Questions	2013	2014	2015	2016	2017	2018	2019	2020	2021[1]	Source
B2. Is the core quarterly projection model (model used for policy-making) publicly available and documentation updated within the last 5 years? – No = 0. – Yes, in a 'working paper' format only, i.e., irreproducible = 0.25. – Yes, in a working paper and with code = 0.5. – Yes, in a working paper, with code, and web-based front-end to modify forecast assumptions = 1.	0	0	0	0	0	0	0	0	0.25	The Bank of Russia website, Monetary Policy section
B3. How transparent is the central bank about the reaction functions (or loss functions) that are used to compute the interest rate paths (or paths for other instruments when the policy rate is constrained by the ELB) in their regular projection exercises? Do the monetary policy reports include a reference to the core model documentation that has the reaction function or the loss function? – The central bank does not publish either the reaction function or the loss function = 0. – The central bank publishes the reaction function and/or loss function (with the coefficients) in an easily accessible place on the central bank's website = 1.	0	0	0	0	0	0	0	0	0	The model reaction function is not published by the Bank of Russia
B4. For what variables does the central bank publish a consistent endogenous instrument (e.g. policy rate) quarterly macroeconomic projection over a horizon of at least two years? – None = 0. – Inflation = 0.2. – Inflation and GDP growth = 0.4. – Inflation, GDP growth, and the endogenous interest rate path = 0.6. – Inflation, GDP growth, the endogenous interest rate path, and the output gap = 0.8. – Inflation, GDP growth, the endogenous interest rate path, the output gap, and the exchange rate = 1.	0	0.6	0.6	0.4	0.4	0.4	0.4	0.4	0.6	MPR. The output gap was published in 2014–2015. In 2021, the Bank of Russia began to publish a rate forecast
B5. Does the central bank regularly publish forecast densities (fan charts) to communicate forecast uncertainty? – No fan chart = 0. – Fan chart for inflation = 0.2. – Fan charts for inflation and GDP growth = 0.4. – Fan charts for inflation, GDP growth, and the endogenous interest rate – path = 0.6. – Fan charts for inflation, GDP growth, the endogenous interest rate path, and the output gap = 0.8. – Fan charts for inflation, GDP growth, the endogenous interest rate path, the output gap, and the exchange rate = 1.	0	0.6	0.6	0.4	0.4	0.4	0.4	0.4	0.4	MPR. A fan chart of the output gap was published in 2014–2015

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Questions	2013	2014	2015	2016	2017	2018	2019	2020	2021[1]	Source
B6. Is the underlying methodology constructing the forecast densities (fan charts) clear and easily accessible? For example, do the regularly published forecast densities (fan charts) reflect (i) monetary policy reaction to shocks (model-based stochastic simulations); (ii) historic experience (past forecast errors); (iii) judgment (e.g. magnitude of structural shocks versus measurement errors); and (iv) other constraints (e.g. effective lower bound)? – No fan chart, or the fan chart methodology is not explained = 0. – Fan charts published in all monetary policy reports and the methodology is clearly explained and/or links to a technical paper is provided = 1.	0	0	0	0	0	0	0	0	0	The fan chart methodology is not fully disclosed
B7. Does the central bank regularly publish an assessment of forecast revisions (decomposition of forecast changes vis-à-vis the previous forecast)? – No = 0. – For inflation only with a discussion of the underlying causes = 0.2. – For inflation and GDP growth with a discussion of the underlying causes = 0.4. – For inflation, GDP growth, and the endogenous interest rate path with a discussion of the underlying causes = 0.6. – For inflation, GDP growth, the endogenous interest rate path, and the output gap with a discussion the underlying causes = 0.8. – For inflation, GDP growth, the endogenous interest rate path, the output gap, and the exchange rate with a discussion the underlying causes = 1.	0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	This issue is raised in the Governor's statement
B8. Does the central bank publish alternative scenarios in their monetary policy reports to illustrate key risk(s) in the baseline forecast? – No alternative scenario = 0. – The major risk(s) is communicated in an alternative scenario(s) = 1.	1	1	1	1	1	1	1	1	1	MPG
B9. Do the monetary policy reports include historical data and forecasts for financial variables? Financial variables include long-term government bond yields, consumer lending rates, mortgage rates, equity prices, property prices, credit aggregates, corporate risky spreads (e.g. BAA-AAA bond yields), and credit standards (e.g. loan officer surveys). All data should be available in downloadable format. – No data or forecast of financial variables are available = 0. – Historical data on less than five of the above variables are available, and forecasts for less than five of the above variables are available = (0.1–0.9)*. – Historical data on five or more of the above variables are available, and forecastsf or five or more of the above variables are available = 1.	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	MPR. There are no less than five historical series published. In addition, a forecast of lending volumes is published

* For historical series, the central bank would be awarded 0.1 for each type of financial variables up to a maximum of 0.5. For forecast series, the central bank would be awarded 0.1 for each type of financial variables up to a maximum of 0.5.

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Continuation, Table starts on p. 115

Questions	2013	2014	2015	2016	2017	2018	2019	2020	2021[1]	Source
Category C: Transparency about policy process	**0.5**	**1**	**1**	**1**	**1**	**2**	**2**	**3**	**3**	
C1. Does the central bank publish a press statement immediately following the policy decisions? – The central bank does not publish a press statement immediately after the policy decisions = 0. – The central bank publishes press statements in the native language only = 0.5. – The central bank publishes press statements in English = 1.	0.5	1	1	1	1	1	1	1	1	Official translation of press releases appeared in 2014
C2. Is the policy decision explained at a press conference immediately after it is announced? Are the presentations available in English? – No = 0. – Yes, after all policy meetings, at pre-announced dates and times. The press conference with the Q&A session is webcasted and the recording is then made available on the website. The presentations are available in downloadable form only in the native language = 0.5. – Yes, after all policy meetings, at pre-announced dates and times. The press conference with the Q&A session is webcasted and the recording is then made available on the website. The presentations are available in downloadable form in English = 1.	0	0	0	0	0	0	0	1	1	A press conference has been held after every decision since 2020
C3. Does the central bank present its regular forecast updates with the Q&A session to journalists, analysts, and market participants? Are the presentations available in English? – No = 0. – Yes. The presentation and Q&A are available only in the native language = 0.5. – Yes. The presentation and Q&A are available in English = 1.	0	0	0	0	0	0	0	0	0	Announcements of meetings with analysts and market participants are available on the Bank of Russia website, in the Investor Relations section. Meeting records are not posted on the website
C4. Is there a public account of the policy deliberations ('minutes') published in less than one month after the meeting? – No = 0. – Yes, but condensed, non-attributed, and without voting results = 0.5. – Yes, detailed and with voting results on the main policy instrument. Contributions by individual MPC members and votes are not attributed = 0.75. – Yes, detailed and with voting results on the main policy instrument. Contributions by individual MPC members and votes are attributed = 1.	0	0	0	0	0	0	0	0	0	Not published
C5. Is the role of staff and policymakers in the baseline forecast process communicated clearly? – No. It is not clear how the forecast is constructed and is used in the decision making process = 0. – Yes. The ownership of the forecast and its role in the decision-making process is defined clearly = 1.	0	0	0	0	0	1	1	1	1	The Bank of Russia website, Monetary Policy section. 'Bank of Russia Key Rate Decision: Preparation Process and Communication' note

Table continued on p. 119

Continuation, Table starts on p. 115

Questions	2013	2014	2015	2016	2017	2018	2019	2020	2021[1]	Source
C6. Is the forecasting performance of the central bank reviewed at least once a year in the monetary policy reports or in a separate document? – No = 0. – Yes = 1.	0	0	0	0	0	0	0	0	0	The forecast is not evaluated
C7. When was the last time the central bank or the government held or invited an external evaluation of the policy framework and the FPAS, and made the results publicly available? – No evaluation in last five years = 0. – Either policy framework or FPAS evaluation in the last five years = 0.5. – Both policy framework and FPAS evaluation in the last five years = 1.	0	0	0	0	0	0	0	0	0	No evaluation has been carried out in the last five years
Total (maximum 20)	**3.5**	**6.2**	**7.2**	**7.3**	**7.3**	**8.3**	**8.3**	**9.3**	**9.8**	

Source: authors' estimations

[1] January to April 2021.

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