

FINANCIAL SECTOR ASSESSMENT PROGRAM

MONTENEGRO

TECHNICAL NOTE

FINANCIAL INFRASTRUCTURE

JANUARY 2016

This Technical Note was prepared in the context of a joint World Bank-IMF Financial Sector Assessment Program mission in Montenegro during September 2015 led by Alexander Pankov, World Bank and Peter Lohmus, IMF, and overseen by Finance & Markets Global Practice, World Bank and the Monetary and Capital Markets Department, IMF. The note contains technical analysis and detailed information underpinning the FSAP assessment's findings and recommendations. Further information on the FSAP program can be found at www.worldbank.org/fsap.



THE WORLD BANK GROUP
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Contents

	Page
I. Executive Summary	5
II. Introduction.....	25
III. Payment and Settlement Systems	26
A. Legal and regulatory framework	26
B. CBM Payment system.....	30
C. Retail payment systems and instruments	37
D. Government payments and receipts	40
E. Securities clearing and settlement systems	42
F. International remittances	51
G. Payment system oversight.....	54
H. Cooperation with stakeholders and other relevant authorities	56

Tables

Table 1: Recommended actions	15
Table 2: Volume and value of payments in 2014	31
Table 3: Daily operating schedule of the RTGS system	34
Table 4: Daily operating schedule of the DNS system	35
Table 5: Number of debit and credit cards with transaction volumes and value; and number of ATMs and PoS terminals.....	39
Table 6: Details of T bill auctions in 2014	43
Table 7: Details of T bill auctions in 2015	44

Figures

Figure 1: Overview of Payment Systems in Montenegro	30
Figure 2: Number of debit and credit cards	39

GLOSSARY

ATM	Automated Teller Machine
BCP	Business Continuity Plan
BIS	Bank for International Settlements
CBM	Central Bank of Montenegro
CBM law	Central Bank of Montenegro law
CDA	Central Depository Agency
CPMI	Committee on Payments and Market Infrastructure
CSD	Central Securities Depository
DNS	Deferred net settlement system
DR	Disaster Recovery
DvP	Delivery versus Payment
EU	European Union
FIFO	First-in-first-out
FMI	Financial Market Infrastructure
FSAP	Financial Sector Assessment Program
FSC	Financial Stability Council
FTP	File Transfer Protocol
IDL	Intraday Liquidity
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commissions
MoF	Ministry of Finance
MNSE	Montenegro Stock Exchange
MNE	Montenegro Transfers
MT	Message type
NPS	National Payments System
NPC	National Payment Council
OR	Operating Rules
PFMI	Principles for Financial Market Infrastructures
PKI	Public key infrastructure
POS	Point of Sale
PSD	Payment services directive
PSD2	Payment services directive2
PSDG	Payment Systems Development Group (of the World Bank)
PS law	Payment systems law
ROSC	Report on Observance of Standards and Codes
RPO	Recovery Point Objective
RSP	Remittance Service Provider
RTGS	Real time gross settlement system
RTO	Recovery Time Objective
SEC	Securities Exchange Commission
Securities law	Law on Securities

SSS	Securities Settlement System
STP	Straight Through Processing
SWIFT	Society for World-wide Interbank Financial Telecommunication
WB	World Bank

I. EXECUTIVE SUMMARY¹

1. **Payment and settlement systems play a crucial role in contributing to financial stability and containing systemic risk and the overall economic development of a nation.**

Payment and settlement systems are an essential tool for the effective implementation of monetary policy, and for the smooth functioning of money and capital markets. The efficient and smooth functioning of the payment and securities settlement systems facilitates the discharge of financial obligations and the safe transfer of funds, contributing to the stability of the financial system. It has been recognized by policy makers that providing access to safe and efficient payment systems with easy to use, safe and innovative payment instruments is a first step towards financial inclusion. Innovations in technology enable provision of retail payment services including remittances at a relatively low cost and need to be actively encouraged by policy makers for adoption in delivering payment services to the poorer and marginalized sections of society, which are very often under- or unserved. A wide and cost-effective range of payment instruments is essential for supporting customers' needs in a market economy as well as a fair and open retail payment system that enables access to the underserved segments of the population and provides them with affordable payment and remittance services.

2. The main components of the payments and settlements infrastructure in Montenegro are: (i) the integrated Central Bank of Montenegro (CBM) owned and operated payment system comprising the RTGS and DNS modules; and (ii) the Central Depository Agency (CDA) which is the central securities depository (CSD) and the securities settlement system (SSS) which is a joint stock company. Direct credit transfers are widely used in Montenegro as a retail payment instrument along with debit card payments. Montenegro has an interoperable ATM and PoS network, with the routing and settlement of transactions happening through international card schemes networks. The CBM has licensed a remittance services provider under the new Payment Systems Law (PS law) to offer remittance services in the country. Commercial banks also provide internet and mobile banking services to their customers with a few of the banks also enabling payments for e-commerce purchases over the internet.

Legal and regulatory framework

3. The legal framework for the payment and settlement systems and securities is quite sound in Montenegro. The framework legislation comprises the Central Bank of Montenegro law (CBM law); the Payment System law (PS law); and Law on Securities (Securities law). Other relevant legal statutes include: (i) Law on protection of competition; and (ii) Law on electronic signature, amongst others. The CBM law provides the CBM with sufficient powers to regulate and oversee payment systems, own and operate payment systems and securities settlement systems and also participate in other payment systems and license payment systems. The PS law provides a high degree of legal certainty for material aspects such as netting, finality and irrevocability and insolvency protection. Immobilization and dematerialization are defined in the Securities law, which however, does not define netting and

¹ This Technical Note has been prepared by Gynedi Srinivas, Senior Payment Systems Specialist, Payment Systems Development Group, Finance and Markets, World Bank.

finality, and does not provide for irrevocability and insolvency remoteness for securities transactions which have been settled in the securities settlement system. The Law on protection of competition prohibits any practices including contracts that prevent, restrict or distort competition in the relevant market and is applicable to all entities including money transfer operators and their agents licensed under the PS law in Montenegro by the CBM and can be deemed to bar any exclusivity arrangements. The Law on electronic signatures is wide in its scope and covers electronic payment orders.

4. CBM should take necessary measures to annul the ambiguity arising out of Article 3 – Negative scope, in the PS law. It should be clearly articulated in the law as to which of the provisions outlined in the negative scope are not applicable to payment and securities settlement systems. In addition, netting should be defined in more clear terms at a single place in the law preferably under “definitions”. It is understood that the CBM is already seized of this issue and is awaiting the formal adoption of the PSD2 Directive to initiate necessary measures in coordination with the Government.

5. In line with EU enlargement and accession, and the recommendations made in the European Commission Screening Report Chapter 9, the authorities should amend the existing laws to widen their scope and encompass other types of financial market infrastructures such as central counterparties and trade repositories, to take care of future requirements. As to which law should be amended, i.e. either the PS law or Securities law should be deliberated and decided upon by the authorities in consultation with EU officials and peer regulators.

6. The Securities law should be amended to provide a legal basis for netting, finality, and irrevocability of securities settlement transactions and insolvency protection.

CBM payment system

7. The CBM implemented integrated payment and settlement system comprises RTGS and DNS modules. The RTGS system is the systemically important payment system in Montenegro. The system is owned and operated by CBM and has been in operations since 2005 and is largely safe and efficient.

RTGS

8. The following risk mitigation measures are recommended to mitigate and minimise residual liquidity risk in the RTGS system:

- i. Introduce a system of automated transfer of balances from the reserve requirement account to the settlement account and vice versa in the RTGS system, to enable banks to use their liquid balances in the system effectively and optimize queue management;
- ii. Automate the IDL process to enable banks to obtain IDL immediately from the CBM;
- iii. Automate the work-flow processes between CDA and the CBM to enable straight-through processing of collateral lien and release;

- iv. Establish prudent valuation practices for collateral and develop haircuts that are regularly tested taking into account stressed market conditions. The haircut procedures should be independently validated at least annually;
- v. Provide a description of the gridlock resolution mechanism in the OR;
- vi. Study the intraday liquidity flows in the RTGS system to identify any lumpiness and in consultation with banks examine the feasibility of establishing throughput guidelines;
- vii. Eliminate the existing system of immediate rejection of payment transactions with priority 50 to 99. The system is inefficient as participants have to resend the transactions adding to their costs. All valid transactions irrespective of priority should be kept pending in the queue in the event of lack of adequate balances in the settlement account; and/or alternately, CBM may prescribe only one priority level to be used by the participants in the OR to avoid immediate rejection of transactions.

DNS

9. The following risk mitigation measures are recommended to mitigate and minimise liquidity and credit risk in the DNS system:

- i. Revise the operating rules and make it mandatory for banks to reserve balances in the settlement account for settling the net clearing files from the DNS system;
- ii. Eliminate the possibility of partial unwinding of payment transactions by revising the operating rules (OR) to make it mandatory for banks to reserve balances (as indicated above); and extend the facility of automated IDL (as and when developed) to participants with net debit positions to ensure that the net clearing file is settled;
- iii. Determine through stress tests the amount of liquid resources required to complete settlement in the event of default of the participant with the single largest credit exposure and provide for tackling such default scenarios in the OR.

10. The BCP for the CBM payment system should be drawn up at the earliest and implemented after the approval of the CBM management. The BCP should adopt a holistic approach and test the central system and the systems of participants as well. As part of the BCP, the RPO and RTO objectives should be established and tested as per prevalent international standards. The BCP should contain a call tree and a crisis management scenario system. The details of the BCP of commercial banks should be shared by the Banking Supervision department with the BCP department and IT department of the CBM. The DR site may be established at the earliest.

Retail payment systems and instruments

11. Cash is the most popular retail payment mode in Montenegro. The other retail payment instruments include credit and debit transfers, credit and debit cards. The settlement of credit and debit transfers of value of EUR 1,000 and above are settled directly in the RTGS system. Credit and debit transfers of value less than EUR 1,000 are also settled in central bank money in the RTGS on a net basis with the net clearing file being generated by the CBM's deferred net settlement (DNS) system. These lower value transactions can also be processed and settled in the RTGS system directly, subject to the participants paying higher

fees as compared to those of the DNS module. Card transactions are routed and settled through the international card schemes networks in commercial bank money. There is an interoperable ATM and PoS network. Some of the ATMs are multifunctional allowing payment of utility bills and mobile top-ups. Internet and mobile banking (accessing bank account through mobile) are provided by a few banks. Some banks allow inter-bank and e-commerce transactions, while most of the banks facilitate balance enquiries and intra-bank transfers online.

12. CBM should start the process of data collection on the various retail payment instruments and their usage in Montenegro, which is currently very minimal. Data templates should be designed to capture the data on the number of credit and debit transfers that are processed and settled in the DNS system. Similarly banks should also be asked to provide break-up details on how many of these transfers (credit and debit) are initiated electronically and how many paper based. Data on usage of cards (credit and debit) at ATMs and PoS terminals should be collected. In addition, while data is available on the number of credit and debit cards issued, there is no data available currently on the number of active² debit and credit cards. Data on online transactions (internet and mobile based) and card not present transaction (i.e. mainly the use of cards for payments over the internet) should also be collected. Data on debit transfers and card frauds (differentiated by card-present and card-not-present fraud), ATM and PoS terminal downtimes and complaints relating to internet and mobile banking should also be collected. Data on interchange fees could also be collected. CBM as a measure of transparency and in line with Article 28 of the PS law, provides data on tariffs relating to retail payment products of all providers.

13. A detailed analysis of the data should be carried out and the results should be shared and discussed with all stakeholders to arrive at a comprehensive national strategy to encourage electronic modes of retail payments.

Government payments and receipts

14. In accordance with Article 41 of the CBM law, the CBM acts as the depository and banker for government bodies and organizations. All government payments and receipts are made, processed and settled only through the CBM RTGS system with a differentiated lower fee structure on par with DNS transaction fees. All government payments and receipts are routed only through the accounts held at the CBM. Payments to the Government are largely made in cash by both legal entities and natural persons. Government social entitlement payments, vendor and salary payments are invariably credited to recipients' bank accounts. The only exceptions are pension payments, which can be drawn by pensioners in cash from the post offices.

15. It is recommended to set up a working group comprising the MoF, CBM, banks and other relevant stakeholders such as the Post Office and Agency for Electronic Communication and Postal Services to examine and draw up an action plan for facilitating greater use of electronic payment means for both Government payments

² Cards could be deemed active say for example if they are used at least once a month.

(G2P³) and receipts (PandB2G⁴). The working group could also study whether the capabilities of the e-services portal could be enhanced to enable payment of taxes and duties to the Government. In addition, such a working group should explore the feasibility of Post Offices providing payment accounts (as defined under the PS Law) to citizens of Montenegro, and integrating the postal system with the retail payments infrastructure in the country by enabling it to become a licensed entity under the PS Law or by allowing it to access the CBM payment system as an indirect participant. As the postal network is widespread throughout the country, such a step would enable citizens to open payment accounts with Post Offices to carry out their payment transactions, foster a savings culture and would be a stepping stone in greater financial inclusion in Montenegro.

Securities clearing and settlement systems

16. Article 42 of the CBM law designates CBM as the fiscal agent of the Government responsible for providing services “with regard to securities issued by Montenegro, including the registration thereof, the payment of principal, interest and other securities-related expenses, and perform other related services”. Government securities comprise treasury bills of maturities of 28, 56, 91, and 182 days and bonds. The CBM is associated only with the issuance of T bills and not Government bonds which is handled solely by the MoF. All Government securities are dematerialized and are held in the accounts of beneficial owners with the CDA. Clearing and settlement of trades in Government securities is undertaken by the CDA as the sole SSS in the country.

17. Corporate securities are listed and traded on the MNSE and cleared and settled through the CDA. The CDA is the sole CSD and SSS for government and corporate securities in Montenegro and all securities transactions are settled on a DvP basis.

18. Detailed information on the various categories of government bonds and the process of their issuance should be published by the MoF. The website of the MoF does not provide any details and there is very little information in the public domain and the references that were available were only from the MNSE website.

19. The CDA as an SSS should compile and publish data on the clearing and settlement of government securities transactions using standard data templates and terminology for both the primary and secondary market segments. As indicated above, very little information is available and the references were to data from the MNSE reports, with various data elements not being clearly defined. As an example, reference is drawn to the Table on Page 4 of the MNSE Annual Report⁵. In the absence of a defined methodology, it is not very clear whether the turnover data in the Table indicates the total value of transactions settled during the year, and what is meant by number of shares and volume.

³ G2P: Government to Persons

⁴ PandB2G: Person and Business to Government

⁵ <http://www.mnse.me/upload/documents/2014/Bilteni/Annual%20bulletin%202014.pdf>

20. The integrity check of the balances of securities in the CDA should be reinforced with an audit process and the audit reports should be placed before the Board of CDA and also shared with the SEC. The periodicity of the audit may be decided in consultation with the SEC.

21. The amount in the guarantee fund mechanism should be stress tested for its adequacy to tackle any default during normal and stressed market conditions. While it could be argued that as the rules provide for settling transactions on a DvP 1 basis (if the net cash debit position of the participants exceeds 50 percent of the guarantee fund in the DvP model 2 framework), and therefore the amount in the guarantee fund is adequate, it should be noted that there is no assurance that such transactions would settle in the DvP 1 mode either. This could result in a significant proportion of failure to settle trades and impair the efficiency of the securities settlement process.

22. The CDA should closely monitor and compile data on all settlement failures in DvP 1 and DvP 2 models and share the same with SEC.

23. To mitigate operational risk and to ensure the continued smooth settlement of secondary market transactions in the CDA, the trading platform of MNSE should have alternate back-up arrangements. Currently there are no such BCP arrangements in place. In addition, the FTP channel for transmission of trade details between the MNSE and the CDA should be encrypted.

24. The BCP being prepared by CDA should adopt a holistic approach and take into account the interdependencies between it and the CBM and MNSE.

International remittances

25. Cross-border inward remittances to Montenegro grew from Euro 37.9 million in 2013 to Euro 39.1 million in 2014. Cross-border inward remittances contributed to a little over 1 percent of the GDP⁶ of Montenegro in 2014. Currently, the sole dedicated remittance services provider⁷ in Montenegro is Montenegro Transfers⁸ (MNE transfers). MNE Transfers has been licensed by the CBM in March 2015, under Article 72 of the PS law as a payment institution authorized to provide money remittance services, with remittances being defined as a payment service under Article 2 of the PS law. It is authorized to both receive and send cross-border remittances⁹. MNE Transfers is an agent of Western Union in Montenegro. MNE

⁶ The GDP of Montenegro in 2014 was Euro 3.45 billion; Source: Statistical Office of Montenegro at http://www.monstat.org/userfiles/file/GDP/2015/godisnji%20BDP%202014_engleska%20ver.pdf

⁷ License has been issued by CBM to RIA Transfers as a payment institution to provide money remittance service. The entity recently licensed is yet to commence operations.

⁸ Prior to the enactment of the PS law, MNE transfers was operating as EKI Transfers in Montenegro with headquarters in Belgrade.

⁹ It is understood from the discussions with CBM, that the segment of cross-border “remittance” market, representing repetitive, low-value transfers by migrant workers to their families in a different country is totally serviced by MNE transfers in Montenegro.

Transfers operates only a cash-in (origination) and cash out (destination) service with all inward remittances being paid to beneficiaries in cash.

26. Policy measures need to be put in place by the Central Bank of Montenegro to target cross-border inward remittance proceeds being deposited in payment accounts as a first step towards greater financial inclusion in Montenegro. Illustratively, the percentage of adults with an account at a financial institution in Montenegro is only 59.8 percent¹⁰, as compared to 67 percent for Western Balkans, 70.4 percent for upper middle income countries and 94 percent for the Euro area. Currently, all remittance proceeds are paid out to beneficiaries in cash by the remittance service provider, even though the beneficiary may have a bank account. Given the fact, that Montenegro received 39 million Euro as inward remittances, the potential to encourage savings is significant and is beneficial to the national economy as a whole and to the balance of payments situation.

27. It is strongly recommended that CBM obtain an expert legal opinion on the definition of Money remittances as provided under Article 9 (7) of the PS law and the corresponding provisions in PSD, as to whether it precludes remittance service providers from crediting a beneficiary's account with the remittance proceeds. The definition while mentioning that there is no requirement for either the payer or payee to have an account does not expressly debar remittance proceeds being credited to an account of the beneficiary.

28. Oversight and supervision over MNE Transfers should be initiated at the earliest. Discussions with CBM and MNE Transfers has revealed that no oversight either on-site inspection or off-site data collection and monitoring or supervision has been carried out, since MNE Transfers began its operations. Illustratively, as part of off-site monitoring, MNE Transfers should be asked to provide details regarding: (i) amount deposited as collateral; (ii) adequacy of the amount of collateral deposited to cover both inward and outward remittance flows; (iii) an auditor's certificate certifying the adequacy of collateral taking into account for example the average drawings in the account say for a period of 4 to 5 days; (iv) indicate the frequency of the revisions in the collateral amount based on remittance flows; (v) data on the volume and value of remittances sent/received; (vi) details regarding which countries are sending/receiving remittances to and from Montenegro and (vii) data on number of agents and agent locations etc.

Payment system oversight

CBM

29. Chapter IV of the newly enacted PS law provides the necessary powers to the CBM to exercise oversight over all payment and settlement systems in the country operated by any entity. An oversight division has been constituted in April 2011, in the department for financial stability, research and statistics. In line with international best practices, the oversight division is distinct from the payment systems department, though both

¹⁰ Source: Global Findex Database, World Bank, 2014

report to the Vice-Governor for financial stability and payment systems. This arrangement prevents any potential conflict of interest in the discharge of the oversight function. The oversight division has 3 staff members.

30. To achieve the stated objective of regulating, supervising, and monitoring payment, clearing, and settlement systems as laid down in the PS law, the oversight division in the CBM needs to be strengthened with adequate trained human resources The existing staff (as well as other staff members) in the Division should be trained on oversight activities which should include: (i) developing an understanding of the PFMI and the self-assessment methodology; (ii) electronic retail payment system developments and instruments including credit and debit transfers, cards, e-money, internet and mobile banking etc. It is understood that the Banca d'Italia and De Nederlandsche Bank are extending technical assistance to the CBM on oversight.

31. It is recommended to establish an internal cooperation and coordination framework within the various departments in CBM and the Oversight division, for ensuring the continued safe and efficient functioning of the CBM payment system. Illustratively, the oversight division receives only monthly reports on the functioning of the CBM payment system. It does not receive any daily reports: (i) on the functioning of the system including any changes to operating hours; (ii) the value and volume of transactions settled; (iii) the liquidity flows in the system including queue management, etc. The oversight division is not associated nor are its inputs sought on any changes to the financial and operational risk management measures for the CBM payment system. To mitigate these circumstances, it is necessary that the CBM adopts a coordinated strategy to harness all resources within the CBM.

32. The oversight division should frame an oversight policy which would provide the overarching principles for the oversight function in CBM in consonance with the PS law and the new regulation on oversight through a consultative process and publish the same. Typically, such a policy framework should outline the public policy objectives of oversight, the standards adopted by the central bank for the conduct of its oversight, the scope of the oversight, the oversight activities and tools; and underline the need for cooperation with other regulatory authorities.

33. Off-site monitoring activities such as data collection and obtaining reports should be established. As far as feasible electronic data collection modes should be utilized to reduce regulatory costs and burdens on the overseen entities. The CBM should strive to publish more detailed information on the payment and settlement systems in the country – both in the large value and retail spheres including the use of both paper and electronic payment instruments, e.g. in the form of regular oversight reports.

34. On-site inspection in cooperation with other departments within CBM should be established. On-site inspection should be undertaken in coordination with other departments within to enable effective utilization of resources such as IT and audit for example.

35. An assessment of the CBM payment system using the PFMI as the benchmark and adopting the framework provided by the Disclosure Framework and the Assessment

Methodology should be undertaken. The completed Disclosure Framework should be publicly disclosed.

SEC

36. The SEC's responsibilities as spelt out in Article 8 of the Securities law include amongst others the powers to license and approve relevant acts of securities markets, authorised market participants and Central Depository Agency and undertake measures to support the operation of an orderly, fair and properly informed securities market. Amongst other powers in the Securities law, the SEC has powers to conduct both off-site monitoring and on-site inspections over all licensed entities. As part of its oversight activities over the CDA, the SEC obtains periodical and annual reports from the CDA regarding all its activities as a CSD and SSS. The reports include information on governance issues (Board of directors); capital; IT; human resources; operations as a CSD; clearing and settlement activities as an SSS. The information pertaining to clearing and settlement comprises the volume and value of settled transactions in the primary and secondary market; and details of members settled trades as buyers and sellers. SEC also undertakes onsite inspections of CDA, which largely focuses on staffing and IT resources.

37. The SEC should also formally adopt the PFMI and publicly disclose the same. The SEC should use the Principles for performing its oversight over the market infrastructure – the CDA to ensure its safe and efficient functioning as a CSD and SSS.

38. The SEC should mandate the CDA to undertake a self-assessment using the PFMI as the benchmark. The self-assessment should be carried out by the CDA using the Assessment Methodology and the completed self-assessment should be reviewed by the SEC. On completion of the review, the SEC should encourage the CDA to complete the Disclosure Framework and publicly disclose the same.

39. The SEC should train its human resources for undertaking oversight activities under the PFMI framework.

Cooperation with stakeholders and other relevant authorities

40. The PS law and the Securities law contain provisions relating to cooperation between regulatory authorities in Montenegro and other relevant cross-border jurisdictions. Complementing these two laws, is the Law on Financial stability, which establishes a Financial Stability Council (FSC) in Montenegro. The FSC is chaired by the Governor of the CBM and has as its members, the Minister of Finance, President of the SEC and President of the Insurance Supervisory Agency. The FSC meets on a quarterly basis and if required on an ad-hoc basis as well depending on need. The scope of work of the FSC is to ensure coordination and exchange of data and information among the competent regulatory bodies to identify risks, prepare contingency plan to tackle any crisis to ensure financial system stability. As to whether the scope includes any analysis and policy recommendations on financial and operational risks in the area of payment and settlement systems and securities settlement systems and their impact on financial system stability in Montenegro, is not very

well spelt out. The Financial Stability Report produced by the CBM does contain a chapter on payment systems, but this is largely devoted to the CBM payments system and deals mainly with the availability of the system and the volume and value of transactions that are processed and settled. There is no permanent consultative stakeholder body such as an NPC in Montenegro.

41. It is recommended that in the meetings of the FSC an agenda item relating to payment and settlement systems including securities settlement systems is included to deliberate on the financial and operational risks and their impact on the overall safety and efficiency of the payments and securities settlement systems. This would enable the FSC to deliberate upon the developments and provide policy directions for the safe and efficient functioning of payment and settlement systems including securities settlement systems in line with international standards and contribute to the overall stability of the financial system.

42. Coordinated and consultative efforts by the authorities and market participants are needed to increase the use of electronic transactions. This could be achieved through the establishment of a National Payments Council (NPC), which should be headed by the Governor or Vice-Governor of the CBM and comprise all relevant stakeholders, including regulators,¹¹ MOF, market infrastructures such as the CDA, representation from the supply side (including entities licensed by CBM to offer payments services) and the demand side (e.g. corporate and consumer representatives) in Montenegro. The NPC could be structured as an informal body in the initial stages and could be formalised at a later date. Such a body should be tasked with preparing a strategic and holistic national payment system (NPS) strategy supported by an action plan with defined timelines for the modernization and development of payment and settlement systems in line with international standards. Devoted working groups could also be established under the aegis of the NPC for example to facilitate greater use of electronic payment means for both Government payments and receipts and using the post office network more effectively (as outlined in Paragraph 104). Illustratively, this NPS strategy could focus on measures (i) to facilitate transaction accounts for all citizens, greater usage of (debit and credit) card, and interoperability of e-money products; (ii) to promote online payments through the internet and mobile with adequate security measures; (iii) to deepen the PoS infrastructure; (iv) to rationalize the fee structure; and (v) to leverage the existing payment infrastructure to promote retail electronic payment products.

43. It is also recommended that CBM and SEC establish cross-border cooperation with peer regulators in the area of payments and securities settlement systems, along the lines of cooperation established in the area of banking supervision. Such cooperation could span both large value and retail payment and settlement systems and in the case of securities settlement systems include both corporate and government securities.

¹¹ Securities and Exchange Commission and Montenegro Agency for Electronic Communications and Postal services.

Table 1: Recommended actions

Pillar	Recommendation	Priority and timeline
1. Legal framework	CBM should take necessary measures to annul the ambiguity arising out of Article 3 – Negative scope, in the PS law. It should be clearly articulated in the law as to which of the provisions outlined in the negative scope are not applicable to payment and securities settlement systems. In addition, netting should be defined in more clear terms at a single place in the law preferably under “definitions”. It is understood that the CBM is already seized of this issue and is awaiting the formal adoption of the PSD2 Directive to initiate necessary measures in coordination with the Government.	High priority/Medium term
1. Legal framework	In addition, in line with EU enlargement and accession, and the recommendations made in the European Commission Screening Report ¹² Chapter 9, the authorities should amend the existing laws to widen their scope and encompass other types of financial market infrastructures such as central counterparties and trade repositories, to take care of future requirements. As to which law should be amended, i.e. either the PS law or Securities Law should be deliberated and decided upon by the authorities in consultation with EU officials and peer regulators.	Medium priority/Medium term
1. Legal framework	The Securities law should be amended to provide a legal basis for netting, finality, and irrevocability of securities settlement transactions and insolvency protection.	High priority/Short term
2. CBM payment system - RTGS	Introduce a system of automated transfer of balances from the reserve requirement account to the settlement account and vice versa in the RTGS	High priority / Short term

¹² http://ec.europa.eu/enlargement/pdf/montenegro/screening_reports/screening_report_montenegro_ch09.pdf

	system, to enable banks to use their liquid balances in the system effectively and optimize queue management;	
2. CBM payment system - RTGS	Automate the IDL process to enable banks to obtain IDL immediately from the CBM;	High priority / Medium term
2. CBM payment system - RTGS	Automate the work-flow processes between CDA and the CBM to enable straight-through processing of collateral lien and release;	High priority / Medium term
2. CBM payment system - RTGS	Establish prudent valuation practices for collateral and develop haircuts that are regularly tested taking into account stressed market conditions. The haircut procedures should be independently validated at least annually;	High priority / Medium term
2. CBM payment system - RTGS	Provide a description of the gridlock resolution mechanism in the OR;	Medium priority / Medium term
2. CBM payment system - RTGS	Study the intraday liquidity flows in the RTGS system to identify any lumpiness and in consultation with banks examine the feasibility of establishing throughput guidelines;	Medium priority / Medium term
2. CBM payment system - RTGS	Eliminate the existing system of immediate rejection of payment transactions with priority 50 to 99. The system is inefficient as participants have to resend the transactions adding to their costs. All valid transactions irrespective of priority should be kept pending in the queue in the event of lack of adequate balances in the settlement account; and/or alternately, CBM may prescribe only one priority level to be used by the participants in the OR to avoid immediate rejection of transactions.	High priority / Short term
2.1 CBM Payment system - DNS	Revise the operating rules and make it mandatory for banks to reserve balances in the settlement account for settling the net clearing files from the DNS system;	High priority / Short term
2.1 CBM Payment system - DNS	Eliminate the possibility of partial unwinding of payment transactions by revising the OR to make it mandatory for banks to reserve balances (as indicated above); and extend the facility of automated IDL (as and when developed) to participants with net debit positions to ensure that the net clearing file is settled;	High priority / Short term
2.1 CBM Payment system - DNS	Determine through stress tests the amount of liquid resources required to complete settlement in the event of default of the participant with the single	High priority / Medium term

	largest credit exposure and provide for tackling such default scenarios in the OR.	
3. Retail payments	CBM should start the process of data collection on the various retail payment instruments and their usage in Montenegro, which is currently very minimal. Data templates should be designed to capture the data on the number of credit and debit transfers that are processed and settled in the DNS system. Similarly banks should also be asked to provide break-up details on how many of these transfers (credit and debit) are initiated electronically and how many paper based. Data on usage of cards (credit and debit) at ATMs and PoS terminals should be collected. In addition, while data is available on the number of credit and debit cards issued, there is no data available currently on the number of active ¹³ debit and credit cards. Data on online transactions (internet and mobile based) and card not present transaction (i.e. mainly the use of cards for payments over the internet) should also be collected. Data on debit transfers and card frauds (differentiated by card-present and card-not-present fraud), ATM and PoS terminal downtimes and complaints relating to internet and mobile banking should also be collected. Data on interchange fees could also be collected. CBM as a measure of transparency and in line with Article 28 of the PS law, provides data on tariffs relating to retail payment products of all providers.	High priority / Short term
3. Retail payments	A detailed analysis of the data should be carried out and the results should be shared and discussed with all stakeholders to arrive at a comprehensive national strategy to encourage electronic modes of retail payments.	High priority / Short term
4. Government payments	It is recommended to set up a working group comprising the MoF, CBM, banks and other relevant stakeholders such as the Post Office and Agency for Electronic Communication and Postal Services to examine and draw up an action plan for facilitating greater use of electronic payment means for	High priority / Short term

¹³ Cards could be deemed active say for example if they are used at least once a month.

	both Government payments (G2P ¹⁴) and receipts (PandB2G ¹⁵). The working group could also study whether the capabilities of the e-services portal could be enhanced to enable payment of taxes and duties to the Government. In addition, such a working group should explore the feasibility of Post Offices providing payment accounts (as defined under the PS Law) to citizens of Montenegro, and integrating the postal system with the retail payments infrastructure in the country by enabling it to become a licensed entity under the PS Law or by allowing it to access the CBM payment system as an indirect participant. As the postal network is widespread throughout the country, such a step would enable citizens to open payment accounts with Post Offices to carry out their payment transactions, foster a savings culture and would be a stepping stone in greater financial inclusion in Montenegro.	
5. Securities settlement systems – <i>Government and corporate securities</i>	Detailed information on the various categories of government bonds and the process of their issuance should be published by the MoF. The website of the MoF does not provide any details and there is very little information in the public domain and the references that were available were only from the MNSE website.	High priority / Short term
5. Securities settlement systems – <i>Government and corporate securities</i>	The CDA as an SSS should compile and publish data on the clearing and settlement of government securities transactions using standard data templates and terminology for both the primary and secondary market segments. As indicated above, very little information is available and the references were to data from the MNSE reports, with various data elements not being clearly defined. As an example, reference is drawn to the Table on Page 4 of the MNSE Annual Report ¹⁶ . In the absence of a defined methodology, it is not very clear whether the turnover data in the Table indicates the total value of transactions settled during the year, and what is meant by number of shares and volume.	High priority / Short term

¹⁴ G2P: Government to Persons

¹⁵ PandB2G: Person and Business to Government

¹⁶ <http://www.mnse.me/upload/documents/2014/Bilteni/Annual%20bulletin%202014.pdf>

5. Securities settlement systems – <i>Government and corporate securities</i>	The amount in the guarantee fund mechanism should be stress tested for its adequacy to tackle any default during normal and stressed market conditions. While it could be argued that as the rules provide for settling transactions on a DvP 1 basis (if the net cash debit position of the participants exceeds 50 percent of the guarantee fund in the DvP model 2 framework), and therefore the amount in the guarantee fund is adequate, it should be noted that there is no assurance that such transactions would settle in the DvP 1 mode either. This could result in a significant proportion of failure to settle trades and impair the efficiency of the securities settlement process.	High priority / Medium term
5. Securities settlement systems – <i>Government and corporate securities</i>	The CDA should closely monitor and compile data on all settlement failures in DvP 1 and DvP 2 models and share the same with SEC.	High priority / Medium term
5. Securities settlement systems – <i>Government and corporate securities</i>	To mitigate operational risk and to ensure the continued smooth settlement of secondary market transactions in the CDA, the trading platform of MNSE should have alternate back-up arrangements. Currently there are no such BCP arrangements in place. In addition, the FTP channel for transmission of trade details between the MNSE and the CDA should be encrypted.	High priority / Short term
5. Securities settlement systems – <i>Government and corporate securities</i>	The BCP being prepared by CDA should adopt a holistic approach and take into account the interdependencies between it and the CBM and MNSE.	High priority / Short term
5. Securities settlement systems – <i>Government and corporate securities</i>	The integrity check of the balances of securities in the CDA should be reinforced with an audit process and the audit reports should be placed before the Board of CDA and also shared with the SEC. The periodicity of the audit may be decided in consultation with the SEC.	High priority / Short term
6. International remittances	Policy measures need to be put in place by the Central Bank of Montenegro to target cross-border inward remittance proceeds being deposited in	High priority / Short term

	<p>payment accounts as a first step towards greater financial inclusion in Montenegro. Currently, all remittance proceeds are paid out to beneficiaries in cash by the remittance service provider, even though the beneficiary may have a bank account. Given the fact, that Montenegro received 39 million Euro as inward remittances, the potential to encourage savings is significant and is beneficial to the national economy as a whole and to the balance of payments situation.</p>	
6. International remittances	<p>It is strongly recommended that CBM obtain an expert legal opinion on the definition of Money remittances as provided under Article 9 (7) of the PS law and the corresponding provisions in PSD, as to whether it precludes remittance service providers from crediting a beneficiary's account with the remittance proceeds. The definition while mentioning that there is no requirement for either the payer or payee to have an account does not expressly debar remittance proceeds being credited to an account of the beneficiary.</p>	High priority / Short term
6. International remittances	<p>Oversight and supervision over MNE Transfers should be initiated at the earliest. Discussions with CBM and MNE Transfers has revealed that no oversight either on-site inspection or off-site data collection and monitoring or supervision has been carried out, since MNE Transfers began its operations. Illustratively, as part of off-site monitoring, MNE Transfers should be asked to provide details regarding: (i) amount deposited as collateral; (ii) adequacy of the amount of collateral deposited to cover both inward and outward remittance flows; (iii) an auditor's certificate certifying the adequacy of collateral taking into account for example the average drawings in the account say for a period of 4 to 5 days; (iv) indicate the frequency of the revisions in the collateral amount based on remittance flows; (v) data on the volume and value of remittances sent/received; (vi) details regarding which countries are sending/receiving remittances to and from Montenegro and (vii) data on number of agents and agent locations etc.</p>	High priority / Short term

7. Payment systems oversight – CBM	To achieve the stated objective of regulating, supervising, and monitoring payment, clearing, and settlement systems as laid down in the PS law, the oversight division in the CBM needs to be strengthened with adequate trained human resources. The existing staff (as well as other staff members) in the Division should be trained on oversight activities which should include: (i) developing an understanding of the PFMI and the self-assessment methodology; (ii) electronic retail payment system developments and instruments including credit and debit transfers, cards, e-money, internet and mobile banking etc.	High priority / Short term
7. Payment systems oversight – CBM	It is recommended to establish an internal cooperation and coordination framework within the various departments in CBM and the Oversight division, for ensuring the continued safe and efficient functioning of the CBM payment system. Illustratively, the oversight division receives only monthly reports on the functioning of the CBM payment system. It does not receive any daily reports: (i) on the functioning of the system including any changes to operating hours; (ii) the value and volume of transactions settled; (iii) the liquidity flows in the system including queue management, etc. The oversight division is not associated nor are its inputs sought on any changes to the financial and operational risk management measures. To mitigate these circumstances, it is necessary that the CBM adopts a coordinated strategy to harness all resources within the CBM.	High priority / Short term
7. Payment systems oversight - CBM	The oversight division should frame an oversight policy which would provide the overarching principles for the oversight function in CBM in consonance with the PS law and the new regulation on oversight through a consultative process and publish the same. Typically, such a policy framework should outline the public policy objectives of oversight, the standards adopted by the central bank for the conduct of its oversight, the scope of the oversight, the oversight activities and tools; and underline the need for cooperation with other regulatory authorities.	High priority/Short term
7. Payment systems oversight – CBM	Off-site monitoring activities such as data collection and obtaining reports should be established. As far as feasible online data collection modes should	High priority / Medium term

	be utilized to reduce regulatory costs and burdens on the overseen entities. The CBM should strive to publish more detailed information on the payment and settlement systems in the country – both in the large value and retail spheres including the use of both paper and electronic payment instruments.	
7. Payment systems oversight - CBM	On-site inspection in cooperation with other departments within CBM should be established. On-site inspection should be undertaken in coordination with other departments within to enable effective utilization of resources such as IT and audit for example.	High priority/Medium term
7. Payment systems oversight – CBM	An assessment of the CBM payment system using the PFMI as the benchmark and adopting the framework provided by the Disclosure Framework and the Assessment Methodology should be undertaken. The completed Disclosure Framework should be publicly disclosed.	High priority / Medium term
7. Securities settlement systems oversight – SEC	The SEC should also formally adopt the PFMI and publicly disclose the same. The SEC should use the Principles for performing its oversight over the market infrastructure – the CDA to ensure its safe and efficient functioning as a CSD and SSS.	High priority / Short term
7. Securities settlement systems – SEC	The SEC should mandate the CDA to undertake a self-assessment using the PFMI as the benchmark. The self-assessment should be carried out by the CDA using the Assessment Methodology and the completed self-assessment should be reviewed by the SEC. On completion of the review, the SEC should encourage the CDA to complete the Disclosure Framework and publicly disclose the same.	High priority / Short term
7. Securities settlement systems – SEC	The SEC should train its human resources for undertaking oversight activities under the PFMI framework.	High priority / Short term
8. Cooperation with stakeholders and	It is recommended that in the meetings of the FSC an agenda item relating to payment and settlement systems including securities settlement systems	High priority / Short term

other relevant authorities	is included to deliberate on the financial and operational risks and their impact on the overall safety and efficiency of the payments and securities settlement systems. This would enable the FSC to deliberate upon the developments and provide policy directions for the safe and efficient functioning of payment and settlement systems including securities settlement systems in line with international standards and contribute to the overall stability of the financial system.	
8. Cooperation with stakeholders and other relevant authorities	Coordinated and consultative efforts by the authorities and market participants are needed to increase the use of electronic transactions. This could be achieved through the establishment of a National Payments Council (NPC), which should be headed by the Governor or Vice-Governor of the CBM and comprise all relevant stakeholders, including regulators, ¹⁷ MOF, market infrastructures such as the CDA, representation from the supply side (including entities licensed by CBM to offer payments services) and the demand side (e.g. corporate and consumer representatives) in Montenegro. The NPC could be structured as an informal body in the initial stages and could be formalised at a later date. Such a body should be tasked with preparing a strategic and holistic national payment system (NPS) strategy supported by an action plan with defined timelines for the modernization and development of payment and settlement systems in line with international standards. Devoted working groups could also be established under the aegis of the NPC for example to facilitate greater use of electronic payment means for both Government payments and receipts and using the post office network more effectively (as outlined in Paragraph 104). Illustratively, this NPS strategy could focus on measures (i) to facilitate transaction accounts for all citizens, greater usage of (debit and credit) card, and interoperability of e-money products; (ii) to promote online payments through the internet and mobile with adequate security measures; (iii) to deepen the PoS infrastructure; (iv) to rationalize the fee structure; and (v) to	High priority / Short term

¹⁷ Securities and Exchange Commission and Montenegro Agency for Electronic Communications and Postal services.

	leverage the existing payment infrastructure to promote retail electronic payment products.	
8. Cooperation with stakeholders and other relevant authorities	It is also recommended that CBM and SEC establish cross-border cooperation with peer regulators in the area of payments and securities settlement systems, along the lines of cooperation established in the area of banking supervision. Such cooperation could span both large value and retail payment and settlement systems and in the case of securities settlement systems include both corporate and government securities.	Medium priority / Medium term

II. INTRODUCTION

1. Financial infrastructure is the underlying foundation of a country's financial system. It comprises all institutions, the rules, and standards of all the systems which enable financial intermediation. The quality of a country's financial infrastructure determines the efficiency of intermediation, the ability of lenders to evaluate risk and of borrowers to obtain credit, insurance, and other financial products at competitive terms. For instance, the efficient and smooth functioning of the payment, and securities settlement systems facilitates the discharge of financial obligations and the safe transfer of funds across distances and institutions; hence, it support the stability of the financial system.

2. This technical note contains the assessment of the national payment and settlement systems (NPS) infrastructure in Montenegro. The assessment was undertaken in the context of the IMF and World Bank (WB) joint Financial Sector Assessment Program (FSAP) mission to Montenegro during September 1-15, 2015. The assessor was Gynedi Srinivas of the World Bank's Payment Systems Development Group. The assessor would like to thank the counterparts in Montenegro for their excellent cooperation and hospitality during the mission.

3. The technical note adopts the World Bank (WB) "nine pillars"¹⁸ approach in carrying out the detailed assessment of the NPS in Montenegro. The nine pillars comprise: Pillar 1 - Legal framework; Pillar 2 - Large value payment systems; Pillar 3 - Retail payment systems; Pillar 4 - Government payments and receipts; Pillar 5 - Securities settlement systems; Pillar 6 - Inter-bank money markets; Pillar 7 - Remittances; Pillar 8 - Oversight of the NPS; and Pillar 9 - Co-operative framework for the development of payment systems in Montenegro. As there is no inter-bank money market in Montenegro, the same was not assessed and does not form part of this note.

4. This Technical Note does not provide a detailed assessment of individual payment and settlement systems in the form of a Report on Observance of Standards and Codes (ROSC), but uses the framework of international standards for carrying out a detailed analysis of the existing systems in Montenegro. These include the Committee on Payments and Market Infrastructures (CPMI¹⁹) and International Organization of Securities Commissions (IOSCO) Principles for Financial Market Infrastructures (PFMIs), the CPSS General Guidance for National Payment System Development, and the CPSS-World Bank General Principles on International Remittance Services (GPs).

5. The information used in the assessment includes relevant national laws, regulations, rules and procedures governing the systems and other available material. Other available material included the responses to the WB mission questionnaires; websites of the various

¹⁸ The WB "nine pillars" approach is based on the *General guidance for national payment systems development* and the experience and previous work of the World Bank on payment systems development in several countries around the world.

¹⁹ Formerly Committee on Payment and Settlement Systems (CPSS). The CPSS was renamed as CPMI in September, 2014.

stakeholders and other relevant documents. In addition, discussions were held with regulators i.e. the Central Bank of Montenegro (CBM), the Securities Exchange Commission (SEC) and various stakeholders including the Ministry of Finance, the Montenegro Stock Exchange (MNSE), the Central Depository Agency (CDA), commercial banks, the Bankers Association, and Montenegro Transfers – a remittance services provider. In addition, discussions were also held with the telecom companies.

III. PAYMENT AND SETTLEMENT SYSTEMS

A. Legal and regulatory framework

6. The legal framework for the payment systems and securities is quite sound in Montenegro. The framework legislation comprises the Central Bank of Montenegro Law (CBM Law); the Payment System Law (PS Law); and Law on Securities (Securities Law). Other relevant legal statutes include: (i) the Law on protection of competition; and (ii) the Law on electronic signature, amongst others. The PS Law provides a high degree of legal certainty for material aspects such as netting, finality and irrevocability and insolvency protection. Immobilization and dematerialization are defined in the Securities Law, which however, does not define netting and finality, and does not provide for irrevocability and insolvency remoteness for securities transactions which have been settled in the securities settlement system.

7. The CBM Law²⁰ provides the CBM with sufficient powers to regulate and oversee payment systems, own and operate payment systems and securities settlement systems, participate in payment systems operated by other institutions, and license and oversee payment systems. One of the central policy objectives of the CBM as laid out in Article 4 of the CBM law is to foster safe and efficient payment systems. Article 14, clauses 4, 5 and 6 of the CBM law empower CBM to “regulate the national and international payment system transactions and supervise payment systems; be a payment system owner and operator and a participant in other payment systems; and license payment systems other than the one it operates and oversee payment systems”. CBM is designated as the sole authority to regulate payment systems in Montenegro in terms of Article 32 of the CBM Law.

8. Article 34 of the CBM law designates the CBM as the owner and operator of the interbank real-time gross settlement payment system (RTGS). The same article also provides for the CBM to be the “owner and/or operator of a securities settlement system and another payment system, as well as a participant in another payment system”. In terms of Article 44 of the CBM law, the Central Bank Council²¹ is empowered to “decide on licensing and revocation of licenses to payment systems, in line with the law and pertinent regulations”.

²⁰ http://www.cb-mn.org/eng/slike_i_fajlovi/fajlovi/fajlovi_brzi_linkovi/propisi/laws/cbcg_law.pdf

²¹ The Council consists of seven members including the Governor, the two Vice Governors responsible for banking system supervision and financial systems and payment systems respectively and four other members. The Council is chaired by the Governor.

The Governor, under Article 45, sub-clause 9, “shall pass decisions and other acts in the process of supervision of banks, financial institutions, and payment systems”.

9. The newly enacted Payment System Law²² transposes the EU Payment Services Directive (PSD) 2007/64/EC and provides a high degree of certainty to several material legal aspects²³. All facets as outlined in PSD such as definitions of payment services, payment service providers (and categories thereof, e.g. payment institutions and, e-money institutions), agents, payment systems and the rights and obligations thereunder of the users, providers and operators and PSD’s negative scope have been articulated in the PS Law. The PS Law also provides powers of supervision and oversight to the CBM under Articles 160 to 164.

10. The blanket transposition of the PSD’s negative scope into the PS Law without providing sufficient explanatory clauses could lead to misinterpretation and is a cause of concern. For example Article 3 (Negative scope), clause (1), sub-clause (8) says that the provisions of the PS law are not applicable to “payment transactions carried out within a payment or securities settlement system between settlement agents, central counterparties, clearing houses and/or central banks and other participants of the system, and payment service providers, without prejudice to Article 142 herein”. This however is not the case as the PS Law does in fact apply to payment transactions processed and settled in payment systems as detailed in the subsequent paragraphs.

11. Material legal concepts such as settlement finality, interoperability, transfer orders, netting, irrevocability, settlement finality and insolvency protection, collateral being insolvency remote are detailed in Articles 145, 147, 148, 149, 150, 151, 152 and 155 of the PS law. Settlement finality is defined in article 145 as occurring when accounts of participants in a payment system are debited and credited. Article 146, states that payment system providing settlement finality has to be a contractual multilateral system with three or more direct participants (excluding the operator, the clearing house and indirect participants), with “established common rules and standardised arrangements for the execution, clearing and settlement of payment transactions between participants”, wherein the operating rules define the moment of entry and the moment of irrevocability of a transfer order. Clause (2) of article 146 provides powers to CBM to assess whether such payment systems are fulfilling these criteria. Interoperability is defined in Article 147 as occurring when operators of two or more payment systems have concluded an agreement on the execution of transfer orders between these systems. Transfer orders themselves are defined in Article 149 as “any instruction by a participant of a payment system where settlement finality is performed to place an amount of money at the disposal of a recipient or any instruction which results in the assumption or discharge of a payment obligation between participants in the payment system as defined by the payment system` rules of operation”.

²² http://www.cb-mn.org/eng/slike_i_fajlovi/fajlovi/fajlovi_brzi_linkovi/propisi/laws/payment_system_6-14.pdf

²³ Montenegro, despite not yet being a EU Member, aims to become one and therefore adopts the EU legal and regulatory framework.

12. The concept of netting is defined in an indirect manner under clause (4) of Article 148, in relation to the operations performed by clearing houses which are defined as “entities responsible for the calculation of the net position of institutions and settlement agents if these are participants in the payment system”. A more comprehensive definition of netting is found in clause (3) of Article 7 of the PS Law, which states that it is the “the process of converting claims and obligations based on transfer order, which one or several participants send or receive from one or several participants – into one net obligation or one net claim” in a payment system.

13. Article 150 reinforces the concept (as outlined in Article 146), that the operating rules of the payment system should clearly specify when a transfer order is accepted by the system and also state the moment of irrevocability of a transfer order which can be neither revoked by a system participant or a third party. Clause (3) Article 150 states that in the case of an interoperable system, “each payment system determines in its own rules of operation the moment of entry and the moment irrevocability in such a way as to ensure, to the extent possible, that the rules of all systems participating in the interoperable system are coordinated in this regard”.

14. Clause (3) of Article 151, protects the rights and obligations of a participant in the payment system from any insolvency proceedings till their actual commencement. Article 152 expands on this to state that “transfer orders and netting shall be legally enforceable and binding on third parties, provided that the transfer orders have entered the system before the moment of opening of the insolvency proceedings”. Such of those transfer orders which may have been received and processed after the opening of insolvency proceedings, will become legally enforceable, binding and irrevocable, only when the payment system operator is able to prove that it was not aware of the commencement of the insolvency proceedings nor could have been aware of the opening of such proceedings at the time when such transfer orders became irrevocable. Clause 4 states that there would not be any avoidance of payment transactions nor unwinding of a net settlement concluded prior to the moment of opening of insolvency proceedings. In terms of Article 154 the provisions of the PS law would be applicable in situations where insolvency proceedings against a payment system participant have commenced. Collateral provided by the insolvent participant is also protected and is insolvency remote under Article 155.

15. Articles 158 and 159 of the PS Law deal with the CBM’s RTGS system and the manner of settlement of transactions in the RTGS system. Clause (1) of article 158 says that the CBM shall be the “owner and operator of, a participant in, and the settlement agent for, the payment system in which the execution of individual payment transactions is made in the real time gross settlement principle (hereinafter: the RTGS system)”. Clause (2) designates the RTGS system as a systemically important payment system, and clause (3) empowers the CBM to lay down operating rules for the RTGS system. Clause (4) states that only legal persons who have accounts with the CBM in accordance with prevalent laws can be participants in the RTGS system. Clause (1) of article 159 states that “payment transactions of banks and other credit institutions providing payment services as well as entities determined under the Central Bank law and regulation to keep accounts with the Central Bank shall be

settled in the RTGS system, in accordance with rules of operations of this system”. Clause (2) of the same article enables CBM to specify in its regulations “the minimum value of payment transactions that must be processed in the RTGS system (large and small payment thresholds)”. Value thresholds for settling transactions in the RTGS system have been prescribed by CBM.

16. The securities market in Montenegro is governed by the Law on Securities (Securities Law). The Securities Law is applicable to both corporate and government securities and covers equity and debt instruments. Article 7 of the Securities Law provides for the establishment of the Securities and Exchange Commission (SEC) as the regulator of the securities market in Montenegro. The SEC is tasked with administering the Securities law in Montenegro, and the Securities Law provides it with powers to license stock exchanges, different market participants, license the Central Depository Agency (CDA) - the CSD and SSS for securities transactions – and create and maintain a market in which securities can be issued and traded in an orderly and fair manner. The Securities Law also provides protection to client assets held with the CDA in the event of insolvency or bankruptcy of the CDA in terms of Article 93. The Securities Law provides legal recognition to dematerialization of securities, with securities in Montenegro being dematerialized in terms of Article 3 of the statute. Article 87 of the Securities law reinforces this provision by stating that dematerialized securities exist in electronic form in the computer system of the CDA.

17. The Securities law, however, does not define netting and finality, and does not provide for irrevocability and insolvency remoteness for securities transactions which have been settled in the securities settlement system.

18. The Law on protection of competition prohibits any practices including contracts that prevent, restrict or distort competition in the relevant market (Article 8); prevents any abuse of dominant market position (Article 15); establishes an Agency to administer the statute (Article 20); and provides for penalties for not complying with the provisions (Article 67). The provisions of the law are applicable to all entities including money transfer operators and their agents licensed under the PS Law in Montenegro by the CBM and can be deemed to bar any exclusivity arrangements. Further, the Law on electronic signatures is wide in its scope and is deemed to cover electronic payment orders.

Recommendations

19. CBM should take necessary measures to annul the ambiguity arising out of Article 3 – Negative scope, in the PS Law. It should be clearly articulated in the law as to which of the provisions outlined in the negative scope are not applicable to payment and securities settlement systems. In addition, netting should be defined in more clear terms at a single place in the law preferably under “definitions”. It is understood that the CBM is already seized of this issue and is awaiting for the ratification of the PSD2 Directive to initiate necessary measures (*High priority/Medium term*).

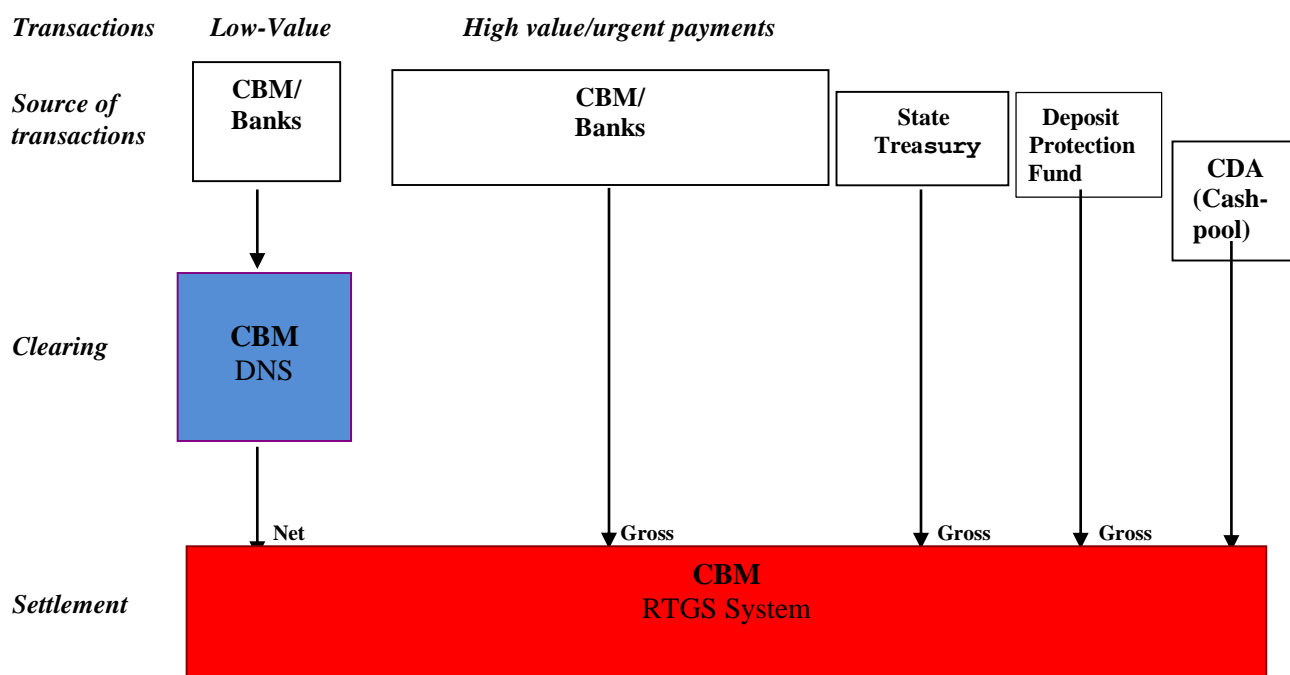
20. In addition, in line with EU enlargement and accession, and the recommendations made in the European Commission Screening Report²⁴ Chapter 9, the authorities should amend the existing laws to widen their scope and encompass other types of financial market infrastructures such as central counterparties and trade repositories, to take care of future requirements. As to which law should be amended, i.e. either the PS Law or Securities Law should be deliberated and decided upon by the authorities in consultation with European Commission officials and peer regulators (*Medium priority/Medium term*).

21. The Securities Law should be amended to provide a legal basis for netting, finality, and irrevocability of securities settlement transactions and insolvency protection (*High priority/Short term*).

B. CBM Payment system

22. The CBM implemented integrated payment and settlement system comprises RTGS and DNS modules. The RTGS system is the systemically important payment system in Montenegro. The system is owned and operated by CBM and has been in operations since 2005 and is largely safe and efficient. An overview of the system is provided below.

Figure 1: Overview of Payment Systems in Montenegro



Source: CBM

²⁴ http://ec.europa.eu/enlargement/pdf/montenegro/screening_reports/screening_report_montenegro_ch09.pdf

23. The system is governed by the Operating Rules (OR) approved by the CBM Council (the highest decision making body of the central bank). The operating rules derive their legal basis from: (i) Article 44 of CBM Law (on the powers of the CBM Council to make rules); and (ii) Article 158, clause 3 of the PS Law which states that CBM shall lay down the operating rules of the system. These OR as approved by the Council are published in the Official Gazette of Montenegro. The rules provide for finality of settlement and irrevocability of a settled transaction. A payment transaction is deemed settled when the participant's settlement accounts have been debited and credited. The OR have provisions for tackling operational default of a participant. There are no specific provisions for tackling the financial default of a participant.

24. The main components of the system are the RTGS module for large-value, urgent and real time payments and the DNS module for small value transfers up to a value of Euro 1,000.00 per single transaction. Euro 1,000 limit acts as a cap for inputting and settling transactions in the DNS module. Participants are free to input low value payment orders into the RTGS albeit with higher charges as compared to settling the same transaction in the DNS system. All Government transactions irrespective of their value are settled in the RTGS with a lower fee structure as compared to RTGS transactions of other participants.

25. The volume and value of transactions processed in the system are given in the table below.

Table 2: Volume and value of payments in 2014

Description	Volume of transactions	Percentage	Value of transactions	Percentage
RTGS	3,725,929	45.37%	10,407,060,461	94.55%
DNS	4,486,801	54.63%	599,297,745	5.45%
Interbank payment system (total)	8,212,730	100.00%	11,006,358,207	100.00%

Source: CBM

RTGS

26. The participants in the RTGS system are the 14 commercial banks, the Treasury (MoF), Ministry of Interior, Police Department, Customs Administration, Tax Administration, Depositors Protection Fund, and the CDA with a “cash pool”²⁵ account for settling the funds leg of securities transactions. The CBM is also a participant in the system. The transactions of the Depositors Protection Fund are inputted into the system by CBM. The system is a single currency system with all transactions settled in Euro (the official currency of Montenegro²⁶).

²⁵ The CDA holds a cash pool account for settling the funds leg of the securities transactions in central bank money. Pay-ins and pay-outs take place from the cash pool account for settling the funds leg of the securities transactions. The cash pool account also holds the Guarantee fund of the CDA.

²⁶ Euro is used as a local currency in Montenegro, while it awaits becoming a member of the Euro area.

27. Participants hold settlement accounts in the RTGS system. The OR do not prescribe any minimum balances that are to be held in the settlement account. In practice, it has been ascertained that the banks hold their balances in the settlement account with the exception of the mandatory reserve requirement balances. The reserve requirement balances which are calculated on a weekly basis are held in separate reserve requirement accounts in the RTGS system. Banks can use up to 50 percent of their balances in the reserves requirement account for their intra-day payment needs, without the prior approval of the CBM, with the proviso that the funds have to be returned by the end of the day. In case of a shortfall, the CBM applies a regular rate of interest on the shortfall amount. However, there is no mechanism of an automated transfer of balances from the reserve requirement account to the settlement account and vice versa in the RTGS system. Banks have to make specific requests to the CBM for transferring balances. In the recent past there have been no instances of banks making a request to CBM to transfer balances from their reserve accounts to their respective settlement accounts.

28. Banks can also avail IDL from CBM on a collateralized basis, in addition to using their balances from their reserve accounts. Collateral that can be accepted include Government securities, securities of EU member states and securities of international financial institutions and any other securities deemed acceptable by CBM. A haircut of 110 percent of the nominal value of the IDL being provided is stipulated. The rules also provide for CBM to obtain additional collateral in case the value of the collateral dips below the prescribed haircut ratio. The haircut ratios were prescribed in 2010 and there is no evidence on record to show whether these have been revised since taking into account market conditions and developments.

29. The IDL process is however, not automated with banks having to make a request to the CBM and providing proof of ownership of the security along with proof of a lien in favor of CBM having been registered by the CDA on the security in the proprietary account of the securities holder (bank). Further, there is no automated work-flow process between the CBM and CDA for management of collateral pledged by banks. It has been stated by the CBM team, that as banks have been surplus in liquidity, there has been no recourse to IDL in the recent past for several years.

30. Banks are charged an interest rate which is the average annual rate recorded at the last auction of Treasury bills issued by Montenegro, for the amount of IDL availed from CBM. If the IDL amount is not repaid by the end of the RTGS operating hours, it is converted into an overnight liquidity loan and a regular rate of interest is levied. In addition banks can avail overnight liquidity loan separately by making a request to the CBM on the same terms. The overnight liquidity loan has to be repaid by 10:00 hours on the subsequent working day. If a bank fails to repay the overnight liquidity loan, CBM charges a statutory default interest calculated for the period beginning from the maturity date until the collection of the overnight liquidity loan.

31. Banks can also avail short-term liquidity loans from the CBM for a period not exceeding 15 days, by making a request. Interest on the granted short-term liquidity loan is

levied at the average annual rate recorded at the last auction of T-bills, increased by two percentage points.

32. The RTGS system uses proprietary telecommunication network as a message carrier and uses SWIFT MT message standards. MT100 series messages are used for customer transactions, while MT 200 series are used for interbank transactions. All participants therefore necessarily have to have a SWIFT Business Identifier Code (BIC). In the case of MoF and others, an internal individual BIC code has been put in place by CBM. All messages are validated and authenticated using public key infrastructure (PKI), with CBM issuing digital certificates to RTGS participants.

33. Queue management in the RTGS system is based on the first-in-first-out (FIFO) principle, based on priority of the payment message. Priorities are ranked from 1 to 99, with 1 as the highest priority and 99 being the lowest priority. Priorities from 1 to 9 are reserved for CBM payment transactions, and priorities 10 to 99 are for other participants in the system. Payment messages with priorities 10 to 49 which cannot be settled due to inadequate balances are put in a queue and settled on a FIFO basis. Participants can either change the priority of a payment message pending in the queue for settlement or cancel the same.

34. Payment messages with priorities 50 to 99, are not queued but are immediately rejected in case of inadequate balances in the participant's settlement account. The RTGS system sends a message to the participants on successful execution of a transaction or its rejection either due to lack of balances for messages with priorities 50 to 99, or in case of invalid and incorrect message syntax in respect of all payment messages irrespective of priority. All queued transactions (with priorities 10 to 49) are rejected by the system at the end of the day and the participants are sent a message by the system. The RTGS system has a gridlock resolution mechanism for dissolving queues if needed. However, the OR do not include any description of the gridlock mechanism.

35. To aid liquidity flows in the RTGS system, the OR have prescribed a differentiated tariff structure for the processing and settlement of RTGS payment messages. For transactions received up to 14.00 hours in the RTGS system, a per transaction fee of Euro 1.50 is collected. For transactions received beyond 14.00 hours and till 17.30 hours, the fee goes upto Euro 1.95. For transactions received after 17.30 hours, the fee structure is calculated at 30 percent of the amount of the transaction, with the minimum fee being Euro 1.95. Government transactions in the RTGS are priced at Euro 0.10 cents.

36. Discussions have revealed that there are no lumpy liquidity flows in the RTGS system. Data on the liquidity flows in the system was not available. There are no throughput guidelines issued by the CBM to ease any lumpiness in payment and liquidity flows.

37. The working hours of the RTGS system are from 08.30 to 19.00 hours on all working days. The working hours are divided into an operations session from 08.30 to 17.30 hours and a processing session from 17.30 to 19.00 hours. The operations session commences with a beginning of the day session from 08.30 hours to 09.00 hours. On completion of the

beginning of the day session, participants can and send receive messages in the system from 09.00 hours to 17.30 hours. The processing session is used for rejection of pending messages and housekeeping activities such as data back-up and fee calculations. The daily operating schedule of the RTGS system is given in the table below.

Table 3: Daily operating schedule of the RTGS system

Beginning of Day	08.30-09.00
Exchange of payment transaction messages	09.00-17.30
Stop RTGS system	17.30-17.31
Rejecting unexecuted messages	17.31-17.35
Creating reports on executed payment transactions	17.35-18.00
Creating reports on the daily charge of the Central Bank fee	17.35-18.00
Archiving	18.00-19.00
End of Day	19.00

Source: CBM

38. The operations session is characterized by definite work-flow periods such as beginning of day; exchange of payment messages; stop RTGS (participants can no longer send messages). The processing session starts thereafter to purge all pending transactions, completes the house-keeping activities and performs end-of-day. The CBM reserves the right to alter and extend the sessions based on circumstances.

39. The CBM also collects an initial one-time fee of Euro 5,000.00 for connecting to the RTGS/DNS system. Participants pay in addition a monthly fee of Euro 1,300.00.

40. The primary site of the CBM payment system²⁷ is located in the CBM head office. A secondary site is located in close proximity to the primary site. Data replication happens in real time at the secondary site. The secondary site is tested once a year. Both the primary and secondary sites have redundant network links. Staff relocate to the secondary site whenever needed. A DR site is planned to be established in the northern part of Montenegro. The system availability during the year 2014, as reported in the Annual Report of the CBM was 99.96 percent. The system has also been subjected to a performance stress test and the same was found adequate.

41. The IT department in the CBM is responsible for the IT systems including those of the payment system in CBM; while the Business Continuity Planning (BCP) Department of the CBM is tasked with implementing the business continuity arrangements for all the systems including payment systems in the CBM. A business impact analysis of all the critical functions of the CBM has been conducted by the BCP department and based on the analysis, a business continuity plan is being drawn up and is being submitted to the CBM management for approval. RPO and RTO objectives will be established as part of the business continuity plan. The business continuity plan will also contain a call tree

²⁷ For the CBM payment system comprising RTGS and DNS systems.

and a crisis management system. The business continuity plans of commercial banks is verified by the Banking Supervision Department. However, details are not shared by the Banking Supervision department with either the BCP or IT departments.

DNS

42. The participants in the DNS system are the commercial banks and the CBM. For a participant to be a member of the DNS system, it should be a participant in the RTGS system and provide an authorization to debit its RTGS settlement account for DNS transactions. The DNS system is used for the processing and settlement of low value payment transactions upto Euro 1000.

43. The operating hours of the DNS system are from 08:30 hours to 16:30 hours. There are 3 clearing cycles at 11:00 hours; 13:30 hours; and 16:00 hours. The net clearing file generated by the DNS system is settled in the RTGS system using the settlement accounts of the participants in the RTGS. All payment messages in the DNS system carry a priority of 100. SWIFT MT 102 messages are used in the DNS system. The daily operating schedule of the DNS system is given in the table below.

Table 4: Daily operating schedule of the DNS system

Beginning of Day	08.30-09.00
Exchange of payment transaction messages for the first cycle	09.00-11.00
Clearing (the first cycle)	11.00-11.30
Exchange of payment transaction messages for the second cycle	11.30-13.30
Clearing (the second cycle)	13.30-14.00
Exchange of payment transaction messages for the third cycle	14.00-16.00
Preparation for the third cycle	16.00-16.15
Clearing (the third cycle)	16.15-16.30
Stop clearing	16.30-17.30
Rejecting unexecuted messages	17.31-17.35
Creating reports in the RTGS system on net position in the DNS system	17.35-18.00
Archiving	18.00-19.00
End of Day	19.00

Source: CBM

44. The operating rules provide for participants to reserve balances in their settlement accounts for settling the net clearing file which is settled by the system on an all or none basis. However, it is not mandatory for participants to reserve such balances in the settlement accounts.

45. The system verifies for available balances in the settlement accounts of the participants at the beginning of the clearing cycle and if the balances in the account are equal to or greater to the net debit amount payable by the participant, the clearing file is settled immediately. In the event of inadequate balances, i.e., if the balances in the account of

a participant are lesser than the net debit amount payable by the participant, payment transactions of the participant, exceeding the balance amount are kept pending in a queue and are taken up for settlement in the subsequent clearing and settlement cycle. In the last clearing cycle, if the funds are not available in a member's account, the transactions are rejected by the system by resorting to partial unwinding. It has been stated by the CBM team that partial unwinding has not been resorted to for several years, as banks are liquidity surplus and the net clearing files are settled without any problem.

46. The OR do not contain any provisions for tackling the default of a participant with the single largest aggregate credit exposure in the DNS system. The CBM as owner and operator of the system and as a lender of last resort is in a position to provide sufficient liquid resources to the banks for completing the settlement through the provision of IDL along with utilization of balances in the reserve requirement accounts. However, in a worse-case scenario where both the above avenues are exhausted, there are no provisions in the OR for tackling the default of a participant with the single largest aggregate credit exposure in the DNS system and complete the settlement. It is accordingly necessary to develop the same, by determining the amount of liquid resources required to complete settlement through stress testing various potential stress scenarios.

Recommendations

RTGS

47. The following risk mitigation measures are recommended to mitigate and minimize residual liquidity risk in the RTGS system:

- i. Introduce a mechanism of automated transfer of balances from the reserve requirement account to the settlement account and vice versa in the RTGS system, to enable banks to use their liquid balances in the system effectively and optimize queue management (*High priority/Short term*)
- ii. Automate the IDL process to enable banks to obtain IDL immediately from the CBM (*High priority/Medium term*)
- iii. Automate the work-flow processes between CDA and the CBM to enable straight-through processing of collateral lien and release (*High priority/Medium term*)
- iv. Establish prudent valuation practices for collateral and develop haircuts that are regularly tested taking into account stressed market conditions. The haircut procedures should be independently validated at least annually (*High priority/Medium term*)
- v. Provide a description of the gridlock resolution mechanism in the OR (*Medium priority/Medium term*)
- vi. Study the intraday liquidity flows in the RTGS system to identify any lumpiness and in consultation with banks examine the feasibility of establishing throughput guidelines (*Medium priority/Medium term*)
- vii. Eliminate the existing system of immediate rejection of payment transactions with priority 50 to 99. The system is inefficient as participants have to resend the transactions adding to their costs. All valid transactions irrespective of priority should be kept pending in the queue in the event of lack of adequate balances in the settlement

account; and/or alternately, CBM may prescribe only one priority level to be used by the participants in the OR to avoid immediate rejection of transactions (*High priority/Short term*)

DNS

48. The following risk mitigation measures are recommended to mitigate and minimize liquidity and credit risk in the DNS system:

- i. Revise the operating rules and make it mandatory for banks to reserve balances in the settlement account for settling the net clearing files from the DNS system (*High priority/Short term*)
- ii. Eliminate the possibility of partial unwinding of payment transactions by revising the OR to make it mandatory for banks to reserve balances (as indicated above); and extend the facility of automated IDL (as and when developed) to participants with net debit positions to ensure that the net clearing file is settled (*High priority/Short term*)
- iii. Determine through stress tests the amount of liquid resources required to complete settlement in the event of default of the participant with the single largest credit exposure and provide for tackling such default scenarios in the OR (*High priority/Medium term*)

49. **The BCP for the CBM payment system should be drawn up at the earliest and implemented after the approval of the CBM management.** The BCP should adopt a holistic approach and test the central system and the system of participants as well. As part of the BCP, the RPO and RTO objectives should be established and tested as per prevalent international standards. The BCP should contain a call tree and a crisis management scenario system. The details of the BCP of commercial banks should be shared by the Banking Supervision department with the BCP department and IT department of the CBM. The DR site may be established at the earliest (*High priority/ Short term*).

C. Retail payment systems and instruments

50. **Cash is the most popular retail payment mode in Montenegro²⁸. The other retail payment instruments include credit and debit transfers, credit and debit cards.** Internet and mobile banking (accessing bank account through mobile) are provided by a few banks. Some banks offer inter-bank credit and debit transfers and payment mechanisms for e-commerce transactions, while most of the banks facilitate balance enquiries and intra-bank transfers online. There is an interoperable ATM and PoS network in Montenegro. All the 347 ATMs and 12,784 PoS terminals²⁹ in the country are interoperable. Some of the ATMs are multifunctional allowing payment of utility bills and mobile top-ups.

²⁸ Data on monetary stock aggregates such as M1 and M2 is not available to ascertain the value of currency held with public to establish the high usage of cash.

²⁹ The total number of ATMs and PoS terminals is as at the end of 2014. Data source: CBM.

51. The settlement of credit and debit transfers happens in central bank money in the CBM's RTGS system, with the transactions being cleared and netted in the CBM's DNS system. As is the norm elsewhere, while the volume of credit and debit transfers processed in the DNS system is higher than the volume of payment orders processed in the RTGS system, in value terms their contribution is quite low. The volume of payment orders processed in the DNS system in 2014 was 4,486,801, representing 54.63 percent of the total volume of payment orders processed in the CBM payment system for a value of Euro 599,297,745 constituting only 5.45 percent of the total value processed in the CBM payment system, with the transactions settled in the RTGS accounting for the remaining 94.5 percent of the value³⁰.

52. The bulk of the payment orders processed in the DNS system are ascertained to be credit transfers, as borne out during discussions with the staff of CBM, banks and the Bankers Association. Currently, data on the number of credit and debit transfers is not available, nor is there any data on the number of paper based and electronic credit and debit transfers. Anecdotally, it has been gathered that the bulk of the credit transfers initiated are paper based, with the usage of direct debits being limited. Some of the factors seen as contributing to the limited use of direct debits range from: (i) close proximity of payment points where payments can be made in cash; (ii) issues related to mandate management³¹; and (iii) in some cases difficulties in getting prompt refunds in case of incorrect debits.

53. The number of debit cards is far higher to that of credit cards in Montenegro as can be seen from the table below. Banks issue internationally branded cards – both debit and credit. Fees are levied by banks on customers for issuing cards. A high proportion of debit and credit cards are EMV compliant and the industry is implementing PCI DSS standards. The processing and settlement of card transactions is done through the international card schemes outside the country in commercial bank money. It has been ascertained anecdotally, that the debit cards are predominantly used for withdrawing cash from ATMs, while credit cards are largely used at PoS terminals. Asked for reasons for the low usage of cards generally at PoS terminals, the aspect of high interchange fees, resulting in high merchant service charges was cited as one of the contributory factors. Currently, data on usage of debit and credit cards at ATMs and PoS machines is not available.

³⁰ Please see Table 2.

³¹ Anecdotally, it has been ascertained that these issues pertain mainly to: (i) revocation of mandates and the time taken (number of days) for doing the same; (ii) the debits that could still happen to a customer's account while the revocation process is on and getting refunds of the debited amounts.

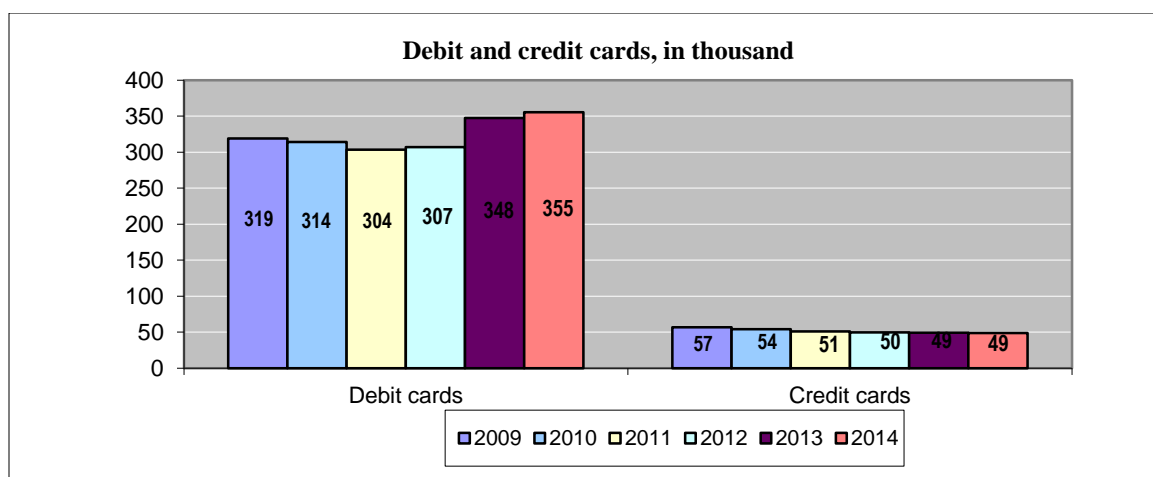
Table 5: Number of debit and credit cards with transaction volumes and value; and number of ATMs and PoS terminals

	2009	2010	2011	2012	2013	2014
1. Number of issued cards (total)	375,810	368,508	354,509	356,922	396,861	404,305
1.1. Debit	318,875	314,181	303,630	307,249	347,572	355,441
1.2. Credit	56,935	54,327	50,879	49,673	49,289	48,864
2. Number of transfers (total)	5,326,505	4,413,975	5,018,717	6,294,052	7,409,582	9,168,087
2.1. From debit cards	3,929,956	3,320,809	3,947,310	5,206,112	6,302,209	8,056,526
2.2. From credit cards	1,396,549	1,093,166	1,071,407	1,087,940	1,107,373	1,111,561
3. Value of transfers (total)	303,478,387	280,683,756	313,238,144	382,393,967	422,784,554	470,557,118
3.1. From debit cards	196,151,260	199,465,851	234,461,252	299,438,428	343,585,994	395,942,903
3.2. From credit cards	107,327,127	81,217,905	78,776,892	82,955,540	79,198,559	74,614,215
4. ATMs	295	298	311	327	334	347
5. POSs	7,202	8,333	10,131	10,779	11,111	12,784
6. E-banking clients	18,155	22,816	27,230	34,811	48,215	62,991

Note: the data on credit and debit cards reflects the combined usage at ATMs and PoS terminals.

Source: CBM

Figure 2: Number of debit and credit cards



Source: CBM

Recommendations

54. CBM should start the process of data collection on the various retail payment instruments and their usage in Montenegro, which is currently very minimal. Data templates should be designed to capture the data on the number of credit and debit transfers that are processed and settled in the DNS system. Similarly banks should also be asked to provide break-up details on how many of these transfers (credit and debit) are initiated electronically and how many paper based. Data on usage of cards (credit and debit) at ATMs and PoS terminals should be collected. In addition, while data is available on the number of

credit and debit cards issued, there is no data available currently on the number of active³² debit and credit cards. Data on online transactions (internet and mobile based) and card not present transaction (i.e. mainly the use of cards for payments over the internet) should also be collected. Data on debit transfers and card frauds (differentiated by card-present and card-not-present fraud), ATM and PoS terminal downtimes and complaints relating to internet and mobile banking should also be collected. Data on interchange fees could also be collected. CBM as a measure of transparency and in line with Article 28 of the PS law, provides data on tariffs relating to retail payment products of all providers. *(High priority/Short term)*.

55. A detailed analysis of the data should be carried out and the results should be shared and discussed with all stakeholders to arrive at a comprehensive national strategy to encourage electronic modes of retail payments *(High priority/Short term)*.

D. Government payments and receipts

56. In accordance with Article 41 of the CBM law, the CBM acts as the depository and banker for government bodies and organizations. Article 41 empowers CBM to “accept deposits from the government bodies and organisations, open accounts thereof and perform payment service transactions related thereto”. All government payments and receipts are made processed and settled only through the CBM RTGS system with a differentiated lower fee structure on par with DNS transaction fees. All government payments and receipts are routed only through the accounts held at the CBM.

57. The Ministry of Finance has two accounts at the CBM – (i) the central account (used for public revenues and divided into different sub-accounts (around 300 – of which 110 are for various taxes and customs revenues) identified by purpose); and (ii) main account. The central account with its different sub-accounts is a collection account which is used for all kinds of Government receipts i.e., for collection of various taxes, duties and customs revenues. No payments can be effected from the central accounts or its sub-accounts. The balances in these accounts are swept to the main account at the end-of-the day. All Government payments (vendor, salary, pensions etc.) are effected only through the main account, which is akin to the Single Treasury Account concept. Daily reconciliation of balances is done with the CBM providing a statement to the MoF.

58. Various bodies of the State are connected online to the General Ledger in the Treasury. Payment orders from the State bodies are received by the Treasury and verified and authorized for payment through the Main account at the CBM within 7 days. These include vendor payments, salaries, pensions and social entitlements. The Treasury after verification and authorization sends SWIFT MT 103 to the CBM RTGS system for effecting the payments. Field 70 in MT 103 is reserved for Government transactions and identifies the relevant Government department and type of payment. MT 103 is also used for Government receipts.

³² Cards could be deemed active say for example if they are used at least once a month.

59. Data from Global Findex 2014, indicates that 44 percent of Government transfers were received in cash, while 49.5 percent of Government transfers were received into an account at a financial institution. The percentage of Government transfers received in cash by persons in Montenegro is quite high in comparison to peers³³. It has been ascertained that Government pension payments, can be drawn by pensioners in cash from the post offices. It is however, not very clear as to whether these pension payments contribute to the bulk of the Government transfers in cash. In the case of pension payments, the account of the Post Office held with a commercial bank is credited with the pension amount payable by the MoF through the RTGS system. It has been learnt that other Government payments such as social entitlements, vendor and salary payments are credited to recipients' bank accounts.

60. Payments to the Government are largely made in cash by both legal entities and natural persons. It is not very clear whether legal entities and natural persons can use electronic modes of payments to make payments to Governments. Discussions with MoF officials and CBM staff did not reveal whether there were any plans to introduce electronic modes of payments using cards, online banking facilities or for enhancing the capabilities of the e-services portal³⁴ of the Tax Administration of the MoF to enable payment of taxes and duties to the Government.

Recommendations

61. It is recommended to set up a working group comprising the MoF, CBM, banks and other relevant stakeholders such as the Post Office and Agency for Electronic Communication and Postal Services to examine and draw up an action plan for facilitating greater use of electronic payment means for both Government payments (G2P³⁵) and receipts (PandB2G³⁶). The working group could also study whether the capabilities of the e-services portal could be enhanced to enable payment of taxes and duties to the Government. In addition, such a working group should explore the feasibility of Post Offices providing payment accounts (as defined under the PS Law) to citizens of Montenegro, and integrating the postal system with the retail payments infrastructure in the country by enabling it to become a licensed entity under the PS Law or by allowing it to access the CBM payment system as an indirect participant. As the postal network is widespread throughout the country, such a step would enable citizens to open payment accounts with Post Offices to carry out their payment transactions, foster a savings culture and would be a stepping stone in greater financial inclusion in Montenegro (*High priority/Short term*).

³³ The percentage of Government transfers in cash is significantly higher compared to the Western Balkans (21.3 percent) and upper middle income countries 37.2 percent), though it is lower to developing Europe and Central Asia (50.7 percent). Please see <http://databank.worldbank.org/data/reports.aspx?source=1228>

³⁴ The Tax Administration introduced new e-services in March 2014, including the e-filing of VAT returns, VAT refund claims, corporate income tax, as well as financial statements <https://eprijava.tax.gov.me>.

³⁵ G2P: Government to Persons

³⁶ PandB2G: Person and Business to Government

E. Securities clearing and settlement systems

Government securities

62. Article 42 of the CBM law designates CBM as the fiscal agent of the Government responsible for providing services “with regard to securities issued by Montenegro, including the registration thereof, the payment of principal, interest and other securities-related expenses, and perform other related services”. Government securities comprise treasury bills of maturities of 28, 56, 91, and 182 days and bonds. The CBM is associated only with the issuance of T bills and not Government bonds which is handled solely by the MoF. All Government securities are dematerialized and are held in the accounts of beneficial owners with the CDA. Clearing and settlement of trades in Government securities is undertaken by the CDA as the sole SSS in the country.

63. The MoF decides on the tenor of the T bill and the total amount to be issued. There is no auction calendar in place as of now. The details of primary auctions held in 2014 and till date (August 2015) are given below.

Table 6: Details of T bill auctions in 2014

Auctions of treasury bills	Issue date	Issued	Sold	Total demand	Average-weighted Int. rate (annual)
January					
LXVIII Auction of 182-day	15.01.2014.	20.000,0	18.520,0	22.370,0	1,82%
February					
LXIX Auction of 182-day	25.02.2014.	44.078,5	42.408,5	50.108,5	1,85%
March					
LXXI Auction of 182-day	05.03.2014.	8.500,0	8.500,0	14.350,0	1,53%
XXXVI Auction of 91-day	19.03.2014.	20.000,0	14.450,0	23.850,0	1,33%
LXXII Auction of 182-day	26.03.2014.	6.000,0	6.000,0	11.748,0	1,43%
April					
XXXVII Auction of 91-day	02.04.2014.	14.000,0	8.100,0	12.555,0	1,48%
LXXIII Auction of 182-day	17.04.2014.	5.820,0	4.200,0	4.200,0	2,49%
LXXIV Auction of 182-day	23.04.2014.	5.000,0	3.514,3	5.842,3	1,86%
XXXVIII Auction of 91-day	30.04.2014.	5.000,0	2.378,0	2.378,0	3,16%
July					
LXXV Auction of 182-day	16.07.2014	13.700,0	13.700,0	31.882,7	1,29%
August					
LXXVI Auction of 182-day	26.08.2014.	40.000,0	40.000,0	55.334,2	1,08%
September					
LXXVII Auction of 182-day	03.09.2014	8.500,0	8.500,0	23.123,5	0,79%
LXXVIII Auction of 182-day	24.09.2014.	6.000,0	6.000,0	19.770,0	0,64%
October					
LXXIX Auction of 182-day	22.10.2014.	3.514,3	3.514,3	13.738,6	0,49%
December					
LXXX Auction of 182-day	24.12.2014.	6.000,0	6.000,0	15.580,0	0,37%

Source: Bulletin of Central Bank of Montenegro, July 2015

Table 7: Details of T bill auctions in 2015

Auctions of treasury bills	Issue date	Issued	Sold	Total demand	Average-weighted Int. rate (annual)
January	12.01.2015.	10.000,0	21.103,9	25.003,9	0,33%
LXXXI Auction of 182-day					
LXXXII Auction of 182-day	14.01.2015.	13.700,0	15,200,0	19,800,0	0,32%
February					
LXXXIII Auction of 182-day	24.02.2015.	40.000,0	40.000,0	43.900,0	0,31%

Source: Bulletin of Central Bank of Montenegro, July 2015

64. The Banking Operations Department of the CBM conducts the auction of T bills on behalf of the MoF. The details of the upcoming auction are advertised by the CBM on its website as well as in newspapers, at least two days in advance as prescribed under Article 8 of the Guidelines on the procedure for issuance and means of selling treasury bills. The CDA which is kept apprised of the auction, issues the ISIN number for the particular issue of T bill that is being auctioned.

65. The auction process is conducted electronically by CBM. A separate screen for submission of bids is available on the electronic auction platform (of the CBM) for banks to submit their bids. At the time of submission of their bids, banks are required to provide evidence of adequate balances in their RTGS account for the bid amount, or, furnish a written statement that the maturity redemption proceeds of treasury bills would be used for subscribing to the new issue. In order that banks are able to optimally utilize their available balances, the maturity redemption proceeds of T Bills are credited to the accounts of the banks in the RTGS system by 10 am, by debit to the Main account of the MoF. In addition the bidder is required to be an account holder at CDA.

66. Each bank can submit up to 5 competitive bids. The minimum size of a competitive bid is Euro 10,000.00, while the maximum amount that a bank can bid is up to 50 percent of the issue size. Banks have to pay a fee of 0.1 percent of the bid amount as fees along with an additional 1 percent as payment guarantee for the bid amount. In the event that a bank defaults on the settlement date of the auction, CBM has the right to forfeit the fees and the payment guarantee amount from the defaulting bank. Banks can also submit non-competitive bids for a minimum amount of Euro 5,000.00 and a maximum of Euro 50,000.00.

67. Banks are required to submit their bids by 12 noon on the day of auction. The MoF has real-time online access to the bid submission screen. The MoF decides on the cut-off price and informs the CBM. The MoF also has the right to increase the issue size if it so desires exercising a green shoe option. However, there is no fixed percentage for exercising the green shoe option.

68. The auction results are published by CBM on its website through the auction platform no later than three hours following the completion of the auction. The accounts of successful banks are debited on T+1 in the RTGS system, and the transit account for auction

proceeds “Account for liquidity” (in the system) is credited. At the end-of-the day, the balances in the Account for liquidity (by nature a zero balance account) are transferred to the Main account of the MoF in the RTGS system.

69. On T+1, CBM establishes a secure online link with the CDA and provides the statement of allotment in respect of each bank. On receipt of the same, the securities balances are credited to the accounts of the banks in CDA on the same day.

70. The secondary market for T bills is not very active. All banks adopt a buy and hold strategy. One of the reasons attributed for this is that banks do not feel the necessity to actively trade as they are flush with liquidity.

71. Maturity proceeds of the T bills are credited to the participants’ settlement accounts in RTGS by 10 am on the due date.

72. The Ministry of Finance –Treasury Department also issues bonds, but details on these bonds is very sketchy and minimal. Government bonds comprise savings bonds; damage fund bonds and regular bonds with periodical coupon payments and a fixed maturity. Unlike T bills, the CBM is not associated with the process of issuance.

73. The Savings bonds were issued by the Government to compensate holders who earlier held old foreign currency savings and deposits in banks. Damage fund bonds also known as restitution bonds are issued by the Government on request. These bonds can be used the legally recognized owner able to pay accrued taxes to the Government, or to buy state properties when they are auctioned. When the bond matures, the owners do not get the full maturity proceeds, but will be paid in annual instalments as defined by the Law on Restitution of Property Rights and Compensation. The regular bonds are amortised bonds with semi-annual payments comprising interest and principal amounts. All bonds are held with CDA and listed on the MNSE.

74. The regular bonds were auctioned and listed on the MNSE in 2014. The 2104 Annual Report³⁷ of the MNSE states that “about 43 million euro turnover was realized during the auction for the mentioned issuance. It is important to note that the effects of the mentioned issuance were also achieved through the technical implementation of the secondary trade of the above-mentioned securities”.

75. The semi-annual bulletin³⁸ of the MNSE indicates that “during the first half of 2015, the biggest turnover was recorded by trading of government and corporate bonds, in amount of Euro 10,423,111 €, which is 49% of total turnover achieved in first six months through 70 transactions”. Additional details on transactions for different categories of government bonds are not available.

³⁷ MNSE Annual Report, Page 3 at

<http://www.mnse.me/upload/documents/2015/Bilteni/Annual%20Report%20for%202014.pdf>

³⁸ MNSE Semi-annual Bulletin 2015, Page 4 at <http://www.mnse.me/upload/documents/2015/Bilteni/Semi-annual%20Bulletin%202015.pdf>

76. The secondary market transactions in respect of all categories of government bonds are settled on a DvP basis. Details of the DvP settlement process are provided in the CDA section below.

Corporate securities

77. The current Montenegro Stock Exchange (MNSE) started its operations as a new entity in January, 2011, though it was established in 1993, with four Montenegrin banks and the Republic of Montenegro as its shareholders. Subsequently, another stock exchange the New Securities Exchange was established in 2001 by six Montenegrin financial institutions and the Brokers Business Association. Both the exchanges were functioning as independent entities till 2010. The two exchanges were merged in the beginning of 2011 paving the way for a single stock exchange in Montenegro.

78. The MNSE is registered as a joint stock company and has been licensed by the SEC under the Securities Law. Its shareholders comprise banks and brokers and in December 2013 Borsa Istanbul acquired a stake (around 24 percent), making it one of the significant shareholders in terms of its holding. It is governed by a Board of Directors who are elected from amongst its shareholders, who in turn appoint the CEO.

79. The total market capitalization of the MNSE at the end of 2014 was Euro 2,960,670,753 which represented an increase of 4.20 percent over the previous calendar year. The market capitalization at the end of August 2015 stood at Euro 2,949,291,389. The total turnover recorded on the MNSE during the month of August 2015³⁹ was Euro 1,330,934, which compared to the previous month was lower by 44.61 percent and compared to August 2014 was lower by 64 percent. The average daily turnover in August 2015 was Euro 63,378, with an average daily number of 17 trades per day.

80. There are general requirements prescribed for issuance of securities in Montenegro. These include: (i) the issuer to be registered with the Securities Commission; (ii) securities are registered with the Central Depository Agency (CDA); (iii) securities are fully paid for and can be traded on the organized market; (iv) securities are freely transferable; and (v) the operations of the issuer are carried out as prescribed by the MNSE Rule book.

81. The market in Montenegro is divided into two segments: (i) official market; and (ii) free market. The official market is considered to be the premium segment of the market and in order for an issue to be listed on it, additional requirements have been specified over and above the general requirements. These include criteria regarding: (i) the amount of capital; (ii) number of shareholders, (iii) financial condition; (iv) application of the code of corporate governance; and (v) application of the international accounting standards and financial reports. The official market consists of the following segments: “A” and “B” list, primary sales and debt securities. There are 15 stocks listed under the “A” list with a further

³⁹ <http://mnse.me/upload/documents/2015/Bilteni/Monthly%20Bulletin%2008-2015.pdf>

16 stocks under the “B” list. A daily change in prices of securities on the official market is limited to +/- 10 percent. Securities listed on the official market are traded by continuous method.

82. The free market segment consists of all other securities which are not included on the official market and comprises: (i) free share market; (ii) investment funds shares; (iii) government bonds; (iv) bonds issued by local self- government; (v) corporate bonds; (vi) short-term securities; (vii) primary sales; (viii) a special list (shares for bonds, state-owned securities, special state funds offer, public offer-takeover); and (ix) sub- segment of free share market. A daily change in prices of securities on the free share market is limited to +/- 20 percent. Free market securities are traded by continuous method, with only securities under the category “sub-segment of free market” traded under the auction method.

83. The MNSE has 10 members. Members can be any legal entity authorized by the SEC to deal with securities, and have fulfilled the membership requirements as per the MNSE Rules. Banks and insurance companies can also be members of the MNSE, provided they are granted approval by the SEC. Members can be either dealers and/or brokers. A dealer can only trade on its own behalf and for its own account, while a broker can trade on its own behalf and on behalf of a client.

84. Trading on MNSE is done electronically through an exchange trading system (ETS). Members access the ETS through authorized work stations using FIX⁴⁰ protocol. Members connect to the ETS through the FIX Gateway using standard FIX 4.4 protocol via standard SSL encrypted communications. At the conclusion of the day’s trading session, the MNSE transfers the details to CDA through a file transfer protocol at 3.00 pm for clearing and settling the securities transactions. It is not clear whether the file is encrypted and transmitted to the CDA.

Central Depository Agency (CDA)

85. Clearing and settlement of all stock exchange transactions is done at the Central Depository Agency (CDA), which is the CSD and SSS for government and corporate securities in Montenegro. The CDA was established in 2000, as a for profit joint stock company, with the Ministry of Finance, the Central Bank of Montenegro, and seven commercial banks as its shareholders. The CDA is licensed and authorized to operate as the CSD and SSS in Montenegro by the SEC under Article 89 of the Securities Law. Article 90 stipulates the terms and conditions required to be met by CDA to obtain a license from the SEC. As indicated elsewhere in the Technical Note all securities (government and corporate) issued as per provisions of the Securities Law in Montenegro are dematerialized (Article 2) and have to be registered with the CDA in terms of Article 5. In addition to the provisions of

⁴⁰ The Financial Information eXchange (FIX®) Protocol is a non-proprietary, free and open messaging standard for communicating trade information. The FIX messaging standard is owned, maintained and developed through the collaborative efforts of FIX Trading Community™ member firms, which include many of the world’s leading financial institutions. <http://www.fixtradingcommunity.org/pg/main/what-is-fix>

the Securities Law, the CDA is guided by its own bye-laws, regulations and procedures⁴¹ all of which are and have been approved by the SEC as the regulator of the CDA in terms of Article 92 of the Securities law. In addition to its functions as a CSD and SSS, the CDA is also the National Numbering Agency (NNA) for Montenegro.

86. There are different categories of membership in the CDA depending on the nature of the activity of the entity. Members are divided into Issuers; Participants and Stock Exchanges. Participants comprise broker-dealers, custodians and bank depositories. All members have to be legal entities. Membership can be either direct or indirect. A direct member is defined as an entity which has a direct on-line access to CDA's systems. An indirect member accesses CDA's systems through a direct member. Issuers and Participants can be either direct or indirect members while the Stock Exchange is an indirect member.

87. As stated in Article 24 of the Securities Law, the CDA is the official registrar and maintains a centralized database register of all securities issued in Montenegro. The centralized database register contains information on: (i) issuers and security issuance (ISIN) details; (ii) data on registered owners; and (iii) custody account details. All securities are recorded as book entry equity positions in the securities accounts of account holders.

88. Article 88 of the Securities law makes it mandatory for owners of securities to open securities accounts with the CDA. Custodians are required under Article 82 of the Securities law to open separate accounts for customers. Article 100 of the Securities law states that the definitive legal proof of ownership of securities is the statement of account provided by the CDA. Based on these statutory provisions, the CDA rules provide for the following types of securities accounts: individual, joint, nominal account, collective (omnibus) custody account, custody account in the name, aggregate depository bank account, securities accounts administered by a foreign depository, participant omnibus account and issuer treasury account. In omnibus custody accounts and securities accounts administered by a foreign depository the identity of the account holder (beneficial owner) is only known to the custodian or the foreign depository. Determining the true owners of equity positions held in omnibus custody account and securities accounts administered by a foreign depository is the exclusively responsibility of the custodian and foreign depository that opened this account.

89. As a CSD, the CDA undertakes the following functions in addition to the above: (i) opening the securities account of the issuer (treasury account) along with details of the total number of shares issued; (ii) opening of one or more individual securities account for the beneficial owners and their management and safekeeping; (iii) daily reconciliation of account balances (which is an automated process) based on either market transactions (DvP) or non-market (free of payment) transactions; (iv) comparing and synchronizing the account balances with the nominal issue size details provided by the issuer; and (v) implementing corporate actions. It is not clear whether for example, the reconciliation is subjected to audit either through an internal audit mechanism or an external one and whether the reports of such an exercise are put up to the Board of CDA.

⁴¹ Available in Montenegrin language at <http://www.cda.me/EN/Pages/Naslovna.aspx>. An unofficial translation of significant chapters of the CDA Rules were provided by the staff of CDA to the assessor.

90. The CDA performs the clearing and settlement of all secondary market trades on a delivery versus payment (DvP) basis, using either DvP model 1 or DvP model 2. On receipt of the day's trade details file from MNSE after 15.00 hours (through FTP), the CDA classifies the trades as either "not accepted"; "conditionally accepted"; "rejected" or "accepted". Trades are not accepted for clearing and settlement if they are: (i) IPO trades (for which a separate procedure is followed); and (ii) if the seller's account does not have enough securities balances⁴². Trades are conditionally accepted when there are any incorrect details in the trade subject to the MNSE furnishing the correct trade details on T+1. Trades belonging to participants with outstanding penalty payments to the Guarantee fund are rejected. All other trades are accepted for clearing and settlement. The accepted trades are further classified into "confirmed" and "unconfirmed"⁴³ trades. On completion of this process on T+0, the CDA generates a clearing position file outlining the settlement obligations of each participant and sends the same to the participants.

91. The securities are settled on a DvP mode usually on a T+2 basis. There is however, a possibility to have a shortened settlement cycle (T+0 or T+1), provided both counterparties agree to such an arrangement; or an extended settlement cycle of T+3 if it is a delivery versus delivery trade (where securities are delivered in lieu of cash).

92. Settlement can happen on either DvP 2 or DvP 1 basis. Settlement takes place on a DvP 2 basis if the trade is being: (i) settled on T+2; (ii) there are adequate balances of securities in the seller's account; and (iii) the transaction value is less than the daily value limit per transaction (calculated by the sum of net cash debit positions of all participants not exceeding 50 percent of the current value of the guarantee fund). Additionally, if the same broker is representing both the seller and the buyer, the transaction is settled on a DvP 2 basis provided it meets with conditions (i) and (ii) irrespective of the value of the transaction (as the funds are settled on a net basis). Where the transaction does not meet with the above criteria, it is settled on a DvP 1 basis.

93. While the securities leg is settled in the CDA, the funds leg is settled in central bank money in the CBM's RTGS system. The CDA holds a cash pool account in the RTGS system. On T+2 at around 11.00 hours the net cash position file (containing details of debits and credits⁴⁴) is sent to the RTGS system for settlement by the CDA. On receipt of the file, the CBM debits the settlement account of the bank of the buying broker and credits the cash pool account of the CDA. The selling side broker's bank account is thereafter credited by debit to

⁴² In terms of Article 92 of the Securities law, the CDA has the right to determine the operational procedures under its rules. It has been ascertained that though there is no ban on short-selling in the Securities law, the rules of CDA do not permit any short-selling. The rules of the CDA have been approved by the SEC.

⁴³ Unconfirmed trades are trades executed by brokers on behalf of custodians. These trades have to be confirmed by the custodian by 12.00 hours on T+1 (client of the custodian has provided the confirmation to the custodian - voluntary confirmation) and if not by 15.00 hours (the outer limit) on T+1 through a process of enforced confirmation (custodian confirms the trade though it has not yet received any client confirmation).

⁴⁴ Brokers have to provide their bank account details to CDA for settlement of the funds leg. The buying broker's bank account is debited and the selling broker's bank account is credited in the RTGS system.

the cash pool account of the CDA. On confirmation of the settlement of the funds leg from the RTGS system, the CDA completes the settlement of the securities leg of the transaction.

94. As indicated above, a guarantee fund mechanism as prescribed under Article 98 of the Securities law is in place to take care of participant defaults under DvP 2 model. All participants contribute to the guarantee fund. The guarantee fund consists of a fixed annual contribution and an additional variable monthly contribution (linked to the volume and value of trades undertaken by a participant in the previous month). The annual contribution is calculated at the beginning of the year as the average daily net cash debit of all participants in the previous year, multiplied by times three. In addition, there is a minimum basic contribution set at 2 percent of the capital of the broker firm. Additional monthly contribution is the difference between the average net cash debit of the participant in the previous month plus the amount of basic contribution. The current size of the guarantee fund is Euro 16,000.00. The guarantee fund is held in the cash pool account of the CDA and is not part of the balance sheet of the CDA.

95. Whenever the guarantee fund is used to complete settlement in DvP 2 mode, the defaulting participant has to repay the amount to CDA on T+1. If it fails to repay on T+1, the participant has to pay a penalty of 10 percent of the outstanding amount along with the default amount. It has been gathered that there were 7 instances of failure to settle during the past two calendar years. In the case of DvP1 settlement, the transaction is cancelled if there is a failure to settle and penalties are imposed on the participant. As an extreme measure, the SEC in terms of Article 74 of the Securities law has the right to suspend such a participant.

96. The CDA has a secondary site in Podgorica where data replication happens in real time. There are redundancy features for network connectivity. It is understood that a BCP is being drawn up.

Recommendations

97. Detailed information on the various categories of government bonds and the process of their issuance should be published by the MoF. The website of the MoF does not provide any details and there is very little information in the public domain and the references that were available were only from the MNSE website (*High priority/Short term*).

98. The CDA as an SSS should compile and publish data on the clearing and settlement of government securities transactions using standard data templates and terminology for both the primary and secondary market segments. As indicated above, very little information is available and the references were to data from the MNSE reports, with various data elements not being clearly defined. As an example, reference is drawn to the Table on Page 4 of the MNSE Annual Report⁴⁵. In the absence of a defined methodology, it is not very clear whether the turnover data in the Table indicates the total value of transactions settled during the year, and what is meant by number of shares and volume (*High priority/Short term*).

⁴⁵ <http://www.mnse.me/upload/documents/2014/Bilteni/Annual%20bulletin%202014.pdf>

99. The amount in the guarantee fund mechanism should be stress tested for its adequacy to tackle any default during normal and stressed market conditions. While it could be argued that as the rules provide for settling transactions on a DvP 1 basis (if the net cash debit position of the participants exceeds 50 percent of the guarantee fund in the DvP model 2 framework), and therefore the amount in the guarantee fund is adequate, it should be noted that there is no assurance that such transactions would settle in the DvP 1 mode either. This could result in a significant proportion of failure to settle trades and impair the efficiency of the securities settlement process (*High priority/Medium term*).

100. The CDA should closely monitor and compile data on all settlement failures in DvP 1 and DvP 2 models and share the same with SEC (*High priority/Medium term*).

101. To mitigate operational risk and to ensure the continued smooth settlement of secondary market transactions in the CDA, the trading platform of MNSE should have alternate back-up arrangements. Currently there are no such BCP arrangements in place. In addition, the FTP channel for transmission of trade details between the MNSE and the CDA should be encrypted (*High priority/Short term*).

102. The BCP being prepared by CDA should adopt a holistic approach and take into account the interdependencies between it and the CBM and MNSE (*High priority/Short term*).

103. The integrity check of the balances of securities in the CDA should be reinforced with an audit process and the audit reports should be placed before the Board of CDA and also shared with the SEC. The periodicity of the audit may be decided in consultation with the SEC (*High priority/Short term*).

F. International remittances

104. Cross-border inward remittances grew from Euro 37.9 million in 2013 to Euro 39.1 million⁴⁶ in 2014. The main remittance sending countries to Montenegro are Germany, Serbia and the US. As is the case elsewhere, the remittances are largely small value in nature with the average value of a remittance usually being Euro 275.00⁴⁷. Outbound remittances from Montenegro also increased from Euro 12.9 million in 2013 to a little over Euro 15 million in 2014. These outbound remittances are mainly to the neighboring countries such as Serbia, Bosnia and Herzegovina, Macedonia and Croatia with the average value of a remittance being Euro 177.00.

⁴⁶ Data on total value of inward and outward remittances provided by CBM.

⁴⁷ Data on average value of an inward and outward remittance provided by MNE Transfers.

105. Currently, the sole dedicated remittance services provider⁴⁸ in Montenegro is Montenegro Transfers⁴⁹ (MNE transfers). MNE Transfers has been licensed by the CBM in March 2015, under Article 72 of the PS law as a payment institution authorised to provide money remittance services, with remittances being defined as a payment service under Article 2 of the PS law. It is authorized to both receive and send cross-border remittances⁵⁰. MNE Transfers is an agent of Western Union in Montenegro.

106. MNE Transfers has a wide network of agents comprising 11 banks and the Montenegro Post office covering the country. The services are available in 253 locations (of which 70 are Post office locations) in 52 towns. MNE transfers does not have any merchant establishments such as supermarkets as its agents in Montenegro. The appointment of agents is governed by Article 77 of the PS law and the relevant guidelines⁵¹ issued thereunder by the CBM. The payment service provider and the agent (either a legal person or an entrepreneur) have to sign a contractual agreement specifying: (i) the type of payment services being provided by the agent being provided on behalf of the payment service provider; (ii) the manner in which these services are being provided; (iii) rights, obligations and responsibilities of the payment service provider and the agent; and (iv) the term of the contract. All agents have to be approved by the CBM and have to be registered with CBM, prior to commencing their operations.

107. MNE Transfers operates only a cash-in (origination) and cash out (destination) service with all inward remittances being paid to beneficiaries in cash. MNE Transfers remittance product “Will call” only permits cash to cash transfers and does not provide for credit to a bank account even when a beneficiary has one. It was also indicated that its contract with Western Union permits it to provide only cash to cash transfers as is the approval received from the CBM. Discussions with CBM have revealed that the definition of “Money remittances” as available in the EU Payment Services Directive (PSD) 2007/64/EC has been transposed into the PS law wherein under Article 9 (7) money remittances has been defined as “payment service where funds are received from a payer, without any payment accounts being created in the name of the payer or the payee, for the sole purpose of transferring a corresponding amount to a payee or to another payment service provider acting on behalf of the payee, and/or where such funds are received on behalf of and made available to the payee”. The CBM is therefore of the view that this definition precludes MNE Transfers from providing a product that would enable cash out and/or credit to the beneficiary account, notwithstanding the fact that channeling these significant remittance inflows into the formal financial system would have a positive impact on savings and economic growth.

⁴⁸ License has been issued by CBM to RIA Transfers as a payment institution to provide money remittance service. The entity recently licensed is yet to commence operations.

⁴⁹ Prior to the enactment of the PS law, MNE transfers was operating as EKI Transfers in Montenegro with headquarters in Belgrade.

⁵⁰ It is understood from the discussions with CBM, that the segment of cross-border “remittance” market, representing repetitive, low-value transfers by migrant workers to their families in a different country is totally serviced by MNE transfers in Montenegro.

⁵¹ http://www.cb-mn.org/eng/slike_i_fajlovi/fajlovi/fajlovi_brzi_linkovi/propisi/payment/dec_conditions_payment_service_agent_4814.pdf

108. There are no clauses barring exclusivity arrangements regarding agents either in the license conditions or in the relevant CBM regulations. However, as indicated elsewhere, this does not appear to be an impediment given the Law on protection of competition which prohibits any practices including contracts that prevent, restrict or distort competition in the relevant market (Article 8); supplemented by Article 15 which prevents any abuse of dominant market position.

109. MNE Transfers has an account with CKB Bank, where the collateral amount to cover the value of the inward remittances received is deposited. Discussions with MNE Transfers indicate that an amount of Euro 20,000.00 has been prescribed by the CBM (though this could not be independently verified with CBM), as the minimum collateral that has to be maintained at all times. As against the prescribed requirement, MNE Transfers has indicated that it usually maintains an amount of Euro 100,000 to 150,000 as minimum collateral with CKB Bank. This however could not be verified in the absence of any reports or data with CBM.

110. MNE Transfers holds an account with CKB bank. All its transactions related to remittances (both inward and outward) are routed through this account. The same account is also used for making reimbursements (principal amount + commission) to agents (for the pay-outs made by them to beneficiaries) on a T+2 basis by MNE Transfers. Similarly, for any outward remittances, the agents have to pay-in (for the amounts collected from the senders) on a T+1 basis into this same account.

Recommendations

111. Policy measures need to be put in place by the Central Bank of Montenegro to target cross-border inward remittance proceeds being deposited in payment accounts as a first step towards greater financial inclusion in Montenegro. Currently, all remittance proceeds are paid out to beneficiaries in cash by the remittance service provider, even though the beneficiary may have a bank account. Given the fact, that Montenegro received 39 million Euro as inward remittances in 2014, the potential to encourage savings is significant and is beneficial to the national economy as a whole and to the balance of payments situation (*High priority/Short term*).

112. It is strongly recommended that CBM obtain an expert legal opinion on the definition of Money remittances as provided under Article 9 (7) of the PS law and the corresponding provisions in PSD, as to whether it precludes a payment institution providing money remittance services from crediting a beneficiary's account with the remittance proceeds. The definition while mentioning that there is no requirement for either the payer or payee to have an account does not expressly debar remittance proceeds being credited to an account of the beneficiary. (*High priority/Short term*).

113. Oversight and supervision over MNE Transfers should be initiated at the earliest. Discussions with CBM and MNE Transfers has revealed that no oversight either on-site inspection or off-site data collection and monitoring or supervision has been carried out, since

MNE Transfers began its operations. Illustratively, as part of off-site monitoring, MNE Transfers should be asked to provide details regarding: (i) amount deposited as collateral; (ii) adequacy of the amount of collateral deposited to cover both inward and outward remittance flows; (iii) an auditor's certificate certifying the adequacy of collateral taking into account for example the average drawings in the account say for a period of 4 to 5 days; (iv) indicate the frequency of the revisions in the collateral amount based on remittance flows; (v) data on the volume and value of remittances sent/received; (vi) details regarding which countries are sending/receiving remittances to and from Montenegro and (vii) data on number of agents and agent locations etc. (*High priority/Short term*).

G. Payment system oversight

CBM

114. Chapter IV of the newly enacted PS law provides the necessary powers to the CBM to exercise oversight over all payment and settlement systems in the country operated by any entity. An oversight division has been constituted in April 2011, in the department for financial stability, research and statistics. In line with international best practices, the oversight division is distinct from the payment systems department, though both report to the Vice-Governor for financial stability and payment systems. This arrangement prevents any potential conflict of interest in the discharge of the oversight function. The oversight division has 3 staff members. It is understood that the Banca d'Italia and DeNederlandesche Bank are extending technical assistance to the CBM on oversight.

115. The activities of the oversight division and the scope of oversight are not very well-defined currently. Activities pertinent to oversight such as monitoring of the CBM payment system on a daily basis; assessing the financial and operational risk management measures does not appear to be part of the scope of oversight and the activity profile of the Department. To illustrate this point, the oversight division receives only monthly data from the payment systems department on the volume and value of transactions settled in the CBM payment system and ~~from the IT department~~ data on system availability. Oversight of retail payment systems and instruments does not appear to be part of the activity profile of the division, as is oversight and supervision over the newly licensed remittance services provider MNE Transfers. No data collection on these aspects is undertaken by the division.

116. An interdepartmental team of the CBM, ~~The Oversight division~~ undertook an assessment of the CBM payment system using the previous set of standards the Core Principles (CPs) for systemically important payment systems in 2010. Another assessment was carried out this year by the Oversight division using CPs 7, 8 and 10 to assess the impact of changes to the functioning of the system on account of hardware changes, application software upgrades, operationalization of a secondary site etc. It has been ascertained during discussions, that the CPs were used, pending the formal adoption of the PFMI by the CBM. It has been learnt that a new regulation on oversight would come into effect from 1 January 2016, wherein the PFMI have been adopted as the standards in lieu of the Core Principles.

SEC

117. The SEC's responsibilities as spelt out in Article 8 of the Securities Law include amongst others the powers to license and approve relevant acts of securities markets, authorize market participants and Central Depository Agency (clause 5); and undertake measures to support the operation of an orderly, fair and properly informed securities market (clause 12). Article 9 of the Securities Law enables the SEC to make rules to achieve these objectives. The SEC has accordingly issued rules pertaining to the licensing of brokers and dealers, securities market infrastructures (MNSE and the CDA), and for the orderly conduct of the securities market. Amongst other powers in the Securities Law, the SEC has powers to conduct both off-site monitoring and on-site inspections over all licensed entities.

118. As part of its oversight activities over the CDA, the SEC obtains periodical and annual reports from the CDA regarding all its activities as a CSD and SSS. The reports include information on governance issues (Board of directors); capital; IT; human resources; operations as a CSD; clearing and settlement activities as an SSS. The information pertaining to clearing and settlement comprises the volume and value of settled transactions in the primary and secondary market; and details of members settled trades as buyers and sellers. SEC also undertakes onsite inspections of CDA, which largely focuses on staffing and IT resources.

Recommendations

CBM

119. To achieve the stated objective of regulating, supervising, and monitoring payment, clearing, and settlement systems as laid down in the PS law, the oversight division in the CBM needs to be strengthened with adequate trained human resources. The existing staff (as well as other staff members) in the Division should be trained on oversight activities which should include: (i) developing an understanding of the PFMI and the self-assessment methodology; (ii) electronic retail payment system developments and instruments including credit and debit transfers, cards, e-money, internet and mobile banking etc. (*High priority / Short term*).

120. It is recommended to establish an internal cooperation and coordination framework within the various departments in CBM and the Oversight division, for ensuring the continued safe and efficient functioning of the CBM payment system. Illustratively, the oversight division receives only monthly reports on the functioning of the CBM payment system. It does not receive any daily reports: (i) on the functioning of the system including any changes to operating hours; (ii) the value and volume of transactions settled; (iii) the liquidity flows in the system including queue management, etc. The oversight division is not associated nor are its inputs sought on any changes to the financial and operational risk management measures for the CBM payment system. To mitigate these circumstances, it is necessary that the CBM adopts a coordinated strategy to harness all resources within the CBM (*High priority/Short term*).

121. The oversight division should frame an oversight policy which would provide the overarching principles for the oversight function in CBM in consonance with the PS law and the new regulation on oversight through a consultative process and publish the same. Typically, such a policy framework should outline the public policy objectives of oversight, the standards adopted by the central bank for the conduct of its oversight, the scope of the oversight, the oversight activities and tools; and underline the need for cooperation with other regulatory authorities (*High priority/Short term*).

122. Off-site monitoring activities such as data collection and obtaining reports should be established. As far as feasible electronic data collection modes should be utilized to reduce regulatory costs and burdens on the overseen entities. The CBM should strive to publish more detailed information on the payment and settlement systems in the country – both in the large value and retail spheres including the use of both paper and electronic payment instruments, e.g. in the form of regular oversight reports (*High priority/Medium term*).

123. On-site inspection in cooperation with other departments within CBM should be established. On-site inspection should be undertaken in coordination with other departments within to enable effective utilization of resources such as IT and audit for example (*High priority/Medium term*).

124. An assessment of the CBM payment system using the PFMI as the benchmark and adopting the framework provided by the Disclosure Framework and the Assessment Methodology should be undertaken. The completed Disclosure Framework should be publicly disclosed (*High priority/Medium term*).

SEC

125. The SEC should also formally adopt the PFMI and publicly disclose the same. The SEC should use the Principles for performing its oversight over the market infrastructure – the CDA to ensure its safe and efficient functioning as a CSD and SSS (*High priority/short term*).

126. The SEC should mandate the CDA to undertake a self-assessment using the PFMI as the benchmark. The self-assessment should be carried out by the CDA using the Assessment Methodology and the completed self-assessment should be reviewed by the SEC. On completion of the review, the SEC should encourage the CDS to complete the Disclosure Framework and publicly disclose the same (*High priority/short term*).

127. The SEC should train its human resources for undertaking oversight activities under the PFMI framework (*High priority/short term*).

H. Cooperation with stakeholders and other relevant authorities

128. The PS Law and the Securities Law contain provisions relating to cooperation between regulatory authorities in Montenegro and other relevant cross-border

jurisdictions. Articles 104,105 and 106 of the PS Law provide for cooperation and exchange of information between CBM and other regulatory authorities both domestically and on a cross-border basis for the supervision of payment institutions. Article 106 also enables the CBM to conclude agreements with relevant authorities in different countries if required. Similarly, Article 164 of the PS Law allows the CBM to cooperate with other competent authorities in Montenegro and other relevant cross-border jurisdictions, for the supervision of payment system operators and participants. The SEC is enjoined under Article 18 (a) of the Securities law to cooperate and furnish data and information to relevant authorities domestically and on a cross-border basis.

129. Complementing these two laws, is the Law on Financial stability, which establishes a Financial Stability Council (FSC) in Montenegro. The FSC is chaired by the Governor of the CBM and has as its members, the Minister of Finance, President of the SEC and President of the Insurance Supervisory Agency. The FSC meets on a quarterly basis and if required on an ad-hoc basis as well depending on need. The scope of work of the FSC is to ensure coordination and exchange of data and information among the competent regulatory bodies to identify risks, prepare contingency plan to tackle any crisis to ensure financial system stability. It is also tasked with monitoring best practices with a view to adopting regulatory standards in the financial area. As to whether the scope outlined above includes any analysis and policy recommendations on financial and operational risks in the area of payment and settlement systems and securities settlement systems and their impact on financial system stability in Montenegro, is not very well spelt out. The Financial Stability Report produced by the CBM does contain a chapter on payment systems, but this is largely devoted to the CBM payments system and deals mainly with the availability of the system and the volume and value of transactions that are processed and settled. It has been ascertained that data relating to operations of payment and settlement systems and securities settlement system operations is submitted to the FSC.

130. There is no permanent consultative body comprising all stakeholders (regulators, market infrastructures and participants) such as a National Payments Council (NPC) in Montenegro to prepare and drive the country's payment and settlement systems strategic development. The NPC in many countries is chaired by the Governor of the Central Bank and has as its members other regulators (securities commissions, telecom authorities), market participants and the Government. The NPC in many countries is tasked with preparing a strategic and holistic action plan with defined timelines for the modernization and development of payment and settlement systems in line with international standards. Illustratively, the NPC strategy could focus on measures to facilitate transaction accounts for all citizens; greater usage of cards (debit and credit); introducing interoperable e-money products; promoting online payments through the internet and mobile with adequate security measures; deepening the PoS infrastructure; rationalizing the fee structure; and devising plans to leverage existing payment infrastructure to promote retail electronic payment products.

131. Currently, the CBM as part of its public consultation process, shares the draft copies of any proposed changes to regulations with all market participants and the Committee on Payments of the Bankers Association. The suggestions and comments

received during the public consultation process are vetted and if found suitable are incorporated into the final regulations.

Recommendations

132. It is recommended that in the meetings of the FSC an agenda item relating to payment and settlement systems including securities settlement systems is included to deliberate on the financial and operational risks and their impact on the overall safety and efficiency of the payments and securities settlement systems. This would enable the FSC to deliberate upon the developments and provide policy directions for the safe and efficient functioning of payment and settlement systems including securities settlement systems in line with international standards and contribute to the overall stability of the financial system (*High priority / Short term*).

133. Coordinated and consultative efforts by the authorities and market participants are needed to increase the use of electronic transactions. This could be achieved through the establishment of a National Payments Council (NPC), which should be headed by the Governor or Vice-Governor of the CBM and comprise all relevant stakeholders, including regulators,⁵² MOF, market infrastructures such as the CDA, representation from the supply side (including entities licensed by CBM to offer payments services) and the demand side (e.g. corporate and consumer representatives) in Montenegro. The NPC could be structured as an informal body in the initial stages and could be formalised at a later date. Such a body should be tasked with preparing a strategic and holistic national payment system (NPS) strategy supported by an action plan with defined timelines for the modernization and development of payment and settlement systems in line with international standards. Devoted working groups could also be established under the aegis of the NPC for example to facilitate greater use of electronic payment means for both Government payments and receipts and using the post office network more effectively (as outlined in Paragraph 104). Illustratively, this NPS strategy could focus on measures (i) to facilitate transaction accounts for all citizens, greater usage of (debit and credit) card, and interoperability of e-money products; (ii) to promote online payments through the internet and mobile with adequate security measures; (iii) to deepen the PoS infrastructure; (iv) to rationalize the fee structure; and (v) to leverage the existing payment infrastructure to promote retail electronic payment products (*High priority / Short term*).

134. It is also recommended that CBM and SEC establish cross-border cooperation with peer regulators in the area of payments and securities settlement systems, along the lines of cooperation established in the area of banking supervision. Such cooperation could span both large value and retail payment and settlement systems and in the case of securities settlement systems include both corporate and government securities (*Medium priority/Medium term*).

⁵² Securities and Exchange Commission and Montenegro Agency for Electronic Communications and Postal services.