

Payments Flow Diagnostics

Retail Payments for Nepal

Content



- ✓ Introduction
- ✓ Objective
- ✓ Methodology
- ✓ Payment Flows Grid
- ✓ Payment Instrument Preferences in Nepal
- ✓ Retail Payments Instruments in Nepal
- ✓ Underlying Issues with Retail Payments
- ✓ Barriers to Digitization of Payments

Introduction



Payment system modernization has become a prominent feature of the financial sector reform agenda of many countries. The focus is not only on payment instruments, user fees, and product pricing, but also on the need for an efficient payment system to support the needs of a growing demand of non-cash retail payment instruments.

Nepal is a cash heavy economy with concentration of formal financial services in urban areas, with limited software and hardware infrastructure in rural areas. Policy/ systematic gaps also hinders the advent of digital finance in the country.

Nepal Rastra Bank is primarily interested in the overall safety and efficiency of retail payments and of the corresponding clearing and settlement mechanisms. This report is a stock take of retail payment systems in Nepal. It aims to assist NRB in prioritizing issues identified during the stock take exercise, mainly in the six major payment flows in terms of transaction value in Nepal:

G2P	B2G	B2P	P2G	P2B	P2P
Government to Person	Business to Government	Business to Person	Person to Government	Person to Business	Person to Person

The payment flow diagnostic follows the approach developed for the Better Than Cash Alliance country diagnostics and uses the data-sets that is laid out by the World Bank on measuring payments in the financial sectors.

Objective



The Payment Systems Department within NRB aims to develop strategy around retail payments. NRB long term vision is to have retail payments digitized in the longer terms, for this, it needs to determine the usage of digital retail payments in Nepal instead of non-digital payments (cash and cheque). The overall objectives of this report are:



To promote the development of secure, healthy and efficient system of payments.



To reduce barriers for retail payment service and other retail financial services.



To promote innovation through leveled playing field and flexibility in the market.



To expand effective, yet proportionate approach to consumer protection.



To offer sustained rapid growth and large-scale volumes.



To help providers access market information along with data security and protecting customer privacy.

Number of interviewees:

- ✓ A 3 day Focus Group Discussion was held from 30 May 2017 to 1 June 2017 in Kathmandu.
- ✓ Number of interviewees: 72 participants from 42 organizations, comprising of:



Scoping Tools:



Qualitative Scoping

- ✓ Eco-system payment flow mapping.
- ✓ Supply side payments assessments.



Quantitative Scoping

- ✓ Regulatory readiness captured through Focus Group Discussion (FGD) with regulators.
- ✓ Market readiness captured through FGD with partners, payment service providers and operators, banking and financial institutions etc.

Payment Flow Grid

Data on payment flows in Nepal and the cash and digital breakdown of the transaction value and volume.

Payment Flow Grid



		PAYEE		
		Government	Business	Person (Individual)
PAYER	Government	G2G Central government disbursements to local levels. Transfers within the central government.	G2B Supplier payments, Utility payments.	G2P Welfare programs, Salaries, Pensions.
	Business	B2G Taxes, Fees for licenses and permits. Payments to gov't utilities.	B2B Supplier payments, Utility payments, Pension contributions.	B2P Salaries and benefits.
	Person (Individual)	P2G Taxes, Utilities, Debit card payment of taxes, Payments to gov't utilities.	P2B Utilities, School fees, Credit card payments, Pension contributions, Debit card payment at stores.	P2P Remittances, Gifts.
	Development community	D2G Taxes	D2B Utility payments	D2P Cash transfers, Salaries for local employees.

High Value \$\$

High Volume ##

Figure I: The Payment Flow Grid

Selected Segments



To feed the stock taking exercise, NRB decided on few payment flows that were analyzed and of the nine payment grids (as shown in figure I), six of them were analyzed further (highlighted in figure II).

		PAYEE		
		Government	Business	People (Individual)
PAYER	Government	G2G Central government disbursements to local level, transfers within the central government.	G2B Supplier payments.	G2P Welfare programs, salaries, pensions.
	Business	B2G Taxes, fees for licenses and permits.	B2B Supplier payments, utility payments, pension contributions, payments to government utilities.	B2P Salaries and benefits.
	Persons (Individual)	P2G Taxes and fees.	P2B Utilities, school fees, credit card payments, pension contributions, debit card payment at stores.	P2P Remittances.

Figure II: The Payment Grid

Payment Flows: Cash and Digital Breakdown



Of the total payments flowing across the six grids of the eco-system, only 0.23% of the transactions are done digitally, and this is largely driven by salary payments specially on part of businesses. (See Annexure for source)

		PAYEE		
		Government	Business	People (Individual)
PAYER	Government			G2P Transaction volume: 13.2 million Digital transaction volume: ~10% Transaction value: Nr218 billion Digital transaction value: 0.6%
	Business	B2G Transaction volume: 366,578 Digital transaction volume: 0% Transaction value: Nr184.3 billion Digital transaction value: 0%		B2P Transaction volume: ~1 billion Digital transaction volume: 5.6% Transaction value: Nr558.8 billion Digital transaction value: 9.9%
	Persons (Individual)	P2G Transaction volume: 496,730 Digital transaction volume: 0% Transaction value: Nr33.9 billion Digital transaction value: 0%	P2B Transaction volume: 29 billion Digital transaction volume: 0.06% Transaction value: Nr1600 billion Digital transaction value: 3.95%	P2P Transaction volume: 9 million Digital transaction volume: 4.4% Transaction value: Nr710.9 billion Digital transaction value: 1.3%

Figure III: Cash and Digital Breakdown of the Payment Flows

Preferred Payment Instruments in Nepal

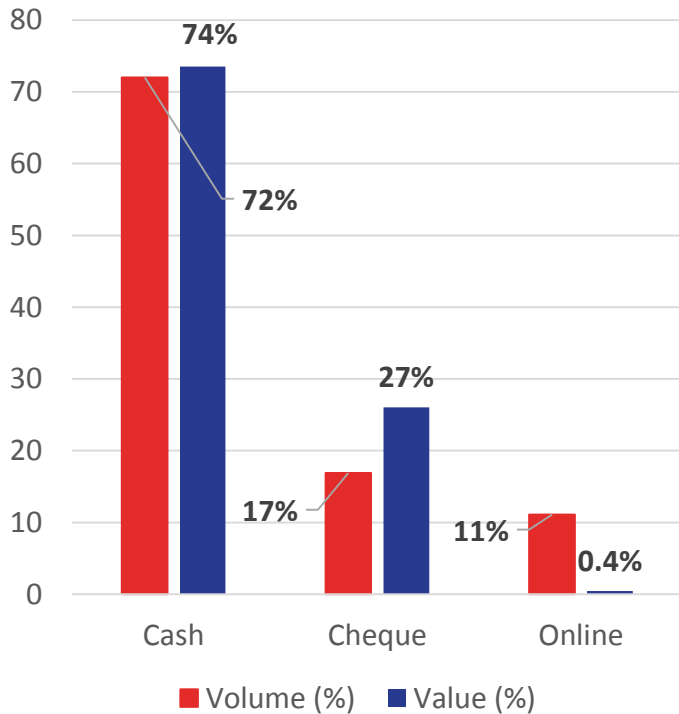
Payment instrument preferences and payment transaction pool.

Payment Instrument Preferences



Based on the data provided by banks and other sources, every month an average of Nr11 million transactions are processed. And cash has been the most preferred mode and accounts for more than 70% of transactions both by volume and value. (See Annexure for source)

Figure IV: Payment Instruments - Preferences



Transaction Pools	Volume %	Value %
<25,000	55%	2%
25,000-100,000	22%	6%
100,000 – 1 million	20%	31%
1 million – 3 million	2%	21%
3 million – 10 million	0.5%	16%
10 million – 100 million	0.2%	23%
>100 million	0.001%	1%

Table I: Payment Transaction Pools

Types of Retail Payment Instruments in Nepal

Cash, Cheque, Debit and Credit cards, e-wallets etc.

Retail Payment Instruments: Cash

Cash dominates almost all spheres of financial activity in Nepal. Financial Institutions still accept deposit and allow withdrawals in high denomination. Closer look at the denomination of the payments and deposits taking place in the banking sector suggests that 83% of payments in cash are below Nr100,000 and 69% of deposits are within this range. (See Annexure for source)

Figure V: Payments In Cash

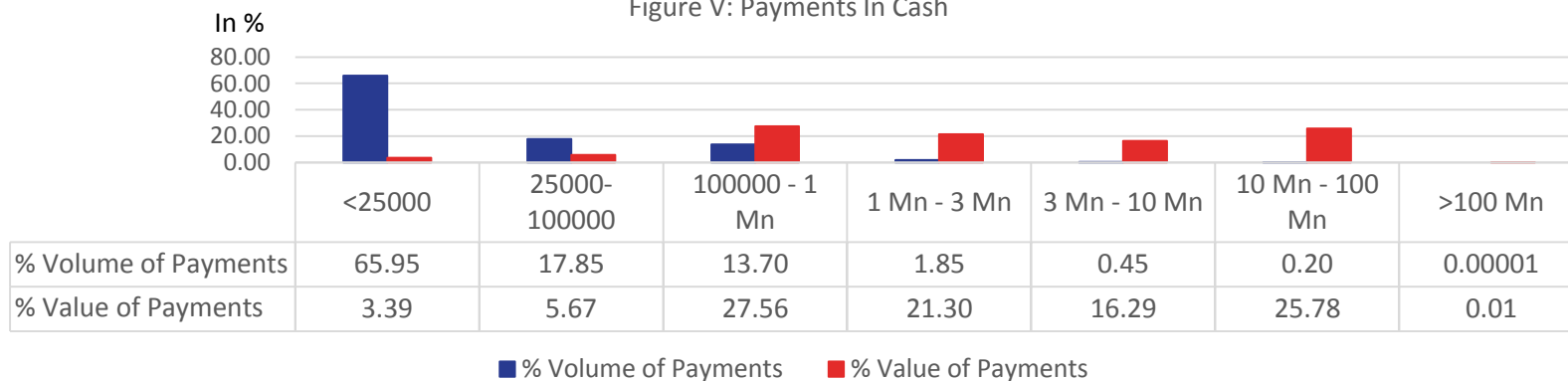
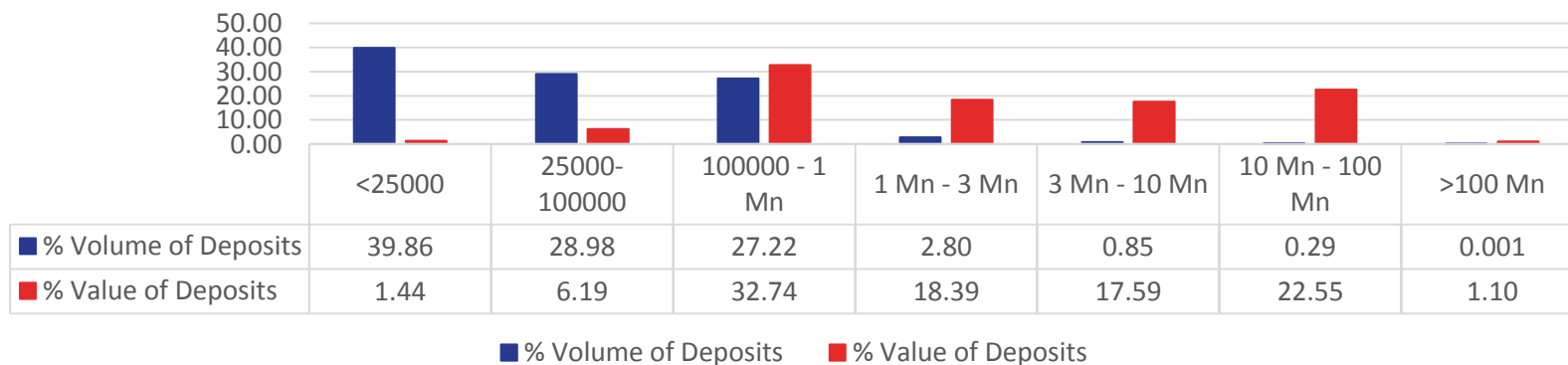


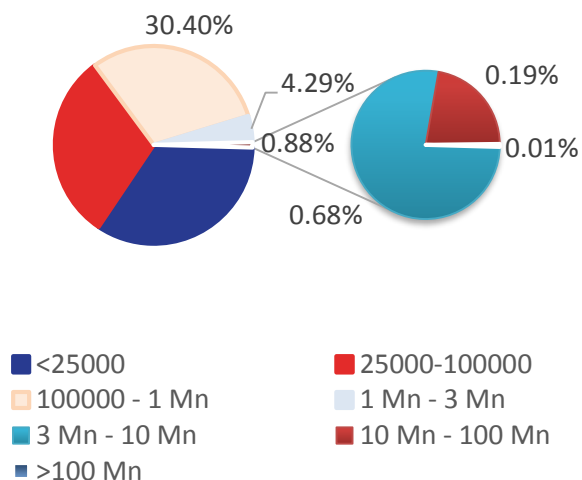
Figure VI: Deposits In Cash





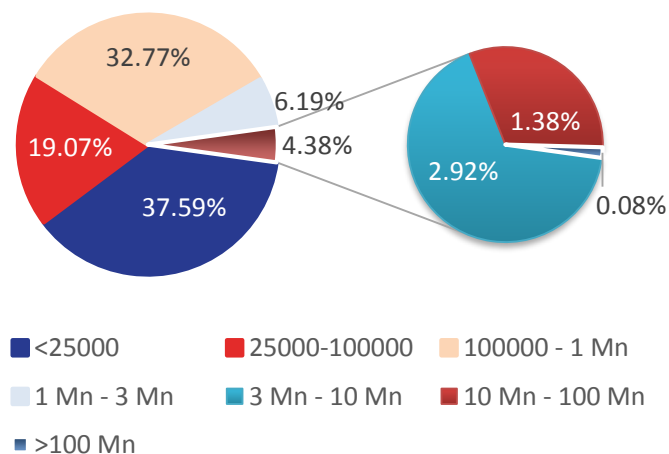
Retail Payment Instruments: Cheque

Figure VII: Break-Up Of Cheque Transactions



- ✓ 64% of all cheque transactions are below Nr100,000 (7% by value).
- ✓ 30% of all cheque transactions are between Nr100,000-Nr1,000,000 (34% by value).
- ✓ 75% of DD purchased in a period were through customer bank account and 41% of DDs above Nr100,000 purchased in cash accounts for 92% in value terms. (See Annexure for source)

Figure VIII: Break-Up Of DD/PO Transactions



Amount (NPR)	% of Cheque Transactions by Value	% of DD/PO Transactions by Value	Avg. Value of Cheque Transaction (NPR)	Avg. Value of DD/PO Transaction (NPR)
<25,000	1%	0.2%	10,500	6,500
25,000 – 100,000	6%	1%	52,000	51,500
100,000 – 1 million	34%	11%	316,000	356,000
1 million – 3 million	26%	10%	8 million	2 million
3 million – 10 million	12%	14%	5 million	5 million
10 million – 100 million	19%	32%	28 million	24 million
>100 million	2%	31%	128 million	416 million

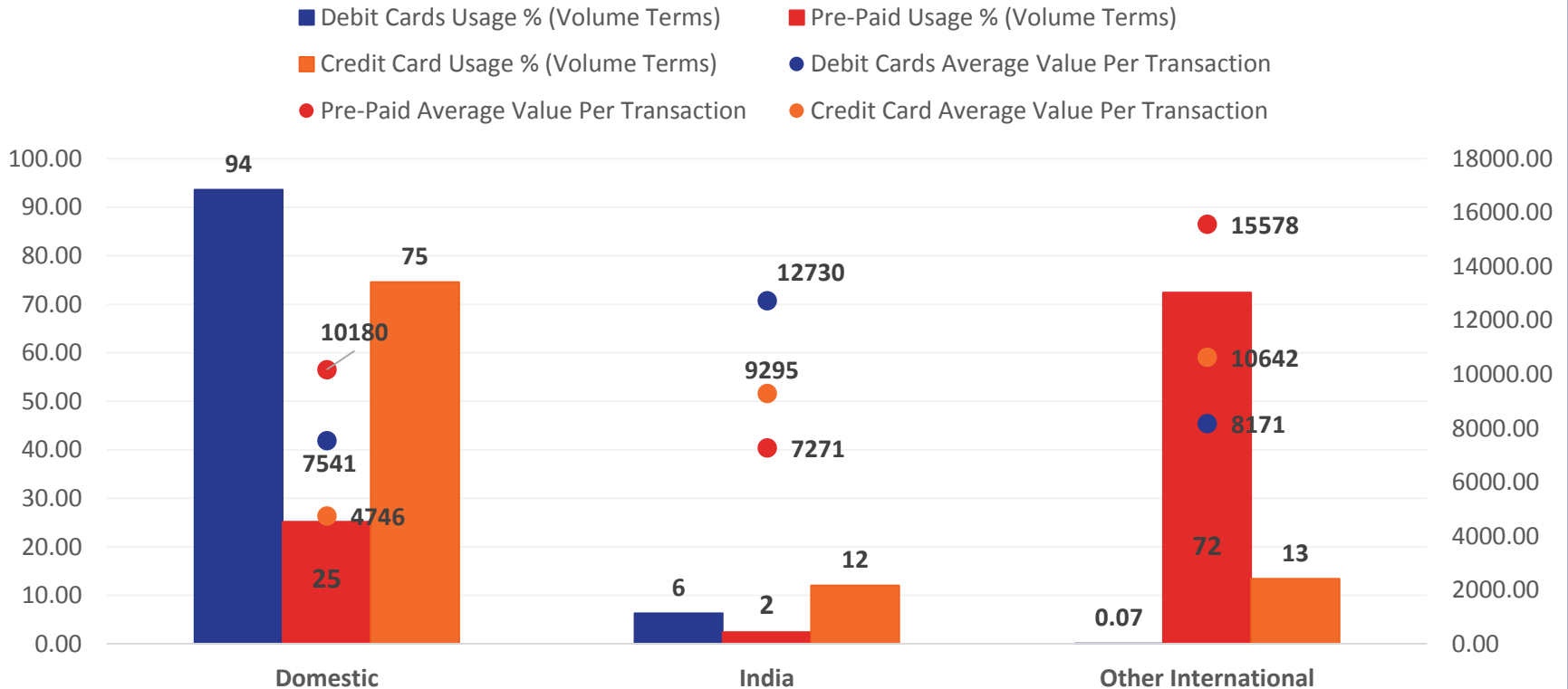
Table II: Data on Cheque and DD Transaction



Retail Payment Instruments: Cards

Debit card has grown 7% to 9% year on year whereas in the same period deposit accounts grew by 11% - 12% year on year. Active rate in cards is approx. around 60% (based on domestic card network). This also implies that the split between domestic card and foreign card is 42%:58% respectively. Only 3.5% of all debit card based financial transactions are done at merchant held POS and remaining transactions are at ATMs in form of cash withdrawal requests. (See Annexure for source)

Figure IX: Usage Geography Of Cards





Retail Payment Instruments: eWallets

Since data is not yet available in a substantial way, prepaid card and electronic money activities remain on a small scale. However, there are several payment service providers such as e-Sewa, IME Pay, Prabhu wallet that offer a range of prepaid card services, e-wallets for mobile phone and internet-based services. (See Annexure for source)

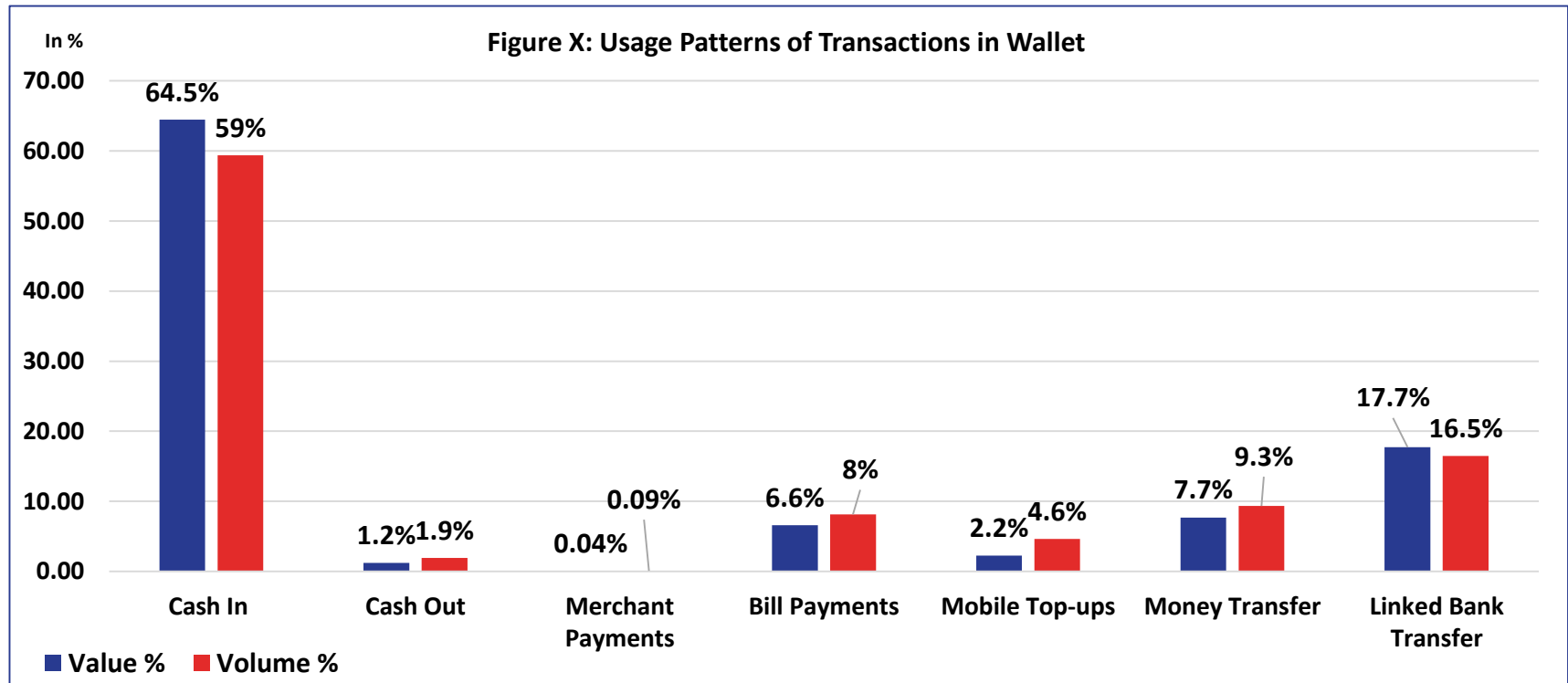
Wallet users: 642,103

Active wallet users: 483,810

Average transactions per day: 134,549

- Internal Reports, e-Sewa May 2017

Figure X: Usage Patterns of Transactions in Wallet



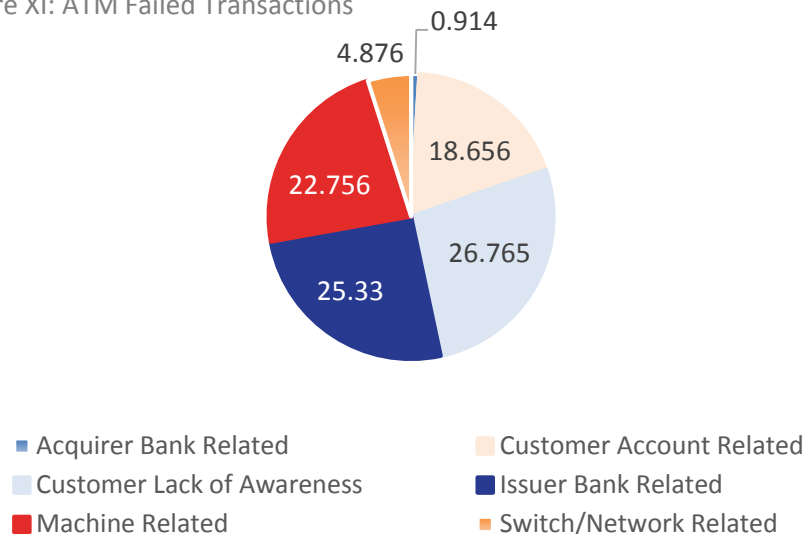
Underlying Issues with the current Retail Payment Instruments

Customer confidence, Unsettled Accounts, Nascent digital channels.

Issues with Retail Payments: Customer Confidence



Figure XI: ATM Failed Transactions



ATM and POS transactions have grown over the years and so has the confidence in dealing with digital channel. In 2013 the ratio of financial to non-financial transactions was **2.97**, which in 2017 stands at **4.1**. However, there are still issues with the digital channel such as failure of transactions and absence of consumer protection mechanisms. (See Annexure for source)

Figure XII: POS Failed Transactions

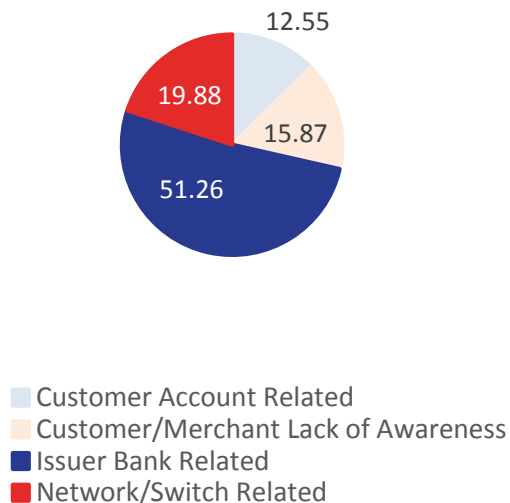


Table III: Financial and Non-financial ATM Failure Ratio

Failure Ratio – ATM	Financial Transactions	Non-financial Transaction
Any Transaction	3	2
On-Us Transaction	5	3
Off-Us Transaction	2	2

Issues with Retail Payments: Unsettled Transactions



Unsettled transactions for nine commercial bank shows that, a total of Nr90 million spread across 11,833 transactions is parked in these banks. 91% of these transactions are unsettled for more than 2 months and 62% for more than a year. In terms of money held in general ledger balance, these transactions represent 88% (more than 2 months) and 61% (more than 1 year) respectively. (See Annexure for source)

Table IV: Details of Unsettled Transactions

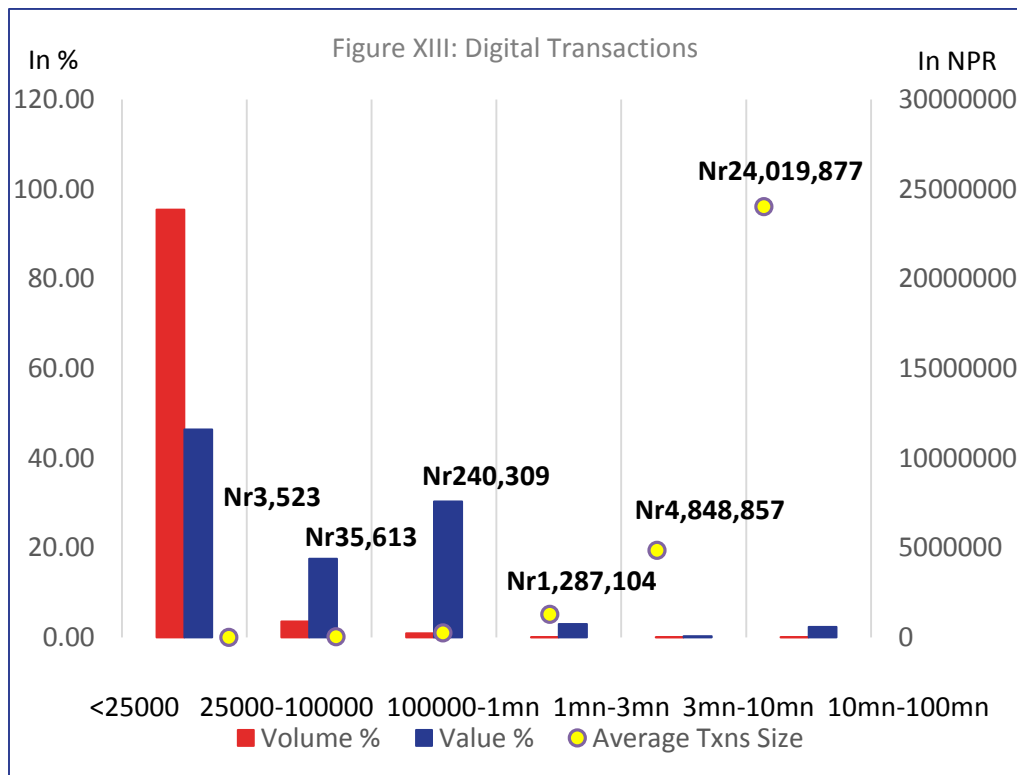
Details of unsettled transactions either through card or under other payment mode	Number of transactions	Cumulative Value of those transactions (Amount NPR)
15 days to 1 month	589	3,516,803
1 month to 2 months	419	7,676,055
2 months to 1 year	3526	24,102,313
1 year to 2 years	3891	41,697,849
2 years and above	3408	13,428,298

Issues with Retail Payments: Nascent Digital Channels



While ATM networks have added a layer of convenience for the public, its use has been rather limited. The addition of channel like internet, mobile and POS and possibility of making payments through a credit transfer or a direct debit into the account has only lately come to force.

More than 95% of transactions on digital channel is below Nr25,000 and accounts for 46% of the entire value of transaction through digital channel. (See Annexure for source)



	Number of Txns	Value of Txns (NPR)
Credit Transfers	163,210	74.6 billion
Direct Debits	13	9,040

Table V: Details of Credit Transfers and Direct Debits

Barriers to Digitization of Payments

Two main barriers to digitization of payments are 'settlement' and 'market'.

Barriers to Digitization of Payment: Settlements



High concentration risks as all banks have the urge to become settlement banks for payment service providers.



High chance of system failure which can create a domino effect on the ability of other banks to carry out settlements.



Lack of proper legal agreements to ensure the clarity and liquidity of settlement process along with well managed credit risks.



Long settlement period imposed by banks for card payments. The settlement cycle could be improved by imposing hourly circles. This would ease liquidity for merchants and transcribe real time payments.

Barriers to Digitization of Payment: Markets



Lack of synergy among existing payment service providers who operate as silos making it difficult for any one system to achieve scalability.



Limited number of acquiring banks to facilitate digital finance across Nepal.



Lack of proper pricing scheme to support use cases in agriculture, education, health or other sectors.



Unavailability of a common platform or industry standards to interface with other service providers.



High dependence and reliance on current payment systems due to lack of knowledge and awareness on digital finance among potential users.



Lack of proper agent networks due to high cost of operation and outreach for payment service providers who are not remittance providers.

Annexure 1: Documents Reviewed



Legislation/Regulation
Asset (Money) Laundering Prevention Act (2008)
Banking Offence and Punishment Act (2008)
Banks and Financial Institutions Act (2006)
Competition Promotion and Market Protection Act (2007)
Consumer Protection Act (1998)
Directive on Consumer Protection and Financial Literacy (issued by BFI Regulation Department)
Directive on Electronic Banking (issued by BFI Regulation Department)
Directive on Electronic Cards (issued by Payment Systems Department)
Directive on Security of Electronic Payments (issued by Payment Systems Department)
Directive on Transactions Carried through the Telecommunication Network (issued by Payment Systems Department)
Licensing Policy for Institution/Mechanism Operating Payment Related Activities, 2016
Nepal Rastra Bank Act, 2002 (and 2006 amendment)
Nepal Rastra Bank Payment and Settlement System By-law (2015)
Telecommunications Act (1997)
The Telecommunications Regulation (1997)
Policy Papers and Official Documents
Cheque Standards and Specifications (2012)
Electronic Cheque Clearing Operating Rules (updated July 2015)
Electronic Cheque Clearing Rule Book (updated July 2015)
Information Technology Policy (2000)
Interbank Payment System (NCHL-IPS) (2015)
National Payment System Development Strategy (2014)
NRB Information Technology Guidelines (2012)
Policy Provision for Opening Branch Offices by Foreign Banks or Financial Institutions in Nepal (2010)
Telecommunication Policy (2004)

Annexure 1: Documents Reviewed



The Financial Sector Development Strategy (FSDS), covering the period from 2016/17 to 2020/21 (recently approved by the Government of Nepal)
The Monetary Policy of 2016/17
The Strategic Plan (2012-2016) of Nepal Rastra Bank (NRB)
Transaction Limit and Timing Amendments to NCHL ECC and NCHL IPS
Reports
Digital Payment Systems, Mobile Money Services and Agent Banking: Bangladesh, Nepal and Sri Lanka (ADB, 2016)
Making Access Possible: Nepal Country Detailed Diagnostic Report 2016
Making Access Possible: Nepal Financial Inclusion Country Report 2016
NRB Financial Stability Report (March 2016)
UNCDF Nepal Financial Inclusion Roadmap (2017–2022)
Others
World Bank Report on “Nepal – Strengthening Systems for Social Protection and Civil Registration Project”
Financial Inclusion in Nepal: Policy Review and Prescriptions (a paper authored by Bhubanesh Pant)
International Standard Setting Bodies Documents
Access through Innovation Sub-Group, ‘Innovative Financial Inclusion: Principles and Report on Innovative Financial Inclusion’ (Report, G20 Financial Inclusion Experts Group, 25 May 2010)
Alliance for Financial Inclusion, <i>G20 Principles for Innovative Financial Inclusion</i> (April 2011) Global Partnership for Financial Inclusion < http://www.gpfi.org/sites/default/files/documents/G20%20Principles%20for%20Innovative%20Financial%20Inclusion%20-%20AFI%20brochure.pdf >
Committee on Payment and Settlement Systems, ‘Innovations in Retail Payments’ (Report, Bank for International Settlements, May 2012)
Committee on Payments and Market Infrastructures, ‘Non-banks in Retail Payments’ (Report, Bank for International Settlements, September 2014)
Committee on Payments and Market Infrastructures, ‘Payment Aspects of Financial Inclusion’ (Report, Bank for International Settlements and World Bank Group, April 2016)

Annexure 2: References used



Annex 3 – References used for data set in the report

1. Nepal MAP Demand Side Study, 2016
2. Annual Household Survey, 2014-15, Central Bureau of Statistics, Nepal
3. Nepal Labor Force Survey, 2008
4. Economic Survey, 2014-15, Ministry of Finance, Nepal
5. Budget Speech, 2017-18, Ministry of Finance
6. Nepal Electricity Authority, Annual Report, 2015
7. Nepal Telecom Authority, MIS, 2015
8. Industrial Statistics, Nepal, 2010-11
9. Data from Inland Revenue Department
10. Data from Department of Civil Registration
11. Data from Nepal Rastra Bank
12. <http://data.worldbank.org/indicator/NE.CON.PETC.KD?locations=NP>
13. Fifth Household Budget Survey, Nepal Rastra Bank, 2015
14. <http://cbs.gov.np/image/data/Population/Population%20Monograph%20of%20Nepal%202014/Population%20Monograph%20of%20Nepal%202014%20Volume%20I%20FinalPrintReady1.pdf>
15. <http://cbs.gov.np/nada/index.php/catalog/37>
16. <https://www.adb.org/sites/default/files/linked-documents/cps-nep-2013-2017-ssa-02.pdf>
17. HH Consumption Expenditure head wise from ADB STU survey 2005



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