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Growth of Plastic Money in India, Prospects and Chllenges an Analysis

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ABSTRCT:
The present paper titled with "**Growth of Plastic Money in India, Prospects and Challenges – An Analysis,** focused some significant economic and business prospects and challenges in the plastic money market. Plastic Money includes Credit, Debit and other Electronic Instruments used to transfer payments. In this paper the terms 'Plastic Money,' 'Electronic Payments,' and 'Credit Cards', interchangeably, but will refer explicitly to credit cards when discussing empirical studies limited to credit card payments.

Keywords: Plastic Money, Credit Cards, Debit Cards, Charge It, Mag Stripe, ATM, VISA

INTRODUCTION:

Plastic Money facilitates the global shift toward a cashless economy by driving retail commerce, enhancing transaction velocity, and fostering financial inclusion. This transaction also presents ongoing challenges, including Cyber Security Vulnerabilities, Potential Consumer debt cycles and socio-economic literacy gaps. Every so often one bank announces that its number of credit cards has reached a record high while another bank launches a new line of specialist cards. Every day more and more ATMs are coming to our neighbourhood. This flurry of activity in the plastic money sector is a sign of both high demand for plastic money and the potential gain for financial intermediaries due to its supply in our economy dominated largely by cash.

OBJECTIVES OF STUDY:

The main objective of the present study is to examine the challenges facing Plastic Money in India. The sub objectives of the present study are as follows:

- To analyse the Historical back ground of Plastic Money in India.
- To understand the concept of Growth Drivers of Plastic Money in India.
- To examine the market share of Credit and Debit Cards in India.
- To evaluate challenges facing by Plastic Money in India.
- To offer suggestions to overcome the challenges facing Plastic Money in India.

NEED FOR THE STUDY:

Plastic Money in India -encompassing Credit, Debit, ATM and Prepaid Cards – is a vital driver of the shift from a cash – heavy economy to digital first financial system. The need for the present study due to

Tracking Economic Transitions, Policy and Tax Compliance, Macro Economic Data Compilation, Banking Sector Innovation and Consumer Behaviour Insights.

SCOPE OF THE STUDY:

An academic or market analysis of plastic money in In several typically covers several core dimensions: Historical back ground, Types, Growth Drivers, Market share of Credit and Debit cards, Public Vs. Private banks and Challenges faced by Plastic Money in India.

METHODOLOGY AND DATABASE:

The methodology adopted in the present study regarding, period of study, data sources, analysis and interpretation of data. The present study is based on secondary data was collected from the books, journals and various websites. While presenting the data figures and tables are used.

REVIEW OF LITERATURE:

P. Manivannan (2013) in his research paper "Plastic Money a way for cash Less Payment System" examined that Plastic Money i.e. usage of Credit card was measured a luxury, and has become needed. These Plastic Money and electronic payments were and used by only higher income group. This facility extended not only to customers in urban areas or cities, but also to customers residing in rural area. However, today, with development of banking and trading activity, the fixed income group or salaried classes are also start using the plastic money and electronic payment systems and particularly Credit cards. In this research paper an attempt has been made to study an overview of the development of banking in the plastic cards usage trends since these have been introduced in Indian banking sector. The study also highlights the role of these cards as electronic payment.

PERIOD OF STUDY:

The Present Study covers a period of two years 2025 and 2026 in order to draw trends in quality of growth of Plastic Money in India, with regard to analyse the prospects and challenges.

LIMITATIONS OF THE STUDY:

The secondary data was sometimes gathered from more than one source, which in turn lacks of uniformity, consistency and regularity, information taken from internal records suffers from limitation (non – availability/irregularity).

PLASTIC MONEY:

The plastic money introduced in the year of 1950s and expanded globally with electronic banking. The plastic money is defined as 'Cards made of polymer or plastic used for buying goods and services.'

HISTORICAL BACK GROUND OF PLASTIC MONEY:

The Phase - 1 (1900 – 1960s):

The History of Plastic Money means charge cards laid the ground work for debit and credit cards. Company issued charge cards can be found as far back as the early 1900s. These cards mainly just kept customers loyal to the company. "Charge It" was the first actual bank card and was issued in the year of

1946. The "Charge It" card was invented by a banker Brooklyn, by the name of John Biggins for local purchases.

The concept of "Credit Card" was initially accepted upon by Frank Mcnamara. After dinner with a fellow business associate, Frank found himself short on cash after forgetting his wallet, what followed was an epiphany that laid him to think of a charge card. Later this card known as the "Dinner Club Card", could be used at multiple locations. This novel idea became the first true model of the multipurpose charge card. American Express issued their first credit card in the year of 1958. Due to their international presence, the 'Green Charge Card' was globally accepted. This became the first internationally available credit card.

In the year of 1958 Bank of America introduced a unique card that could be used to purchase anything at participating merchants. It was a universal card so the cardholder did not need multiple cards for specific destinations. This card also set industry standards such as a 25-day grace period, credit limits and floor limits. The pilot program in 1959 initially had 60,000 customers and was a huge success. The program was then rolled out state wide in California.

MAG STRIPE:

Credit and Debit would not be what they are today without "Mag Stripe". This momentous leap in card technology arrived when CIA hired IBM to attach a Magnetic Stripe to their identity cards. The main problem from this technology was permanently attaching the stripe to the card without wrinkles while working on this problem. Forest Perry came home from work to find his wife ironing his clothes. When he mentioned the problem about the stripe, Forest's wife asked to see the prototype card. By using the iron, she managed to melt the stripe to the card wrinkle – free. This solved the entire problem, which allowed IBM to go into full production with the Mag Stripe on all their cards.

AUTOMATED TELLER MACHINE (ATM) :

The ATM was brought into existence in the 1960's by John Shepperd - Barron which is the most convenient aspects of plastic money. After an unfortunate and unsuccessful trip to the bank, John had to wait until the next day when it opened again. That night, while reportedly taking a bath, John thought of a self-dispensing cash machine. Along with the invention of what was soon to be the ATM, he also invented the 4 – digit International Standard Pin Code. John first wanted a 6 – digit army serial; but his wife convinced him to 4 – digits would be easier to remember.

The Phase – 2 (1970s – 1990s):

VISA:

In the year of 1965 Bank America begin a licensing program with banks around California. After enough banks subscribed in the program Bank America was able to create a joint venture bank association. This eventually rolled out on an international scale and Bank America changed the name of their card VISA International. They also created a domestic America Version named VISA U.S.A. this two - card system allowed VISA International to be more easily accepted across other countries due to having no association with America. The acronym VISA stands for Visa International Service Association; Bank America felt the name change was appropriate since VISA would be instantly recognised in many different languages. Their success continued and eventually they joined the plus ATM network becoming even more accessible to customers around the world. These strategic branding choices allowed VISA to become one of the most recognisable and successful consumer brands today.

MASTER CARD:

Crocker National Bank, Well Fargo and Bank of California came together and launched the Interbank Card Association (ICA) in the year of 1966. Three years later Master Card changed their logo and came out with the iconic red and orange overlapping circle. However, it was not until ten years later when Master Card became the Master Card we know today. The 80's were also a revolutionary decade for Master Card. They released their Emergency Card Replacement Program: they entered the Plastic Rim and acquired cirrus which was the largest ATM Network in the world. After such a successful decade. Mastercard capitalised on their advancements and became the other key player in the market along with VISA.

DISCOVER CARD:

The Discover Card was a revolutionary card in the 1980's. It specifically presented Sears and Roebuck & company customers with a new credit card option. This card was of its kind to have no annual fee, cash back, and high credit limits. The only problem was that since it was associated with Sears, other retailers where were ready to accept it, as they would be helping their competition. Eventually Discover realised that their brand needed to completely separate from Sears and so they proceeded to do so. Separating from Sears made Discover more attractive for other merchants to adopt the card. By the early 1990's Discover became incredibly successful and was a regarded as a competitor of merit to VISA and Master Card.

The Phase – 3 (1990'S – TILL DATE):

To compete in technological world, credit and debit cards have become more efficient and instantly accessible across multiple mediums. With new technologies such as mobile platforms, this presents numerous opportunities for vendors and consumers alike.

CHIP AND PIN:

One of the more disruptive changes to Plastic Money came with the adoption of 'CHIP AND PIN' technology. This system has become a standard with credit and debit cards and is preferred to the Magnetic Stripe. CHIP AND PIN technology makes cards much more secure and personal information is very hard to steal because of encrypted Chip. A cloned chip can also be immediately recognisable as a fraudulent card, as each individual chip is specifically encrypted for each individual card. Even though this card technology has been around since the 1990's, it has become nationally used across Canada, and will become mandatory in the United States by October 1st 2015.

SQUARE:

As able to accept transactions through a mobile device is a game changer for businesses. This was largely made possible by a company called Square. Square allowed a cell phone to be used as a point of sale system and accept card payment anywhere. The device simply plugs into the headphone jack and has a card slot for the customer to swipe their card. Introduced to the market with 3.75% flat rate free, mobile card readers have definitely a significant contribution to Plastic Money. Square has opened the door for many small businesses across the world that can now offer their consumers more ways to pay.

YES CARD:

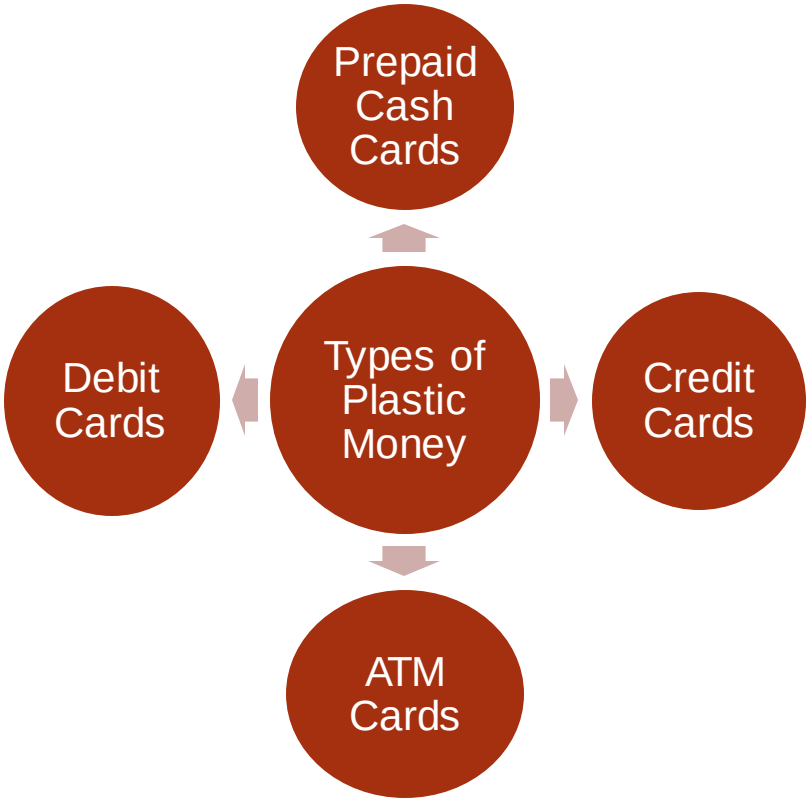
The 'Yes Card' is a new way of accessing online loans and getting money instantly. The old ways of taking loans in the form of a cheque or cash, having to wait days for processing and then taking the time to deposit

the money are gone! The 'Yes Card' allows you to access and use your loans any time any place and faster than anywhere else.

TYPES OF PLASTIC MONEY:

The types Plastic Money is presented in the Figure – 1

FIGURE -1
TYPES OF PLASTIC MONEY



PREPAID CASH CARDS:

Prepaid Cash Cards is a payment card pre – loaded with a specific amount of money that we can use for online shopping, point – of – sale (POS) purchases, or cash withdrawals without linking to a traditional bank account or undergoing a credit check.

CREDIT CARDS:

A Credit Card is a financial payment tool issued by a bank or financial institution that lets we borrow money up to a set limit to pay for goods, services or cash advances, which we must repay later.

ATM CARDS:

An ATM Card is a payment card issued by a bank that links directly to our bank account.

DEBIT CARDS:

A Debit Card is a payment card issued by a bank that is directly linked to our savings or current account.

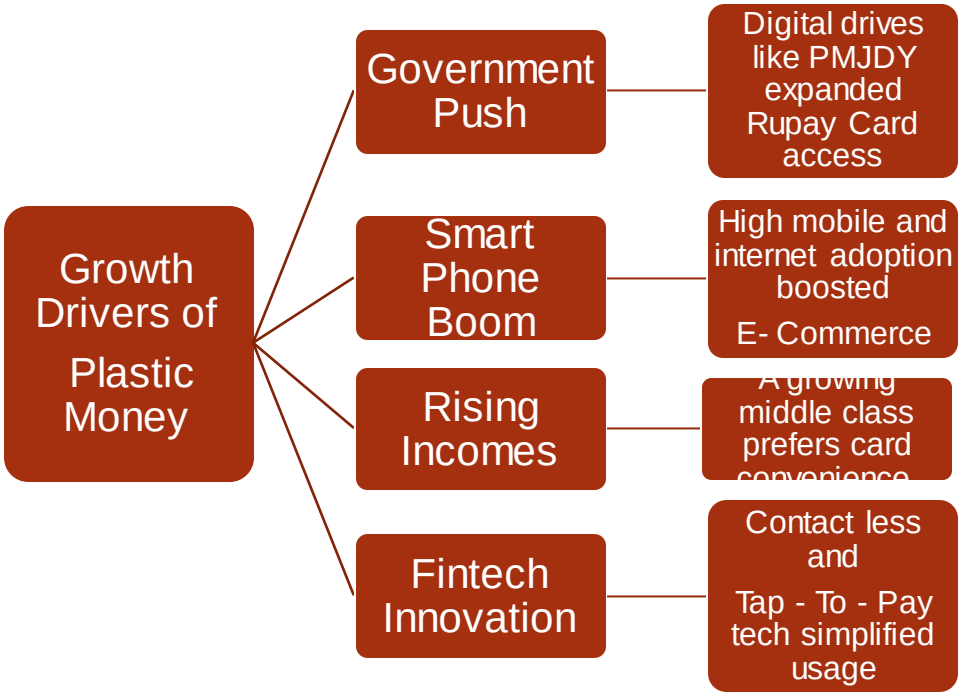
PLASTIC MONEY GROWTH IN INDIA:

Plastic Money including credit, debit and prepaid cards – has experienced rapid growth in India, shifting from a luxury product in the 1990's to an every day digital payment tool. India's credit card and plastic money adoption has surged significantly, with total credit cards in circulation exceeding 122.86 million (12.28 Crore) and monthly spending consistently topping ₹2 trillion[1].

GROWTH DRIVERS:

The Growth Drivers of Plastic Money in India is presented in the Figure - 2.

FIGURE – 2
GROWTH DRIVERS OF PLASTIC MONEY IN INDIA



KEY ADOPTION STATISTICS OF PLASTIC MONEY IN INDIA:

The Key Adoption Statistics of Plastic Money in India is evaluated in terms of Credit Cards and Debit Cards:

CREDIT CARD TRENDS:

- **Total Cards in Circulation:** Active credit cards reached 122.86 million by mid – 2026, reflecting steady consumer demand for retail credit.
- **Monthly Spends:** Monthly credit card spend routinely tops ₹2 trillion (₹2 lakhs crore) with total annual spend for financial year 2025 – 2026 hitting ₹23.62 trillion.
- **Market Concentration:** dominated by private sector heavy weights holding over 71% of total outstanding cards led by HDFC Bank with 26.58, SBI with 22.42, and ICICI Bank with 19.37 million.
- **Transaction Channels:** E – Commerce contributes the lion's share of spending ₹1.23 to ₹1.41 trillion monthly, while physical point of sale (POs) swipes account for ₹73,000 to ₹ 78,000 crore.

DEBIT CARD TRENDS:

The Key Adoption Statistics of Plastic Money in India is evaluated in terms of Debit Card:

- **Shifting Utility:** While hundreds of millions of debit cards remain embeded in bank accounts (Seeded heavily via initiatives like PMJDY, Rupay cards), active retail usage has plummeted.
- **Transaction Decline:** Annual debit card transaction volumes dropped steeply by 67% over a four-year window (Falling from 408.7 crore transactions in 2021 to 133.6 crore in 2025). Contracting transaction value down to ₹4.5 lakh crore.
- **Root Cause:** competing directly with instant, zero – free UPI app transfers, consumers increasingly by pass physical debit cards for every day retail transactions.

The card Transaction Volume and Value trends for the year 2025 – 2026 presented in the Table – 1

TABLE – 1
THE CARD TRANSACTION VOLUME AND VALUE TRENDS FOR THE YEAR 2025 -2026

Sl. No.	Card Type	Annual Transaction (Volume)	Annual Spends (Value)	Primary Consumer Use Case
01	Credit Cards	602.38 crore	₹23.62 lakh crore	Online Shopping, Lifestyle Spending and Credit Access.
02	Debit Cards	128.02 crore	₹4.45 lakh crore	ATM cash withdrawals and basic merchant POs transactions

Source: RBI Outstanding Credit and Debit Cards.

THE CREDIT CARD AND DEBIT CARD MARKET SHARE:

The Credit Card and Debit Card Market share as on June – 2026 is presented in the Table – 2

TABLE – 2
THE CREDIT AND DEBIT CARD MARKET SHARE AS ON JUNE – 2026

Sl.No.	Credit Card Market Share		Debit Card Market Share	
	Name of The Bank	Market Share (In %)	Name of The Bank	Market Share (In %)
01	HDFC	22.10	SBI	25.00
02	SBI	18.60	BANK OF BARODA	8.00
03	ICICI BANK	16.10	CANARA BANK	6.00
04	AXIS BANK	13.50	HDFC	6.00
05	KOTAK MAHINDRA BANK	3.90	AXIS BANK	6.00
06	IDFC FIRST BANK	3.90	BANK OF INDIA	5.00
07	RBL BANK	3.90	PUNJAB NATIONAL BANK	4.00
08	AU SMALL FINANCE BANK	2.70	ICICI BANK	4.00

09	INDUSLAND BANK	2.50		
10	YES BANK	2.50		
11	FEDERAL BANK	2.00		
12	OTHERS	8.39		

Source: RBI Outstanding Credit and Debit Cards

Note: Public Sector Banks hold the Largest Share of active Debit Cards led dominated by SBI.

PUBLIC VS. PRIVATE BANKS:

Feature Wise analysis of the Public Vs. Private Banks is presented in the Table – 3

TABLE – 3

FEATURE WISE ANALYSIS OF PUBLIC VS. PRIVATE BANK

Sl. No.	Feature	Public Sector Banks (PSBs)	Private Sector Banks (Pvt.Bs)
01	Ownership	Government holds a stake greater than 50%.	Private individuals and institutional investors hold the majority.
02	Market Share (Loans)	Controls over 50% of the total loan market in India.	Controls approximately 40% of the total loan market.
03	Profitability (ROA)	Historically lower Average Return on Assets	Higher Average Return on Assets and Net Margins.
04	Primary Focus	National Financial inclusion and rural reach.	Commercial profitability and agile retail growth.

CHALLENGES FACED BY PLASTIC MONEY IN INDIA:

Challenges faced 21st century banking has become wholly Customer – Driven and technology driven by challenges of competition, rising customer expectations and shrinking margins, banks have been using technology to reduce cost and enhance efficiency, productivity and customer convenience. The main challenges facing Plastic Money (Credit, Debit and ATM cards) in India include high cyber security risks, widespread preference for cash, and strong competition from alternative digital payment systems like UPI. The challenges faced by Plastic Money in India are presented in the Figure – 3

FIGURE – 3
CHALLENGES FACED BY PLASTIC MONEY IN INDIA



SECURITY AND FRAUD RISKS:

The security and fraud risks are:

- **Cyberattacks:** Rising incidents of data breaches, skimming, and online phishing.
- **Card Fraud:** Unauthorised transactions using stolen card credentials or cloning.
- **Consumer Trust:** Fear of financial loss reduces adoption among first time users.

CASH PRFERENCE AND INFRASTRUCTURE GAPS:

- **Cash Dominance:** A large portion of daily retail and informal transactions still relies on physical cash.
- **Rural Limitations:** Poor Point - of – Sale (POs) machine penetration and unrealiable internet connectivity in rural areas.
- **Maintenance Costs:** High installation and operational costs for merchants to maintain card swipe hardware.

COMPETITION FROM UPI AND WALLETS:

- **UPI Dominance:** Free, instant mobile – based unified payments interface transactions out perform physical cards for small and large retail purchases.

- **BNPL APPs:** Buy Now Pay Later (BNPL) services provide quick short – term credit without rigid card eligibility requirements.

ENVIRONMENTAL CONCERNS:

Non – Biodegradable Waste: Standard PVC plastic cards create hazardous electronic and material waste upon expiration.

HIGH COSTS AND HIDDEN CHARGES:

- **Fees for Users:** Annual maintenance fees, hidden transaction charges, and late – payment interest penalties can deter cost conscious consumers.
- **Merchant Discount Rate (MDR):** Processing fees charged to merchants for card transactions create resistance among small shopkeepers who prefer zero – fee or direct UPI transfers.

OVERSPENDING AND DEBT ACCUMULATION:

Easy Credit Risks: The psychological detachment of paying with plastic instead of physical cash often leads to impulsive overspending and high – interest debt accumulation for credit card holders.

SUGGESTIONS FOR OVERCOME THE CHALLENGES:

To systematically overcome the challenges facing Plastic Money, a multi – stakeholder approach involving the RBI, banks, Fintech firms and merchants is required. The actionable frame work outlining the key strategies are as follows:

- Expanding Infrastructure and lowering merchant resistance: Subsidising Smart POs Terminals that accept both physical cards and dynamic QR codes lowers hardware resistance Government Tax Incentives for small businesses adopting digital billing software can offset initial installation costs.
- Rationalising Merchant Discount Rate (MDR): By introducing a tiered MDR framework where Micro – Merchants pay zero fees on low – value card transactions, funded partly by a centralised digital payment promotion fund, will encourage card acceptance.
- Voice – Activated and Biometric Authentication: Integrating Aadhaar based biometric scans and vernacular voice commands into payment terminals bypasses literacy barriers, reducing the reliance on complex PINs and Smart Phone Apps.
- Implementation of Offline Payment Ecosystems mandating wider deployment of Chip – Based offline wallets on debit cards and scaling UPI Lite – X for rural field Communication transfers ensures transactions can execute smoothly in zero connectivity rural zones.
- AI – Driven Anomaly Detection implementing real time, machine- learning – driven fraud monitoring at the banking gateway level to temporarily freeze transactions that deviate sharply from a user's historical spending footprint.
- Aggressive Tokenisation eliminating the storage of actual card data on E – Commerce merchant servers.
- Enforcing mandatory Card – On – File tokenisation replaces sensitive numbers with randomised digital tokens.
- Accelerate the transition of traditional cardholders toward Rupay Credit Cards linked to UPI. This combines the care strength of plastic money with the absolute physical convenience of UPI QR code.

- Instead of issuing rigid high – free physical credit cards to low – populations, banks should offer pre – sanctioned digital card lines on UPI with that users to access credit for emergency micro – expenses in granular, manageable amounts.
- The banking sector should transition to recycled ocean plastic or bio – sourced PLA materials for physical card issuances, while offering heavy cross – merchant discounts to users who opt exclusively for digital only virtual cards.
- To prevent impulsive debt traps, banking apps should integrate native financial wellness modules. Users can toggle on "Cool – Down Timers" for late – night E – Commerce spending, or set strict category – wise hard ceilings on credit limits.

CONCLUSION:

The payment landscape in India is undergoing a massive shift moving from a cash – first economy toward a highly dynamic digital first ecosystem. While traditional 'Plastic Money' successfully laid the foundation for electronic banking. It faces structural roadblocks, such as high merchant costs, rigid hardware requirements, and environmental concerns. Meanwhile, the explosive rise of UPI has democratised digital transactions by eliminating infrastructure barriers and processing fees for every day, micro – payments.

These two formats are no longer purely competing; instead, they are coveraging. The introduction of Ru - pay Credit Cards on UPI and the rise of pre – sanctioned digital credit lines proves that the core benefit of plastic money is seamlessly merging with the frictionless delivery system of UPI.

To achieve an entirely inclusive and secure financial ecosystem. India's next phase of growth must focus on fortifying cyber security through AI, scaling offline transaction protocols for rural dead zones, and migrating toward eco – friendly virtual instruments. Ultimately, the future of Indian payments will not belong exclusively to plastic or QR codes, but to unfiled, highly adaptable digital framework that prioritises consumer safety, merchant viability, and universal access.

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