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Decoding NPA Nuances: A Pioneering Comparative Odyssey of India's Non-Performing Assets in the Global Arena

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Abstract

Non-Performing Assets (NPAs) in the Indian banking sector together with a comparative assessment of the issues that other Asian economy. This study aims at decoding NPAs of India and comparing it with selected Asian countries China, Thailand, South Korea, and Japan. For this, we studied the historical expansion of the Indian banking sector following nationalisation of that sector along with all historical background of NPAs of selected Asian Countries. Trends in non-performing assets (NPA) in India and selected Asian countries have been illustrated in this paper span 2008 to 2023. Apart from the examination of government programmes such as the Insolvency and Bankruptcy Code (IBC) and Asset Reconstruction Companies (ARCs), several significant elements, including legal obstacles, political influences, and delays in asset disposal, are taken into consideration. The report notes a high in 2017–2018 followed by a period of decline, suggesting that the quality of the assets has also improved. This analysis reveals, among other traits, inadequate legal frameworks, reliance on the government, disparities in firm structures and macroeconomic policies. Following the research, it is quite clear that regulatory changes, improved openness, and strong government are all absolutely necessary to reduce the risks related to non-performing assets (NPAs) and to promote sustainable economic growth.

Keywords: Banking Sector, Financial Stability, Legal Reforms, Non-Performing Assets, Prudential Norms.

Introduction

The banking sector has been observed a notable changes post-nationalisation based on a model mostly controlled by the state to one progressively shaped by market forces and technological innovations focused on its achievements, difficulties, and future orientations. Following the nationalisation of the banking industry, banks were assigned to grow their branch networks to improve consumer savings rates and to credit underprivileged sectors, especially small-scale and rural businesses. The banks significantly expanded their presence in the rural areas that engaged with people who had previously lacked access to the financial services, thereby helping these individuals achieve their goals remarkably well. The banking industry has clearly changed recently to be on improving asset quality and extending risk management techniques. More market-driven processes have replaced once-dominant directed lending approach which forces more comprehensive creditworthiness rating and risk profile research in the financial institutions. Particularly with regard to income recognition and asset classification, the Narasimhan Committee promoted the application of suitable rules to address previously experienced problems by banks. One of the most obvious changes made was moving from accrual-basis income recognition to exclusive direct receipt. This change was done to reduce the possibility of erroneous financial performance or inflation of financial results and to match income recognition practices with the economic reality experienced by banks. For classifying non-performing assets (NPAs), strict rules have been put in place because financial institutions need to adapt to current demands, use technology to work better, and enhance their risk management systems to handle these challenges effectively (1). A priority of financial literacy helps the banking sector to be more stable and long-term sustainable by encouraging responsible lending policies and strengthening regulatory control. Recent studies from 2023–2024 have offered significant insights into the evolving challenges of Non-Performing Assets (NPAs) in the Indian banking sector and the urgent need for dynamic

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regulatory responses. The Reserve Bank of India's Financial Stability Report cautioned that the Gross NPA ratio for Scheduled Commercial Banks (2), though declining, could rise due to emerging stress in unsecured retail lending and microfinance portfolios. It highlighted the need for banks to strengthen internal credit risk mechanisms and adopt forward-looking provisioning strategies. In parallel, a comprehensive study by the National Institute of Public Finance and Policy (NIPFP) critically assessed the Insolvency and Bankruptcy Code (IBC)(3), pointing out increasing delays in resolution timelines—often exceeding 400 days—and declining recovery rates, particularly in MSME cases. The report recommended judicial capacity-building and fast-track benches to ensure the IBC's continued effectiveness. The panel data were analysed from public sector banks (PSBs) and found that regulatory forbearance measures, particularly those introduced during the COVID-19 period, temporarily concealed asset quality deterioration (4). The authors advocated for enhanced credit appraisal systems and real-time risk analytics. Uptick in NPAs in the NBFC and MSME segments due to inflationary pressures and refinancing challenges were projected by CRISIL Ratings (5). Their analysis emphasized the need for borrower-specific restructuring and sectoral stress testing. Furthermore, several policy commentaries have called for the integration of digital loan monitoring platforms, improved coordination between banks and Asset Reconstruction Companies (ARCs), and depoliticization of lending processes to restore credit discipline (6, 7). These studies collectively argue for a calibrated mix of regulatory innovation, legal reform, and institutional strengthening to sustainably manage the NPA burden.

Indian Scenario of NPA

Based on the Economic Survey of 2022–23, the Gross NPAs (in Rs. Million) of Scheduled Commercial Banks (SCBs) from 2008 to 2023 as elaborated below:

- **Rising Trend (2008-2016):** Consistent rising Gross NPAs from 2008 to 2016 point to a notable rise in non-performing assets in the banking industry. From 2008 to 2009, NPAs almost doubled; then, they kept increasing gradually every year.
- **Peak in 2017-2018:** With Gross NPAs rising significantly in 2017 and 2018, respectively to reach 7,917,907 Rs. Millions and 9,08,000 Rs. Millions respectively Within the noted era, this marks the height of NPAs.
- **Decline in Recent Years (2019-2023):** From 2019, gross NPAs have dropped dramatically although NPAs slightly rose in 2022 compared to 2021; generally NPAs indicate a declining trend. The lowest Gross NPAs were reported in 2023 since 2008 point to a possible turnabout in asset quality as given in table 1.

Table 1: GNPAs of Scheduled Commercial Banks (SCBs) over the Years (8)

Year	Gross NPAs (Rs. Million)
2008	563,092
2009	683,282
2010	847,008
2011	979,732
2012	1,429,033
2013	1,940,533
2014	2,643,811
2015	3,233,352
2016	6,119,473
2017	7,917,907
2018	9,08,000
2019	8,21,000
2020	7,33,000
2021	5,82,000
2022	5,82,000
2023	3,87,000

Currently, the rising non-performance levels under control by banks are causing financial strain on the banking network. Given the rising gross NPAs since 2018, this scenario is likely to remain. These developments can compromise the stability of the financial system since high nonperforming assets

(NPAs) reduce banks' lending capacity, therefore compromising their balance sheets. The rise in nonperforming assets during 2017–2018 could have led legislative actions and policy changes meant to solve problems with asset quality to be triggered. Higher degrees of nonperforming assets (NPAs) have the potential to affect the state of the economy, influencing the availability of credit, investment prospects, and overall chances for future development. Recorded after the year 2018, nonperforming assets (NPAs) show that the banking sector has improved its risk management techniques and the economy is doing better. Examining the Gross Non-Performing Assets (NPAs) of Scheduled Commercial Banks over a number of years reveals the need for always observing the trend of asset quality and carrying out preventative actions to lower the non-performance level. Though the accumulation of non-performing assets (NPAs) prior to 2018 presents difficulties, the subsequent decrease shows a favourable trend in terms of asset quality and financial stability. Whether or not the financial sector will remain robust and whether or not it will continue to travel on a positive path will depend on constant awareness, regulatory control, and the application of appropriate risk management techniques. Recent numbers show that asset quality is improving because the gross non-performance assets ratio for Indian banks dropped to a decade low of 3.9% in March 2023. This is so because the ratio has been rising. Notwithstanding all the challenges faced, this notable improvement in asset quality is commendable. As part of its proactive approach to handling non-performing assets (NPAs), the Reserve Bank of India (RBI) has put policy guidelines and legal actions into effect (1). Other acts include carrying out legal ones. One especially outstanding illustration of the activities the Insolvency and Bankruptcy Code (IBC) participates in is their application. The aim is to maximise the efficiency of the procedure for resolving the difficult assets. The Reserve Bank of India (RBI) has emphasised the need to improve risk management strategies and control systems in companies. This legislation relates to approaches for recapitalisation for public sector banks (PSBs) and the execution of the Prompt Corrective Action (PCA) system (9). The recapitalisation initiatives have helped banks to boost their capital bases, enhance their lending ability, and so support the growth of the economy.

Recovering non-performing assets (NPAs) is a difficult task, and the strategies that have been used—Lok Adalats, Debt Recovery Tribunals, and the SARFAESI Act—have changed with time. This is yet another huge barrier to overcome. To assure conformity with overall financial stability goals, the Reserve Bank of India (RBI) has chosen a proactive approach by routinely examining programmes to address nonperforming assets (NPAs) and thoroughly analysing the effectiveness of regulatory actions (1). This strategy is meant to guarantee that adherence to these objectives is kept. It is advised to approach the reformation in this sense. It is vital for the complete upgrades to address the core issues that are causing the asset quality to degrade. Maintaining openness, supporting responsible lending practices, and so improving risk management techniques is of great relevance for minimising the negative effects that nonperforming assets (NPAs) have on the stability of the financial system and so promoting sustainable development inside the banking sector (9). The data from several banks groups and from each bank about gross NPAs and gross advances were analysed by the researcher and also discussed about the priority and non-priority sector advances of scheduled commercial banks. It also pointed out that all Indian banks are having trouble with NPAs and that the problem is worse in public sector banks. They also illustrated that the public sector's NPAs were higher in the past than those of public sector banks. However, the handling of NPAs has decreased in recent times (10). NPAs, which are the biggest problem in the banking industry that affects banks' performance by lowering profits, creates problems for investible money, and other financial metrics. One of the most important ways to judge the health of banks and their success in the stock market is by looking at NPAs. The Covid-19 outbreak has made banks' NPA situation even worse. The research looked at more than 100 other papers find out what problems small and marginal farmers have when they try to pay back their loans, especially those for farming (11). The researchers discussed about the non-performing assets in agriculture loans and found that there is not a big difference between how banks handle non-performing assets and how they handle agriculture loans before and after they are approved. Political parties have adopted debt waiver policies that have led to borrowers not paying back their loans and banks having more NPAs (12). The researchers also discovered that the main reason for NPAs in both public and private sector banks is that people don't use their bank loans correctly and don't manage their recoveries well. The NPAs are going up in both farming and industry. They said that greater corporate governance would help make better operational and credit decisions (13). The NPAs in different sectors before and after the crisis at some commercial banks" looked at the NPAs of both priority and non-priority sectors and compared public and private sector banks. Their study showed that before the crisis, public and private banks had more NPAs in the priority sector. After the crisis, both banks showed a negative growth rate in NPAs. The study also showed that the crisis didn't affect the banking sector because the number of NPAs went down following. The increase in NPA was bigger in private sector banks than in public sector banks. During the time before the crisis, it was found that public sector banks were seeing a drop in NPA in no priority sectors, while private sector banks were seeing an increase in NPA. The rate of increase in NPA was higher after the crisis (14).

Based on the introduction and literature studied, we found several gaps to be fulfilled but the majors are like most of the studies focused on impacts of post-implementation of IBC recovery scenario, no any empirical studies that disclosed effect of NPA prevention and early detection in real time, limited granular analysis of borrower behaviour, regional distribution of defaults, and the effectiveness of restructuring schemes as NPAs in NBFCs and MSMEs have shown rising stress. Along with these, we also observed the insufficient evaluation of recapitalization and its impact on lending behaviour as it can increase risk-based lending & no any research compared NPAs of India with Global banks especially in Asian Region. Considering the gaps illustrated above, this research aims at assessing the challenges of NPAs in India along with Asian Nations, hence, thereafter we have compared with each other.

Methodology

This research is conducted qualitatively as we have collected data from banks' website of India and Selected Asian Countries. We discussed number of challenges, banking scenario towards NPAs of selected Asian countries. For this, we have opted Asian countries to assess worldwide scenario and compare that with Indian NPAs systems. Those selected Asian countries are China, Thailand, South Korea and Japan. The parameter considered for the selection of these countries are, these are Asian countries, and they face number of challenges stem from various factors, including moral hazard, shortcomings in bankruptcy laws, political interference, and reluctance to lend to private enterprises as per Indian scenario and compare it with selected Asian countries. The comparative parameters were opted due to assessment of NPAs in same region. NPAs are the critical factors for these countries as similar as India.

Result and Discussion

Challenges in Addressing Non-Performing Assets (NPAs) in India

Consistently afflicting the Indian banking industry with a number of challenges, Non-Performing Assets (NPAs) seriously jeopardise financial stability and impede economic development. India has recently imposed strict prudential rules to address the NPAs; however, various issues, including "legal challenges, financial misbehaviour, and long-standing asset disposal policies," often impair the effectiveness of these efforts. This extensive study looks at the complicated nature of the NPA problem in India and evaluates the main elements for its continuation.

Legal Impediments and Time-Consuming Asset Disposal Process

Resolving NPAs issues for banks since asset disposal is linked with a drawn-out and difficult for legal process since the Indian legal system regulates the debt collection and bankruptcy procedures. These procedures are sometimes confusing and take a lot of time, and causes delays in the settlement of troubled assets. Debt recovery tribunals and courts, now a day, have become overcrowded due to increment of such cases, which then fuels protracted litigation and extended the recovery periods (15). This raises the general financial load of banks and compromises their capacity to control nonperforming loans and distribute resources to profitable lending activities.

Furthermore, the issues of NPAs are lacking with particular mechanisms for timely settlement. The legal gaps and difficulties in application have seriously hampered the efficacy of the laws like the Insolvency and Bankruptcy Code (IBC), and were especially meant to hasten the resolution process (16). The defaulters often use legal gaps to postpone asset collection activities, therefore extending the resolution process and compromising the banks' efforts to clear their balance sheets.

'Postponement' of the Problem for Reporting Higher Earnings

A major issue that has to be addressed is to manage non-performing assets (NPAs) which is the practice of "ever-greening," or "postponing". The acknowledgement of non-performing loans to purposefully hide banks' actual financial situation and artificially enhance profits. To maintain profitability and avoid the need for provisioning, several financial institutions restructure or refinance difficult loans (17).

Manipulation by Debtors Using Political Influence

Changing the debt collection process by defaulting on borrowers and applying political force and relationships is another significant obstacle that has to be addressed to resolve NPAs. Debtor defaults hinder recovery efforts and delay the clearing of NPAs, as debtors often use their political power to pressure banks and regulatory bodies. The political involvement in the debt collecting process affects the rule of law and lessens the effectiveness of legislation designed to handle NPAs (18).

Perverse Effect on Risk-taking Behaviour

The slow and lengthy legal process and the difficulties in resolving non-performing assets (NPA) have banks taking a more cautious approach to lending and investment operations. They have thus cut their risk-taking. Because of the extended litigation and uncertainty about asset recovery, financial institutions give low-risk investments—including sovereign debt paper—top priority over high-risk lending. Despite investing in sovereign debt, banks struggle to support economic growth and meet the financial requirements of crucial industries (19).

Government Initiatives and Policy Measures

Recognising the need to tackle the NPA issue in the banking sector, the Indian government has launched a number of policies and projects meant to help resolve troubled assets and boost the industry. The Asset Reconstruction Ordinance gives banks broad authority to sell all the assets and establishes Asset Reconstruction Companies (ARCs) to help in the resolution process. These steps seek to speed NPAs' recovery, raise asset quality, and rebuild banking sector confidence (20).

Worldwide Scenario for NPAs

Despite its rapid growth and significant contributions to the country's economic development, the banking sector faces many challenges threatening its stability and long-term viability especially selected Asian countries. Hence, in this section, we have defined all the challenges of banking system of all selected Asian countries.

Challenges Faced by the Chinese Banking System

Moral Hazard: One main problem Chinese banks are trying to solve is the widespread moral hazard, particularly with State-Owned Enterprises (SOEs). Many state-owned businesses (SOEs) operate with irresponsibility and engage in high-risk activities believing the government will help during financial crisis. This moral hazard encourages state-owned enterprises (SOEs) to participate in high-risk activities without enough thought given to the consequences on operational profitability and efficiency (18).

Bankruptcy Laws and Enforcement: Regarding the effectiveness of bankruptcy laws in China, the banking sector faces a significant difficulty. The present legislative system, which favours borrowers over creditors, hampers banks' legal means of debt recovery for defaulting borrowers. People often perceive the legal courts as unpredictable instruments for enforcing laws, leading to delays and ambiguity in the resolution of non-performing loans.

Political and Social Implications: Restructuring significant state-owned enterprises (SOEs) presents a unique difficulty for the Chinese government given the political and social ramifications of such actions. Concerns about unemployment, social discontent, and possible effects on economic stability can cause the government to be hesitant to support the bankruptcy or restructuring of significant state-owned companies (SOEs). This happens notwithstanding government financial challenges (16).

Reluctance to Lend to Private Enterprises: Due to the supposed risks linked with private businesses, the Chinese banks sometimes show reluctance to provide loans to them and improve the banking system. They would rather credit state-owned enterprises (SOEs). There are several reasons for these issues including the use of unorthodox accounting techniques and the supposed political and financial risks connected to supporting private businesses. While the NPA of a private organisation is considered both financially and politically negative, that of a state-owned enterprise (SOE) may be seen as financially adverse. Such an outcome increases credit limitations for individual businesses and compromises financing possibilities.

Implications and Potential Consequences: The challenges the Chinese banking sector faces have broad effects on the state of the economy generally. Regarding state-owned businesses (SOEs), the predominance of moral hazard and inefficiency can have a detrimental effect on overall production and complicate the process of moving to a market-driven economy. The Chinese banking industry requires a comprehensive approach that addresses structural flaws and institutional constraints. The tightening of bankruptcy rules and enforcement actions is absolutely necessary for the resolution of non-performing loans as well as for the increase of banking industry efficiency. These challenges are under assessment to improve the financial situation's stability. The Chinese banking industry has initiated various projects to address the challenging issues it faces. These initiatives try to lower risks, advance openness, and improve the general stability and efficiency of the Chinese financial sector. These initiatives cover a broad spectrum of activity, including bank strengthening, disclosure requirements, SOEs' reform, and legislative changes to help debt restructuring and asset management. The projects listed below comprise those incorporated into these policies (18):

Strengthening Banks and Raising Disclosure Standards: Regarding the lowering of risks, the Chinese government has concentrated on improving the capital adequacy and risk management mechanisms of financial institutions. Resilience of the banking system depends on ensuring that the financial institutions have enough buffers to withstand negative shocks, that regulatory monitoring is reinforced, that stress tests are conducted, and that strict capital considerations are developed. Moreover, the upgrading of disclosure standards has been given great importance as it requires financial institutions to generate more timely and transparent information on their governance practices, risk exposure, and financial situation.

Reforms of State-Owned Enterprises (SOEs): Chinese officials have started steps to lower debt and improve the operational performance of state-owned companies (SOEs). This approach acknowledges the systematic risks resulting from very leveraged state-owned businesses. These changes aim to lower state-owned companies' (SOEs') dependence on debt funding and raise their profitability and competitiveness. These kinds of reforms aim to relieve the burden on the financial sector and build a more sustainable economic model motivated by the dynamism of the private sector. This goal is achieved by tackling the basic reasons for state-owned company (SOE) debt.

Legislative Changes to Facilitate Debt Restructuring: China has instituted regulatory changes to expedite debt restructuring and resolution in response to the rising load of corporate debt and non-performing loans. These programs were carried out in response to the mounting debt load. Legislation allowing the founding of asset management companies (AMCs) has been passed to speed the elimination of troublesome assets from bank balance sheets. This procedure helps institutions to focus on their main operations.

Incentives and Supportive Measures: By means of supporting policies and an incentive system, encouragement of debt restructuring and relief of financial burden among borrowers have been accomplished. Many incentives have been used to support debt restructuring and debt-to-equity swaps: tax rebates, administrative fee exemptions, and simple asset valuation criteria.

Implications and Effectiveness of Measures: The degree of application, enforcement, and interaction with more general macroeconomic issues will define how effective these policies are in tackling the problems the Chinese banking system finds present. Strengthening banks and raising disclosure criteria boosts risk management techniques, in addition to promoting market discipline and openness, and lowering information asymmetries and improving risk management strategies. The efforts taken by the Chinese financial system in reaction to the problems it is now confronting reflect a thorough and multifarious strategy aiming at enhancing stability, resilience, and efficiency.

Challenges Facing the Thailand Banking Sector

Thailand's banking sector has faced many challenges, which have affected its long-term stability and expansion possibilities. Liberalised capital accounts, legal system flaws, speculative lending practices, changing interest rates, and poor credit risk assessments are a few of the several factors causing these challenges (21). The liberalisation of external borrowings and capital accounts is a significant challenge currently facing the Thai banking industry. One of the main challenges the Thai banking industry is now facing is the deregulation of capital accounts and external borrowings. Although liberalisation was meant to promote investment and economic development, it also exposed the economy to hazards related to erroneous evaluation of currency rate risk and the prospect of capital flight in case of a crisis (21).

Legal Systems and Credit Recovery: In Thailand, legal system flaws have seriously hampered the recovery of credit, therefore generating great challenges. The legal framework governing debt-collecting activities is often regarded as complex and time-consuming. Consequently, banks find it challenging to legally recover debt from failing consumers. Delays in court procedures and disparities in legal enforcement compromise the efficacy of credit recovery activities, which in turn results in a continuous drop in asset quality and an increase in the number of loans deemed to be non-performing or non-active within the banking sector. In Thailand, real estate speculation has significantly contributed to overly generous lending practices in the property industry. The foundation of this loan is hopeful projections of price increase and demand. For both financial organisations and people trying to borrow money, Thailand's unstable interest rate situation has proved to be a challenge. Changes to monetary policy or outside events have driven the sharp rises in interest rates, which have increased borrowing money costs and strained borrowers' financial situations, especially for those with loans with variable interest rates.

Review of Credit Risk Have the following weaknesses: The lack of adequate techniques for credit risk assessment has continuously challenged the Thai banking industry. Particularly in periods of rapid credit expansion or economic boom, banks' inability to properly estimate credit risk has resulted in reckless lending practices and more credit loss exposure. This is especially true during outbreaks of these diseases.

Potential Effects and Consequences: The financial stability, economic progress, and investor confidence of Thailand depend much on the challenges the banking industry there is facing. In times of economic uncertainty, an erroneous evaluation of the risk of currency rates and vulnerabilities to capital flight can undermine the stability of the macro-economy and raise the volatility of the financial market. Defects in the legal system and credit recovery procedures hinder the resolution of non-performing loans, which results in a continuous drop in asset quality and worse profitability for financial institutions.

Moreover, initiatives to improve credit risk assessment—that is, the acceptance of strict credit scoring models and stress testing approaches—can help financial institutions find and reduce possible hazards connected with lending operations. Improving openness and disclosure requirements as well as raising investor education and awareness will help Thailand's banking sector to be more resilient and sustainable.

Challenges Facing South Korea's Banking Sector

There have been several obstacles that have been met by the banking sector in South Korea, which have had an effect on its stability and growth trajectory. The following are some of the issues that have arisen as a result of directed credit policies, aggressive expansion tactics, poor monitoring measures, and the consequences of external contagion (22):

Directed Credit Policies: The legacy of the directed lending policies, which are marked by the extended periods of interest rate control and selective credit allocations, is considered as one of the key issues that the banking system in South Korea is currently confronting. Because of these regulations, the distribution of funds was inefficient because banks were required to provide loans to industries or sectors that were deemed to be preferred by the government.

Aggressive Expansion Strategies: South Korean banks followed aggressive expansion tactics that were defined by leveraged growth and large lending to conglomerates known as chaebols. These policies were driven by the requirement to support the rapid industrialisation and economic development of the country. During times of solid economic expansion, this technique was successful in generating dividends; nevertheless, when confronted with a slowdown in demand and an increase in input costs, it was unable to be maintained.

Inadequate Monitoring Mechanisms: One major challenge the banking industry in South Korea is currently facing is its reliance on collateral-based lending and guarantees in addition to neglect of borrower cash flows and performance. Usually focused on the value of the collateral instead of the borrowers' underlying financial situation and loan ability to be repaid, banks produced careless credit assessment practices and higher risk exposure.

Contagion Effects and Structural Adjustments: Contagion effects were experienced by the banking sector of South Korea as a result of the Asian financial crisis, which occurred at the same time as a period of structural adjustments and cyclical downturns in the local economy. Existing vulnerabilities within the banking system were exacerbated as a result of the external shock, which resulted in a severe shortage of liquidity, capital outflows, and widespread financial distress (23).

Implications and Potential Consequences: The significant problems that the South Korean banking industry is facing have a significant impact on the stability of the financial system, the expansion of the economy, and investor confidence. Direct and aggressive expansion strategies in resource allocation policies have altered the distribution of resources, impaired competitiveness, and raised systematic economic hazards. Inappropriate monitoring techniques and weak credit assessment policies have resulted in a rise in the number of loans deemed non-performing, a decline in asset quality, and a greater sensitivity to outside shocks.

Measures Implemented to Address the Banking Issues

Speed of Action: Reacting quickly to the local financial crisis, South Korea poured out massive public funds meant for bank recapitalisation. The action was carried out to reduce the overall risks connected with systematic hazards. Through proactive initiatives, the government aims to normalise the financial system and rebuild trust in the banking sector.

Corporate Restructuring Vehicles (CRVs): Established in South Korea, Corporate Restructuring Vehicles (CRVs) help resolve debt restructuring and bad loan settlements.

Debt/Equity Swaps: Companies used debt/equity swaps to reorganise their operations and reduce the burden of bad debts. Banks could raise their capital by pushing financially struggling companies to restructure their debt into equity.

Creation of Korea Asset Management Corporation (KAMCO): Established to handle non-performing loans, the South Korean government formed the Korea Asset Management Corporation (KAMCO). Financial institutions desperately needed liquidity, and they assigned KAMCO to supply it by purchasing discounted nonperforming assets (NPAs) from banks. This helped fix problematic assets. KAMCO plays a pivotal role in recovering distressed assets through asset-backed securitisation and outright sales. Entities like the Lone Star Fund's involvement demonstrated the attractiveness of distressed asset opportunities in South Korea and contributed to the success of asset recovery initiatives to strengthen the provision norms and loan classification standards (22).

NPA Fund: Together, the South Korean government and KAMCO established an NPA fund intended to purchase non-performing assets. By means of additional resources, the fund aimed to stabilise the banking sector and handle the non-performance loan situation (22).

By considering a wide range of future factors of NPAs of banking sector in South Korea including anticipated financial flows, this nation was able to enhance its loan categorisation standards and provision requirements. Implementing forward-looking appraisal criteria helped financial institutions improve the quality of their loan portfolios and the general viability of the financial system. This improvement was attained by greatly lowering the likelihood of future credit risks and improving their predictability. By stressing criteria based on the future, the banking sector is moving towards more efficient risk control strategies. Because of their focus on expected credit issues and future income flows, financial institutions enjoyed a benefit in terms of risk management and portfolio construction. Such an approach helps them to better control risk. Both the total number of loans categorised as nonperforming, or NPLs, and the probability of future loan defaults dropped in line with regulatory framework (24).

The institutional regulatory framework plays an important role in handling NPAs where Central Bank, Financial Supervisory Commission (FSC) plays a critical role in it. The strategic realignment aimed to enhance the credibility and effectiveness of monetary policy in supporting economic stability and growth is being managed by Central bank. The FSC ensures the effective supervisory system aligned with universal banking practices that promote the transparency, accountability, and sound governance within the financial sector. South Korea implemented a series of measures focusing on the speed of action, corporate restructuring the creation of asset management corporations. These measures aimed to stabilise the financial system, resolve bad loans, and restore confidence in the banking sector (25).

- **Japan's Banking Challenges**

Japan's banking sector is in crisis, which endangers the stability of its economy. Emphasising real estate investments, financial policies, accounting mistakes, legislative problems, and company governance has exposed consistent problems. The banking crisis of Japan started when real estate investments peaked during the economic boom at unsustainable levels. The protracted and expensive legal process hampered NPA settlement. On banks' balance sheets, NPAs stayed, reducing profitability and complicating lending to viable businesses. The fiscal policies and legal frameworks have been initiated by Japan as described below (26).

Fiscal policies

Expansionary fiscal policies to revive the economy inadvertently exacerbated the banking crisis by perpetuating support for the construction and real estate sectors. Close ties between banks and corporate conglomerates, known as Keiretsus, perpetuated a culture of crony capitalism, where preferential treatment and lenient lending practices prevailed (23).

Remedial Measures and Institutional Reforms in terms of law

Legal Reforms: Japan started legal changes meant to expedite bad loan disposal and simplify bankruptcy processes. Japan aimed to speed the cleaning of bank balance sheets and rebuild financial health in the banking industry by improving the efficiency and efficacy of legislative systems for NPAs resolution.

Corporate Governance Reforms: Keiretsus was the target of Japan's attempts to improve risk management techniques and instill market discipline. This goal was achieved by advocating more board independence, shareholder rights, and transparency rules inside the framework of multinational conglomerates, thus lowering moral hazard and increasing openness and responsibility (27). Moral hazard occurs when financial institutions or borrowers engage in high-risk behaviour, assuming that any resulting losses will be covered by the government or shifted to the public. The situation involving Kingfisher Airlines, under the leadership of Vijay Mallya, serves as a notable instance. Despite its declining financial state, the company kept obtaining restructuring packages from public sector banks, particularly the State Bank of India, totalling more than ₹9,000 crore, which were subsequently categorized as non-performing loans. Investigations indicated that insufficient due diligence and the urge to provide loans to prominent borrowers played a major role in this default likewise (28, 29), the bankruptcy cases of Essar Steel and Bhushan Steel, which together represented more than ₹1 lakh crore in NPAs, faced considerable legal setbacks and opposition from promoters. The Essar Steel promoters tried to reclaim control of the company despite its default status, highlighting flaws in the IBC before Section 29A was introduced, which prohibited such efforts (30, 31). Another significant event, the IL&FS crisis of 2018, highlighted the dangers of regulatory leniency and governance shortcomings. IL&FS, with a default exposure of ₹91,000 crore, functioned via a convoluted network of more than 340 subsidiaries and lacked adequate internal financial supervision, but did not encounter any regulatory action until the crisis unfolded (32). Moreover, ongoing bank recapitalizations without strict reform requirements have led to moral hazard. From 2015 to 2021, the Indian government invested more than ₹3.1 lakh crore into public sector banks but did not connect recapitalization to enhancements in performance or lending discipline, which allowed ongoing inefficiencies (33, 34). Consequently, empirical data robustly affirms that in the absence of enhanced enforcement, depoliticized governance, and better accountability systems, the issue of NPAs in India will continue to be a fundamental challenge. Among the factors affecting the banking crises, Japan went through the real estate, regulatory restrictions, fiscal policies, and poor corporate governance. To handle such challenges, a multifarious strategy was needed that includes institutional reorganisation, legal reforms, and regulatory improvements timely. By implementing the corrective efforts to solve structural gaps and increase governance standards, Japan restored the financial stability, raises market confidence, and created the environment for sustainable economic development. Japan implemented these steps to enhance the quality of governance criteria (26).

Comparative Analysis of NPA Challenges across Selected Asian Economies

Comparative Studies of NPAs and its decoding: India with other selected Asian Nation

India's battle with Non-Performing Assets (NPAs) has remained a persistent structural challenge, particularly when assessed against global benchmarks. As of 2023, India's gross NPA ratio stood at 4.1%, significantly higher than those of peer economies like South Korea (<1.5%), China (1.6%), and Japan (<2%), although lower than the peak levels during the 2017–2018 banking crisis (over 11%). While India implemented the Insolvency and Bankruptcy Code (IBC) in 2016 and institutional mechanisms like Asset Reconstruction Companies (ARCs) and National Asset Reconstruction Company Limited (NARCL), the average recovery rate under IBC remains ~33% and the resolution time averages 500+ days, both substantially lagging behind global standards. In contrast, South Korea's KAMCO reduced resolution times by over 40% and maintained an NPA ratio below 2% within three years post-crisis. Japan, despite its 1990s crisis, used aggressive public funding and achieved over 60% recovery from real estate NPAs, paired with stringent capital adequacy enforcement. China's centralized AMC model also led to faster disposal, albeit under state control and less transparency.

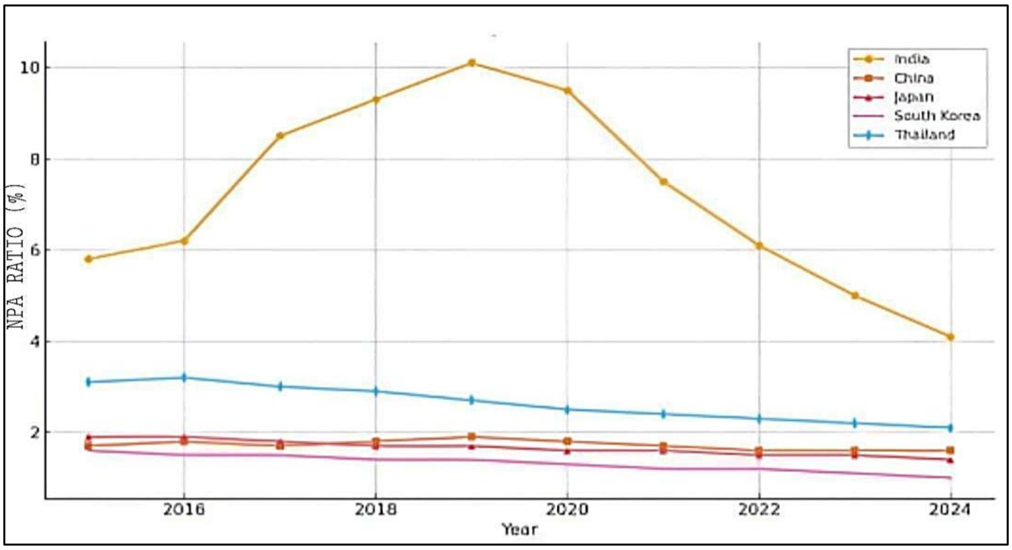

Figure 1: Comparative Graph of NPA Ratio

The NPA ratio in India was over 10% in 2017–2018, but it has been going down gradually since then and was 4.1% by 2024 (as shown in Figure 1). But it is still far behind countries like Japan (1.4%) and South Korea (1.0%), which have had much lower and more stable NPA levels over the past ten years. To enrich the analysis, a comparative line graph showing gross NPA ratios (2015–2024) across India, China, Japan, South Korea, and Thailand can visually illustrate India's slower pace of improvement shown above. A bar chart comparing average recovery rates and resolution times under different frameworks (IBC, CRVs, AMCs, public bailouts) would also highlight India's relative inefficiencies. Additionally, a radar chart using metrics like NPA ratio, recovery rate, legal efficiency index, and time to resolution can synthesize multi-dimensional performance across countries. These quantitative and visual tools clearly suggest that India's NPA problem is not merely financial but rooted in legal delays, political interference, and inefficient resolution architecture. Going forward, integrating real-time credit surveillance, digitized legal infrastructure, and greater ARC accountability are vital for aligning with global best practices in NPA management.

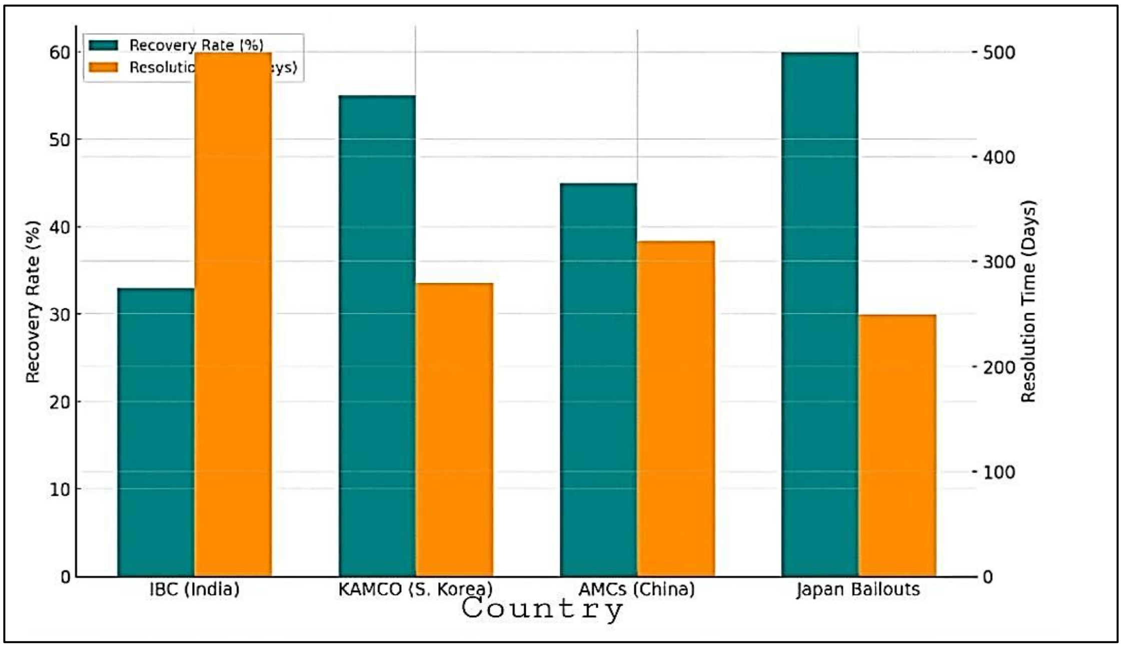

Figure 2: Recovery Efficiency by Framework

The IBC framework in India has the lowest recovery rate, at about 33%, and the longest average resolution time, which exceeds 500 days. Japan's public bailout method had the highest recovery rate (60%) and the quickest resolution time (250 days) as shown in Figure 2. South Korea's KAMCO also did well in both areas. Together, these visualizations show how important it is for India to improve its legal processes, institutional flexibility, and recovery effectiveness to meet the highest global standards that are already in place as disclosed in the table 2 given below. The NPA resolution framework as elaborated above got affected the SWOT of the recovery system with effectiveness score as shown below in Table 3.

Table 2: NPA Resolution Framework

Country	Gross NPA Ratio (2024)	Avg. Recovery Rate (%)	Avg. Resolution Time (days)	Legal Efficiency (0–10)	Mechanism Used
India	4.1%	33	500	4.0	IBC, ARCs, NARCL
China	1.6%	45	320	5.0	AMCs (Cinda, Huarong), Foreign Participation
Japan	1.4%	60	250	7.0	Public Bailouts, Securitisation
South Korea	1.0%	55	280	8.0	KAMCO, CRVs, Debt-Equity Swaps
Thailand	2.1%	42	350	4.5	AMCs, Bank Takeover, Foreign Ownership

The SWOT analysis and index indicators, which include NPA ratios, recovery rates, and legal efficiency, provide us further information. These signs show that centralized government (like in Korea and China) and openness (as in Japan) are essential for solving NPAs quickly and effectively. On the other hand, countries like India and Thailand need to make further adjustments to their laws and structures to improve their chances of recovery.

Table 3: SWOT Analysis

Country	Causes of the Problem	Mechanisms Used to Solve the Problem	Effectiveness Score (out of 10)	Index System (Key Indicators)	SWOT Analysis Summary
India	1. Legal impediments & slow asset disposal 2. Debtor manipulation via political influence 3. Directed credit policies (SSI, rural)	1. Strengthening legal norms 2. Aligning prudential norms with international standards 3. Creation of ARCs, partial disbanding of BIFR	**6/10**	NPA Ratio (Gross): 4.1% (2023)IBC recovery rate: ~33%Time to resolve: ~500+ days	**S:** Strong legal reforms post-IBC **W:** Judicial backlog **O:** Digital NPA tracking, ARC privatization **T:** Political interference, wilful default
China	1. Moral hazard in SOEs 2. Borrower-favoring bankruptcy laws 3. Weak legal enforcement	1. Creation of AMCs (e.g., Cinda, Huarong) 2. Foreign equity participation 3. Higher disclosure norms	**7/10**	NPA Ratio: ~1.6% (official, 2023)AMC recoveries: Mixed successSOE bailout cost: High	**S:** Centralized control enabled fast cleanup **W:** Data opacity, weak legal rights **O:** Foreign collaboration **T:** Hidden NPAs, shadow banking risks
Japan	1. Real estate boom & bust 2. Slow legal processes 3. Crony capitalism	1. Closure of non-compliant banks 2. Securitisation of real estate loans 3. Public-funded bailouts	**8/10**	NPA Ratio: <2% (2024)Capital adequacy: Strong post-2000sPublic bailout: $350B (1990s)	**S:** Quick capital injections **W:** High fiscal cost **O:** Real estate rebound & reform **T:** Aging economy, deflation
South Korea	1. Directed credit policies 2. Compressed growth strategy 3. Weak monitoring	1. Systemic risk containment 2. CRVs & debt-equity swaps 3. KAMCO (1997) for asset recovery	**9/10**	NPA Ratio: <1.5% (2024)CRV success rate: HighKAMCO recovery: Efficient	**S:** Swift reform & centralised AMC model **W:** Reliance on debt-equity swaps **O:** Regional fintech leadership **T:** External debt risk, export dependency
Thailand	1. Debtor-friendly legal system 2. Capital account	1. Privatisation of govt entities 2. Foreign equity caps removed 3.	**7/10**	NPA Ratio: ~3.1% (2024)Foreign participation: High post-	**S:** Openness to global capital **W:** Legal delays remain

	liberalization 3. Real estate speculation 4. High interest rate impact 5. Decentralised problem	AMCs created 4. Bank nationalisation		crisisAMC model: Mixed results	**O:** Tourism and real estate rebound **T:** Political volatility, currency swings

Similarities and Differences in Banking Systems across Selected Asian Countries

Similarities: Information Quality and Governance Environment (23)

- Transparent information is crucial for efficient development of the financial industry, according to Lee and Ahn's findings.
- The aggregate informational quality scale rankings show that there is room for improvement in information transparency and governance frameworks across Japan, Korea, Thailand, China, and India.

Weaknesses in Legal Systems

- Inadequate legal procedures for the sale of assets make it harder for Asian countries to resolve their financial crises quickly, and
- investors lose faith in the banking sector as a whole due to this lack of strength in enforcement.

Reliance on Government Support

- Using guarantees and funding, governments in these countries mostly address nonperforming loans (NPAs) and other banking sector issues.
- While stabilising financial institutions during crises requires bailouts, depending too much on them cause moral hazard and lessens market discipline.

Differences in Causes of the Problem (27)

- **Real Estate Speculation:** The Thai government's strong assurances for economic development led to inflated real estate prices and enormous debt, which ultimately defaulted because those expectations were not fulfilled. Investors bought exaggerated prices during Japan's real estate frenzy, which finally resulted in loan defaults when prices fell. India's issues arose from significant industrial bad loans, which resulted from the nation's political power-based ability to manage creditors.
- **Crony Capitalism and Business Structures:** The crony capitalism that flourished inside the Keiretsus and Chaebols of Japan and Korea respectively caused ineffective distribution of money and strain on the economies. China's state-owned businesses (SOEs) operated with the knowledge that government financial support would be forthcoming, which led to high-risk behaviour and a disdain for profitability.
- **Macroeconomic and Fiscal Policies:** India and China effectively shielded themselves from the effects of the East Asian Crisis, which spread throughout the region, by maintaining restricted capital accounts and substantial domestic savings. The expenses of the Japanese government, meant to boost the economy during a recession, could have aggravated NPA problems.

Differences in Macroeconomic and Fiscal Policy

- **India and China**: Maintaining closed capital accounts and significant internal savings, they were better able to withstand outside shocks like the East Asian Crisis (35).
- **Japan**: Used large government expenditure to boost the economy, therefore aggravating NPA problems via poor resource allocation and unproductive investments.

Implications and Recommendations

Enhancing Information Transparency (36)

- Within the banking industry, the enhancement of disclosure requirements and reporting standards has the potential to improve both the quality of information and the transparency of governance.
- It is absolutely necessary to strengthen regulatory oversight and enforcement procedures to guarantee compliance with reporting standards and to encourage responsibility.

Reforming Legal Frameworks (37)

- By means of measures aimed at streamlining legal processes for asset disposal and non-performance asset resolution, one might hasten

the rehabilitation of troubled assets and rebuild financial system confidence.
- Creating specialised courts or tribunals for banking-related issues could help to lighten the court's workload and speed up procedures of resolution.

Reducing Dependency on Government Support
- By encouraging market discipline and risk-sharing policies, governments should give the building of a more robust and self-sustaining financial system first priority.
- Improving prudential rules and control will help to reduce the likelihood of financial crises and the need for government bailouts.

Promoting Financial Literacy and Investor Education
- Improving risk awareness and encouraging prudent financial decisions depends on financial literacy among stakeholders including lenders, investors, and authorities.
- Programs for investor education help people to make wise judgements, therefore lowering the possibility of financial instability and speculative bubbles.

Asian countries may strengthen their financial institutions, lower systematic risks, and encourage sustainable economic development by addressing these shared issues and implementing certain reforms. Understanding the several causes of NPA problems in different countries emphasises the need for tailored solutions fit for every country. Targeting these inequalities and implementing focused changes can help countries strengthen their banking systems, reduce systematic risks, and encourage environmentally friendly economic development (38).

Conclusion

This article compares Indian NPAs with China, Thailand, South Korea, and Japan which were assessed for NPA resolution traits. Along with the paper claims that regulatory actions, including the IBC and ARCs, caused Indian NPA to peak in 2017–2018 and drop to 3.9% by March 2023. China has SOE moral hazard; Thailand has speculative lending; South Korea has directed credit leftovers; and Japan has real estate issues. These outcomes highlight the need for focused changes to meet NPA and advance transparency, good government, and solid legal systems as it exposes persistent challenges related to legal delays, political interference, and a lack of financial awareness at the grassroots.

China has systemic problems because of moral hazard and the fact that most businesses are owned by the government. Japan and South Korea, on the other hand, have typically used centralized, aggressive, and fiscally supported efforts to strengthen their financial systems. Also, Thailand's problems with speculative lending and slow legal systems show that dealing with non-performing assets (NPA) is closely tied to how the economy is run, the culture of the law, and how the financial sector acts. This essay argues that sustainable non-performing asset management should be part of a larger system of financial governance. Instead of separate regional policy responses, this framework should be based on transparency, institutional autonomy, digital infrastructure, and risk-aware policy design. Countries should not see crises connected to non-performing assets (NPA) as cyclical problems; instead, they should see them as structural weaknesses that need constant reform, accountability, and learning from other countries.

This study uses a comparative approach to add to the academic conversation by showing that professional, depoliticized, and technology-enabled resolution mechanisms not only make non-performing asset crises less severe, but they also make the organization's long-term financial stability stronger. Future study needs to go beyond just making descriptive comparisons. The study must examine the interrelationships between institutional capacity, regulatory innovation, and financial stability across various economies. Also, it's important to look at how digital revolution, post-crisis institutional growth, and cross-border risk contagion affect the setting of NPA trajectories, especially in developing economies. To keep asset quality improvements, India has maximised the insolvency processes, avoid political meddling, and advance financial literacy while other Asian countries should provide market discipline and make bankruptcy rules a top priority in order to reduce NPAs and private sector dynamism while NPA problems are contextual therefore comparative studies reveals that the improved transparency and professional resolution can help to manage regional financial stability. This paper claims that in order to sustain economic development, politicians, legislators, officials, and financial institutions have to be creative and control risk.

Future research should look at digital transformation and non-performing asset management, long-term effects of post-crisis reforms, and developing country data. By closing these gaps, researchers and practitioners could create globalised, resilient banks and streamline NPAs. The NPA condition of India calls for significant changes and coordinated actions among all sides. To address NPA and preserve economic growth, policies, laws, and institutional capacity-building are absolutely indispensable. By addressing the root causes of the NPA issue and strengthening institutions and regulation, India can create a strong, colourful financial sector that supports fair development. Problems in Chinese banking influence the country. Inefficiencies and moral hazards could lower SOE performance and marketization. Inadequate bankruptcy rules cause non-performance of debt. Banks find it more difficult to back wise investments and economic development. Open and consistent accounting enhances prospects for non-state-owned companies to borrow and invest. This lowers the financing risks for private companies. The main challenges of the Chinese banking sector and sustainable economic development call for improved governance, regulatory control, and market fairness. To right its financial crisis, Japan requires legislative, institutional, and regulatory reforms. Japan rectified basic problems and enhanced government to bring back market confidence, financial stability, and economic growth. Actions reached these objectives. The financial system needs constant observation and intervention to restore integrity and resilience following the banking crisis.

Recommendation

Based on the conclusion, we can have below recommendations to be incorporated for future prospects:

- India needs to enhance efficiency of the regulatory system for NPAs.
- India or any country must initiate financial literacy in their rural or urban areas to build culture of repayment discipline and awareness about credit mechanism.
- Countries need to initiate digitalization for NPAs of increasing solvency of loan recovery.
- Reform and enhance the legal and judicial infrastructure for NPA resolution.
- India should try to rely less on big businesses and state organizations by making it easier for micro, small, and medium-sized businesses (MSMEs) and new businesses to grow. Transparent credit information systems and risk-based pricing can help the private sector change and grow.

Abbreviations

ARCs: Asset Reconstruction Companies, CRVs: Corporate Restructuring Vehicles, FSC: Financial Supervisory Commission, IBC: Insolvency and Bankruptcy Code, KAMCO: Korea Asset Management Corporation, NPAs: Non-Performing Assets, RBI: Reserve Bank of India, SEBI: Securities and Exchange Board of India.

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Conflict of Interest

The authors declare that there is no conflict of interest for the publication of this paper.

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