Executive Summary-

Iran's banking system is facing a confluence of challenges that collectively threaten the stability of the nation's financial system. For instance, since the end of Iran-Iraq war, liquidity (M2) and money supply has ballooned at an average rate of 27.5% per year which has contributed significantly to the average annual inflation rate of 21% during this period. These issues are rooted in decades of mismanagement of the economy by the Islamic Republic, its lack of fiscal discipline, and effectively eliminating Iran's central bank (the CBI) independence, making the CBI incapable of performing its tasks and essentially transforming it to the fiscal arm of the government. Systemic corruption and connected lending have also contributed to the dire condition of the banking system and resulted in a substantial build-up of non-cash flow generating assets, a significant rise in the percentage of non-performing loans, and massive rollover losses. As a result, these issues have brought the entire banking system to the precipice of a full-fledged banking/financial crisis.

Structural and fundamental reforms are desperately needed for Iran's banking system. However, as we discuss later, while the Islamic Republic authorities appear to have understood the necessity of these reforms, these reforms were never completely implemented and the situation has deteriorated rapidly over time, especially during past few years with Raisi in office.

With the collapse of the Islamic Republic, there is a meaningful opportunity to implement structural reforms in the banking system. However, the collapse of the current regime will also present several risks and challenges that need to be carefully considered, especially given that the banking system is already weak and fragile. In a nutshell, all policies to get the banking system on track must be based on established findings of Economics and Banking research and common practices in the world to ensure the stability of Iran's financial market and the predictability of the economy. We strongly suggest avoiding any convoluted and untested policy as the Iranian economy does not have the capacity to withstand another major shock.

In the short run, the risks immediately after the collapse of the Islamic Republic include:

- **Bank Run:** This is a serious risk in the short term, given the fact that the banking system in Iran is practically bankrupt now. It is important to emphasize that in the early days after the regime change, a run on any individual bank would not be confined to that bank itself. It will almost surely create a domino effect. The main mechanism to prevent bank runs is deposit insurance. It may be necessary for the CBI at that time to expand the current coverage of deposit insurance. The transition government could also put in place more active policies such as forced banking holidays or deposit withdrawal freezes.

- **Capital Flight:** Given the inevitable significant rise in uncertainty and risk in the country immediately after Islamic Republic collapse, a substantial outflow of capital from the country is another serious short-term risk. Ex-officials of the Islamic Republic or other wealthy investors, households, and businesses may attempt to take their capital out of the country. This can lead to a more rapid depreciation in the value of Rial, leading to a vicious cycle of depreciation in currency value and higher inflation, with a potential to pull the economy into a deep recession. Therefore, the transition government must impose and enforce limits on bank withdrawals, foreign currency transactions by individuals and firms and within banks network that includes their foreign branches and limit (fire) sale of companies assets or their ownership.
- **Currency Depreciation:** It is almost certain that the Rial would depreciate immediately after the regime change, at least in part, due to elevated level of uncertainty and political risk. Given that in Iran inflation expectation is anchored to the exchange rate, a free fall in the value of the currency poses a serious risk. Therefore, given that the ultimate objective is to have a floating exchange rate system, in early days of the regime change, the transition government should manage this risk by sending credible signals to the market that Iran will be removed from FATF blacklist, and that the sanctions will be (partly) lifted. Imposing limits on the foreign currency transactions described above would also help manage this risk.
- Other recommended short-term policies include talks with FATF to remove the country from its blacklist; engage in talks with the US and other western countries so that the sanctions are at least partly lifted; and begin work to attract foreign direct investment, all which would also help with managing currency depreciation risk as well as mitigating the risk of bank run and capital flight.

In the longer term after the collapse of Islamic Republic, the main risk is mismanaging financial liberalization. This risk could jeopardize the country's path to economic growth and lead to a full-fledged financial crisis. It is rooted in weak credit culture, institutional weakness, lack of proper monitoring and supervision which characterize Iran's banking and would lead to excessive risk-taking by banks, creating a cycle of lending boom and bust. The financial crises in Mexico in 1994-1995 and East Asia in 1997-1998 are examples of such mismanagement.

Therefore, the transition government and the CBI need to make some structural reforms in the banking system. For instance, the credit culture of the banking system must be improved; compliance with the Basel framework must be enforced with active monitoring. Other recommended longer-term policies include price liberalization, protecting the CBI independence in the Law, floating exchange rate, and foreign trade facilitation.

1. Central Bank of Iran: Institutional Background

1.1 Introduction

The Central Bank of Iran (CBI), also known as Bank-e-Markazi, plays a pivotal role in Iran's monetary and financial landscape. Established in 1960, the CBI's functions have evolved over the years, with significant changes occurring after the 1979 revolution. This section provides an overview of the CBI's institutional background, highlighting key developments in its role and responsibilities.

1.1.1 Pre-Revolution Era

Before the 1979 revolution, the CBI primarily served as the issuer of currency and the government's banker. The expansion of economic activities in the 1960s and 1970s led to the rapid growth of Iran's banking sector, with numerous commercial and specialized banks operating by 1978. However, after the revolution, the nationalization of banks and industries, as detailed in the Banks Nationalization Act and the Law for Administration of the Banks, significantly reshaped the banking landscape. This transformation was accompanied by a contraction in economic activities, leading to extensive bank consolidation, ultimately reducing the number of banks to approximately a dozen, substantially weakening competition in the banking sector.

Iran's banking sector currently comprises 35 private and non-private banks [1], with a total debt of 10.5 billion dollars [2]. This diverse banking landscape reflects the complex financial ecosystem in which the CBI operates.

1.1.2 Post-Revolution Changes

The post-revolution era witnessed fundamental changes in the structure and governing rules of the CBI. The departure of experts and policymakers from the CBI, along with changes in its governance structure impacted the banking sector's performance during this period. In 1983, Iran's banking rules were amended to adhere to the principles of usury-free Islamic finance, resulting in a non-interest-bearing banking system. [3].

The CBI's objectives, as outlined in the Second Monetary and Banking Act of 1972, encompassed maintaining the value of the currency, achieving equilibrium in the balance of payments, facilitating trade transactions, and supporting economic growth. Moreover, CBI monetary policy must be consistent with the five-year development plans and the government annual budget. To understand the challenges facing the Iranian banking and currency system, it is imperative to consider the evolution of monetary and fiscal policies during each presidential term since the 1979 revolution.

1.2. Evolution of Macroeconomic Policies in Iran (1979–2023)

This section provides a chronological overview of how Iran's macroeconomic policies have evolved during each presidential term post-revolution:

1.2.1 The Post-Revolution Period (1979-1988)

Given Islamic Republic's anti-free market views, its hostility towards the west, and insistence on independence from both west and east, along with the devastating war with Iraq, the first decade after the revolution saw a marked rise in government involvement in the economy and a decline in income levels. The per capita oil revenue plummeted, leading to a government budget deficit surpassing 50% of total expenditures. This period witnessed significant public debt accumulation due to war costs and subsidies.

1.2.2 Rafsanjani's Presidency (1989-1997)

Rafsanjani initiated structural reforms, including price liberalization, exchange rate unification, industrial privatization, and stock exchange market relaunch. These reforms led to a brief period of economic growth. However, in 1995, main parts of his economic reform, price liberalization and unification of the exchange market, was reversed due to falling oil prices, maturing foreign debt, and new US sanctions that resulted in stagflation in the economy.

1.2.3 Khatami's Presidency (1997-2005)

Khatami's era marked steady economic expansion due to reduced tensions with the West and rising oil prices. Real GDP per capita increased, inflation eased, and other significant economic reforms included the establishment of the Oil Stabilization Fund, reduced government borrowing from the central bank, and privatization.

1.2.4 Ahmadinejad's Presidency (2005-2013)

Ahmadinejad's presidency witnessed a shift towards populist economic policies characterized by increased government spending, subsidies, and currency interventions. His administration’s economic policies have had a long-lasting adverse impact on Iran’s financial markets, including the banking sector, and completely reshaped the financial landscape.

His presidency is stained by systemic corruption, lack of planning and several massive and extremely costly failures, largest in decades, in multiple government projects, which the banking system was forced to foot the bill. As a result, during his presidency, banks’ claim on government increased by more than 4.5 times from 1.7% to 7.8% of GDP. This in turn significantly weakened the banking system’s balance sheet by increasing the size of non-cash flow generating assets due to the rise of non-performing loans. As a result, banks had to borrow heavily from the CBI which led to a substantial increase in monetary base followed by high levels of inflation towards the end of his term in office. This situation was exacerbated by the competition to attract deposits between the banking sector and Non-bank financial institutions that were not properly regulated at the time. This dynamic led to a surge in the interest rates which not only further pressured the already weakened banking system, but also increased the cost of capital in the real economy and caused the economic activities to slow down. Meanwhile to control the pace of inflation, Ahmadinejad’s administration spent over $140 billion petrodollars, increasing the imports by two folds, kickstarting the Dutch Disease in the Iranian economy. By the time he left the office, the economy had entered stagflation, GDP per capital was almost the same as when he took office, the currency had lost half of its value, and inflation was about 40%. The top panel in Figure 1 depicts the monthly value of the dollar expressed in Rial from March 1989 until March 2022. The bottom panel illustrates the annual growth in monetary base (MB) and the concurrent rate of annual inflation between 1989 and 2021.

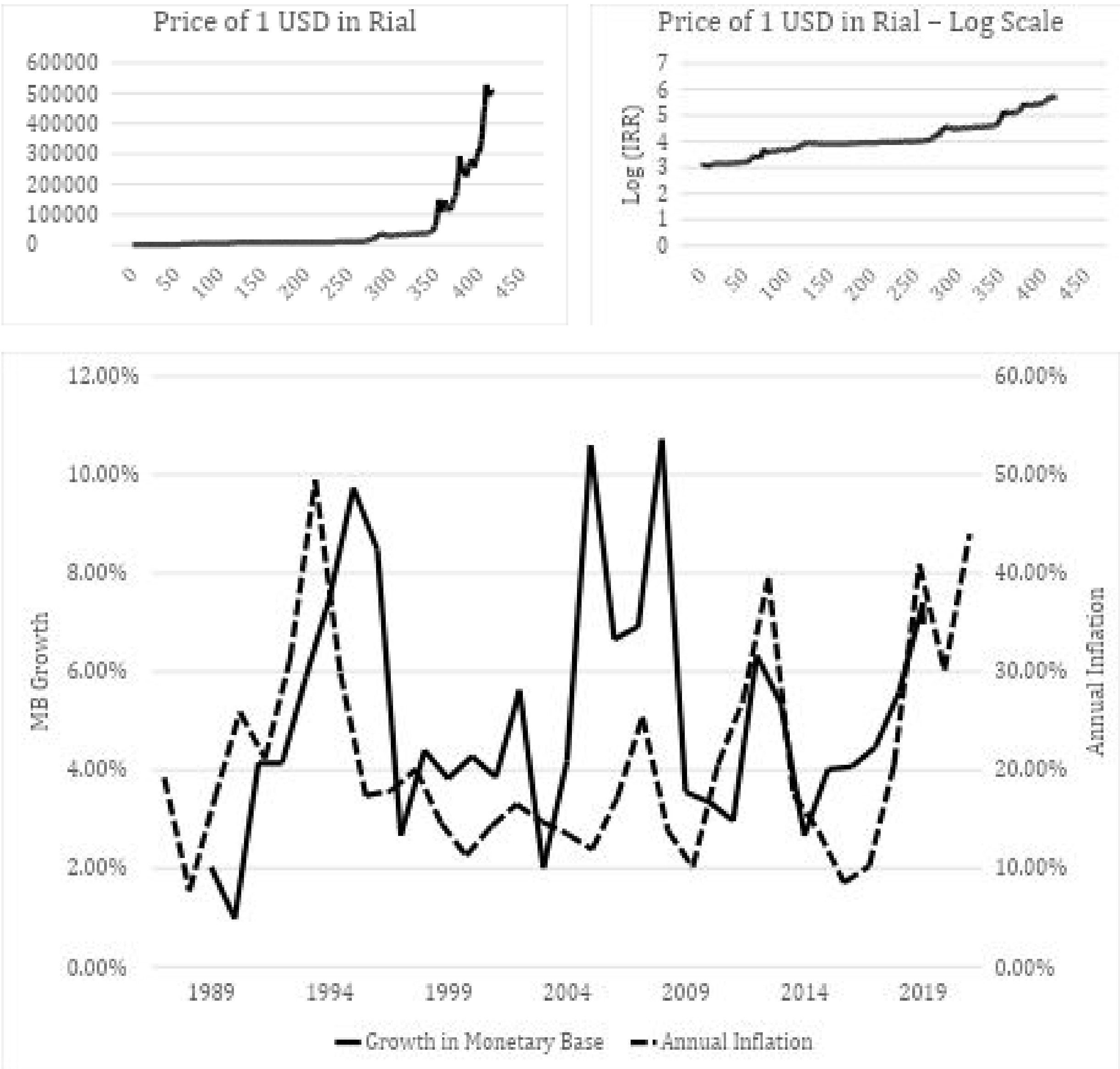

Figure 1- The top panels in Figure 1 depict the monthly value of the dollar expressed in Rial from March 1989 until March 2022. The bottom panel illustrates the annual growth in monetary base (MB) and the concurrent rate of annual inflation between 1989 and 2021.

1.2.5 Rouhani's Presidency (2013-2021)

Rouhani's presidency was marked by a shift towards economic pragmatism and engagement with the international community to alleviate sanctions. The Joint Comprehensive Plan of Action (JCPOA), commonly known as the Iran nuclear deal, was reached in 2015, leading to the lifting of some sanctions and a period of relative economic stability. While his administration also failed to make structural reforms in the economy, the above breakthroughs in Iran's foreign policy and international relations, elevated the expectations for a better economic outlook and reduced inflation to about 8.5% in 2016. However, failure to address the fundamental and structural issues in Iran’s economy in general and in the banking sector in particular, along with the economic devastation brought about by COVID-19 pandemic, led to emergence of the old economic problems. By the time he left office, inflation had surged to above 40% and real GDP per capita was almost the same as when he took office.

1.2.6 Raisi's Presidency (2021-Present)

Ebrahim Raisi assumed the presidency in 2021 amid economic challenges exacerbated by the COVID-19 pandemic and sanctions. His administration faces the daunting task of addressing the banking and currency system's deep-rooted problems, including high inflation, non-performing loans, and a lack of central bank independence. More than two years into his presidency, his administration seems to be either unable or unwilling to tackle the economic and banking issues. Inflation has increased close to 50% and in particular, for food items this figure is well over 70%. Reports of systemic corruption and embezzlements have become a natural part of the news cycle. Almost all macroeconomic indicators point to a looming full-fledged economic and banking crisis on the horizon. The monetary base has grown by about 45% during the one year leading up to April 2023, a twenty-year high. During the same period, the CBI claims on Government and the banking system rose by over 58% and 148%, respectively. According to the IMF, the ratio of Iran’s government gross debt to GDP is close to 33%. The inflation rate has been steadily well over 40% during his presidency.

As Iran continues to navigate economic and political challenges, the banking and currency system remains a focal point for policymakers. The need for comprehensive reforms in monetary and fiscal policies is increasingly urgent to stabilize the economy and enhance the resilience of the financial sector.

2. Current State of Banking in Iran: A Crisis on the Horizon

2.1. Background of the Banking System in Iran

The Iranian banking sector is facing a confluence of challenges that collectively threaten the stability of the nation's financial system. This section conducts a comprehensive analysis of the root causes of the current banking problems in Iran, examining key factors that have contributed to this crisis.

2.1.1 Overview of Fiscal and Monetary Policy Post-1979 Revolution

The post-revolution era witnessed substantial shifts in fiscal and monetary policies. Chronic fiscal deficits have been a persistent challenge, with the government resorting to seigniorage and money supply expansion instead of tax collection and market borrowing. This has led to an average annual inflation rate of about 21% since Islamic Republic took power. Figure 2 depicts the annual inflation rate from 1979 to 2023 (based on the statistics made publicly available until September 2023), illustrating the fluctuations in inflation over this period.

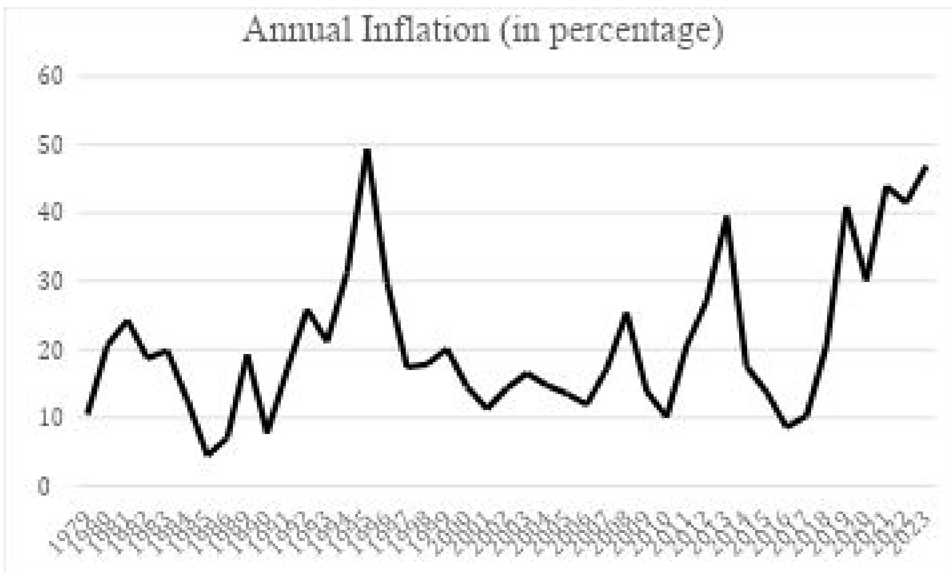

Figure 2- Annual Inflation Rate Trends from 1979 to 2023 in Iran

2.1.2 FATF (Financial Actions Task Force)

The FATF serves as the global standard-setting body for anti-money laundering and combating the financing of terrorism Anti-Money Laundering/ Counter-Financing of Terrorism (AML/CFT). Its primary objective is to safeguard the international financial system from the risks of money laundering and terrorist financing (ML/FT) while promoting greater compliance with AML/CFT standards. The FATF identifies jurisdictions with strategic deficiencies and collaborates with them to rectify these issues, thus mitigating risks to the global financial system.

FATF includes countries with *"serious strategic deficiencies to counter money laundering, terrorist financing, and financing of proliferation"* in its "Black List".[1] The first FATF black list was published in 2000 and Iran has been consistently on the list since its initial publication. Being blacklisted by FATF has had severe adverse consequences for Iran's economy as well as its banking system. It has essentially isolated Iran's banking system from the global financial markets and has effectively deterred potential international economic partners from doing business with Iran because it would expose them to considerable liabilities.

Rouhani administration attempted to ratify and implement FATF required steps so that the country would be removed from the Black List. As a result of these efforts, in June 2016, Iran received a measure of relief from its blacklisted status as the FATF acknowledged the country's seeming commitment to address its strategic AML/CFT deficiencies. This commitment was coupled with Iran's expressed intention to seek technical assistance for the effective implementation of the recommended Action Plan by the FATF. In November 2017, the FATF decided to continue suspending countermeasures against Iran, recognizing the initial steps taken to address its AML/CFT issues. Since November 2017, Iran undertook several measures in line with FATF recommendations. These include the establishment of a cash declaration regime and the introduction of draft amendments to its AML and CFT laws. Nevertheless, Iran's action plan expired in January 2018 and the action plan was not completed. Specifically, the country has not yet ratified the Palermo and CFT conventions. Therefore, it was eventually put back on the blacklist in February 2020.[2]

2.1.3 The CBI Lack of Independence, Transparency, and Accountability

Independence, transparency, and accountability are the three pillars of modern central banking governance, and the CBI lacks all three. The CBI lack of independence has hindered its ability to set and implement effective monetary policy. The CBI's role has often been compromised by fiscal pressures, constraining its capacity to combat inflation and ensure financial stability. In fact, the CBI is unable to independently set or conduct monetary policy. Monetary policy is set by the members of the Money and Credit Council who are political appointees. Over the past 21 years, the CBI has had 10 governors, reflecting how susceptible the CBI is to the whims of the

[1] https://www.fatf-gafi.org/en/countries/black-and-grey-lists.html

[2] https://www.fatf-gafi.org/en/publications/High-risk-and-other-monitored-jurisdictions/Call-for-action-october-2023.html

government, and that the CBI has effectively become the fiscal hand of the government. According to the Bertelsmann Stiftung's Transformation Index (BTI), the CBI is not independent from political interference [4]. In the 2019 Global Competitive Index, Iran ranked 136 out of 141 countries regarding the soundness of its banks [5].

The CBI also lacks transparency and accountability. Given the CBI lack of independence, its inability to conduct monetary policy, and the high turnover rate of the CBI governors, it seems to be natural for the CBI decision makers to continuously surprise the market without any proper justifications, instead of communicating their decisions as clearly as possible and in a timely fashion so that market has time to digest the new information. This has not only amplified market fluctuations but has also eroded the credibility of the CBI in the public and has created a mistrust in the CBI policies. This is a serious issue, because credibility of and trust in any central bank by the public is a necessary condition for that central to implement different policies smoothly.

2.1.4 Chronic Government Fiscal Deficit and Growth of Liquidity and Monetary Base

The government's chronic fiscal deficit, coupled with limited efforts to address it effectively, has strained the fiscal landscape (See Figure 3). Lack of fiscal discipline by the Iranian government and financing the deficit through the CBI, whether directly or indirectly, is the root cause of many economic problems in Iran. It is crucial to emphasize that banking reform in Iran is not possible without resolving the government's chronic budget deficit and restoring fiscal discipline. In other words, fiscal austerity by the government, its fiscal discipline and balancing the budget take precedence to any banking reform.

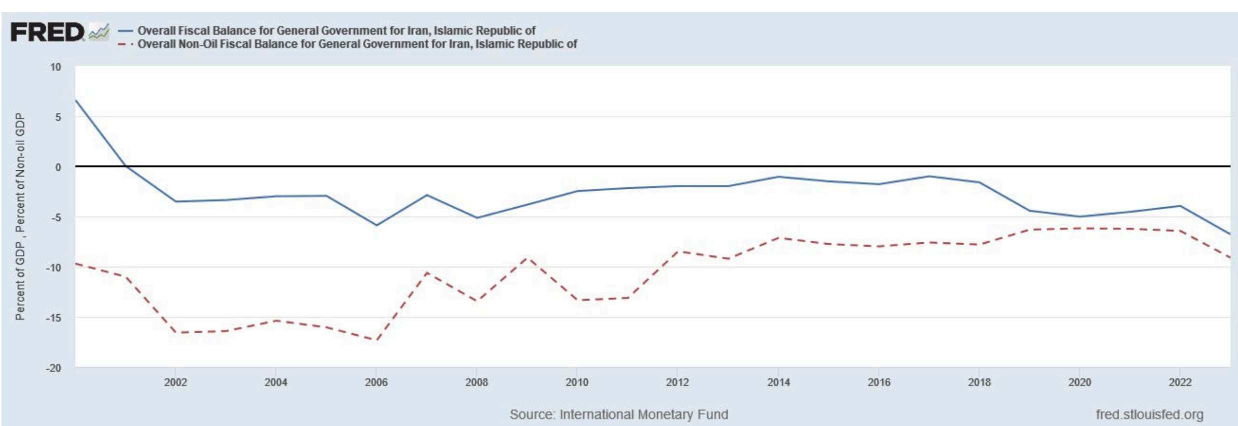

Figure 3- Overall fiscal balance of Islamic Republic governments since 2000

As discussed earlier, by effectively eliminating the CBI independence, the Iranian government has made the CBI effectively its bank and has borrowed heavily from the CBI either directly, or indirectly through the banking system, to finance its deficit. This has led to substantial growth in monetary base and liquidity (M2). In fact, since 1989, the average growth rate in M2 is about 27.5% per year. The ballooning of liquidity and money supply have significantly contributed to Iran's high levels of inflation during these years. The average annual inflation during this period is 21%. Figure 4 depicts the M2 growth with concurrent inflation between 1989 and 2021.

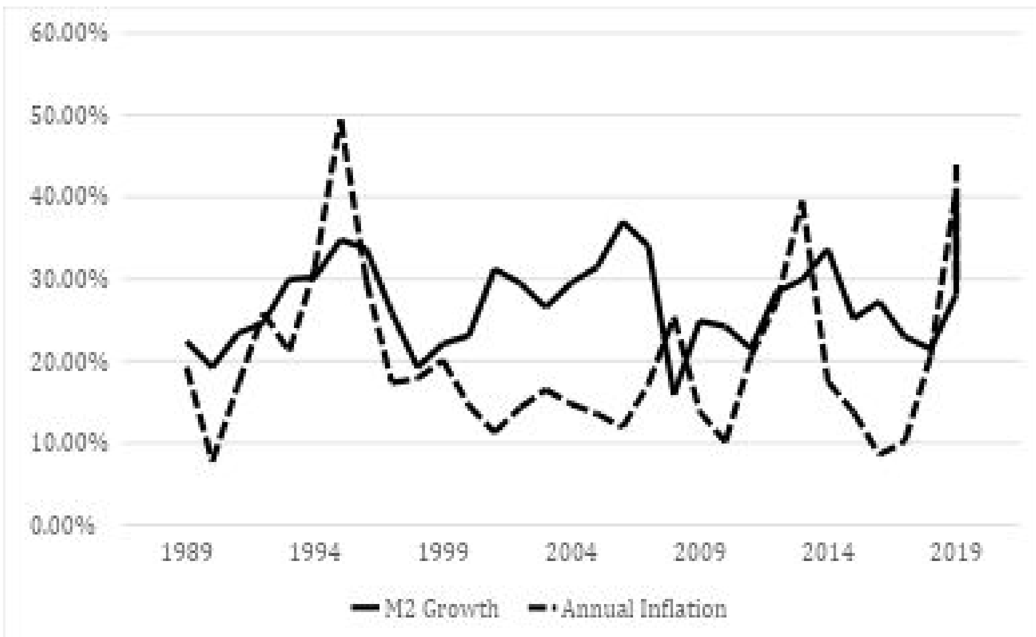

Figure 4- Liquidity (M2) growth and annual inflation from 1989 to 2021

2.1.5 Systemic and Institutionalized Corruption and Non-Performing Loans

The banking sector has long suffered from systemic and institutionalized corruption, which has eroded trust and integrity within the industry. This pervasive corruption has not only hindered the practice of prudent financial management but also exacerbated the issue of non-performing loans and rollover losses in Iran's banking system.

Iran's banking sector grapples with a substantial burden of non-performing loans (NPLs), and considerable rollover losses, many of which are associated with government entities. These loans significantly impact the balance sheets of banks and hinder their ability to extend credit to the private sector. As of March 2023, Iran's NPL ratio stood at 6.9% and rollover losses are about \$7.3 Billion (based on the market exchange rate of \$1= IRR 500,000). To provide context, we provide the NPL ratio of a few countries: Saudi Arabia 1.8% (2022); Türkiye 2% (2022); Russia 6.1% (2022); Pakistan 7.3% (2022); UAE 6.4% (2022); Malaysia 1.7% (2022); China 1.7% (2021); India 6.5% (2021); USA 0.7% (2022).

To gauge the extent of corruption, according to the World Bank Corruption index, Iran's corruption is one of the worst in the world. According to this index, corruption is significantly more pervasive in Iran compared to most countries in the region. Figure 5 depicts Iran's corruption index and contrasts it with several other countries.

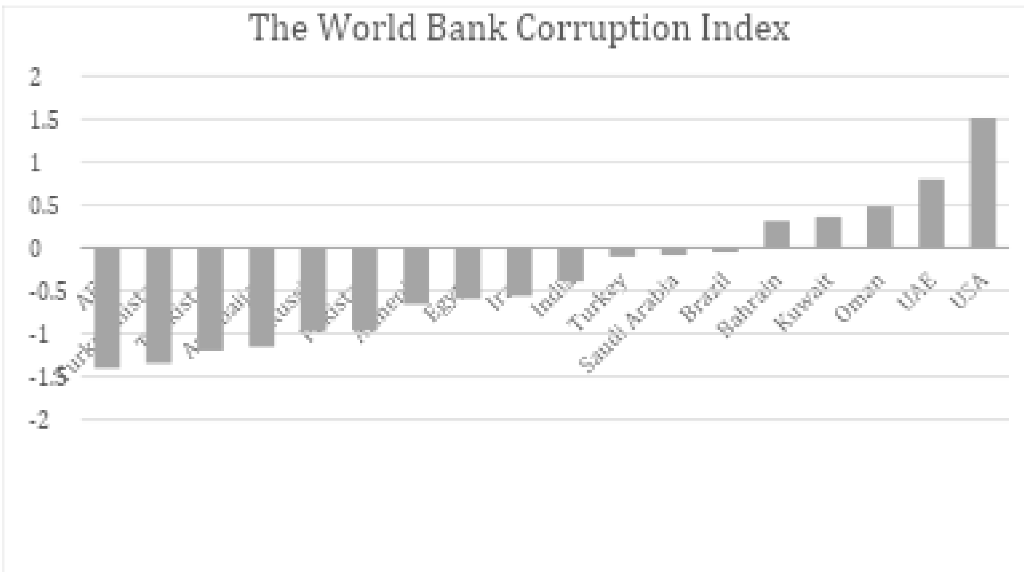

Figure 5- contrasting the corruption in Iran with other countries based on the World Bank Corruption index.

2.1.6 Adherence to Islamic Finance

The adherence to Islamic finance principles has also introduced unique challenges to Iran's banking sector. Islamic finance prohibits predetermined payments, such as interest or riba, in all forms of transactions, restricting fund usage solely to profit-and-loss-sharing arrangements. As illustrated in figure 6 below, Iran has the largest shares of the Islamic banking market with 34.4% of global Islamic baking assets, followed Suadi Arabia (20.4%), and United Arab Emirates (9.3%).

While consistent with Islamic principles, this framework has implications for risk management and the development of financial instruments. The most critical challenges facing the Iranian Islamic banking system can be succinctly summarized as follows:

1. *Theoretical Challenge*: Islamic banking, as a relatively nascent field compared to conventional banking, presents theoretical challenges. These include defining the exact meaning of riba and addressing disagreements among Islamic scholars regarding riba. Additionally, questions arise about the permissibility of money creation, the role of money in the new monetary system, and the relationship between profit and loss-sharing contracts (e.g., musharakah) and trade-based contracts (e.g., murabaha) [6].
2. *Governmental Dominance*: Islamic banking in Iran is primarily a government-initiated and top-down framework. This differs from many other countries, such as Malaysia, where the private sector actively develops shariah-compliant banking services. The predominant governmental view in Iran often extends to the management of private or privatized banks, limiting private sector involvement.

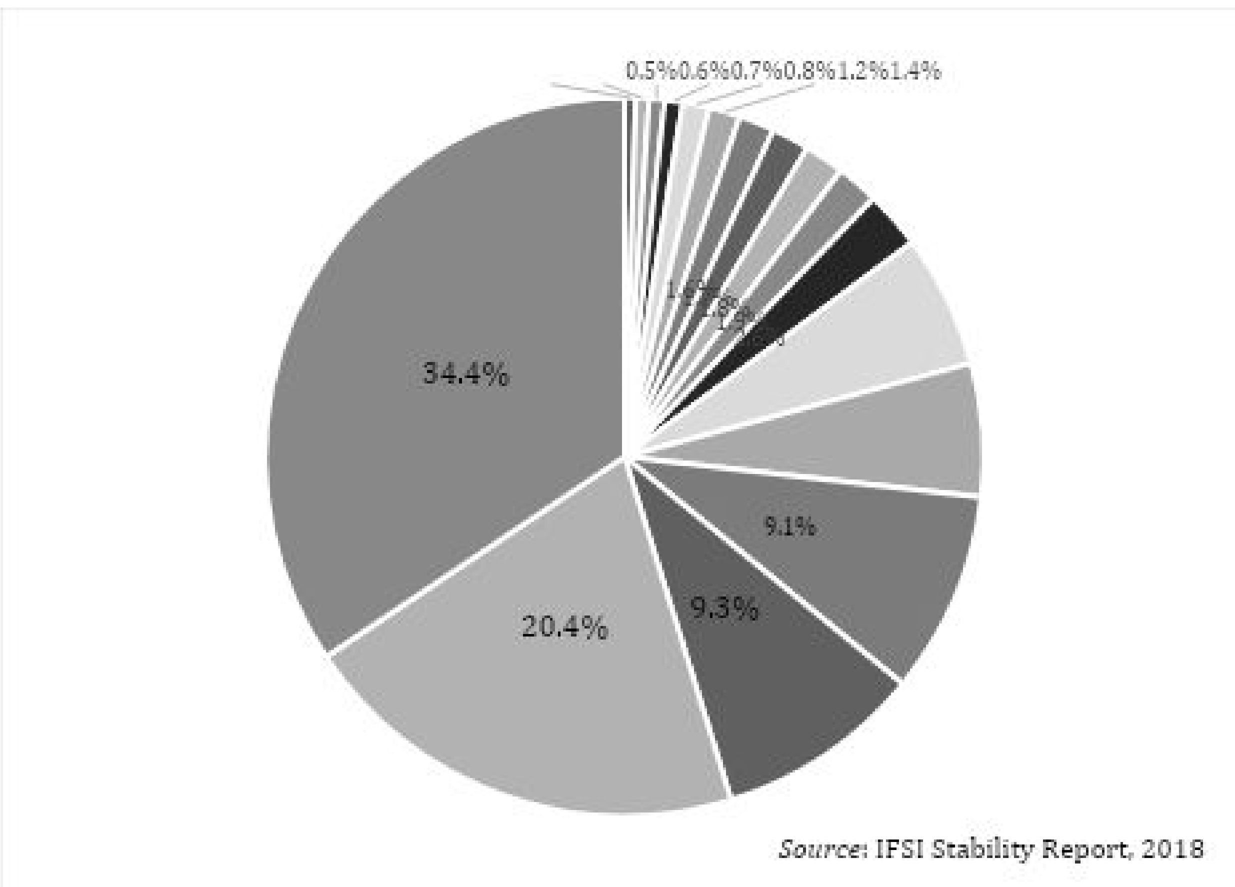

Figure 6 - Shares of Global Islamic Banking Assets

3. *Lack of Competition*: In contrast to many Islamic countries employing dual-banking systems, Iran has exclusively and comprehensively applied the Islamic banking model. This

homogeneity leaves no room for conventional banking, potentially stifling competition and innovation within the Islamic banking sector [7].

4. *Unresolved Issues with Delayed Payments and Rolling Over of Debts*: Islamic banks in Iran cannot impose fees for delayed payments or rolled-over loans, a common practice in conventional banks. Resolving such issues consistent with Islamic jurisprudence remains a challenge.
5. *Collateral Requirement in Musharakah Contracts*: In the absence of prevalent credit ratings, Iranian banks often request collateral from borrowers in various forms, including property or assets, as a means of securing loans. This practice diverges from international Islamic banking standards, where collateral is not a part of musharakah contracts [8]. Using collateral as a pre-requisite to loan origination can introduce moral hazard and distort banks incentive to monitor, especially in a country like Iran where the value of the collateral, which is usually a real estate property, grows significantly due to inflation, which in turn undermines banks' incentives to monitor, and further amplifies the build-up of non-performing loans.
6. *Outdated Regulatory Framework*: The Regulatory Framework of Banking Affairs (RFBA), in effect since 1983, has not undergone revisions to accommodate developments in Islamic banking and finance. This dated law may not adequately address contemporary financial needs [9].
7. *Lack of Shariah Supervision*: Effective Shariah supervision is essential for ensuring compliance with Shariah law in Islamic banks and financial institutions. However, shariah supervision is not adequately implemented within the Iranian banking system, even though there are over 24,000 Islamic banking branches in the country. The absence of rigorous supervision raises concerns about the shariah compliance of their activities [8].
8. *Open Market Operation:* Adherence to Islamic finance principles has deprived the CBI from employing one of the most important monetary policy tools used by all central banks, open market operation. To conduct open market operation, in the sense that most central banks do in order to conduct monetary policy and change interest rate, buying or selling government issued debt is required which does not involve a physical product. Therefore, it would violate Islamic finance principles and is inconsistent with Sharia Law, given that it only involves profit and interest. Lack of access to monetary policy tools due to adherence to principles of Islamic finance has made controlling inflation even more difficult.

2.2. A Looming Crisis on the Horizon

It follows from the preceding discussions that Iran's banking system is on the precipice of a twin banking and currency crisis stemming from the government's chronic fiscal deficit, lack of central bank independence, weak credit culture, lack of supervision, and institutionalized corruption. This impending crisis threatens to severely damage Iran's economy unless major reforms are swiftly enacted.

2.2.1. Stage One: Initiation Phase

The seeds of this looming crisis are sown in the chronic fiscal deficits run by the Iranian government. Several recent financial crises in the world, such as the one in Argentina during 2001-2002, have their roots in severe government fiscal imbalance. With an underdeveloped financial market, the Iranian government has continually cajoled the central bank and state-owned banks to finance these deficits.[3] For instance, in the most recent budget that was released in March 2023, the fiscal deficit grew by more than 58% compared to the prior year. This chronic budget deficit and its financing by the CBI have led to a ballooning of public debt held by the banking system, which the IMF estimated to have reached over 33% of GDP as of August 2023. The most recent statistics released by the CBI also paint a similar picture. They indicate that during the 12 months leading up to April 2023, government debt to the CBI increased by more than 55%, while the CBI claims on other banks grew by about 148%. At the same time, the Monetary Base grew by more than 41%, a 20-year high. These figures are not outliers but rather the norm in Iran's economy and banking system. Financing deficits by borrowing from the CBI has caused rapid growth in the money supply and liquidity. Between 1989 and 2017, liquidity (M2) grew at an average annual rate of 27%. This monetary expansion has fueled Iran's high inflation, which has averaged around 20% over the past three decades and has been hovering around 50% in 2022 and 2023. In effect, the government's fiscal recklessness has resulted in the ballooning of the monetary base and liquidity, causing the inflation to soar and effectively imposing a hidden regressive tax on citizens through that inflation.

[3] In the early 2000s legislation was passed to prevent the government from financing the deficit directly through the CBI. However, lacking fiscal discipline, the Iranian government began borrowing from the state-owned banks which effectively is equivalent to indirectly borrowing from the CBI as these state-owned banks would tab into their reserves with the CBI whenever they face liquidity issues resulting from financing the government deficit.

2.2.2. Stage Two: Banking Crisis

Pressured to finance the government fiscal deficit, the banking system in Iran has a big hole on the asset side of its balance sheet that is accompanied by a significant decline in its net worth. Moreover, financing the government deficit along with lending to other government entities and government-backed projects have led to the accumulation of a substantial amount of non-cash flow-generating assets in banks' balance sheets. This has resulted in a rise in non-performing loans, and a decline in banks operating performance and profitability, which in turn has left no option for banks but to rely on the CBI for their liquidity needs (see footnote 3). Conservative estimates put non-performing loans at around 9% of GDP, but the true figure is likely higher.

Grappling with battered balance sheets stemming from the rise in non-performing loans and the contraction of cash flow-generating assets, banks in Iran need to offer high-interest rates on deposits to attract more funds and avoid liquidity risk. Paying higher interest on deposits has exacerbated their cash flow problem. Meanwhile, the emergence and proliferation of under-regulated credit institutions and other Non-Bank financial firms (Moasesat-e-E'tebari) with lax supervision have given rise to a fierce competition to attract new deposits, pushing up interest rates on deposits. This surge in interest rates has, in turn, increased the cost of borrowing for businesses in the real sector. This, unfortunately, has added even more strain to the banks' financial health. Higher cost of borrowing/capital has driven out viable and profitable projects and elevated adverse selection problems. In other words, analogous to the lemons problem in Akerlof (1970), with higher financing costs in the real sector, mostly "*bad*" projects would continue to seek financing. This has resulted in an increase in default rates, accumulation of even higher levels of non-performing loans, and putting more pressure on the bank's balance sheets, and has set off a vicious cycle characterized by ever-increasing interest rates, higher default rates and a mounting pile of non-performing loans.

This situation is exacerbated in Iran due to a weak credit culture and systemic and institutionalized corruption. Corruption has played an integral role in the rise of non-performing loans and undermining the stability of Iran's banking system. Connected lending to cronies and those close to the circle of power has contributed significantly to the massive build-up of non-performing loans. One recent example of this systemic corruption is Bank-e-Ayandeh. This bank loaned about $12 billion (IRR 400,000,000,000,000 at the exchange rate of $1=IRR34,000 at the time of loan origination) to Mr.Ali Ansari to finance the construction of Iran-Mall, the largest shopping center in Iran. But the loan was not paid off, and as a result, to keep Bank-e-Ayandeh afloat, the CBI injected liquidity into Bank-e-Ayandeh from its reserves, which contributed significantly to the increase in the money supply and its known inflationary effect on the economy. Meanwhile, the Money and Credit Council (Shoraye-Pool-va-E'tebar) voted for the Bank-e-Ayandeh to repossess Iran-Mall as the loan's collateral. All this may look innocuous, and one may argue that bailing out banks and repossessing the collateral of a loan are common practices in the world. However, the issue in this particular case is that Bank-e-Ayandeh itself is owned by Mr.Ali Ansari. In other words, he borrowed from the bank he owned with no apparent intention of repaying the loan at the expense of higher inflation imposed on the public in order to finance his Iran-Mall project, which he got to keep through Bank-e-Ayandeh that he owns.

This kind of moral hazard issue is ubiquitous in Iran's banking system and is rooted in systemic corruption and the CBI's lack of independence. Essentially, there is a clear conflict of interest between the politically connected people who exploit the banking system and the implicit government guarantees to extract rent, and the public that pays the price of this corruption by facing ever-rising inflation.

Making matters worse, under-capitalization leaves Iran's banking system highly vulnerable to loan losses. The IMF estimates the average capital adequacy ratio of Iranian banks has fallen to under 5%, well below the 10.5% recommended under Basel III international standards (8% of risk-weighted assets plus 2.5% capital conversion bubble introduced by Basel III). With declining performance and high levels of non-performing loans, Iranian banks have been unable to recapitalize organically through retained earnings.

All the evidence and the statistics from both international sources like the IMF and the World Bank and domestic sources like the CBI and the Statistical Centre of Iran indicate that the banking system in Iran is, for all practical purposes, broken and at the verge of a full-fledged crisis. The rollover losses of the banking system have grown to a staggering amount of IRR3,660,000,000,000,000 (equivalent to $7.3 billion based on the exchange rate of $1= IRR 500,000). This figure is roughly equal to 61% of Iran's expected oil revenue in 2023 and is more than three times larger than the Islamic Revolutionary Guard Corps (IRGC) official budget in 2023.

In sum, the balance sheet of Iran's banking system is characterized by the substantial build-up of non-performing loans, and other non-cash flow-generating assets, and massive rollover losses. At the same time, the banking system is severely under-capitalized by Basel III standards and is suffering from systemic corruption, substantial adverse selection and moral hazard problems. The banking system has been able to mask these losses through loopholes in Iran's outdated accounting system that is not remotely close to the International Financial Reporting System. When conducting asset revaluations, banks use the appreciation in the value of their real estate that is driven purely by inflation to give the appearance that these losses are small compared to their assets and their capital and hide their financial issues. Nonetheless, based on all economic indicators, the Iranian banking system is at the precipice of a major collapse.

2.2.3. Stage Three: Currency Crisis

As discussed in the preceding two subsections, the chronic fiscal deficit of the government and forcing the banking system to finance the deficit have resulted in substantial growth in the monetary base and liquidity in the Iranian economy and that, in turn, has caused persistent and chronic inflation. In fact, Iran is the only country in history that has consistently had high levels of inflation for over half a century. Higher inflation is tantamount to lower currency value. As inflation rises relative to that of other countries, the currency depreciates in value against other currencies (purchasing power parity).

At the same time, Iran's hawkish foreign policy and the tensions related to the country's nuclear program have resulted in economic isolation and severe sanctions. Economic policy uncertainty along with political uncertainty, systemic corruption and poor governance structure in the country have substantially increased the risk of investment in the country, depriving the country of much-needed foreign direct investment. In fact, according to the most recent report by the United Nations Conference on Trade and Development, Iran was able to attract only 0.1% of the world's total Foreign Investment in 2022.[4] In addition, due to high levels of uncertainties and elevated risk of investment, there is a significant and rising level of capital flight from the country. The CBI statistics indicate that over the past 9 years, close to $98.5 billion worth of

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[4] https://unctad.org/publication/world-investment-report-2023

capital has left the country. Based on these figures, around $13 billion left the country in the second and third quarters of 2022 alone, nearly two and three times the amounts for the same periods in 2021 and 2020, respectively. On the trade side, non-oil exports have largely been outpaced by imports. For instance, the most recent figures in October 2023 indicate that Iran's Balance of Trade deficit has doubled since last year and has reached a deficit of about $8 billion (non-oil exports amounted to 28.3 billion dollars, while imports reached 36 billion dollars). Iran's oil has also been under crippling sanction for over a decade and despite an uptick during the Biden administration, access to the Petro dollars have been limited and difficult.

The above evidence indicates that there is almost no economic factor to simulate the demand for Iranian Rial while almost all economic factors are intensifying the supply of Rial. In other words, the supply of Iranian Rial is substantially larger than its demand, and therefore, there is a significant pressure by the market's fundamental forces on the Iranian currency to depreciate. This situation is exacerbated by the fact that inflation expectation in Iran is anchored in the currency market rather than the interest rate. Therefore, when households see high and rising levels of inflation, they withdraw their deposits from banks and exchange that capital for stable foreign currencies like the US dollar to hedge inflation risk and maintain their purchasing power. Not only does this dynamic further undermine the fragile banking system, but also adds even more pressure on the Iranian currency to depreciate.

The Iranian government and the CBI have limited options to counter this dynamic and defend the currency. These options include intervention in the foreign currency market and rising the interest rate. Like all other historical examples of different governments and central banks trying to defend a depreciating currency - such as Mexico 1994; Indonesia 1997; Russia 1998 - intervention in the currency market is bound to fail. This is particularly true for the case of Iran. Defending a depreciating currency through intervention requires a massive amount of foreign currency reserve which the CBI lacks. Historically, even countries that did have substantial foreign reserves were unable to overcome the market forces. Due to years of continuous sanctions, and lack of foreign direct investment, and CBI's continuous intervention in the currency market, the CBI's currency level has been depleted. As illustrated in Figure 7, during the Trump administration, the CBI foreign currency reserves declined to below $15 billion and while it has risen to about 21 billion since Biden took office, it is still much lower than its peak of $128 billion in 2015 and compared to other countries. For context, it is noteworthy to highlight that Russia's reserve before the Ukraine war was $630 billion, Saudi Arabia has $460 billion in reserve, while China and Japan have over $3 trillion and $1 trillion, respectively. Iran's exchange rate regime consists of different concurrent rates depending on the purpose for which the foreign currency would be used. The CBI has not been even able to defend the preferential exchange rate (Tarjihi) that is heavily subsidized by the government to import essential products. All different rates in Iran's exchange market ecosystem follow the floating rate albeit with some lag.

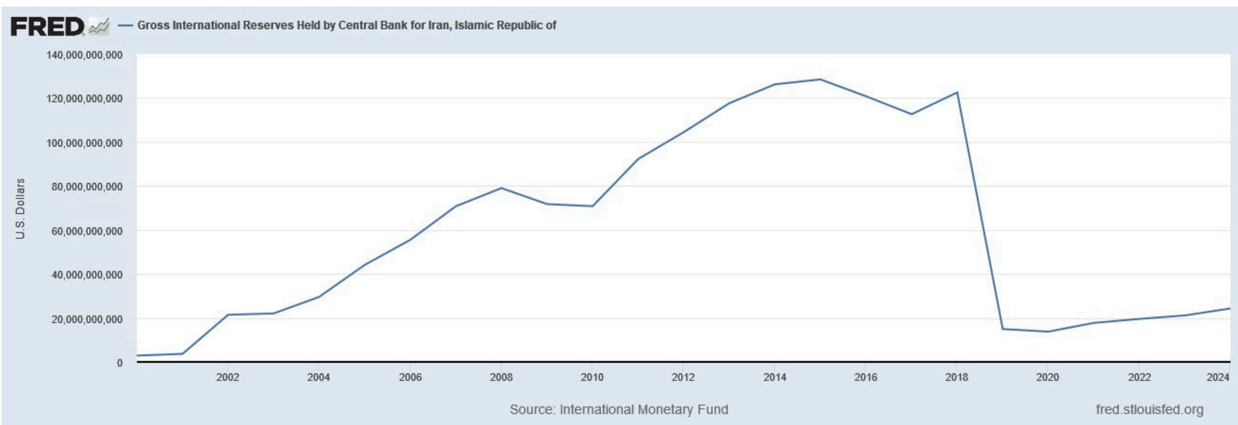

Figure 7 – The CBI international Reserve

The second option for the CBI is to raise interest rates to make the Iranian Rial more attractive, slow down capital outflow and hence reduce the supply of Rial, while encouraging capital inflow. However, sustained high interest rates to defend a currency would increase the cost of borrowing in the real sector and would have a long-lasting damaging impact on the economy. This issue is even more acute for Iran given its broken and weak banking system. As discussed earlier, due to the weak balance sheet of the banks in Iran, it is almost impossible to increase the interest rates as that would exacerbate the situation for the already unstable banking system. Higher interest rates would further reduce the profitability of unprofitable banks in Iran, amplify adverse selection problems, lead to higher default rates which would increase rollover losses and aggravate their cash flow problem. There are numerous examples throughout the world - Indonesia 1997; Russia 1998; South Korea 1997; Philippines 1997; Malaysia 1997 just to name a few - where the governments and central banks, despite their direct intervention and raising the interest, were unable to prevent a currency from depreciation and had to finally allow the currency to float and depreciate according to market forces. Moreover, given the high level of

government debt to the CBI and the banking system, raising the interest rates makes it more costly for the government to service the debt and finance the deficit and increases the likelihood of default. Together, the evidence discussed above suggests that raising the interest rate in Iran is highly unlikely to be viewed as a credible signal and would not result in currency stabilization.
In sum, the twin banking and currency crises in Iran has long been in the making and have its roots in the fiscal imbalance of the government, rampant corruption, lack of CBI independence, and poor governance, and weak credit culture.

3. The Economy Post-Islamic Republic

Banking system is at the heart of the much-needed economic reforms in Iran. In fact, economic factors are currently among the leading reasons for Iranian people protesting the Islamic Republic's rule. In this chapter, we first discuss why the current regime cannot successfully implement meaningful economic reforms. Then, we discuss the policies that should be carried out from the very first days of transition to a new government to the first five to seven years.

3.1. Islamic Republic's economic reform capacity

The Islamic Republic has been implementing economic reform policies since the early days of the 1979 revolution. It is evident that most of the economic reform policies in Iran are defensive, mixed, and lack political determination or institutional integrity for successful implementation. Take the example of small business loans implemented during Ahmadinejad's presidency. In a country where the median age is two years younger than the global average, one-third of the population living in rural areas on a well-distributed energy infrastructure (high penetration of both natural gas pipeline and electricity grid), as well as transportation (railroad, highways and seaports), empowering small businesses appears to be a sound policy at least conceptually. It could potentially reduce unemployment, increase domestic product, and tap into a multitude of comparative advantages of the country, given its diverse geology and weather, to establish itself as a regional hub for trade. However, the disastrous outcome of the initiative still reverberates through the Iranian economy with a bubble in housing prices, a rapid jump in the unofficial (market-based) exchange rate, and sustained inflation. In retrospect, we now know that many of the government-affiliated people, ranging from the commanders and generals of IRGC (Islamic Revolutionary Guard Corp) to the relatives of heads of banks' regional branches practically distributed the resources to their relatives or themselves for the purpose of short-term investments in less risky assets. As there was no practical way to assess the business plans of applicants and no KPIs (Key Performance Indicators) in place to monitor the progress or track the overall distribution of the loans, the allocated resources flooded the housing market, foreign currencies, and gold, leading to detrimental bubbles in these markets, hampering the economic output of the country, Rial depreciation, and contributed to already high inflation for the years since the policy implementation.

This is just one example of the precedence of economic reforms within the Islamic Republic. In simple terms, the institution of the Islamic Republic has proven policy after policy that its mixed approach, the CBI lack of independence, and rampant corruption are among the systematic impediments that prevent any economic policy reform from succeeding. One could argue that the Islamic Republic is walking in the same way that the Soviet Union pursued. Initial reforms of the Soviet Union in the 1950s were focused on heavy industries and agricultural outputs. Similarly, the Islamic Republic also attempted industrial growth in the early years of the post-Iran-Iraq war (Doran Sazandegi) with a focus on heavy industries such as Mobarakeh Steel Company and agricultural policies such as wheat independence plan. In the 1960s, the Soviet economists started the reforms known as Liberman reforms to address the slowing growth and inefficiencies of central planning. In Islamic Republic, such reform activities coincided with Ahmadinejad's tenure in office and his focus on small businesses decentralization of many economic activities as part of his populist agenda of provincial travels.

Soviets realized that their command economy had not been successful in increasing productivity or economic prosperity, and therefore, started the 1980s gradual reforms of the Andropov and Chernenko and eventually Gurbachev's reforms to shift toward market economy. The Soviets had an outdated industry, major productivity issue, and well-known shortage of basic goods. In a similar vein, it is evident that Iran is currently experiencing significantly outdated infrastructure, unprecedented poverty and alarming shortages in basic commodities, as well as protests that directly demand the Islamic Republic's ousting from power. The parallel in the two countries in terms of their economic reform attempts just proves how important the institutional integrity is and that systematic impediments are rooted in ideologies which are inconsistent to individual freedom, open economies, and the welfare of citizens.

3.2. Short-term Risks and Potential Remedies

In this section, we discuss some of the short-term risks facing the country's economy and the banking system immediately after the collapse of the Islamic Republic and offer some potential remedies. These risk mitigation policies are only to be implemented during the early days of transition and should be changed after three to four months as the extended implementation of them could throttle the economy and create its own shocks to the system.

Overall, the main objective of short-term economic policies after overthrowing the Islamic Republic is stabilization and avoid causing any more damage albeit inadvertently. Immediately after the collapse of the Islamic Republic, there will be an unprecedented level of uncertainty, rooted in both political and economic policy uncertainty. This uncertainty would have severe and long-lasting adverse impact on the economy if not handled prudently. Therefore, in the early days, transitional decision-makers should aim to stabilize the economy and smooth the effect of the inevitable adverse shock to the economy. In doing so, clear communication and sending timely credible signals by decision makers is the key to stabilizing the economy and preventing it from falling into a full fledge chaos. Whether the collapse of IR is brought about by a relatively peaceful government resignation, such as Sri Lanka 2019, or a full-scale civil war like Sudan, as soon as a transitional decision-making committee is formed, the economic shocks should be addressed with utmost prudence.

3.2.1. Bank Run

One of the major short-term risks facing the country immediately after the collapse of the current regime is bank run. As discussed earlier, due to years of mismanaging the economy, undermining the independence of the CBI, rampant corruption, and running chronic fiscal deficit which has been financed by the CBI and the banking system, Iran's banking system is essentially bankrupt. As highlighted earlier the banking system has a massive build-up of non-cash flow generating assets that has led to a ballooning of rollover losses and non-performing loans. Therefore, the entire banking system could crumble in the aftermath of a shock to the political system. This is a serious risk in the short term. Given the current dire situation in the banking system, a run on any individual bank would not be confined to that bank itself without any damage to the whole network of banks. Therefore, it is important that the transition government shows determination, strength, and a united front, at least on economic announcements, to assure the public that there will be stability in the banking system's transition. Otherwise, it will be extremely difficult to manage a bank run, given years of mistrust formed in society regarding the CBI and its policies.

The main mechanism to prevent bank runs is deposit insurance and clear and effective communications. In the early days of the transition, the CBI should announce that it honors the deposit insurance and intends to enforce it. It is highly likely that with the inflation and shocks in the unofficial exchange rate market which acts as the anchor of inflation expectations, the current level deposit insurance becomes insufficient to prevent runs on banks. According to the current existing policy, the CBI guarantees deposits up to 1Billion Rial (about $2000 based on the exchange rate of $1 = 500,000 Rial). Therefore, the central bank must be ready to announce a blanket guarantee beyond the current stipulated deposit insurance limits. Alternatively, or in addition to blanket guarantees, the transition government could put in place more active policies such as forced banking holidays or deposit withdrawal freezes. Such active policies have historic precedents, such as Argentina in 1989, Brazil in 1990, and Uruguay in 2002, suggesting they are effective in quelling the short-term shocks and public panic that causes bank runs.

Moreover, the transition government must take ownership of the previous regime's accounts. The Islamic Republic is the largest borrower from the Iranian banks. The government's malpractice of the past decades to finance its fiscal deficit and expenditures through the banking system has made it heavily indebted to banks. Thus, as soon as the government of the Islamic Republic collapses, many banks would become insolvent. To prevent this, the transition government's central bank should quickly announce that (a) it will take ownership of every government debt to the banking system and (b) effective immediately, the central bank places a regulatory capital forbearance policy for the duration of three to six months (during which the balance sheet analysis of banks outlined in Section 4.2 takes place). The purpose of this announcement is to manage the shock in the banking system in the early stages of government change. The transition government should do its best to keep the banking system operational for the first three to six months for two reasons. First, as highlighted earlier the current situation of the Iranian banking system is dire; if one of these banks becomes insolvent, most of the banks are likely to follow in a domino effect and become insolvent. As a result, the normal run of the economy, paying salaries and purchasing goods and services for people, will be halted. Second, the insolvency of banks in the early stages of the transition would not necessarily stop at banks. The pension funds would collapse, every major industry exposed to the banking portfolio would collapse. And this economic meltdown could morph into anarchy, civil unrest, major asset thefts and could damage the country's integrity beyond repair, given the uncertain nature of the political environment, and the legal and law enforcement turbulence in the early days of transition. Therefore, it is important in the early days of transition that the banking system gets a life-saving jacket and stays afloat while the rest of the government forms and transition government grasps enough power to manage the shocks.

3.2.2. Capital Flight

In general, capital outflow rises as a country's investment risk or uncertainty is elevated. Given the inevitable significant rise in uncertainty and risk in the country when Islamic Republic collapses, a substantial outflow of capital from the country is another serious short-term risk. It is highly probable that ousting the Islamic Republic would result in capital flight to offshore accounts by those close to the circle of power in the current regime who were able to accumulate wealth through rent and corruption. However, the capital flight need not necessarily be limited to Islamic Republic-affiliated people. Other wealthy investors, households, and business owners who may not necessarily have meaningful political connection to the current regime, may also attempt to take their capital out of the country.

If capital flight is not controlled, the consequences could be dire. For example:

(1) The capital flight would result in flooding the exchange market with Rial, increasing the supply Rial while demanding foreign currency. This would put substantial pressure on the Rial to plummet in value; hence, the exchange rate will skyrocket. As a result, importing basic commodities and essential goods will be much more expensive, leading to shortages.

(2) To compensate for the lack of capital, the transition government may be forced to create new money, exacerbating the inflation in the economy.

(3) Having no capital left for many semi-private and shadow-state-owned companies (Khosoulati), such businesses may stop their operations, which could increase unemployment, loss of economic output, and pull the economy into a deep recession.

To address the capital flight, the transition government should:

(1) Swiftly place a maximum limit on deposit withdrawal from banks.

(2) Freeze conversion of investment accounts to checking accounts.

(3) There must be a halt on companies' assets (fire) sale or change of ownership. Legal entities and companies own the highest share of the capital deposited in the Iranian banks. It would not be clear during the early days immediately after the regime change, which one of these legal entities or companies have accumulated their assets through healthy business operation and which one through rent, corruption and political connection to the Islamic Republic. Therefore, any major change in assets of firms or legal entities in terms of size or ownership:

(i) is likely to be for individual gains of major shareholders or board members/executives that have government ties and affiliations with the previous regime and are attempting to liquidate as much asset as possible to flee the country for fear of prosecution.

(ii) would likely distort the entity's balance sheet and make an otherwise operational entity insolvent, and trigger shutdowns. Should this happen in a large scale, it could trigger unemployment, loss of output, and negative economic consequences with no established government entity to mitigate the issue and stop the negative shock to prevent a trickling effect in the rest of the economy.

(iii) could potentially lead to the creation of an oligarch group such as the one experienced by the collapse of the Soviet Union with certain people, companies, investors, taking ownership of major entities and backbones of the economy without proper privatization practice. This could lead to the formation of major stakeholders that could easily undermine the new government's agenda or initiatives moving forward. Also, in general, fire sale of assets during periods of elevated uncertainty is a recipe for full-fledged economic crisis since the fire sale of assets could trigger a downward spiral of prices, leading to the contraction of the economy and inflicting significant damage to the economy.

(4) Enforce a maximum foreign currency limit for every person leaving the country with robust border enforcement.

(5) Place a maximum allowable amount of money that banks, financial institutions, and exchange companies could transfer daily from their foreign-based accounts to other foreign accounts, or within their network of international banking co-operations. For instance, if a bank has branches in Moscow and Tehran, it can only move a limited amount of capital from its accounts in Tehran to its accounts in Moscow. Given the volatility of the early months of regime change, many people including many ex-officials of the IR would be willing to sell off whatever they can and transfer the funds to stable currencies deposited in foreign based

accounts. If successful, clearly it would be extremely difficult for the new government to return the capital back to the country. To prevent major capital flight through exchange companies that have fat foreign accounts, or branches of Iranian banks abroad, such as their branches currently in Venezuela or Russia, or their sister banks in other countries the new government should promptly place a ceiling on maximum daily allowable transfer. The benefits are:

- The transition government can track and monitor the amount of capital leaving the country.
- Violating such maximum allowable transfer could provide legal basis to prosecute violators either domestically to retrieve their assets or provide a legal basis for future international prosecution and recovery of funds.
- Prevent or make it more difficult for capital to exit the country through established channels of exchange companies or banks.

It is noteworthy to mention that due to the isolated nature of the Iranian financial system because of sanctions, the capital flight will face extra roadblocks that could be leveraged to prevent it.

It is crucial that the above policies are communicated as clearly as possible with a practical and clear timeline in place. The duration of enforcement should be long enough for the transition government to establish its operations and announce the constitution and general elections timeline and short enough so that the policy does not throttle general operation and the normal course of the economy. Without effective communication and a clear timeline in place, the uncertainty may result in black market formation, misinformation campaigns, or promotion of corrupt action by the transition government. For example, the announcement should clearly outline these conditions are set to expire on a specific date in three months following the announcement of a new exchange rate policy, privatization mechanism, and banking system reform.

3.2.3. Currency Depreciation

A significant part of Iran's economy relies on exports and imports. In 2021 the share of trade to GDP in Iran was at 41%. Not only does this mean that exchange rate fluctuations have a major impact on the overall economy, but also years of mismanagement, Dutch disease and corruption have led to the formation of a pervasive and established unofficial black market for the exchange rate that is much closer to an open market than government's official market. A natural consequence of the regime change shock is a rapid depreciation of the Rial against the USD (and other major currencies). As discussed, currency depreciation would spill over to the real economy by disrupting the flow of imports of essential goods. Furthermore, the inflation expectation in Iran is anchored to exchange rate rather than interest rate. Therefore, a rapid depreciation in the currency in the presence of existing high levels of inflation could create a vicious cycle of perpetual rise in inflation and depreciation in currency value where one reinforcing the other.

Communication and credible signaling with a clear timeline are the critical factors to manage this risk. It is important to make announcements regarding the transition of the economy to a market-oriented economy, floating exchange rate regime, and development plans intended for the near future which would help creating a positive outlook about the economy that may slow-down or ideally stop the depreciation of Rial. However, for these communications to be perceived effective and reliable by the public so that they can create a positive economic outlook, they must be followed by transparent actions and tangible results. For instance, the transition government must immediately begin negotiating with the FATF to remove the country from its blacklist. This would bring about a positive shock to the economy and the banking sector. Engaging in foreign policy talks with the US and other major western countries to lift sanctions, at least partially, would be a clear signal the transition government may have partial access to some of Iran's blocked assets and that would help to slow-down the depreciation in the Rial. Initiating talks with the IMF to obtain loans could also generate a positive shock to the economy and help the transition government manage the currency risk. In addition, the short-term capital flight restriction discussed in the previous section also helps with managing the exchange rate risk in the short run. Moreover, the transition government should utilize the official market of currency exchange to supply enough foreign currency reserves for the import of essential goods with no price change in the short term. For example, the transition government should use the existing list of importers of essential goods registered in The Center for Currency and Gold Exchange (مرکز مبادله ارز و طلای بانک مرکزی) and supply them with the currency needed for the continuity of importing essential goods. It needs to be acknowledged that this is a policy with a timeline in place as well. This means that these importers should be aware that after a certain date, they need to adjust their operations to free market mechanisms.

3.2.3. Other Recommended Shor-term Policies

FATF – As highlighted in the previous section, it is critical that the transition government begins talks with FATF and provide all necessary documentation to signal their firm commitment to comply with all the necessary steps as outlined by FATF so that country could be removed from the blacklist. It is crucial that these talks begin as soon as possible because it would send a credible signal that the country's economy is about to come out of isolation and that would deliver a positive shock to the economy and the banking system.

Lifting Sanctions – The transition government should immediately begin changing Iran's international relation and foreign policy. Specifically, the transition government should begin talks with the US and other major western countries and take necessary steps to ease the sanction. Again, it is paramount that the talks begin as soon as possible. Any breakthrough or success in lifting sanction, even partially, would have drastic effect on forming positive economic outlook, add more credibility to the transition government and its (economic) policies, and manages public expectations which has significant implications for inflation and exchange rate.[5]

Attracting Foreign Investments – The transition government must immediately work on rebranding Iran as a country full of investment opportunities. In fact, due to its isolation from the global economy and the financial markets, and its young and highly educated population, Iran's market is relatively pristine with numerous investment opportunities across many industries ranging from gas and oil to tourism and high tech. It is understandable that attracting foreign investment would take time to materialize and come to fruition, but we are listing it as part of the short-term policies, since the seed of the policy must be planted as soon as possible.

Dismantling Adherence to Islamic Finance – As part of the economic and banking reform, the CBI should not be obligated to comply with Islamic finance framework. As discussed earlier in Section 2.1.6, the CBI has been deprived of an important monetary policy tool because of Islamic Finance. After the collapse of the Islamic Republic, the CBI will operate within the Basel

[5] There is no precise estimate on how much frozen assets Iran has in the world. However, reports suggest they are somewhere between \$100 to \$120 billion. A 2022 IMF report suggests Iran's total frozen assets is about \$115.4 billion. China holds the largest amount of about \$22 to \$30 billion, followed by South Korea with about \$7B, Iraq \$6B, USA \$2B, Japan \$2B, and Luxembourg \$1.4B (Reuters 2021).

framework and according to global standards of central banking. After the collapse of the Islamic Republic the governance of Iran's Central Bank must be based on three main pillars, namely independence, transparency, and accountability.

3.3. Longer term Risks and Policies

In this section, we discuss the longer-term risks facing the country's economy and the banking system after the collapse of the Islamic Republic and some mitigation policies. Overall, the main objective of the medium and long-term economic/banking policies post-Islamic Republic is to move the country towards a market based (free) economy, through price liberalization, floating exchange rate system, sensible deregulations, allowing for the free movement of capital and other factors of production, with minimal government intervention.

3.3.1. Mismanaging Financial Liberalization

A serious risk facing the country in the longer term after the collapse of the Islamic Republic is the mismanagement of financial liberalization that could jeopardize the country's path to economic growth and lead to a full-fledged financial crisis. This channel to financial crisis is different from the one discussed in section 2.2.1 where the root of the crisis was government fiscal imbalance. This risk is rooted in weak credit culture, institutional weakness, lack of proper monitoring and supervision which would lead to excessive risk-taking by banks, creating a cycle of lending boom and bust. The financial crises in Mexico in 1994-1995 and East Asia in 1997-1998 are examples of this mechanism.

While financial liberalization is generally beneficial in promoting long-term financial development and efficiency, its immediate consequences, especially in emerging economies with weak credit cultures and institutional weakness, can be detrimental. In emerging economies like Iran, the elimination of restrictions on financial markets and institutions can lead to a lending spree, known as a credit boom. Financial institutions, lacking proper incentives for risk management and without proper monitoring by banking regulators, could engage in excessive and often risky lending practices. Banks may pay high interest to attract more foreign capital to increase their lending capacity. The situation would get worse if the government is tempted to fix (peg) the value of the currency to dollar (or another major currency) to mitigate the exchange rate risk for foreign investors. It is worth highlighting that banks (their shareholders and management) have the incentive to take excessive risk since they get to keep the upside potential if nothing goes wrong, but the downside risk is distributed among all taxpayers due to implicit government guarantee. In other words, the presence of government-guaranteed insurance further exacerbates the problem by creating a moral hazard. Depositors, assured of protection from losses, continue to supply funds to undisciplined banks involved in risky lending. As a result, risk-taking grows unchecked, leading to mounting losses on loans and a decline in the value of assets relative to liabilities.

This process initiates a deleveraging phase where financial institutions, now with reduced capital due to losses, cut back on lending. Reduced capital also makes banks riskier, causing depositors and lenders to withdraw funds, resulting in a credit freeze, and a lending crash. In environments with weak credit cultures and institutional weakness, this cycle of risk-taking, losses, reduced lending, and economic downturns can be particularly severe, leading to a full-fledged financial crisis, which would be particularly devastating to economies like Iran's where banks are the major source of external finance for economic activities. Overall, the combination of financial liberalization without proper risk management, weak credit cultures, and institutions in emerging economies can create a perfect storm, culminating in a destructive sequence of events that adversely impact economic stability and growth.

To avoid the above scenario:

1. The credit culture of the banking system must be improved.
2. The banking system must operate within the Basel framework.
3. The banking regulators must actively monitor the banks. Forcing the risky ones to increase their capital, and closing the ones that fail to do so.
4. The banking regulators must make sure that the deposit insurance is not underpriced so that the moral hazard is mitigated. That is, riskier banks need to pay more membership fees to enjoy the benefit of deposit insurance.
5. The new Iranian government must adopt a free-floating exchange rate system.

3.3.2 Other Recommended Longer-term Policies

Price Liberalization - The Islamic Republic's price control policies are a major impediment to the market economy. Price regulations disrupt the market's supply side, leading to occasional shortages or excessive supply. Such regulations are prone to corruption in the allocation of resources or distribution of commodities and encouraging the role of intermediaries in the market. In general, regulating prices should be prevented to unleash the market power in providing quality goods and services with affordable price points and innovative approaches that could further contribute to economic growth and welfare.

While the end goal of price deregulation is economic prosperity post-Islamic Republic, the means to achieve it is painful and demands extra attention. Liberalizing the prices in the short term means that certain commodities and services will be offered with skyrocketed values, hence depriving a large share of the population of such goods and services. Take the example of fuel. Iran, being in the top three countries with heavily subsidized fuel costs, is annually spending a considerable portion of government revenue on subsidizing the fuel costs annually. To liberalize fuel costs means the price of gasoline and diesel could rise by orders of magnitude in the short term. Not only the precedence of price hikes in fuel have been a major source of civil unrest in the past, but also almost every other good and service in the economy is heavily affected by this shock, leading to severe inflation, shortage and potentially civil unrest. To make matters worse, the government should only liberalize prices while maintaining the same wages. This is important to control the liquidity in the market and its effect on inflation.

Therefore, the transition government should approach with caution to implement this policy. First, it should be publicly announced that the government will use an incremental approach in removing the fuel subsidies (same for every other major subsidized and price-controlled commodity). The timeline and the price increase at each step should be clearly defined and announced to the public initially. Simultaneously, the transition government should leverage the existing database of welfare in Iran (Paygah Refah) to identify the vulnerable population affected by price hikes and provide them with vouchers, or preferably cash deposits with the amount that could enable them to afford the higher costs of living. The government should assure them they will receive cash transfers or vouchers for the specific timeframe with a known value to compensate for foreseeable price hikes.

The difficulties and risks associated with price liberalization are well documented in many countries that did take such an approach to transition the economy to market-oriented economies from a semi-social context like Chile to a fully social context like Hungary. The case of Chile's reforms of the mid-1970s is an example of a price liberalization that led to major problems in the early 1980s as a result of international shocks, as well as mismanaged loans and market operations with shortages, unemployment, and severe poverty. To mitigate such problems, the

Eastern European Bloc's price liberalization in the early 1990s adopted a more careful approach to social safety nets while transitioning to a market economy. The case of Egypt in 2011-2013 is also a noteworthy example of a mixed approach to price liberalization with missing key elements such as trade liberalization and the government's ability to clearly communicate and take necessary but painful actions to transition to a free economy.[6] Therefore, it is important to (a) have a strong government determined to implement the price liberalization policy, address corruption, and provide a robust social safety net during the transition of the economy, (b) clear messaging and public announcement of plans, timelines, acknowledgment of difficulties ahead, and the desirable outcome, and (c) implement required policies all-at-once, or as Polish economists planning the transition of Poland's socialist economy to market economy in 1989 put "You don't try to cross a chasm in two jumps".

Protecting the CBI Independence in the Law- The CBI should be independent from the government. One of the main factors that undermines the central bank of the Islamic Republic is that the president has significant leverage in appointing the governors of the CBI. The new constitution should divert from this practice and provide a mechanism that the CBI governors are selected based on a consensus formed by a group of elites and confirmed by the parliament. In addition, the CBI should be recognized as the exclusive recipient of income earned by state-owned entities such as oil and gas. One of the main issues that has led the Islamic Republic into years of Dutch Disease and inflationary fiscal policy is the government's influence in allocating oil & gas revenue for fiscal policies. Similar to Bank of Russia that was granted to be Russia's *"mega regulator"* of the financial market in 2013, the CBI should have sole responsibility for making decisions regarding the banking system. It should be authorized to assign one observing member to each bank's board, establish, adjust, and enforce regulations for the banking system, and audit the banking system as intended. There should not be any financial institutions beyond the reach of the CBI whatsoever.

Floating exchange rate - There are three main factors that for the transition government to adopt a floating exchange rate system. First, the combination of all three policies of independent monetary policy, free flow of capital and fixed exchange rate could not happen simultaneously (Impossible Trinity). Among the three, it is important that the central bank of Iran abolish the

[6] These historical examples are discussed in detail in the appendix.

fixed exchange rate system and adopt policies for monetary reforms and ease of capital movement. An active monetary policy is long overdue to reduce inflation, while years of sanctions and a command economy have depleted the real sector of Iranian economy from capital, and state-of-the-art infrastructure and fixed capital growth. Second, Iran does not have enough foreign currency cash reserves or per capita revenue from oil and gas exports to be able to peg the exchange rate like Saudi Arabia or UAE. As a result, any attempt to fix the exchange rate is only temporary and in the long term, a waste of national foreign currency reserves. In fact, as stated earlier, even the preferential exchange rate used by the government has been following the market rate with some lag. Third, years of such attempts in the Islamic Republic have already led to the establishment of a deep, and widespread black market that is nearly impossible to crack down in favor of having only the government's exchange rate to be enforced across the country. Thus, having a unified market-based exchange would effectively eliminate these black markets.

However, there is one major risk in the initial stages of dismantling the Islamic Republic's exchange rate policies. Rapid implementation of this policy is likely to lead to short- to medium-term shortages in the country. Similar example was observed in Egypt’s medical supplies in 2012. As currency depreciated following exchange rate liberalization, and while price regulations were still in place, the import of essential medical and pharmaceutical commodities significantly dropped leading to a healthcare crisis. Therefore, for a duration of transition of the economy, the policy makers should keep utilizing the existing Islamic Republic’s government market of foreign currency exchange for a selected group of major importers of essential goods to make sure the repercussions of floating exchange rate policy do not create shortages in the country.

Floating exchange rate and dissolving the existing government market for exchange rate should happen only when there is no impediment for Iranian banks to operate internationally, and the privatization is initiated with influx of foreign direct investment. Otherwise, the exchange rate would result in a major recession domestically and distort the prices that negatively affect the privatization and banking system fair value accounting schemes.

Foreign Trade Facilitation - The Islamic Republic has imposed extensive tariffs on almost every imported item in the name of independence and supporting the domestic producers. This policy has not only resulted in lower levels of production, lower quality, and higher prices for end consumers, but also opened door to corruption and rent seeking by people connected to the circle of power. From foreign manufactured cars to wheat, the government tariffs are a substantial roadblock for economic reforms toward an open market economy. Therefore, the transition government should remove them in the medium term. Removing tariffs from imports should be carefully planned so that it would prevent adverse shocks to the supply side of basic goods in the market. It must be implemented in phases, while the foreign exchange rate is stabilizing after early shocks associated with political turmoil. The transition government should also consider the comparative advantage of major industries in Iran giving them warning and a reasonable timeline to accommodate for the international competition and leading to major unemployment issues. We would like to caution that environmental or socially appropriate tariffs should be only evaluated in the years that follow the foreign trade liberalization. Here, the argument is that the transition process itself is an already complex process with a plethora of uncertainties that individuals, businesses, and government entities all have to analyze, learn, coordinate and adapt to. Hence, adding further complexity associated with objectives that do not have immediate or near-term tangible repercussions should be deprioritized until the country is successfully positioned as an open market economy. One example of such risk is the promise of Sri Lanka's elected president after ousting the former government in 2019 to transition the farming sector from using chemical pesticides to organic farming practices. Then, an abrupt ban on importing chemical pesticides in 2021 led to major economic output loss, farmer-led protests, and significant economic hardship for the country. Therefore, the transition government should clearly set aside idealism to after the economic recovery has successfully materialized.

4. The Banking System Reforms

Before delving into the discussion about banking reform, we must highlight that the principles of economic and banking reform are independent of the future form of Iran's political structure. While there is a multitude of policies that could be delayed to after a general election on the form of the political structure in Iran, the principles associated with a market-oriented economy are well-defined and established. Thus, no matter what kind of political structure would be governing Iran post Islamic Republic, policies that shape the market economy and the path to implement them are the same.

The banking system is a vital part of economic reform policies, especially in a country like Iran where banks are the most important source of external finance. As discussed earlier, the banking system currently suffers from a multitude of problems. As the Islamic Republic government collapses, some of these problems will be automatically addressed, such as adherence to Islamic Finance rules, while some more important root causes of the banking system crisis remain to be fixed by the transition government. The transition government should establish a central bank team in charge of the CBI and, subsequently, the banking system. It should be further emphasized that any and every financial institute that may currently operate outside of the CBI supervision will be regulated and supervised by the CBI and other relevant banking regulators.

Banking reform must be centered on the three main pillars of modern central banking governance, namely independence, transparency, and accountability. Moreover, banking reform should not be considered a stand-alone reform policy. As discussed earlier, in fact addressing the government's chronic fiscal deficit and its fiscal discipline takes precedence to any banking reform. Moreover, the nature of the banking system as the financial backbone of the economy and exposure of every sector of the economy to the banking system demands that banking reforms be implemented along with other reforms that the transition government needs to pursue. Therefore, it is crucial that the transition government and central bank have close coordination and planning to ensure the overall outcome leads to economic reforms necessary. A well-coordinated effort between the transition government and the CBI will be able to mitigate issues related to the interdependency of the banking system with the rest of the economy. In the following sections, the core policy reforms that should take place in the banking system are presented.

4.1. Monetary Policy and Inflation Targeting

One of the consequences of the CBI's lack of independence is the fact that it is currently overwhelmed by multiple objectives. For instance, currently, Iran's monetary policy must be consistent with the five-year development plan and the government budget. We recommend that the CBI to be tasked with only two main objectives: price stability and financial stability. We recommend Inflation Targeting as the monetary policy strategy to obtain price stability and contain inflation.

Inflation targeting has emerged as a prevalent monetary policy strategy for achieving price stability, with several countries adopting this approach. New Zealand was the pioneer in 1990, followed by Canada, the United Kingdom, Sweden, Finland, Australia, Spain, Israel, Chile, Brazil, Russia, and others. The key elements of inflation targeting include publicly announcing medium-term numerical targets for inflation, an institutional commitment to price stability as the primary goal, an information-inclusive approach to decision-making, increased transparency in communicating policy plans, and heightened accountability of central banks for achieving inflation objectives.

Advantages of inflation targeting include enhanced transparency, making it readily understandable to the public. Explicit numerical targets increase the central bank's accountability, reducing the likelihood of pursuing overly expansionary monetary policies. It shifts the political debate toward long-term goals, such as controlling inflation, reducing pressure on central banks for inflationary policies. Inflation targeting emphasizes communication with the public, using various channels to explain monetary policy goals, inflation targets, strategies, and reasons for deviations, fostering public debate and reducing uncertainty. Overall, inflation targeting involves a multi-faceted approach to monetary policy, focusing on transparency, accountability, and a commitment to achieving and maintaining price stability.

4.2. Balance Sheet Analysis and Health Check

In the early days after the collapse of Islamic Republic, the CBI should take necessary actions to keep the banking system afloat. Considering the dire situation of the Iranian banking system reviewed earlier, the central bank’s policy should gradually shift from keeping the banking system afloat in the short term to a thorough overhaul of the banking system based on the results of the balance sheet analysis. Given the malpractices of banks in Iran by adding non-performing loans as deferred loans under the assets side of their balance sheets, it is difficult to have a clear understanding of how each financial institute is performing in terms of reserve requirements compliance, and capital adequacy ratio. Therefore, we suggest hiring external auditors to examine the bank’s balance sheets in the first to second quarter following the collapse of the IR. Once the balance sheet analysis and auditing of the banks is complete in the first three months, there will be three possible scenarios:

A. If a bank meets its capital adequacy ratio based on BASEL III, and reserve requirements, it could resume its normal activity as long as the board of the bank agrees to the following terms:

    1- Comply with the regulations set forth by the central bank,

    2- Have an observing member assigned by the central bank to its board, and

    3- Adopt the latest IFRS accounting standards and BASEL III (or the most recent one by the time of transition) in no more than one year since resuming normal operations.

    4- For the duration before implementation of the unified credit rating/assessment system and banking system's connection to the global banking system, the bank should regularly review the credits issued as declared in the loan application and should violations occur, the borrower should be reported to authorities.

B. If a bank does not meet the reserve requirements or capital adequacy ratio and is already insolvent the central bank should:

    (1) Dissolve those banks that have major insolvency issues and evidence of chronic bad asset management. Although dissolving should be the last resort due to its effect on unemployment, a shock in the system, and the burden of the dissolving process on the central bank, it should be used when the recapitalization is not justifiable given the amount of non-performing loans, bad assets, and malpractices. For example, if recapitalizing a bank could take a considerable chunk of the already stressed budget, it is not justified to save such a bank. Therefore, the dissolved bank will be announced publicly, and its assets are transferred to the government entity responsible for privatization. The generated revenue should be used to pay back shareholders and account holders of the bank.

    (2) Recapitalization is the preferred method for making corrections in the banking system. Although recapitalization is fiscally expensive, it could lead to a relatively smoother transition timeline to a free economy. As such, most of the banking reforms since the 1970s have been focused on recapitalization despite its fiscal bill, which globally averaged around 6% of the GDP of the countries that implemented this policy. In recapitalization, the central bank could set forth a set of conditions for the banks to make sure that, moving forward, their operations will be in compliance with those regulations (and BASEL framework) and do not contribute significantly to the

build-up of systemic risk, undermining the stability of the financial system. We would like to highlight that recapitalization efforts can and probably should be done in close coordination with the IMF and their supervision. In fact, given the enormous size of rollover losses in Iran's banking system, it is likely that a loan from IMF would be needed to recapitalize banks. Some of the potential conditions set by the CBI include as follows:

1- No payment of dividends to shareholders until the recapitalized loan is paid back.
2- No profit recording until the recapitalized principal is paid back.
3- Comply with the regulations set forth by the central bank.
4- Have an observing member assigned by the central bank to its board, and
5- Adopt the latest IFRS accounting standards and BASEL III (or the most recent one by the time of transition) in no more than one year since resuming normal operations.
6- For the duration before implementation of the unified credit system and banking system's connection to the global banking system, the bank should regularly review the credits issued as declared in the loan application and should violations occur, the borrower should be reported to authorities.

(3) Restructuring the troubled banks is another option based on the outcome of balance sheet analysis and other factors by the time of transition. The central bank could itself initiate and lead a restructuring effort of a bank. Alternatively, in the case that a certain bank in Iran may have enough capital and willingness to take ownership of a troubled bank and restructure it, under the central bank supervision, the merger can occur, assuming the restructuring plan presents a viable approach to fulfill the four conditions set forth in section A. In the process of debt restructuring, the central bank should transfer the bad assets of the banks to privatization entities and use the revenue generated for recapitalizing the bank.

If any of the banks refuse to comply with these conditions, the transition government should dissolve the board and set up an emergency shareholder meeting to vote for new board members who would only be accepted as nominees if they accept the above-mentioned terms. Should the shareholder meeting result in no positive outcome or the bank has a major shareholder affiliated with already dissolved entities such as IRGC, the central bank should take over the bank management and publicly announce that the bank will be added to the privatization scheme and until the bank has new owners and that there will not be any dividend paid to shareholders or profit recording for the bank. Although it may seem too authoritative or in contrast with free-market initiatives, at the early stages of banking reform this is crucial for the central bank not to fall for the moral hazard of saving the banking system or undermine the principles of a healthy banking system operations to save certain banks no matter how well managed or large they are.

The example of Russia is instructive here. Russia began structural reform in its banking system in 2011 which intensified after Elvira Nabiullina became the Bank of Russia governor in 2013. Bank of Russia with her leadership implemented several banking reforms, including a strict compliance to Basel capital adequacy ratios and risk management. Bank of Russia conduct frequent assessment of the riskiness of Russian banks and shut down operations of many of these risky banks. In fact, between 2011 and 2020, the number of banks in Russia dropped from 978 to 370, indicating the Bank of Russia shut down operations of more than 600 banks. However, during this period total assets of all the banking system increased by 4 folds (see figure 8). A similar approach must be adopted in Iran.

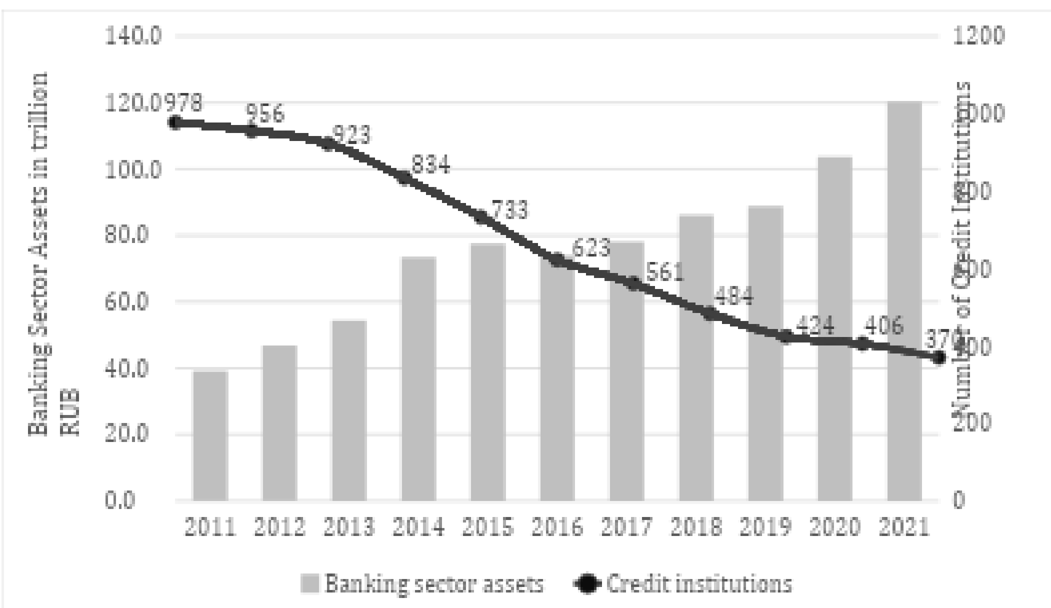

Figure 8 – The trend in the number of banks and total assets of the baking sector in Russia

4.3. Unified Credit Assessment (Rating) System

The transition government's central bank should establish an office for a unified credit score/rating/assessment system. This system could leverage the existing database of the "Paygah Refah Iranian" along with banking records of individuals and businesses as a starting point to develop a credit scoring system based on their assets, salary, tax records, and balances of bank accounts. As soon as this database is established and can be reliably used, each bank should use the unified credit system to evaluate the creditworthiness of its customers. Banks should use the credit score obtained by the central bank's database as the basis of their own risk management portfolio to provide credit to their customers with appropriate interest rates, however, banks should not provide credit to credit scores lower than a floor limit set by the central bank.
Developing this system is a difficult and time-consuming task that could justifiably take more than a year. To make the development of this system as fast and reliable as possible, the central bank should allocate resources accordingly and take advantage of existing databases as much as possible. The speed of deploying the credit system could directly contribute to how fast the monetary policy could achieve the first signs of success in reforming the banking system, improving credit culture and monitoring, curbing corruption, and hence managing inflation and unemployment. During the transition time, these are among the vital KPIs that could help policymakers to take corrective actions in due time.

The central bank should invest in public education regarding the credit score system and increase financial literacy on how people should manage their finances while improving their creditworthiness for better rates or higher amounts of loans they could qualify for. The case of Brazil is instructive. Brazil has a credit information system that is managed by the central bank while three separate companies manage the database, reporting and communication. This credit information system enables (1) the Central bank to monitor macro level credit situation in the country, (2) consumers to be aware of their financial state, (3) financial institutions to be aware of the creditworthiness of loan applicants. In establishing the regulations for credit score agencies, the privacy rights of citizens as well as collaboration of financial institutions and reporting should be recognized.

4.4. International Standards of Banking and Accounting

Compliance with BASEL and IFRS is among the most import reforms for the banking system in post Islamic Republic era. Currently there are no established and enforced regulations for Iranian banks to adhere to international best practices for banking and accounting. Among the Iranian banks at the time of drafting this report, only one is in full compliance with the most recent BASEL and IFRS, Bank e Khavarmianeh. It should be noted that the central bank itself also needs to overhaul its accounting system and establish a new system based on the most recent IFRS standards. The central bank should comply with the most recent standards of accounting within one year of taking power.

4.5. Other Banking Reform Policy Recommendation

- During the early days after the collapse of the Islamic Republic and until the new banking regulator are confident that the banking system is on solid grounds and in full compliance with the BASEL framework, Banks must be regulated to hold at least about 20% to 25% of their assets in terms of cash and other liquid assets. This percentage must be higher for more risky banks after the assessment described in Section 4.2. The penalty for those violating this regulation is an increase in their reserve requirement. At the very least, banks must provide a plan to increase these stipulated requirements over a prespecified period and then tie the compensation of the CEO and the board to this objective and banks performance.
- Those banks that are determined to be very risky (large negative capital adequacy) based on the Balance sheet analysis and Health Check described in Section 4.2. cannot offer an interest rate higher than the average interest rate offered by those healthier banks.
- At least in the short run, it is unlikely that the CBI can use the interest rate as the anchor of inflation expectation to combat inflation. Persistent government fiscal deficit, along with massive amount rollover losses and non-performing loans in the banking system, any increase in the interest rate could lead to instability in the banking system. Therefore, in the short run, we recommend restricting the expansion of the balance sheets of banks as a monetary policy tool to control and reduce liquidity (M2). It has to be highlighted for this policy to work, it must be applied to all banks with no exception and there must be an up-to-date financial accounting system (FIRS) in place. The restriction on balance sheet

expansion must follow a progressive scheme where the highest level of restriction is imposed on the riskiest banks as determined by the assessment process described in Section 4.2.

- Reforming the bankruptcy procedure and more generally overhauling and updating the bankruptcy laws.
- Structural reform in corporate governance laws for corporations and banks alike. These reforms should address the conflict of interests between different stakeholders in the banking system.

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Appendix

A1. Historical Context of Economic Reforms with Banks at Their Heart

There have been as many as 200 examples of banking system reform in the past 40 years. While many banking reforms are initiatives of governments, there are many cases that represent banking system reforms following political turmoil or regime change. Below, we start with the economic reforms of the Pinochet government after the Chilean coup d'état in 1973. Drawing from the experiences of Chile, perhaps the next similar economic reforms that followed government changes from socialist systems to market-oriented economies are the cases of Eastern European countries that separated from the Soviet Union in the timeframe of 1989-1991. We also briefly discuss the cases of Egypt in 2011 and present the perils of prevailing populist policies as the result of regime changes for short-term goals.

A1.1. Chile

The case of Chile is an example of socialism on steroids. The Chilean economy throughout the 20th century before 1970 constituted two major mining industries ruled by the government and the rest of the economy by the private sector. Allende came to power with the promise of nationalization of industries and lands through socialist reforms to address income inequalities. In 1973 amidst experiencing hyperinflation, a successful coup d'état brought Pinochet into power. He invited a group of young Chilean economists from the University of Chicago (Avid proteges of Milton Freedman, referred to as Chicago Boys) to lay down the foundation of Chile's economy. Shortly after the coup, neoliberal and market-oriented policies were initiated. These policies include:

- Stopping the nationalization process and even reversing the process and returning many lands and industries to their previous owners.
- Trade liberalization and price deregulation.
- Fiscal conservatism by preventing wages from rising, curbing government spending, cutting subsidies, and a complete overhaul and privatization of social security.
- Monetary reforms such as the introduction of a new currency.
- Promoting and facilitating foreign trade.

While these policies successfully controlled the hyperinflation, the consequences of deficiencies in implementation, hasty privatization and the economy's dependence on exporting copper and its global price volatility, caused a recession, high unemployment, and a reduced social safety net, putting a significant portion of the population in poverty. The oil crisis of 1973 and subsequent global recession, as well as a series of non-performing loans, finally led to a full-fledged crisis in 1981, with multiple banks becoming insolvent. To avert the crisis, Chile took multiple corrective actions in the banking sector and finally averted the crisis in 1984.

These actions are considered one of the classic examples of macroeconomic policies for banking crisis management:

- Rising interest rates resulted in less domestic borrowing to cool down the effect of many non-performing loans.
- The currency exchange was reverted back to floating exchange rates from the pegged rate established in 1979.
- Selling off state-owned assets enabled the government to generate revenue for reducing the government debt burden as well as recapitalizing the troubled banks.
- The government established a new entity, the Banco Central de Chile, to take over the central bank’s role with additional supervisory control over the banking system.
- To prevent capital flight, the government set limitations for transferring capital out of the country.
- Four of the most troubled banks declared bankruptcy. Then, the government took over the management and recapitalized them to prevent their collapse. The recapitalization was conditional on zero dividend payment or profit recording until the banks could pay off their government recapitalization debt.
- The government performed debt restructuring for major indebted entities such as the state-owned copper company.

A1.2. Eastern European Countries

When Eastern European countries started to separate from the Soviet Union, the case of Chile’s transition from socialism to a market-oriented economy amidst hyperinflation was well on the radar of economists in the Eastern bloc as a success story with a grain of salt. Perhaps, the advantage of the Eastern bloc compared to the Chilean case was the so-called soft landing in the transition out of the Soviet Union. Although each country went through a major revolution, such as the Velvet Revolution in Czechoslovakia or Poland's Revolution of 1989, the turmoil in government transition was not as shocking as the Chilean coup d'état. This is an important notion when we focus on the significance of short-term policies and signals of fear or hope that reverberate in an economy as a result of a government change.

Dealing with high levels of inflation, outdated industries, and 40 years of adjustment with Soviet-based supply chains were among the initial issues facing each country right after separation. In addition, most of the countries were grappling with high levels of inflation and hyperinflation. Since every country in the Eastern bloc was determined to achieve the end goal of a market-oriented economy, the principles of reforms were similar in every country. These principles could be categorized as:

- Curbing inflation by fiscal austerity and monetary reforms.
- Foreign trade liberalization and promoting and attracting of foreign investment.
- Privatization
- Price deregulation
- Social safety nets

From these principles, only the Social safety net policies were one of the main lessons learned from the Chilean example. It is fair to say that the similarity of economic reforms in each country stops at the principles since each country chose a unique path to achieve these goals. Perhaps Poland's reforms are one of the notable ones named after the architect of the reforms, the Balcerowicz Plan. The Balcerowicz plan tackled every angle of the market-oriented approach at the same time and with a rapid process, as it was coined with the phrase "you can't cross a chasm in two steps". As a result, the country experienced severe unemployment, inflation, and a drop in GDP in 1990 and 1991 on a scale that no other eastern country experienced. Despite the difficulties experienced in those years, the government's determination to fully implement economic reforms led to sustained GDP growth of an average of 5% for the next five years and onwards until joining the EU. At the same time, Czechoslovakia and, to some extent, Hungary took the same measures at a slightly slower pace, which caused inflation, unemployment and GDP to drop for approximately 3-4 years and finally achieved market-oriented economic stability with low unemployment and curbed inflation in 1996. The lessons we could learn from the experiences of Eastern European countries are as follows:

- Government determination to tackle all the issues related to the socialist system at once.
- Persistence in applying price deregulation and price discovery at market clearing levels.
- Facilitating foreign trade and attracting foreign investment.
- Fiscal austerity and balanced government budgeting even though it's a major limitation for a newly elected government in a context with dominance of state and government.
- Privatization of industries and, in general, the economy as much as possible with minimum impediment.

- Protecting vulnerable populations through difficulties of economic transition.
- Bold monetary reforms for inflation control.

It should also be noted that the geographical proximity of the Eastern European countries to market-oriented and thriving Western European economies is a significant incentive in their journey toward economic reforms. It might be a symbolic example that the first McDonald's restaurant opened in Prague only four months after the Velvet Revolution of 1989. There were two main motives for Western countries to get involved in the economic recovery of their eastern neighbors. First, the history of the eastern region was full of conflict, often poised by nationalism, which sometimes affected the whole of Europe. Second, close geographical proximity offered significant opportunities to trade, which provided economic and business justification for many western firms (and countries) to invest in their eastern neighbors' countries (and industries).

A1.3. Egypt

The case of Egypt highlights that no matter how well-intended and good economic policies and banking reform policies are designed, it is the determination and robustness of the executive branch that shapes the final outcome. In the case of Egypt, Hosni Mubarak started an economic reform initially designed to mimic the Chilean example with privatization at its core. In 1991 his government privatized 314 state-owned companies covering roughly 15% of GDP. One decade later, the only thing the public would recall from that policy is corruption. A shining example is Ahmed Ezz, Husni Mubarak's party secretary in the 1990s, who leveraged political influence amidst privatization and became a business tycoon with a near monopoly in the steel industry of Egypt. Such malpractices were among the main reasons that Mubarak was ousted from power in 2011. With an economy that was effectively handed over to a small influential group outside of the usual regulatory constraint and accountability, the new government of Mohammed Morsi took an initiative to make the economy more equitable only to confuse equitable society with a mixed approach that was neither liberalizing the economy nor entirely socializing it. While the economy of Egypt was suffering from high inflation, high unemployment, and fiscal deficit, the economic reforms of Mohamed Morsi's government were questionable at best.

It took Morsi's government nearly a year to provide economic reform plans acceptable to the IMF. Forbidding payment of interest, a set of Islamic finance rules were passed into law that were too complex to be implemented as intended. Additionally, courts ordered reverting privatization, which started more than a decade ago and led to state ownership of many firms and giving too much power to certain people close to Morsi’s party, the Muslim Brotherhood. A depreciation in exchange rate led banks to have a more stringent exchange control, impeding international trade and financial integration. Faced with heavily subsidized wheat and fuel in the economy, Morsi’s government failed to implement a plan to liberalize these two main sources of fiscal deficit in the country, further exacerbating the fiscal deficit and increasing inflation as a result in the years following the 2011 revolution.

It can be argued that a mixed approach to economic reform, along with a populist agenda and religious ideology, led to exacerbated economic conditions and, finally a coup d'état in Egypt. Nowadays, the government of Egypt ruled by General Alsisi is privatizing again, this time with a significant trace of army generals and affiliates taking ownership and the same economic struggles for the population still exist.

The perils of such reforms were well studied and known to economists as early as the dawn of reforms in the Eastern bloc. A good example is János Kornai’s book The Road to Free Economy which he authored in 1990 for Hungarian economic reforms. As one of the leaders steering away from mixed approaches such as market socialism, he warns about the importance of a strong government and its determination to fully implement reforms referred to as surgery and short periods of suffering before achieving long-lasting economic prosperities.