

# *Emerging Economies Crises: Lessons from the 1990's*

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The paper examines the financial crises of the 1990s. They represent a new kind of crises, as they do not seem to conform to the so-called first generation and second generation literature on currency crises. The outburst of the Asian crises brought a new challenge for economic policy. The attention has been placed on the self-fulfilling character of the speculative attacks and microeconomic weaknesses. The first part of the paper reviews the recent theoretical literature on financial crises, the second part addresses some lessons for emerging economies. The authors consider the policies to manage financial crises and reduce the risks associated with them.

*Key Words:* financial crises, emerging markets, contagion

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## **Introduction**

Over the past decades, the total capital flows to emerging economies have increased tremendously and most of the increase was in equities and portfolio investments. However, as international capital movements have been the main catalyst for the accelerating global economic integration, market failures associated with them have also become more visible. Since 1982 emerging markets have been rocked by three major financial crises: the American debt crisis of the 1980s, the Mexican crisis of 1994–1995 and the Asian crisis 1997. The Asian crisis spread to Russia and Latin America and impacted the economies of many industrialized nations as well.

Financial crises in emerging economies are very different today than they were in the past. Between 1940 and the 1970s, financial crises in-

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volved large fiscal deficits, repressed domestic financial systems, and balance of payments situations that were associated with a sharp worsening of terms of trade. In the late 1990s, however, a ‘new variety’ of crisis has evolved in Asia. Many of the emerging economies that have experienced financial trauma have been considered very successful until the crises explode.

This paper aims to analyze the determinants of currency and financial crises in the aftermath of the Asian 1997 experience. In the literature the commonly identified factors that increase vulnerability to the currency and financial crises have been imprudent fiscal policies, fragilities of the financial sector, inadequacy of prudential supervision and regulation, appreciated real exchange rate, a heavy lending to private sector and low levels of foreign reserves in proportion to government’s liabilities as measured by broad money. There is a general consensus that all crises of the 1990s involved two kinds of market failures, namely, first, international financial institutions over-lent to emerging market economies and, second, governments’ financial institutions or corporations over-borrowed.

The paper is organized as follows. The next section summarizes financial crises and recent theoretical developments. Section three addresses some lessons from the recent crises for emerging economies. The final sections discuss the findings and conclude.

### **Financial Crises and Recent Theoretical Developments**

Serious financial crises are not a new phenomenon; the Asian crisis follows on the tracks of Mexico 1994, the European Monetary System 1992–1993, and previous crises in Latin America. These currency crises have been the subject of extensive economic literature, both theoretical and empirical. The theoretical literature on balance-of-payment crises has flourished following Krugman’s (1979) seminal paper. Krugman argued that crises occur when a continuous deterioration in the economic fundamentals becomes inconsistent with an attempt to fix the exchange rate. Krugman’s canonical model therefore explains crises as the result of fundamental inconsistency between domestic policies – typically the persistence of money-financed budget deficit – and the attempt to maintain a fixed exchange rate. The inconsistency can be temporarily papered over if the central bank has sufficiently large reserves, but when these reserves become inadequate speculators force the issue with a wane of selling. The timing of the attack in Krugman’s model is therefore determined by

a critical level in the amount of reserves. Once the reserves have been lost in the attack, the central bank has no choice but to abandon the peg. Crises thus result in a transition to floating. More recently, however, some papers have argued that the authorities may decide to abandon the parity for other reasons: they may be concerned about the adverse consequences of policy needed to maintain the parity (such as higher interest rate) or other key economic variables (such as the level of employment).

The Krugman model and its extensions represent what has become known as first-generation models of balance-of-payment crises. Since crisis arises as a result of an inconsistency between an excessive public sector deficit that becomes monetized and the exchange rate system, a crisis is both unavoidable and predictable in an economy with a constant deterioration of its fundamentals.

Recent models have shown that a crisis may develop without a significant change in the fundamentals. Models built along this line are known as second-generation models of balance-of-payment crises. There are at least two types of these models, where crises are not affected by the position of the fundamentals, but instead, they may simply occur as a consequence of pure speculation against the currency. Calvo and Mendoza (1997) developed the model of herding behaviour; the model stresses that information costs may lead foreign investors to take decisions based on limited information and therefore to be more sensitive to rumours.

A second type of models stresses the possibility of contagion effects. There are again two types; the first type (Gerlach and Smets 1995) focuses on trade and on the loss of competitiveness associated with devaluation by a main trading partner, which in turn leaves the domestic currency more vulnerable to attack. The model presents a situation in which the devaluation by one country leads its trading partners to devalue in order to avoid a loss of competitiveness. The same effect could be derived in a model with multiple equilibria, in which the devaluation by a trade partner serves to coordinate a worsening of expectations about the domestic economy and generate a self-fulfilling attack. If contagion effects are present, a crisis in a neighbouring country may be an indicator of a future domestic crisis. Masson (1998) developed a second type, which is related to multiple equilibria, suggesting that a crisis in one country may raise the odds of a crisis elsewhere by signalling that a devaluation is more likely as a result of the initial crisis. The signal may then lead to a self-fulfilling speculative attack.

One may conclude that many of the second-generation models im-

plicitly or explicitly accept the possibility of self-fulfilling crisis. Esquivel and Larrain (1998) define this type of crises as crises that occur when the sheer pessimism of a significant group of investors provokes a capital outflow that leads to the eventual collapse of the exchange rate system, thus validating the negative expectations. These recent theoretical developments accord a smaller role to fundamentals in generating balance-of-payment crises, but they also have highlighted the importance that other variables may have in helping to predict those crises.

The difficulties in accounting for some key aspects of more recent crises have led some economists (Krugman 1998) to emphasize the need for a 'third generation' crises model, centring around banking system problems associated with moral hazard.

### **Lessons from the International Financial Crises of the 1990's**

Two major approaches dominated in the post-1997 theoretical literature. The first one, represented by McKinnon and Pill (1998) as well as Krugman (1998; 1999) modelled the 'over-borrowing syndrome', and emphasized the role of moral-hazard-driven lending by unregulated banks and financial institutions (Corsetti, Pesenti, and Roubini 1998). According to this view, a rational agent can expect the government rescue operation of any large bank or corporation with good political connections in case it had solvency problem.

Radelet and Sachs (1998) blamed a combination of a set of factors such as panic in the international investment community, policy mistakes in crisis management, and poorly designed international rescue programs, for triggering a fully fledged financial panic resulting in currency crises, bank runs, massive bankruptcies, and political disorder. Chang and Velasco (1998) have proposed similar approach, i. e. explaining the Asian currency crisis as a product of a bank run. The first theory of herding (Chari and Kehoe 1997) underlines that a bandwagon effect is driven by an assumption that some investors have private information.

Building on this discussion, Krugman (1999) elaborated a third-generation model concentrating on microeconomic weaknesses (such as moral hazard and resulting over-borrowing), which may trigger, in the world of high capital mobility, speculative attacks against the existing exchange rate regimes. This model attempts to consider both fundamental factors and multiply equilibria in the market behaviour.

Financial crises of the kind experienced in East Asia have highlighted the fact that in a globalizing environment policy mistakes can have more

abrupt and profound consequences for the country involved than has been the case in the past. The Asian crisis and the wave of currency crises in Latin America had significant spillover effects outside the regions, and especially transition economies have been negatively affected by developments in Asia and Russia. What can the Asian and Russian experiences tell us about how a small emerging economy might avoid such crisis in its own economy?

The issue that arises in connection with crisis is to determine what policy implication the currency crisis holds. The problems experienced by the emerging countries differ from each other, but there are certain weaknesses that should be addressed for the small open emerging economy to reduce the chance of a recurrence. Let us single out some lessons on key areas, many of which are interrelated:

*LESSON 1: Financial Market Liberalization is the Best Predictor of Currency Crises*

This fact has been realised in Latin America in the 1980s, in Europe in the early 1990s and again in Asia in 1997. Kaminsky and Reinhart (1999) found that banking crises were rare during the 1970s, with only 3 taking place (in contrast to a total of 26 balance-of-payment crises). The absence of banking crisis may reflect the highly regulated nature of financial markets during this period. While the number of balance-of-payment crises per year does not increase much during the 1980s and 1990s (from 2.9 to 3.1), the number of banking crises per year more than quadruples in the post-liberalization period. Empirical studies suggest that domestic financial market deregulation leads to boom-and-bust cycles. The wave of liberalization that started in the mid-1980s had two major effects (Wyplosz 1998): making self-fulfilling attacks possible and installing weaknesses in domestic financial markets.

Two problems are exacerbated when the domestic financial market becomes international. The asymmetry of information widens when the lender and the borrower belong to two very different economies. The result is that risk and volatility associated with financial operations are higher in global markets than in domestic financial markets.

The second channel through which volatility in financial markets is widened when they become international is through the increased use of derivatives (options and futures). Although the main target of such a market was to reduce risk (mainly exchange rate risk) in financial or trade operations, the use of these kinds of products quickly became spec-

ulative, leading to higher volatility through a wider asymmetry of information.

The third mechanism through which risk increases volatility in global financial markets is through the role played by institutional investors (hedge funds, pension funds, mutual fund, insurance companies ...). Some big institutional investors display highly leveraged operations (Das 1998; Reisen 1999). Leveraged operations are highly risky, adding higher volatility to the financial system.

The message is clear: financial market liberalization must be preceded by a number of measures (effective prudential regulation and supervision of banks, implementation of market-based instruments such as reserve requirements on foreign currency deposits and short term borrowing, etc.). Deregulation must follow, not precede the strengthening of the banking and financial sectors. This factor has been admitted also by the International Monetary Fund (IMF 1998). The events in East Asia have demonstrated that the partial financial reforms could lead to increasingly fragile financial systems characterized by growing short-term foreign debt, rapidly expanding bank credit, and inadequate regulation and supervision of financial institutions. Such weaknesses leave the economy vulnerable to rapid reversal of capital flows.

#### LESSON 2: *Increased Globalisation Raises the Contagion Effects*

The last two decades have been characterized by significant and fundamental changes, which have challenged the capacities of economies to adapt. Widespread lowering of national and regional barriers to trade and foreign direct investment has led to closer links between economies. Increased integration of markets across countries has acted as a major stimulus to trade between developed and transition countries on the one hand, but also as a potential channel of contagion on the other hand (Strašek and Jagrič 2002).

The contagion effects are the contribution of the second-generation models. Masson (1998) argues that contagion reflects a situation where a crisis in one country may trigger a crisis elsewhere for reasons unexplained by macroeconomic fundamentals. Contagion is therefore an additional effect above and beyond those of domestic fundamentals. The rising importance of contagion is striking: some studies (Schmukler and Frankel 1996) suggest that investors differentiated among countries to a greater extent after the 1994 Mexican crisis than after its 1982 predecessor.

Mason (1998) also points out that the notion of contagion is not really

well defined, since assigning explanatory power to 'contagion' could be regarded as a measure of our ignorance. A possible way of avoiding confusion is to distinguish between various reasons. The factors that help to explain why currency crises tend to be clustered fall into several categories:

- *Monsoonal effects*, defined as major economic shifts in industrial countries that trigger crises in emerging markets. In this case, crises may be due to common shocks, for instance policies undertaken by industrial countries (a steep rise in world interest rates, a sharp slowdown in world aggregate demand, a decline in commodity prices, large changes in exchange rates between major currencies) which have similar effects on emerging markets.
- *Spill-over effects*, defined as a case where a crisis in one emerging market may affect the macroeconomic fundamentals in other emerging markets. Spillovers result from interdependence among developing countries themselves. Typical examples: a devaluation in one emerging country reduces the price competitiveness of the emerging countries, or because lack of liquidity in one market leads financial intermediaries to liquidate another emerging market (Valdes 1996).
- *Pure contagion effects*, defined as indirect spillover effects, i. e. the simultaneous occurrence of crises which are not directly linked to the common deterioration of macroeconomic fundamentals. This kind of pure contagion may be explained in two manners (Blejer 1998): either there are psychological factors that result in similar behaviour (unrelated to fundamentals) or a crisis in one country has a trigger-effect in a second country, by creating panic. The first type of effects include the so called 'wake-up call' hypothesis (Goldstein 1998). It is said that Thailand acted as wake-up call for international investors to reassess the creditworthiness of Asian borrowers and when they did that reassessment, they found that a quite a few of these economies had weaknesses similar to those in Thailand.

The evaluation of the East Asia crisis suggests that contagion effects played a role, even greater than in previous crises. Trade and financial ties and associated emerging market economies (EME) vulnerabilities appear to help explain some of the spread of the crisis in Thailand to other Asian EMES in 1997/1998. In the more recent crisis in Argentina, a lower incidence of EMES with both strong links to Argentina and high

associated vulnerabilities to shocks may go some way towards explaining why the crisis has had a less marked impact elsewhere (Hall and Taylor 2002). If shifts in investor behaviour explain the limited spillovers from Argentina, contagious crises may be less likely in the future.

LESSON 3: *Increased Entwinedness Between Banking and Balance-of-Payment Crises (BOP Crises)*

There was no apparent link between balance-of-payment crises and banking crises during the 1970s, when financial markets were highly regulated. Liberalization of financial markets in the 1980s brought very close entwinedness between banking and currency crises. The crises in Asia in 1997 highlighted this important link. Kaminsky and Reinhart (1999) found some interesting lessons:

- Most often, the beginning of banking sector problems predates the BOP crisis. A banking crisis increases the probability that a country will fall prey to a currency crisis.
- Empirical results also suggest that the twin crises may have common origins in the deregulation of the financial system and that the credit booms and asset bubbles appears to accompany these. Inadequate regulation and lack of supervision at the time of the liberalization may play a key role in explaining why deregulation and banking crises are so closely entwined.
- Empirical tests found also evidence of a vicious cycle, in which the currency collapse further undermines an already ailing banking sector. There may be also an adverse relation: financial sector problems undermine the currency. Devaluation, in turn, aggravates the existing banking sector problems and creates new ones. When currency and banking crises occur jointly, they are far more severe than when they occur in isolation. In both types of crises, a financial shock, possibly financial liberalization or increased access to international capital markets, appears to activate a boom-bust cycle by providing easy access to financing.

Twin crises have been characterised by the following stylised facts: sharp reversal of capital flows, financial liberalisation, financial fragility, market overreaction. The mechanism relies on two features that characterised emerging markets which experienced twin crises:

- First, governments held fixed exchange rate regimes or narrow exchange rate bands, which were vulnerable to speculative attacks.

- Second, domestic banks had a mismatch between foreign liabilities and domestic assets and were thus exposed to exchange rate risks.

Goldstein's (2005) study shows, that an increase in the probability of one type of crisis generates an increase in probability of the other type. Both crises occur as a result of the complementarities between the banking sector and the currency market. Twin crises are expected to be more frequent in financially liberalised emerging markets and are expected also to be more costly than regular banking and currency crises. Important implication: policy measures that do not affect the reserves of government, such as an international lender of last resort or suspension of convertibility may be preferable for attacking twin crises.

#### LESSON 4: *Crises are Becoming Unanticipated*

Financial crises in Mexico in 1994–1995, Argentina in 1995 and the five East Asian economies 1997 display elements of self-fulfilling crises. The evidence so far is that self-fulfilling attacks have become more likely in a world of increased capital openness and mobility. Until the mid-1980s, most countries enforced capital controls, therefore the self-fulfilling attacks have played a minor role.

Many observers have noted the increasing intrinsic instability in international lending: Radelet and Sachs (1998) concluded that emerging markets are especially prone to self-fulfilling crises, since many emerging markets lack the lender of last resort capacity to handle sudden shifts in depositor confidence. Premature financial liberalization in such markets creates self-fulfilling attacks. Emerging markets are handicapped twice:

- First, they aren't sufficiently equipped with a bulwark against panic, since they usually don't pass a well-defined and relatively transparent system for managing bankruptcies, liquidations and other forms of debt workouts.
- Second, international financial markets feel the lack of bulwarks against self-fulfilling panics, that are available in the domestic markets (deposit insurance, lender of last resort function, etc). With globalization and premature financial liberalization the emerging economies are increasingly exposed to the instabilities of the international financial markets.

The handicap of partial and incomplete liberalization has been manifested in opening loopholes in other areas, which firms were quick to exploit (Cole and Slade 1996). Asian events suggest an important lecture

for emerging economies: if an economy suffers from distortions deriving from implicit and explicit public guarantees that everybody would be bailed-out if things went wrong, the liberalization of the capital market will surely exacerbate these distortions. Government bail-out guarantees will lead to serious moral hazard problems in the behaviour at banks: they will be tempted to overland in the more risky investment projects. The bail out promise derives from political distortions that lead governments to want to increase short-term growth and investment above their socially optimal values (Corsetti, Pesenti, and Roubini 1998).

The difficulties in predicting crises lead to the suggestion that specialists should be focused instead on the more modest goal of developing early-warning indicators in order to prevent (and not predict) the recurrence of crises. In order to create a new set of early-warning indicators, economists should focus on non-conventional deficiencies, such as those related to financial fragility associated with financial deregulation and with capital inflows, to a declining efficiency of investment and to high short-term external debt.

#### LESSON 5: *Keep Current Account Deficit Sustainable*

A number of authors indicate that balance of payment crises are typically related to persistent current account deficits. The East Asia crisis and some studies (Frankel 1998) confirm that close attention should be paid to any current-account deficit in excess of 4% of GDP, particularly if it is financed in a way that could lead to rapid reversals. A current account imbalance may be less sustainable if it is derived from a large trade deficit than from a large negative net factor income from abroad component. In the case of Mexico (1994), a large and growing current account deficit is often singled out as a key determinant of the crisis. The Asian crises also confirm a clear connection between real appreciation, current account deficit and possible currency crashes.

Large deficits lead to high external debt, to the point where the country either becomes insolvent (the present value of conceivable trade balance surpluses does not suffice to cover external obligations) or hits borrowing constraint (lenders understand that the country will have no incentives to repay any additional debt). In the case of the Thailand crisis, macroeconomic policy should have reigned in aggregate demand, avoided excessive credit expansion and curtailed the excessive external reliance on foreign savings. This would have reduced the extent of real effective overvaluation and the current account deficit, and slowed the build up of short-term external debt relative to foreign exchange reserves.

The common factor observed in many crises is that economies had serious macroeconomic imbalances, besides large and growing current account deficit also fiscal deficit, which led to excessive accumulation of public debt or external debt that eventually become unsustainable. The lesson is clear: avoid large current account deficits financed through short-term, unhedged private capital inflows.

National measures, the aims of which are to improve the mechanism for crisis prevention, management and resolution at the national level should include these instruments:

- secure adequate foreign exchange reserves,
- maintain sound fiscal and monetary policy,
- adopt a viable exchange rate regime,
- establish orderly capital account liberalization,
- aggressively regulate and supervise financial systems to ensure that financial institutions manage risks prudently.

Although strong macroeconomic fundamentals are necessary, they are not sufficient for averting all crises; a resilient financial sector is required for coping with abrupt changes in asset prices and capital flows. Having a resilient and robust financial sector is therefore the key to avoiding crises. It deals as a preventive measure against contagion and allows flexibility to cope with external shocks. Empirical studies (Stiglitz and Bhattacharya 1999), suggest policies that can achieve this financial structure: prudential regulation of asset liability mismatches, and portfolio and loan standards that adhere to internationally accepted norms; capital adequacy regulations that, at a minimum, match those which are required under the Basle standards; clear governance rules to prevent insider and group lending not subject to loan evaluation and creditworthiness and standards; transparency for investors and depositors through mandatory public disclosure of audited financial statements; and, finally, deposit insurance limited to a minimal share of private liabilities to bound government contingent liabilities in event of crisis, and share risk with investors and depositors. These policies should be supplemented on a global level with policies that tighten regulations over financial institutions that lend to highly leveraged institutions.

### **Policy Implication**

The generation approach towards financial crises clearly shows evolution of economic policy considerations: the differences between first and second generation approach suggest that crises are no longer the result

of obviously irresponsible economic policy and that crises may occur suddenly in situations where no crises seemed inevitable. With the third generation, crises are no longer mainly about monetary policy, so crises become damaging for the economy.

Considering recent changes in the proliferation of third generation models, we accept Krugman's suggestion (2001) that a fourth generation crisis model may not be a currency crisis model at all; it may be a more general financial crisis model in which other asset prices play the starring role.

In order to improve the policy response to financial crises, three issues must be considered: first, the complexities involved in designing an appropriate policy framework; second, the considerable trade-offs that policy makers face in formulating policy options; third, in the long run, a country can remain exposed to significant post-crisis vulnerabilities. Economic policy response is especially complicated by the need to assess a variety of trade-offs; fiscal consolidation vis a vis medium-term growth prospects; administrative measures for quelling a banking crisis vis-a-vis risks of eroding confidence in the banking system and triggering capital flight.

The appropriate policy framework is attributed to the government to undertake the appropriate restrictive measures at the right time: the low interest rate policies in Malaysia after the runs on the Thai baht are a fitting example of the unwillingness. The maintenance of restrictive measures beyond an 'emergence scenario' can have destabilizing consequences. Excessively tight fiscal discipline made the crisis-induced recession worse.

The Asian experience suggests that the economic policies with their effective rescue strategy must be bound to address the issues at the very core of the crisis: strategies and measures have to differentiate between structural problems and traditional macroeconomic imbalances. The lessons we elaborate in our paper could significantly reduce the frequency and damage from capital flow reversals and contagion.

It appears that policy makers have to focus on three distinct elements: preventing crises, managing crises, and resolving the systemic consequences of crises. In order to improve mechanisms for crises prevention, management and resolution, Kawai et al. (2003) suggest measures at the national, global and regional level. Financial globalization and surge of capital flows to emerging economies has made these economies more vulnerable to shocks coming from the capital market itself. Calvo

(2005) referred to these capital market shocks as 'globalization hazard' and found that traditional fiscal and monetary stabilization policies do not seem very effective and need to be complemented with structural policies that help to lower domestic financial vulnerability, especially in economies suffering from a high incidence of foreign-exchange denominated domestic bank loans.

### **Conclusions**

The evidence reviewed in this paper confirms that the growing vulnerability in emerging market economies can be attributed to the surge in capital inflows and private investment. Financial crises of the 1990s have undoubtedly involved several interlinked phenomena, most of which seem to be very important for the future development of the emerging economies. Several aspects of the lessons are worth highlighting:

- The factors that underlie the emergence of imbalances of the financial sector could be seen as the combined consequence of domestic financial liberalization, external capital account liberalization, massive capital inflows and lack of prudential supervision and regulation of the financial system.
- If an economy initiates, but does not complete, the process of financial sector liberalization and reform, this fact would lead to an increasingly fragile financial system. Such a system is potentially very vulnerable to rapid reversal of capital inflows. Emerging economies need properly functioning and well-regulated financial sectors. Banks and other financial institutions need to be well-structured and properly supervised.
- Current account imbalances have become larger since 1980 and have led to building up a serious source of instability to the global macroeconomy. National economy could be seriously damaged, if the current account deficit is financed with the accumulation of foreign debt in the form of short-term foreign-currency denominated and unhedged liabilities. Asian events clearly suggest that current account deficit should be financed largely by direct investment; in this way, first, a deficit is more sustainable than a deficit financed by short-term hot money (especially if it is coming from official creditors), and second, financial flows are less volatile and less reversible.
- Lessons from Asia, Russia and Argentina suggest that the power of the early warning system is still weak. The problem with recent

crises lies in the fact that an early warning system should indicate vulnerability to crises well in advance and that a number of the indicators tend not to signal vulnerability until a crisis is about to occur.

- Emerging economies must be warned against the cases where external borrowing is heavily reliant on short-term, foreign currency-denominated and unhedged foreign debt. The possible depreciation (exchange rate crisis) would increase the real burden of the debt and provoke a further financial crisis.
- Emerging economies are by definition poorly institutionally developed. Therefore, what may start out as one type of crisis may develop into others as well – foreign debt crisis, banking crisis, currency crises or even systemic financial crises.
- A key feature of recent crises arises from financial linkages between countries. Globalization in the 1990s has turned out not to be the cure but a cause of financial crises. Changes in asset returns that are due to shocks will contribute to changes in portfolio allocation to all other emerging markets. Recent contagion episodes show that the financial crises in small economies have devastating effects on economies of very different sizes and structures, with very few direct trade or financial links and in very severe and unexpected ways. Recent events suggest that contagion is the likely reason for huge and sudden withdrawal of capital.
- The financial channel is, besides the trade channel, and similarity channel another strong conduit spreading the contagion. With the larger rise of mutual fund industry it is on a good way to becoming the dominant channel.

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