The International Debt Crisis

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Introduction

This paper reviews recent historical experience with international debt crises, with an emphasis on how economists have answered two core questions about these episodes: why do they occur? And what should be done about them? The past eight years, a period of virtually unregulated cross-border financial flows, have witnessed eight major episodes of international debt and currency crisis: the 1994-95 Mexican 'tequila' crisis, the 1997-98 Asian financial crisis, the 1998-99 run on the Brazilian real, and the 1998-99 Russian ruble/Long-Term Credit crisis, the 2000 Turkish crisis, the 2001-2 meltdown of the Argentine economy, the 2002 attack on the Brazilian real, and the 2002 Uruguayan collapse. International debt crisis has become a defining feature of the contemporary world economy (Eatwell and Taylor, 2000).

International debt crisis arises when the sum of a borrower nation's cross-border repayment obligations cannot be met without radically altering expenditure levels or renegotiating repayment terms. Because both parties to cross-border debt contracts are not covered by a common contract law, lenders expect that borrowers' national governments bear residual repayment responsibility. Cross-border debt also typically involves exchange risk. If the debt contract is denominated in the lender's currency, then the borrower takes on exchange risk, and vice versa. A currency crisis arises when overseas payment obligations cannot be met at prevailing exchange rates. Most cross-border debt contracts are written in lenders' currencies, so international debt and currency crises often coincide.

From the inter-war period to the end of Bretton Woods

International debt crises have a history nearly as long as international debt flows. Bordo, Eichengreen, and Kim (1998) argue that financial integration has followed a U-shaped pattern: it was at very high levels until the early twentieth century, collapsed between the wars, and then has gradually returned to pre-1914 levels. The breakdown of cross-border financial obligations and the collapse of banking systems in the 1930s Depression generated numerous studies – notably those of Charles Kindleberger. His 1937 volume identified four motivations for cross-border capital movements, of which three are potentially destabilizing. He observes that shifts in perceptions about exchange-rate stability can lead to changes in motives and hence to capital-flow reversals. Kindleberger emphasizes the link between fear and capital flight, which he terms 'abnormal capital movements': "the same forces that induce people to attempt to expatriate their capital make them unwilling to lend freely at home" (p. 157). Abnormal capital movements pose a problem for borrower nations: "the balance sheet position of the country may be weakened if short-term liabilities are acquired in exchange for assets not readily available" (p. 157). The key

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to limiting fear and speculative pressure is a hegemonic global financial center willing and able to serve as an issuer of reserve currency and lender of last resort (Kindleberger, 1973, 1974).

The United States became the financial hegemon with the 1944 establishment of the Bretton Woods system of fixed exchange rates. Initially, tight regulation of banks combined with central-bank vigilance minimized worries about the destabilizing consequences of cross-border lending. Indeed, the 1950s Marshall Plan demonstrated the benefits of international lending.

By the late 1960s, financial crises emerged as regular characteristics of business-cycle dynamics (Wolfson, 1994). These events led Minsky to set out his financial instability hypothesis (1975), which asserted that agents are led by a combination of uncertainty and competitive forces to overvalue assets and become overleveraged in upswings; they take on excessive debt, which makes them financially fragile. Cash-flow precommitments for debt repayment reduce the economy's margin for error, eventually leading to a downturn.

The end of the Bretton Woods dollar-standard system in 1973 exposed nations and firms to exchange risk for the first time in four decades. With the reemergence of exchange-rate volatility, economists also renewed their attention to financial disruptions across borders. Kindleberger (1978) demonstrated that historically, Minskian financial instability often crossed national borders. Krugman and Taylor (1978) developed a cross-border Minsky model. Krugman's 1979 paper gave rise to a literature on currency crises. His "first-generation model" (FGM) suggests that if a nation's macroeconomic structure is unsustainable in the medium run, speculators can start a currency crisis in the short run by making payment demands that precipitate a currency collapse. If cross-border lending had occurred, international debt crisis follows. The Minsky/Kindleberger model suggests the opposite course of events: an international debt crisis can trigger a currency crisis. Which triggers which will depend on which market (currency or debt) moves first.

The Latin American debt crisis

These theoretical speculations were soon put to the test. The end of the Bretton Woods system coincided with the first of two oil price shocks in the 1970s. These events generated stagflation and high interest rates, forcing some bank borrowers into market-based financing. Banks had to seek out new loan customers. Meanwhile, national restrictions on international capital movements were lifted: floating exchange rates created "the overwhelming need to hedge against the costs that fluctuating exchange rates imposed upon the private sector." (Eatwell and Taylor, 2000, page 2). The banks found their new loan customers by recycling the revenues of oil exporters, especially to oil importing nations. A key component of this "petrodollar" recycling was large-scale bank lending to Latin America. In an era attuned to the "limits to growth" (Meadows, 1981), this lending seemed eminently justified by these nations' resources and growth prospects. As Citibank's Walter Wriston put it, countries don't go bankrupt.

Competitive pressures among megabanks, together with these lenders' "disaster myopia" (Guttentag and Herring, 1984) led to a rapid build-up of bank loans to Latin America. This lending momentum came to a stop when Mexico's August 1982 debt moratorium triggered the first international debt crisis in fifty years. The unprecedented nominal interest rates of this

period, combined with global stagnation, generated debt moratoria, renegotiations, and adjustment programs throughout Latin America.[1]

The Latin American debt crisis occurred just as principal-agent theory based on asymmetric information was coming into fashion, as were microfoundational explanations of macroeconomic phenomena.[2] Asymmetric information models of the credit market assert that borrowers may have informational advantages of two kinds over lenders: information concerning their competency, which affects their probability of success (their "type"); and their plans for using and repaying the loans they receive, which affect the likelihood of repayment (their "effort"). Lenders' optimal response is to ration credit and/or to use signaling mechanisms to screen borrowers.

The paradigmatic microfoundational model of the non-payment of Latin American loans is Eaton, Gersovitz, and Stiglitz (1986). These authors argue that debt repudiation is a feasible outcome because of the lack of a common contract law. They also accept Wriston's view, writing that "the resources of the debtor are likely to be adequate to repay the loans regardless." (page 485). The borrower country, conceptualized as a unitary agent, compares the relative utility of repaying its debt and of defaulting on its debt; as a rational agent, it defaults when the utility from default is larger. The debt "crisis" of non-payment is thus due to inadequate debtor "effort" (not "type"), that is, to realized moral hazard.. The solution is to increase the penalty for not repaying until it exceeds the value of the principal lent; and improve oversight of lending to developing countries. These authors conclude, "it is surprising that there has been as much lending to developing countries as there has been, not that there is not more" (512).

This model illuminates some aspects of the Latin American debt crisis, but obscures others. First, the underassessment of risk—"disaster myopia"—is dismissed out of hand, since lenders and borrowers are viewed as fully rational. Second, to operationalize rationality, credit risk is treated in a simplified way, ignoring its institutional and historical precedents (why didn't this crisis arise in 1979?). Third, the "enforceability" model also has overly simple depictions of the "agents" in this principal/agent game. On the lenders' side, the focus on one lender ignores the competitive pressures among banks. The borrowers, in turn, were not unitary agents with complete control over national wealth (their "collateral"); instead, they were firms, state enterprises, and political leaders, all with different objectives and time horizons. Modeling a unitary "borrower" precludes any attention to the evolving roles of various "sub-agents" in determining each borrower country's "moves."

Some alternative explanations addressed these limitations. As noted above, the "disaster myopia" explanation of overborrowing emerges once the postulate of rationality is relaxed. This view constitutes the microfoundational side of the Minsky/Kindleberger model. Indeed, Kindleberger developed his own account of what had happened (1989). Darity and Horn (1988) developed an overlending model in which developing nations are locked out of primary markets, except in periods of excess liquidity. The late 1970s and early 1980s were such a period; during that time the multinational banks "pushed" credit onto less-developed countries because of their

[1] Cline (1984, 1996) provides valuable overviews of this crisis. The academic literature on the Latin American debt crisis is surveyed by Eaton and Taylor (1986).
[2] The most important of these articles was Stiglitz and Weiss (1983).

competition for market share (Joint ECLAC, 1989). So the root of the Latin American debt crisis is uneven global development and market segmentation, not borrower recalcitrance.

Dymski and Pastor (1990a, 1990b), in turn, develop a model that replaces the "unitary agent" borrower-nation with several "players" in borrower countries. In their account, repayment to external lenders may be problematic because it requires the regressive redistribution of national income, threatening political leaders' legitimacy and also the continued worker effort on which national output depends. Repaying debt amidst a crisis can have longer-run costs in political legitimacy and economic productivity.

Other authors have developed alternative explanations that put this crisis into historical perspective. Vos (1994) observes that overlending tends to arise because of the oligopolistic nature of overseas lending markets, competitors' goal of enhancing their market share, and lenders' tendency to underassess risks. Most current LDC borrowers have defaulted in the past, more than once. Eichengreen and Lindert (1989) found that credit markets learn nothing: when lending resumes, former defaulters are treated the same as are those who made payments. This volume also finds (as does Vos) that lending tends to be clustered among certain borrowers, leading to undue concentrations of risk.

From the Latin American debt crisis to the East Asian financial crisis

Concern with the causes of the Latin American debt crisis soon gave way to scholarship on sovereign debt renegotiation and the pricing of securitized soverign debt. Aggarwal (1996) summarizes this vast literature and interprets it using bargaining models. This literature identified several problems associated with debt "overhang." Claessens and Diwan (1990) showed that an overhang of external public debt can generate illiquidity and disincentive effects. Making payments on existing debt can restrict investment and dampen growth, due to a liquidity shortage. This shortage arises, in turn, because expectations of a continuing future debt burden reduces incentives for current investment and dissuades external lenders from new financing. Cohen (1990) noted that when existing debt is offloaded by lenders into a secondary market (as happened from 1987 onward with the Latin American crisis), any primary-market (new) debt can be obtained only at the price prevailing in the secondary market. That is, lenders cannot be more optimistic than whichever wealth-owners already hold a borrower nation's pre-existing debt. Borrowers in this circumstance are subject to double market discipline.

By the end of the 1980s, Latin America itself was in the midst of its "lost decade," with stagnation accompanied by hyperinflation, devaluation, and regressive redistribution. Still, a reevaluation of international capital and credit flows to the developing world was underway. Sachs (1989), for example, asserted that developing-countries could avoid renewed debt crisis by adopting proper macroeconomic policies.

Large-scale financial flows resumed. Cross-border lending to East Asia increased: from $161 billion in 1985, to $204 billion in 1990, to a peak of $534 billion in 1997. Lending to the transition economies of Europe grew next: from $134 billion in 1990 to a high of $275 billion in

2000.[3] After 1990, cross-border lending to Latin America also recovered: the nominal value of claims on Latin America grew in every year except one (1999) after 1990—from $250 billion in 1990 to $746 billion in 2001.

The character of cross-border financial flows was evolving. Between 1985 and 1995, about 45 percent of cross-border claims on developing countries were held by banks; after 1995, bank share plummeted, reaching 20 percent in 2000. By contrast, banks' share of developed-country cross-border claims has climbed from 16 percent in 1985 to 33 percent in 2000. Banks' reduced role in cross-border lending was paralleled by an increasing role of non-bank private-sector lending, much of it taking the form of bonds.[4] Bank lending also shifted toward short-term commitments, and away from long-term lending. Foreign direct investment in developing countries has moved away from greenfield development and toward privatizations and portfolio investments.[5] A final significant shift involves the entry of many large overseas banks into developing economies (Dymski 2002)..

The Mexican "tequila" crisis of 1994-95, involving a run on the peso, came as a rude shock. Mexico had become a favored locus for capital inflows because of its financial liberalization, its improving macroeconomic fundamentals, and its investment prospects, all linked to the 1992 North American Free Trade Agreement. This crisis exposed and, to some extent, triggered many credit-related problems in Mexican banks; the Mexican government was forced to subsidize selloffs of leading Mexican banks to offshore owners. Since it was such a surprise, this crisis created substantial interest in what was termed the second-generation model (SGM) of currency crises (Obstfeld, 1994). The SGM showed that non-linearities in the behaviors and beliefs of agents in capital, credit, and currency markets could in themselves give rise to currency crises, especially when a nation's macroeconomic fundamentals fell into a "grey area."[6] The SGM thus raised the possibility, commonly observed in non-linear systems, that small changes in beliefs and fundamentals could unleash cumulative cascades and also set off contagion effects in other countries.

Reflecting on this episode, Calvo, Goldstein, and Hochreiter (1996) emphasized the need for policies protecting borrower countries—especially the maintenance of adequate reserves and provisions for orderly workouts. Stronger measures, such as exchange and capital controls, are rejected. Goldstein and Reinhart (1996), in turn, argued for "early warning systems" for investors and creditors. Both suggestions anticipate that enhancing information and guarantees will suffice to limit contagion and bandwagon effects.

This calming prognosis was amplified in a World Bank report on capital flows to developing nations (World Bank, 1997), which reviews both the 1980s Latin American debt crisis and the 1994-5 Mexican currency crisis. This report admits that financial opening and

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[3] These statistics were calculated by the author from data series published by the Bank for International Settlements, and are available on request.

[4] The shift to bonds represents a return to the historical pattern of the 1920s (Vos, 1994).

[5] For Latin America and the Caribbean, see ECLAC (2001).

[6] Masson and Agenor (1996) suggest the peso crisis was generated more by SGM-like than FGM-like factors.

cross-border financial flows entail macroeconomic and financial risks, but argues that these risks are manageable and are outweighed by prospective efficiency and output gains. This volume takes as given that "there is no alternative" to financial liberalization: developing nations' governments can monitor and oversee financial risk; but blocking financial opening would only distort incentives and worsen riskiness in the longer run.

A more troubling interpretation based on Minsky was available, though it did not sway many in this period: the volatility and reversibility of capital flows make economies receiving systematic capital inflows increasingly vulnerable to bad news, downturns, or shifts of investor opinion. So the Mexican crisis is not anomalous, but instead prefigures problems in other nations receiving capital inflows. FGM models of currency crisis indicated that speculators are expected to attack the currencies of nations with non-viable macroeconomic structures. Having current-account deficits is one signal of such "non-viability." However, these deficits are often linked to capital-account inflows. This happens, for example, when a nation favored by overseas investors has many unfinished investment projects, has a politically influential (and financially flighty) upper class interested in conspicuous consumption, and must import many intermediate and consumer goods. But then, virtually any developing nation that becomes a favored offshore investment/loan target will, by virtue of accepting capital inflows, create the macroeconomic circumstances that will later justify speculative runs on its currency.

The Asian financial crisis and its aftermath

East and Southeast Asia became favored venues for cross-border debt flows through the 1990s, as noted above. The Asian financial crisis, like the tequila crisis, was a surprise: as Obstfeld (1998) wrote, the free flow of capital across border should induce macro discipline and reduce the likelihood of policy mistakes. Instead the opposite seemed the case, as this crisis hit the global financial system like an iceberg. The slow-motion detonation began in Indonesia and Thailand, then moved northeasterly to South Korea and the Philippines; longer-run effects then followed, including growth slowdowns in Taiwan, price declines in global equity markets, and speculative attacks on Brazil, Russia, and Turkey.

The Asian crisis has unleashed a vigorous and unresolved debate in the realms of both policy and economic research. Turning first to policy, the International Monetary Fund (IMF, 1998, Guitian, 1998) argues that while borrower nations caught in this crisis may have had sound macroeconomic strategies, they were vulnerable because of their improperly supervised banking systems. Specifically, developing countries are especially vulnerable to financial instability because they lack a fully-developed set of financial instruments and institutions: information on borrowers is incomplete, so overseas' investors uncertainty is higher than elsewhere (Knight, 1998). The solution is tighter regulation and further financial-system development and opening.

The World Bank (1999) takes a far more skeptical view of market forces, rethinking some of its positions in World Bank (1997). This report attributes the global financial crisis in the developing world not just to weaknesses in domestic financial systems and oversight but also to international capital market imperfections, which can lead to contagion effects, liquidity crises, and panics. A rethinking of global financial architecture is advocated. Other policy voices have gone even further. For example, UNCTAD (1998) argues that slow global macroeconomic

growth combined with unstable "hot money" flows are at the root of the East Asian crisis. UNCTAD (2000, Chapter 4) challenges both the appropriateness of the IMF's orthodox policies and the advisability of financial liberalization.

This crisis also has profoundly shaken economists' ideas about international debt crises. For neither the FGM or the SGM fit the East Asian case (Bustelo, 1998),and economists had before 1998 frequently cited the Asian economies' success in using government-led arrangements to asymmetric-information-related incentive problems (Stiglitz and Uy, 1996, and Stiglitz, 1996) and achieve high growth rates (Singh, 1996). Indeed, one of the first reactions to the Asian crisis, by Krugman (1998), argued that rampant moral hazard in Asia's state-controlled banking systems was at its root cause.[7] Numerous analysts (Chang, Park, and Yoo, 1998, Crotty and Dymski, 1998, Wade, 1998, Wade and Veneroso, 1998) objected that external factors—such as the stagnant global macroeconomy, unstable global financial markets, the power of Wall Street, and IMF policies—had played the key role. Stiglitz himself reacted immediately in a speech (Stiglitz, 1998) defending the prerogative of developing nations to regulate markets and maintain independent (including non-neoliberal) strategies (and see Stiglitz, 2000). Kregel (1998) shows that the Asian crisis can be understood as an outbreak of Minskyian financial instability. Corsetti, Presenti, and Roubini (1999) acknowledged that speculation and contagion effects were important, but asserted that moral hazard and poorly-designed economic policies triggered these effects. Clearly, there is no consensus here.

The Asian crisis launched much new empirical and theoretical research, much of it focused on the empirical importance of FGM and SGM factors. This research has verified the empirical significance of contagion effects. For example, Demirgüç-Kunt and Detragiache (1998) find that financial liberalization increases the probability of banking crisis, and that financial crises' contagion effects are large and costly. And since much of the lending in Asia involved intermediation by domestic banking systems, some research has focused on this link in the international lending chain. For example, Hardy and Pazarbasioglu (1998) find that variables capturing the vulnerability of the banking and corporate sector predict subsequent crises, but macroeconomic variables do not. An historical investigation by Williamson and Mahar (1998) also finds that financial liberalization and financial crises coincide.

As in the years after the Latin American crisis, debt repayment has attracted attention. Krueger (2002) points out that debt repayment has to be rethought because of the shift away from lending by a few large banks, and toward non-bank financing of cross-border debt. There are also more complex interactions among sovereign and private-sector obligations; indeed, sovereign bankruptcy has even been discussed (White, 2002).

The continuing experiences of debt and currency crises (Brazil, Russia, and so on) have perhaps affected researchers. Increasingly, even work by market-oriented economists comes to

[7] Krugman (1994) previously registered his skepticism of the Asian "model." Chang (2000) is a thoughtful rejoinder to the idea that moral hazard characterizes this model. Bustelo, Garcia, and Olivié (1999) is the most comprehensive review of the literature on the Asian financial crisis.

skeptical conclusions about the liberalization of financial flows.[8] For example, Espinosa-Vega, Smith, and Yip (2000) argue that developing economies may grow faster if they impose some restrictions on cross-border capital movements; and Calvo (2000) demonstrates that opening up derivatives markets for developing economies can reduce economic welfare. Agénor's survey (2001) finds that financial integration is generating many efficiency losses: undue concentration of lending, while some nations are credit-starved; procyclical access to global financial markets; and procyclicality in short-term flows.[9]

Because principal-agent conflicts and asymmetric information exist at several levels of the global economy, models often show that any policy which fixes one set of problems may generate others. For example, Vives (2002) argues that while dollarization and short-term debt exert discipline over borrower nations' macroeconomic policies, these measures may lead to excessive liquidation of otherwise viable projects. Chang and Majnoni (2002), in turn, show that whether contagion effects or fundamentals generate financial crises (that is, whether FGM or SGM factors dominate) depends on whether the fundamentals are "weak."

This research by market-oriented economists has reached no conclusion. Since these economists use Walrasian equilibrium as an index of how markets are *supposed* to work, they are reluctant to drop it as a benchmark (Crotty and Dymski, 1998). At the same time, recent experience made them uneasy about this reference point. In consequence, debate proceeds uncertainly, with participants sometimes talking past eachother. An example is banks' self-assessments of risk: the notion that regulatory standards are inadequate guides to bank safety because of proliferating off-balance sheet commitments and regulatory capture. Barth, Caprio, and Levine (2001) and Barth and Honohan (2002), among others, advocate cross-border mergers and bank self-assessment of risk as means of promoting financial and macroeconomic stability. But Szegö (2002) has just edited a special issue of *Journal of Banking and Finance* whose articles demonstrate the infeasibility of bank risk self-assessments.[10]

Economists who do not operate from neoliberal premises increasingly regard cross-border debt crises as one element of a global trap for developing nations. Eatwell and Taylor (2000) point out the inescapability of the 'trilemma,' wherein liberalized capital markets, a fixed exchange rate, and an independent monetary or fiscal policy are not mutually consistent. In the neoliberal story, in which an "alert private sector chastizes an inept government" (p. 106), the trilemma can be avoided because floating exchange rates are a viable means of achieving equilibrium (Reinhart, 2000). When the viability of floating rates is rejected, then the trilemma looms as an inescapable obstacle to development, once financial markets are liberalized. Crises cannot be traced to inadvisable fiscal or monetary policies in any simple way. Eatwell and Taylor

[8] This distinction between 'market-oriented' and 'market-skeptical' economists is arbitrary; in practice, there is a continuum of opinion among economists about how well markets work.

[9] Interestingly, these characteristics of contemporary cross-border lending, which reflect lenders' risk aversion, are precisely those of which Kindleberger warned in 1937.

[10] For example, Daníelsson argues "since market data is endogenous to market behavior, statistical analysis made in times of stability does not provide much guidance in times of crisis. ... the empirical properties of current risk forecasting models are found to be lacking in robustness while being excessively volatile." (2002, Page 1273)

argue that both the public and private sectors generate positive financial feedbacks. They sketch out what they term a Frenkel/Neftci cycle. It begins with capital inflows, which spill over to the macroeconomy via the financial system. As the current account worsens, the interest rate is raised. Financial fragility and risks rise, with "fiscal deficits and moral hazard did not play a significant role" (149).

So under capital inflows, the trilemma takes a special form: as noted, the very fact of these inflows creates the preconditions for a panic. In many cases, domestic policy cannot erase the problem. Uncovered-interest parity becomes a trap for nations with continuing external debt obligations (such as Brazil).[11] Leaving domestic interest rates at current levels will do nothing to stop creditors who are pulling their funds away. But widening the world/local interest-rate spread to hold funds or attract new capital only signals the greater likelihood of exchange-rate collapse. Under the current rules of the game, there may be no alternative to domestic stagnation and regressive redistribution as the price of inflows of overseas capital and credit.

Conclusion

Economists have suggested five answers to the question of what causes international debt crises: perverse macroeconomic policies; problems in cross-border creditor-debtor contracts; problems in creditor/debtor relations within borrower countries; perverse interactions among cross-border creditors; problems in the global structure of cross-border financial flows. These five causes lead to five parallel responses to the question of what should be done: fix macroeconomic policies; fix the rules governing cross-border financial contracts; fix the rules governing creditor/borrower relations within borrower countries; improve information; or fix the rules governing cross-border financial flows in the global economy.

In the Latin American debt crisis, economists who were broadly sympathetic to market forces focused on the first two causes (and solutions), while those skeptical of such forces emphasized the fifth. In the Asian crisis, market-oriented economists emphasized the third and fourth factors, since the first two were largely resolved. Market skeptics, whose ranks increased in relative terms, again pointed to the fifth cause, the overall structure of the global system. Meanwhile, international debt crisis is becoming continuous for developing nations, not episodic.

Despite universal acknowledgement of the high cost of international debt crises, these are likely to recur, once cross-border lending recovers again, as it has before. For economists who operate on the premise that "there is no alternative" to market-driven flows of credit and capital, these crises present opportunities for fine-tuning. This is the only way of moving ever closer to the idea of economic efficiency set out in the textbooks. But for economists who regard the structure of global financial flows as flawed, the costs of each crisis episode are cumulative: each crisis leads to more international and intranational inequality and to the further dismantling of national development-oriented institutions (Baker, Epstein, and Pollin, 1998). The shape of the alternative is twisted ever more, as are the odds of reaching it, as each new debt crisis unfolds.

[11] Under uncovered interest parity, the domestic interest rate should in equilibrium equal the world interest rate plus any expected currency devaluation. This is a commonly cited criterion for assessing the soundness of national economic policy.

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