# Why Do Currency Crises Recur?

## Lessons from Argentina and Turkey

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### Key Points

- Argentina and Turkey experienced currency crises in 2018, having also had crises in 2001. Why do crises recur?
- There are three generations of model that help to explain in theory why currency crises occur, although in practice the theories need to be amalgamated.
- The recurrence of currency crises implies that either appropriate lessons have not been learnt or, for some reason, countries have been unable to convert learning into actions.
- Key lessons are first, avoid excessively large fiscal deficits, rapid credit creation and debt accumulation, and second, reduce economic and financial vulnerability and create better insulation from external shocks.
- Empirical analysis shows that the causes of the crises in Argentina and Turkey in 2018 were different from those in 2001.

## Introduction

Economic crises have been a feature of the world economy. They can take various forms. They may affect the banking and financial system. They may affect the value of the currency. They may affect the economy as a whole and be reflected in the poor performance of conventional macroeconomic indicators such as economic growth, inflation and employment. The different types of crisis may go together, be inter-connected, and occur fairly simultaneously, or they may occur independently of one another.

In 2018, a number of countries encountered crises of one sort or another. Most notorious and extreme amongst them has been the crisis in Venezuela. However, severe crises have also occurred in Argentina and Turkey. In both of these countries, the value of the domestic currency fell precipitously, qualifying them as currency crises.

Neither Argentina nor Turkey are strangers to currency crisis. In writing a book on the topic in the early 2000s, Eichengreen (2002) chose their 2001 crises as his two in-depth case studies. A natural question that follows on from this is 'why do currency crises recur?' Are lessons not learnt and acted upon? Has experience with currency crises not provided a better understanding of why they happen and therefore how to prevent them? Why do some countries appear to be serial offenders with respect to currency crises? What determines the time lapse between crises? And does the international financial system possess features that make currency crises likely?

This paper examines these questions. It considers the observed tendency for crises to happen repeatedly in some, but not all, countries.[1] In doing this, it draws on the existing genres of currency crisis theory and examines the extent to which the inherited theory helps to explain the recent crises in Argentina and Turkey. However, these examples are used to illustrate more general factors that influence the recurrence of currency crises.

The paper is organized in the following way. The second section provides a brief summary of existing currency crisis theory as a background to what follows. The third section explores how these ideas might help to explain why crises may recur. The fourth section applies this analysis to the crises in Argentina and Turkey in 2018 and compares them with the earlier ones in these two countries in 2001. It seeks to identify the similarities and dissimilarities between the two crisis periods. The fifth section concludes by considering the policy implications that follow on from the analysis.

[1] Meyer et al. (2018) provide an empirical analysis of the extent to which a contemporary crisis affects the probability of future ones. They conclude that currency crises and crashes generally reduce the likelihood of later crises over a short to medium period, using panel logit models. They find some evidence of 'learning', particularly with respect to reserve adequacy and exchange rates, but weaker evidence of learning with respect to structural fiscal deficits and credit growth.

## Why Do Currency Crises Happen? Inherited Theory

Rather than assembling a long litany of related factors that may contribute to currency crises, theory has endeavored to organize them into three basic models. These have evolved over time and have represented a response to the actual currency crises that have occurred.[2] They have tended to be formulated retrospectively in order to explain crises that were largely unpredicted on the basis of previous theory.

The first generation of currency crisis model emphasizes domestic economic mismanagement, particularly of fiscal policy. In this model fiscal deficits are financed by monetary expansion, which leads to inflation and an appreciation in the real exchange rate that reduces competitiveness. This results in a current account deficit that is initially financed by running down international reserves in an attempt to defend the nominal value of the currency. Eventually, however, the loss of reserves causes a crisis of confidence. This will be particularly pronounced where there is little perceived attempt to correct the underlying macroeconomic disequilibria. Capital flight then forces the government to devalue the exchange rate; there is a currency crisis.[3]

The second-generation model does not emphasize fiscal mismanagement. Here, other factors affecting aggregate demand and supply cause the pegged exchange rate to become overvalued. The pegged rate becomes inconsistent with the simultaneous achievement of internal and external balance. Viewing the inconsistency, there is a speculative attack on the currency. Whereas the government's initial response is to run down reserves and raise interest rates, this further damages internal balance; there is recession and rising

[2] Excellent reviews of the theory may be found in Eichengreen (2002) and Claessens (2005). Economists have discussed what it is that causes crises before there became a tendency to discuss currency crises in the context of the three generations of model. See for example the 'classic' contribution by Kindleberger (1978).

[3] Key contributions to the first-generation model are Krugman (1979) and Flood and Garber (1984). The model was developed in large measure as a way of explaining the currency crises that had been experienced in Latin America. In many Latin American economies, fiscal deficits appeared to be almost endemic, and vicious cycles of rapid inflation and devaluation were not uncommon. Other research has shown how the relationship between fiscal deficits and exchange market pressure differs as between Latin America and Asia (Bird and Mandilaras, 2002). See also Bird and Mandilaras (2008) for an empirical investigation of the link between debt and foreign exchange market pressure in Latin America. Frankel and Rose (1996) examine the relationship between debt and currency crashes. They find that the incidence of currency crashes is significantly related to output growth, the rate of change of domestic credit and foreign interest rates. A low ratio of foreign direct investment (FDI) to debt is consistently found to be associated with a high likelihood of a currency crash.

unemployment. Such developments enhance the discrepancy between internal and external balance and merely tend to strengthen the speculative attack that is motivated by the belief that the peg will at some point have to be abandoned. Eventually reserve loss and political opposition to high interest rates and deteriorating domestic economic performance force the government to do just this. There is a precipitous fall in the currency's value, or, in other words, a currency crisis.

However, there are other important elements to the second-generation model. These relate to the concepts of 'vulnerability', 'triggers' and 'multiple equilibria'. The inconsistency between internal and external balance makes the economy vulnerable to speculative attack, with the degree of vulnerability depending on the degree of inconsistency. The vulnerability will be more strongly exposed where there is a 'shock' that acts as a trigger to the crisis. This may be economic or political in nature. It may be domestic or external. And it may affect the current account or the capital account. Speculators respond to the exposed vulnerability by mounting an attack on the currency. The attack may 'succeed', leading to devaluation, or it may be effectively repelled. There are therefore multiple equilibria, and a crisis is not inevitable.

The second-generation model makes a distinction between currency crises that are reflected in enhanced exchange market pressure characterized by falling reserves and rising interest rates, and those that result in a large fall in the value of the currency or a 'currency crash'. Judged in this way, it follows that all currency crashes involve currency crises but not all currency crises involve currency crashes.[4]

Early versions of the second-generation model focused on vulnerability in terms of macroeconomic performance and policy, but a more recent version

[4] Key contributions to the formulation of the second-generation model include Obstfeld (1986, 1996). The model has in particular been applied to explaining the crisis in Europe's Exchange Rate Mechanism in 1992. Claessens (2005) argues that whereas the first-generation model is caused by weak fundamentals, the second-generation model is not, but instead he stresses the self-fulfilling expectations of market participants. However, the expectations are likely to be based on an assessment of vulnerability. Occupying a location in the zone of vulnerability may therefore be seen as a precondition for a second-generation currency crisis. Almahmood et al. (2018) provide evidence to show that, while they may result in a currency crisis, the majority of speculative currency attacks do not succeed in leading to devaluation. For other attempts to provide models of currency crises see, for example, Kaminsky et al. (1998), Aghion et al. (2000), Dooley (2000) and Chang and Velasco (2001).

would put much greater emphasis on weaknesses in the domestic financial sector and excessive indebtedness.

In this respect, the newer versions of the second-generation model share features with versions of the third-generation model that emphasize the capital account and problems associated with the domestic financial system. In this third model, currency crises are usually preceded by a surge of capital inflows motivated by expected rates of return that are high relative to those available elsewhere in the world. However, for many countries international capital (particularly bank lending and portfolio investment) is highly mobile, volatile and can be affected by fairly rapid and discrete changes in market sentiment. Thus, if interest rate differentials narrow, or default risk is perceived to rise, or a depreciation in the domestic currency is seen as being more probable than previously thought, capital inflows can suddenly stop or reverse. The narrowing of interest rate differentials may be the consequence of increased rates elsewhere in the world. Default risk may rise if the domestic banking and financial system has engaged in excessive and insecure domestic lending, with this being reflected in more defaults and an increase in non-performing loans.

Whatever the precise cause of the perceived decrease in the (relative) expected rate of return, capital outflows will put downward pressure on the exchange rate. This may initially be resisted by governments that intervene to support the currency, and then seek to sterilize the effects of their intervention through open market policy. However, reserves are finite and there will also be limits on sterilization. Even without such limits, sterilization will keep the rate of interest lower than it would otherwise have been, and this may stimulate further capital outflows. With an expected devaluation also encouraging capital to flow out, the crisis is likely to culminate in the devaluation that has become expected; there will be both a currency crisis and a currency crash. A sharp exchange rate depreciation may then make economic performance worse if it carries with it significant

adverse balance sheet effects, and if it results in faster inflation. The outcome may then be stagflation.[5]

A difficulty with the currency crisis models summarized above is that they overlap. There is no sharp demarcation between them. The factors that they individually stress are in fact inter-related with causality often running in more than one direction. Having said this, in the next section we consider why crises that can be seen as falling within a particular crisis model may recur. Then, in the following full section, we examine the potential causes of the recent crises in Argentina and Turkey, drawing on the three currency crisis models as well as our discussion of the factors influencing the recurrence of crises.

## Why Do Currency Crises Recur? Theoretical Considerations

There is an easy answer to the question why currency crises recur, but it is rather unhelpful. Crises may recur because the circumstances that created an earlier one are recreated. In this section we explore and develop this simple observation in the context of the three generations of currency crisis model. However, we also need to note that while one crisis may fall into the first-generation category, a subsequent one may fall into second- and/or third-generation categories.

### (i) Insights from the first-generation currency crisis model

Taking the first-generation model, the recurrence of currency crises means that fiscal deficits are again allowed to expand, monetary policy is allowed to loosen, current account deficits are allowed to get bigger and reserves are allowed to run down. But why should this happen? Do governments not learn from their previous mistakes? Or, if they learn, why do they not act in a way that avoids future crises?

[5] Bird and Milne (1999) provide an overview of the causes of the Asian crisis in 1997/98 within the context of which the third-generation model was formulated. Bird and Rajan (2001) examine the role of the financial sector in more detail. For another explanation of the Asian crisis and the ways in which similar crises may be avoided, see Goldstein (1998).

A number of factors may come into play. An underlying assumption is that policy formulation is not a random exercise. Governments are making conscious or subconscious calculations concerning the consequences of their actions. The consequences will be both economic and political and will have different time profiles. If governments once again adopt certain stances with regard to the design of macroeconomic policy that contributed to previous crises, there must be an explanation as to why they do. Knowing that large fiscal deficits and excessive debt accumulation may increase the probability of future crises does not necessarily mean that the government will be able to avoid them.

First, it may seem reasonable to assume that the impact of a previous crisis on the design of current macroeconomic policy depends on the costs of the crisis and the time that has elapsed since it happened. Recent and severe crises may be expected to exert a stronger impact on current policy than crises that are distant and that were less severe. There will be an element of 'disaster myopia'. This psychological phenomenon can be seen in many areas of human activity. Drivers encountering an accident on the freeway will tend to drop their speed for a time. For how long their behavior is affected is likely to depend on the seriousness of the accident they encountered and how long ago it was that they saw it. Policymakers are probably not exempt from such behavioral characteristics; except, in their case, it is the economy that they begin to allow to go too fast and to overheat. Memories of crises fade over time.

Second, institutional memory may, in any case, be impaired by a change in government. New governments may therefore repeat the mistakes of old ones since they will be under the same pressures to retain short-term political approval. There will be an element of time inconsistency that all governments encounter. There is a natural incentive for politicians to opt for short-term political approval. Short-run economic benefits will be weighted more heavily than longer-term costs. There is a well-known political cycle where governments tend to relax macroeconomic policy before elections and then implement tighter policies after they have been re-elected. Even if the opposition party wins the election, there may be a period of greater economic conservatism since this can be blamed on the outgoing administration. This

means that disciplined macroeconomic policy may not last permanently. In advance of a subsequent election the new government may also engage in over-expansionary policies. Populism is, by definition, more politically popular than fiscal conservatism, but it is also more likely to lead eventually to a currency crisis. New governments may also believe that they can handle similar situations better than the old ones. They may believe the mantra that 'this time it's different'. A crisis then shows them that it is not.[6]

Third, it is misleading to assume that there is an agreed policy algorithm that guarantees that crises will be avoided. If there was such a formula then governments would merely need to make sure that they followed it. However, no such formula exists. There are deep-seated and fundamental disagreements about the effects of fiscal, monetary and exchange rate policy. These may reach the point where even the direction of the effects is in dispute. At the very least, there may be disagreement about their size. In these circumstances a situation may arise where an incumbent government has learned a qualitative lesson from a prior crisis; excessively large fiscal deficits and over-indebtedness are likely to result in a crisis. But it will still be left with the problem of calculating the point at which the fiscal deficit becomes excessive and the point at which the debt threshold is passed. There is little reason to believe that these will be exactly the same as in previous crises. Calculations of fiscal space and debt thresholds will, in part, depend on future economic growth, future export performance and other external factors, all of which are difficult to forecast with any degree of precision. On top of this, if there is a more benign global economic outlook, this may be used to justify a degree of fiscal relaxation. If the reality turns out to be less benign, then the fiscal relaxation may retrospectively turn out to have been too much. Given all of the uncertainties, governments are inevitably dealing with probabilities, and they may simply miscalculate them; the recurrence of crisis provides the evidence of such miscalculation.

Fourth, if there is the danger that governments repeat policy mistakes because they encounter the same political pressures that led to the policy

[6] This leaves to one side the turnover of political leaders and decision makers. The people involved at the time of a previous crisis may have moved on. A new generation may now be in power. They may feel that they are superior to and know better than their predecessors.

mistakes being made before, then the recurrence of crises will depend on the extent to which policy choices are taken out of the political arena and handed over to technocrats. Central bankers may have longer institutional memories than politicians and may in any case take a longer-term view when it comes to the design of macroeconomic policy, as well as one that is largely exempt from political considerations. Thus it might be anticipated that crises are less likely to recur where decisions with regard to at least some aspects of macroeconomic policy are made by technocrats.

A particular example of this is central bank independence. Left in the hands of politicians, the electoral cycle and the pressures to pursue populist policies might be expected to result in bouts of inflation that then contribute to currency crises. With a credibly independent central bank that is pursuing a policy of inflation targeting, these bouts of inflation may be better avoided. Inflationary expectations will be more effectively anchored, and currency crises therefore become less likely to recur. However, governments may be reluctant to delegate policy formulation to technocrats precisely because they want to retain the ability to use it for political purposes.

Politics may also be important in other ways. A fifth factor influencing the recurrence of crises relates to special interest groups. These may act as veto players and block economic reform. During a crisis and its immediate aftermath, the bargaining power of special interest groups may weaken. Indeed, they themselves may decide that they gain more from backing policy reform that helps to aid recovery than from staunchly resisting any reform that may reduce the rents they receive. As recovery occurs, however, the old special interests may begin to reassert themselves. Reform of the tax system or of the banking system, for example, may be delayed or halted, and this may mean that it becomes harder for governments to control the fiscal balance and the rate of credit creation.[7] As a consequence of the microeconomics of rents and the politics of special interest groups, it may become progressively more difficult to avoid the macroeconomic

[7] Amri et al. (2017) discover that banking crises are often generated by rapid credit creation. They also find that such crises tend to discipline credit creation following a banking crisis. The recurrence of crises suggests, however, that the discipline is not maintained or that other factors combine to cause a subsequent crisis.

disequilibria that, over time, culminate in the next crisis. How long this process takes helps to determine the length of time between crises.[8]

Sixth, up until now, we have implicitly assumed that governments are unified actors. This may be far from the truth. With a non-unified government, the power of individual elements within it may change. During a crisis and its immediate aftermath, the finance ministry and treasury department may exercise control. Over time, however, their influence within the government may wane and spending ministries that are opposed to strict fiscal conservatism that limits their budgets may become relatively more powerful. This may then affect the likelihood of a subsequent crisis. Thus it may be that there is no real learning from the crisis, but instead an evolving distribution of power and influence within the government. Each element may possess its own fairly time-invariant point of view, but different points of view within governments may dominate decision making at different times. Spending ministries may wield more power in non-crisis periods.

It may also be that the power exercised by different ministries within a government is affected by the involvement of outside agencies, with this in turn depending on contemporary economic performance. Thus, in the midst of a crisis, the International Monetary Fund may exert a significant influence over the design of macroeconomic policy under the auspices of an IMF program. This influence may continue to be felt for a time even after the program has come to an end. However, without the Fund's further input, there may be less incentive to implement tight fiscal and monetary policies. Access to international capital markets may have been restored, so that there is a less strict financing constraint. Spending ministries may, as a consequence, gain more influence within the government, and as a result macroeconomic stringency may be relaxed with this eventually culminating in another crisis.[9]

[8] A standard reference on veto players is Tsebelis (2002). Arpac et al. (2008) report empirical evidence to show that veto players play a significant role in affecting the implementation of economic reform under the auspices of IMF programs.

[9] For a further discussion of the role of institutions in affecting the incidence of currency crises see Shimpalee and Breuer (2006). Their findings confirm that both institutional and economic factors affect the probability of currency crises, as well as the impact of the crises on output. In general, their strongest results show that corruption, a *de facto* fixed exchange rate regime, weak government stability and weak law and order increase the probability of a currency crisis. They find mixed evidence that deposit insurance, the removal of capital controls, a lack of central bank independence, financial liberalization and civil law increase the chance of a crisis.

The incentive to maintain macroeconomic stringency may depend on the perceived costs of IMF involvement. Where there is extreme opposition to involving the IMF, governments may be more likely to attempt to maintain policies that make a crisis less likely. However, there is a Catch-22 here. It is likely to be governments that are more strongly opposed to the policies of macroeconomic 'austerity' and economic liberalization, policies conventionally associated with the IMF, that will also be more strongly opposed to the involvement of the IMF. It may therefore be precisely those countries that are more strongly opposed to the involvement of the IMF that are more likely to encounter crises and end up borrowing from the Fund and having to implement Fund-favored policies. However, they are unlikely to exhibit ownership of these policies and will cease implementing them as soon as they can. There will then be a cycle of crisis, recovery based on macroeconomic stabilization, increasing macroeconomic disequilibrium as stabilization policies are relaxed, followed by a further crisis. The time lapse between crises will depend on how long each of these stages lasts.

Finally, but importantly, some of the issues raised above may themselves depend on the political system in place; whether it is democratic or authoritarian. It might be supposed that voices raised in opposition to tight fiscal and monetary policy would be louder and more effective in a democratic regime. This would imply that a recurrence of currency crises is more probable in such a regime. The mirror to this would be that authoritarian regimes would be more effective in enforcing macroeconomic stabilization. However, such superficial conclusions may be misplaced. In a democratic society a government with a strong majority and charismatic leader may be able to maintain a program of stabilization and reform for a protracted period of time. Where economic stabilization is a precursor to sustained economic growth and continuing macroeconomic equilibrium, further crises may be avoided. Meanwhile, authoritarianism may emerge from a period of populism; authoritarian regimes may seek to stay in power by relaxing macroeconomic stringency and appearing to pursue a populist agenda. This may then culminate in a crisis.

**(ii) Insights from the second-generation currency crisis model**

Whereas the first-generation model involves an inexorable momentum towards crisis, the second-generation model does not. Economies are vulnerable to a crisis but there is no certainty that one will occur. The probability of a crisis depends on the degree of vulnerability and on whether or not there is a shock that exposes the vulnerability and triggers a crisis. Vulnerability is associated with the extent to which there is a fundamental disequilibrium in the real economy and an inconsistency between internal and external objectives, although, as noted above, shortcomings in the domestic financial system and the amount of external debt, particularly in relation to international reserves, are also likely to affect vulnerability. Speculative attacks that are motivated by an economy's vulnerability are also a key element of the second-generation model, although it is not certain that such attacks will lead to a sharp depreciation in the value of the currency that is attacked.

In the second-generation model, a number of factors may therefore be significant in determining whether or not crises recur.

Recurrence is more likely where a country's areas of vulnerability remain uncorrected or are recreated, or where other areas of vulnerability arise. Even where vulnerability is reduced, it may not be eliminated altogether; severe external shocks, then, may still cause further crises to happen. Since the role of speculation is important within the second-generation model, the response of speculators to the current economic and financial environment will also influence the incidence of crises. It is feasible that the actions of speculators lead to a currency crisis in circumstances where they previously had not. This could be where governments are less prepared to repel the attack because reserves are lower, interest rates are already higher, or the government's perception is that a sharp currency depreciation will cause fewer political problems than would a tightening of monetary policy.[10]

[10] Amri and Willett (2017) discuss how the choice of policy will be influenced by political factors in the context of currency crises. More specifically, Bird and Willett (2008) analyze why governments may be reluctant to devalue, and Walter and Willett (2012) examine how the changing configuration of the perceived political costs of economic policies will make tight monetary policy an increasingly unattractive alternative to devaluation.

**(iii) Insights from the third-generation currency crisis model**

Where the second-generation model is modified to accommodate vulnerability from the domestic financial sector, a distinguishing feature of the third-generation model is largely lost. This model focuses on the capital account and the return/risk combination that explains capital movements. It accentuates how changes in relative interest rates and risks of default, as well as perceived exchange rate risk, lead to capital flows that then create currency crisis conditions. Perhaps the remaining distinguishing feature of the model is that it shows how a crisis may reflect the boom and bust nature of international capital flows. From this angle, a crisis may recur where, following a previous one, markets have become over-optimistic and there has been a capital surge that then results in rapid credit expansion. This goes on to contribute to a subsequent crisis.

**(iv) An overview drawing on all the models; a possible scenario**

The three generations of currency crisis model are not mutually exclusive. Crises may not fall conveniently into one theoretical box. In explaining why they recur, it may therefore be necessary to draw on all three generations of model. Just because one crisis seems to be explained well by one particular model, it does not mean that the next one will be. Since, as a former Managing Director of the IMF observed, 'crises do not come out of a clear blue sky', all crises are likely to involve factors that affect a country's vulnerability, combined with a trigger that exposes it. Vulnerability is not a discrete phenomenon and countries can become progressively more and progressively less vulnerable. Moreover, vulnerability can emanate from various sources. Shocks or triggers can be large or not so large, and again can come about in various ways. This means that not only do crises arise from different sources, but that their recurrence may be explained by different combinations of factors. Accurate assessments of vulnerability may allow the probability of crises to be estimated, but it is in the nature of shocks that they are surprise events that are difficult to predict.

In the rest of this subsection we suggest one potential hypothetical scenario that explains the recurrence of a currency crisis and draws on all

three currency crisis models. In the following full section we move on to look at the recurrence of crises in Argentina and Turkey as specific cases.

In our hypothetical example, an initial currency crisis leads to a change in macroeconomic policy. Tighter fiscal and monetary policies are adopted and there is a realignment of the currency's value. In the midst of the crisis, special interest groups possess less bargaining power, and technocrats and factions of the government in favor of macroeconomic reform have more. The political balance of power changes. With the change in policy direction, and probably as a result of it, many indicators of economic performance improve, but the rate of economic growth may be relatively modest. Increasingly, the policies of macroeconomic stabilization may become politically difficult to sustain. Special interest groups reassert their influence and there are political pressures both to loosen fiscal constraints and to lower interest rates and 'go for growth'. Politicians in favor of expansionary policies may take greater control over the design of macroeconomic policy. With a build-up in aggregate demand, government and corporate borrowing increases, as does external indebtedness.

Just as politicians may fail to learn from the policy mistakes of predecessors, or be constrained by political pressures from allowing those lessons to be acted upon, markets may also fail to learn, except in the relatively short to medium term. In tranquil times they tend to underestimate risks and therefore over-lend. In the midst of a crisis they may experience a wake-up call, but this does not necessarily prevent them from going back to sleep in the longer term.[11]

With the economy beginning to overheat, inflation accelerates, the current account weakens, the exchange rate falls and international reserve holdings diminish. As a consequence of increasing indebtedness, the domestic financial system becomes more fragile. In short, the economy becomes increasingly vulnerable. However, it may not immediately succumb to a further crisis. A more accommodating global economic environment, with rising commodity prices and low interest rates, may conceal some of the vulnerability. But things do not carry on like this forever. Eventually, there

[11] Deverell (2009) provides a useful conceptual framework for analyzing the way in which crises may induce learning.

are external shocks in the form of an adverse movement in the terms of trade, an increase in global interest rates, a bad harvest that affects export earnings or some form of increased political instability; these act as a trigger. Foreign investors lose confidence and there is a capital outflow that puts further pressure on the exchange rate which begins to fall precipitously and in spite of sharp increases in interest rates. A currency crisis therefore recurs.

Does this hypothetical scenario have any similarities with what happened in Argentina and Turkey in 2018?

## The Recurrence of Currency Crises: Case Studies of Argentina and Turkey

The crises in Argentina and in Turkey in 2018 are certainly not exact replicas of the ones that happened in 2001.[12]

Tables 1 and 2 present a summary of macroeconomic performance in the two countries from 1995 to 2017/18. They examine the conventional indicators of economic growth, inflation, unemployment and the current account of the balance of payments. Since the first-generation model emphasizes the role of fiscal policy, the tables also provide data on the fiscal balance, as well as on the value of the domestic currency relative to the US dollar. Table 3 provides information about the ratio between short-term external debt and reserves for Argentina and Turkey and compares the situation in these two countries with a selection of Association of South-East Asian Nations (ASEAN) countries.

[12] For a deeper analysis of the crises in Argentina and Turkey in 2001 see Eichengreen (2002), Bird (2002), and Arpac and Bird (2009).

**Table 1: Macro Indicators in Argentina (1995–2018)**

| | Gross domestic product, constant prices (% change) | Inflation, average consumer prices (% change) | Unemployment rate (% total labor force) | Current account balance (% GDP) | Fiscal balance (% GDP) | Changes in exchange rate (% change) |
|---|---|---|---|---|---|---|
| 1995 | –2.85 | n/a | 18.9 | –1.82 | –2.14 | 0.00 |
| 1996 | 5.53 | n/a | 18.76 | –2.43 | –2.9 | 0.00 |
| 1997 | 8.11 | n/a | 16.81 | –3.87 | –1.89 | 0.00 |
| 1998 | 3.85 | 0.93 | 14.79 | –4.52 | –1.88 | 0.00 |
| 1999 | –3.39 | –1.17 | 16.06 | –3.93 | –3.81 | 0.00 |
| 2000 | –0.79 | –0.94 | 17.13 | –2.96 | –3.33 | 0.00 |
| 2001 | –4.41 | –1.07 | 19.21 | –1.36 | –5.42 | 0.00 |
| 2002 | –10.9 | 25.87 | 22.45 | 7.93 | –2.12 | 0.00 |
| 2003 | 8.84 | 13.44 | 17.25 | 5.77 | 1.17 | –0.67 |
| 2004 | 9.03 | 4.42 | 13.63 | 1.8 | 3.55 | 0.06 |
| 2005 | 8.85 | 9.64 | 11.58 | 2.47 | 3.19 | –0.01 |
| 2006 | 8.05 | 10.9 | 10.18 | 2.79 | 1.35 | 0.01 |
| 2007 | 9.01 | 8.83 | 8.48 | 2.1 | –0.11 | –0.05 |
| 2008 | 4.06 | 8.59 | 7.88 | 1.49 | 0.23 | –0.01 |
| 2009 | –5.92 | 6.27 | 8.68 | 2.17 | –2.6 | –0.02 |
| 2010 | 10.13 | 10.46 | 7.75 | –0.38 | –1.44 | –0.15 |
| 2011 | 6.00 | 9.78 | 7.15 | –1.01 | –2.75 | –0.05 |
| 2012 | –1.03 | 10.04 | 7.2 | –0.37 | –3.02 | –0.05 |
| 2013 | 2.41 | 10.62 | 7.08 | –2.15 | –3.25 | –0.09 |
| 2014 | –2.51 | n/a | 7.25 | –1.63 | –4.25 | –0.17 |
| 2015 | 2.73 | n/a | n/a | –2.74 | –5.79 | –0.32 |
| 2016 | –1.82 | n/a | 8.47 | –2.65 | –6.36 | –0.13 |
| 2017 | 2.86 | 25.68 | 8.35 | –4.83 | –6.46 | –0.37 |
| 2018 | 1.95 | 22.68 | 8.04 | –5.09 | –5.5 | –0.11 |

Sources: Organisation for Economic Co-operation and Development (OECD); IMF, *World Economic Outlook*

**Table 2: Macro Indicators in Turkey (1995–2018)**

| | Gross domestic product, constant prices (% change) | Inflation, average consumer prices (% change) | Unemployment rate (% total labor force) | Current account balance (% GDP) | Fiscal balance (% GDP) | Changes in exchange rate (% change) |
|---|---|---|---|---|---|---|
| 1995 | 7.19 | 89.57 | 7.11 | –1.00 | n/a | –0.35 |
| 1996 | 7.01 | 80.24 | 6.12 | –0.97 | n/a | –0.44 |
| 1997 | 7.53 | 85.65 | 6.32 | –1.01 | n/a | –0.46 |
| 1998 | 3.09 | 84.72 | 6.37 | 0.73 | n/a | –0.42 |
| 1999 | –3.39 | 64.87 | 7.16 | –0.36 | n/a | –0.38 |
| 2000 | 6.64 | 55.04 | 6.00 | –3.63 | –8.41 | –0.33 |
| 2001 | –5.96 | 54.25 | 7.80 | 1.88 | –11.76 | –0.49 |
| 2002 | 6.43 | 45.13 | 9.76 | –0.26 | –11.43 | –0.19 |
| 2003 | 5.61 | 25.34 | 9.93 | –2.42 | –7.64 | 0.00 |
| 2004 | 9.64 | 8.6 | 9.69 | –3.51 | –4.16 | 0.05 |
| 2005 | 9.01 | 8.18 | 9.49 | –4.19 | –0.76 | 0.06 |
| 2006 | 7.11 | 9.60 | 9.03 | –5.66 | –0.69 | –0.06 |
| 2007 | 5.03 | 8.76 | 9.18 | –5.47 | –1.94 | 0.10 |
| 2008 | 0.85 | 10.44 | 10.02 | –5.16 | –2.66 | 0.00 |
| 2009 | –4.70 | 6.25 | 13.05 | –1.76 | –5.88 | –0.16 |
| 2010 | 8.49 | 8.57 | 11.13 | –5.78 | –3.42 | 0.03 |
| 2011 | 11.11 | 6.47 | 9.10 | –8.94 | –0.69 | –0.10 |
| 2012 | 4.79 | 8.89 | 8.43 | –5.49 | –1.83 | –0.07 |
| 2013 | 8.49 | 7.49 | 9.04 | –6.7 | –1.47 | –0.06 |
| 2014 | 5.17 | 8.86 | 9.92 | –4.67 | –1.43 | –0.13 |
| 2015 | 6.09 | 7.67 | 10.28 | –3.74 | –1.27 | –0.20 |
| 2016 | 3.18 | 7.78 | 10.91 | –3.84 | –2.33 | –0.10 |
| 2017 | 7.05 | 11.14 | 11.01 | –5.55 | –2.29 | –0.17 |
| 2018 | 4.41 | 11.4 | 10.66 | –5.4 | –2.93 | –0.42 |

Sources: OECD; IMF, *World Economic Outlook*

**Table 3: Short-term Debt in Argentina, Turkey and Selected ASEAN Countries, 1995–2016, (% total reserves)**

| | Argentina | Turkey | Cambodia | Lao PDR | Indonesia | Thailand | Vietnam | Malaysia | Philippines | Myanmar |
|---|---|---|---|---|---|---|---|---|---|---|
| 1995 | 133.64 | 113.03 | 0.00 | 0.00 | 174.18 | 119.37 | 247.2 | 29.45 | 67.85 | 54.05 |
| 1996 | 119.16 | 97.34 | 0.12 | 0.05 | 166.17 | 123.47 | 216.27 | 39.68 | 67.68 | 116.41 |
| 1997 | 142.65 | 91.13 | 0.22 | 0.07 | 187.94 | 140.67 | 117.92 | 69.58 | 134.87 | 123.14 |
| 1998 | 124.54 | 103.16 | 0.22 | 0.14 | 85.2 | 100.42 | 109.53 | 32.28 | 54.04 | 119.51 |
| 1999 | 111.63 | 96.07 | 0.18 | 0.18 | 73.25 | 67.33 | 71.43 | 19.44 | 32.84 | 153.19 |
| 2000 | 112.62 | 122.95 | 0.01 | 1.60 | 73.89 | 45.55 | 24.09 | 15.96 | 36.45 | 171.81 |
| 2001 | 137.43 | 82.09 | 0.01 | 1.33 | 71.28 | 40.02 | 19.57 | 22.62 | 38.26 | 109.54 |
| 2002 | 141.39 | 57.94 | 0.01 | 4.16 | 55.02 | 30.64 | 16.47 | 24.79 | 34.06 | 118.35 |
| 2003 | 158.13 | 64.74 | 0.00 | 0.00 | 53.72 | 25.99 | 13.21 | 19.47 | 36.17 | 120.55 |
| 2004 | 135.04 | 82.73 | 0.00 | 1.09 | 60.65 | 23.05 | 23.97 | 17.22 | 31.08 | 106.19 |
| 2005 | 124.78 | 74.13 | 0.00 | 18.44 | 31.74 | 30.75 | 22.54 | 18.7 | 34.62 | 89.54 |
| 2006 | 88.22 | 67.74 | 0.00 | 22.08 | 28.66 | 26.58 | 18.22 | 14.24 | 21.81 | 61.59 |
| 2007 | 41.61 | 56.4 | 0.00 | 23.74 | 32.77 | 20.92 | 18.70 | 22.65 | 21.00 | 30.84 |
| 2008 | 41.91 | 71.28 | 3.07 | 16.99 | 39.67 | 18.43 | 17.58 | 42.10 | 18.67 | 25.49 |
| 2009 | 40.17 | 65.36 | 7.00 | 22.2 | 36.37 | 24.05 | 29.06 | 45.18 | 9.05 | 19.26 |
| 2010 | 31.44 | 89.85 | 9.93 | 5.07 | 34.35 | 29.45 | 55.58 | 48.13 | 16.87 | 19.54 |
| 2011 | 55.65 | 92.74 | 12.23 | 4.84 | 34.66 | 27.04 | 79.61 | 48.44 | 16.04 | 16.18 |
| 2012 | 58.42 | 84.03 | 17.09 | 4.64 | 39.23 | 32.06 | 48.28 | 66.28 | 19.64 | 13.28 |
| 2013 | 120.17 | 99.42 | 19.26 | 75.33 | 46.39 | 37.01 | 46.99 | 59.11 | 20.33 | 10.11 |
| 2014 | 90.2 | 103.25 | 17.8 | 67.56 | 41.09 | 35.69 | 39.78 | 68.46 | 20.40 | 16.67 |
| 2015 | 232.89 | 92.21 | 18.06 | 68.36 | 36.28 | 32.76 | 42.43 | 80.25 | 18.72 | 17.36 |
| 2016 | 123.24 | 92.5 | 19.51 | 80.76 | 36.14 | 30.73 | 38.35 | 87.03 | 18.01 | 15.59 |

Source: World Bank, International Debt Statistics

## Argentina: 2001 and 2018

In the years building up to the 2001 crisis, Argentina experienced relatively low inflation, relatively high unemployment, and economic recession. The current account was in deficit, but as a percentage of GDP this was getting smaller in the period between 1998 and 2001. In contrast the general government fiscal deficit was getting bigger over the same period. In part, it was the low level of economic activity that created political unrest and instability. Large capital inflows helped to finance the fiscal deficit, but left Argentina vulnerable to a sudden stop in such flows.

At the same time, Argentina's commitment to a currency board arrangement prevented the peso from depreciating. Indeed, the peg to the US dollar, alongside dollar appreciation, led to an adverse 'third currency phenomenon' which undermined competitiveness. While the currency board arrangement tended to discipline domestic monetary policy, it did not discipline fiscal policy, especially in circumstances where the federal government underwrote provincial deficits.

The fall in commodity prices at the beginning of the decade added to an adverse economic environment. The incompatibility between internal and external targets at the pegged peso/dollar rate resulted in speculative pressure, as predicted by the second-generation model, and the authorities eventually opted to allow the currency to depreciate sharply; there was a currency crisis.

In the years preceding the 2018 crisis, the macroeconomic circumstances in Argentina were in many ways different. Inflation was high and accelerating, reaching nearly 30% in mid-2018. Unemployment at just over 8% in 2017 was less than half the rate that it had been before the 2001 crisis. Moreover, the economy had grown strongly in 2017, partly as a consequence of relatively high levels of consumption and investment. This helps to explain the accelerating rate of inflation. However, a widening fiscal deficit was also a factor, with the general government fiscal deficit reaching over 6% of GDP in 2016 and 2017.

Unsurprisingly with expanding aggregate demand, the current account deficit widened, reaching nearly 5% of GDP in 2017; it continued to widen thereafter. With the authorities trying to mitigate the fall in the peso's value,

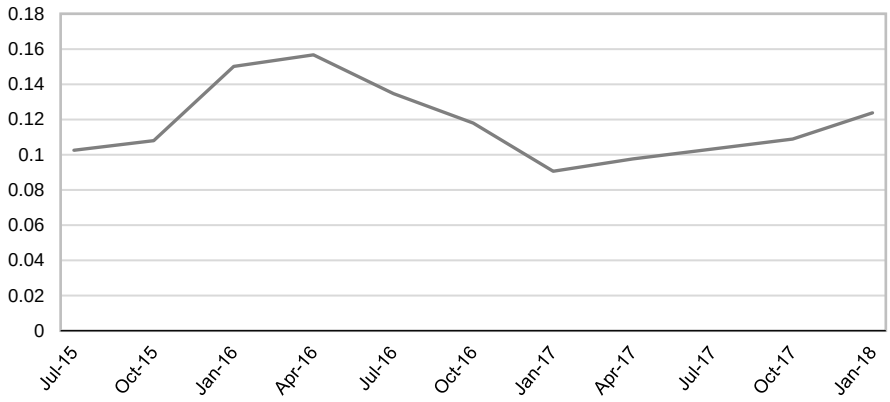
foreign exchange reserves fell, and the ratio between the relatively large amount of external debt that had been accumulated in order to finance the fiscal deficit and private sector spending and the level of international reserves also rose sharply. This made Argentina vulnerable to a loss of market confidence.

Figures 1 and 2 provide evidence relating to international reserves, and short-term debt in Argentina. Figure 3 provides information on Argentina's debt to reserves ratio.

**Figure 1: Total Reserves in Argentina, 1995–2018, (USD million, gold at market price)**


Source: IMF, International Financial Statistics

**Figure 2: Short-term External Debt in Argentina, 2015–18 (% GDP)**




Sources: CEIC; IMF, *World Economic Outlook*

Argentina's vulnerability was further exposed by two 'external' shocks. The first was a bad harvest for maize and soybeans in the first half of 2018, which adversely affected exports and the current account. The second was a rise in interest rates in the USA that caused the capital account to weaken. Capital was now leaving Argentina partly as a consequence of 'pull' factors from the USA, and partly because the deteriorating economic performance at home was 'pushing' capital out. Faced with a currency crisis, Argentina turned to the IMF for assistance and negotiated a program to help underwrite its debt obligations and in an attempt to restore market confidence. The conditions agreed with the Fund incorporated fiscal retrenchment and tight monetary policy.

The recurrence of a currency crisis in Argentina is consistent with only some of the elements in the hypothetical explanation of recurrence offered earlier. The 2018 crisis happened in spite of there being a reasonably unified government that appeared, at least from its policy pronouncements, to be fairly committed to macroeconomic orthodoxy. This government had, in 2015, replaced a more populist regime whose policies had, in many ways, sown the seeds of the subsequent crisis. Moreover, the central bank had the

responsibility for pursuing a policy of inflation targeting and there seemed to be relatively few significant tensions between technocrats and politicians, although the resignation of the president of the central bank as negotiations with the IMF were taking place may suggest otherwise.

By the time of the 2018 crisis, Argentina had moved away from the policy of exchange rate-based stabilization that had characterized the crisis of 2001 (see Table 1). The delay in allowing the peso to fall in value had been seen as playing a key role in contributing to the earlier crisis. By 2018 it appeared that this lesson had been learnt, and the peso was allowed to fall in value; yet a crisis still occurred. Argentina's experience suggests that a flexible exchange rate regime does not guarantee that currency crises will be averted. Indeed, the fall in the peso seemed to make markets believe that there would be further falls. There was therefore a risk of overshooting. Moreover, with a fall in the value of the peso of more than 50% in a twelve-month period, there were acute dangers not only of further inflation, leading to yet more exchange rate depreciation, but also of recession as a result of adverse balance sheet effects.

Explaining the recurrence of a currency crisis in Argentina draws on elements of all three generations of currency crisis model. The *de facto* fiscal relaxation that occurred between 2015 and 2018 suggests that even governments that claim to reject a populist agenda still want to avoid being unpopular. The key role of fiscal policy is consistent with the first-generation model. The external borrowing that was used to help finance the larger fiscal deficit resulted in an accumulation of relatively short-term debt denominated in foreign currencies. Along with the fall in reserves designed to moderate the fall in the peso, this made Argentina more vulnerable. The second-generation model predicts that a trigger may expose this vulnerability. The changing configuration of global returns and risks that is emphasized by the third-generation model, happened not only as a result of events in Argentina but also elsewhere, particularly in the USA.

Although the IMF is generally unpopular in Argentina, perhaps it performs a significant role in providing necessary policy discipline and in offering a scapegoat that governments can blame, even for policies that they believe are appropriate; albeit politically unpopular.

**Turkey: 2001 and 2018**

In Turkey, things were different. There was much greater resistance to turning to the IMF for assistance as the 2018 crisis developed. In some respects, announcements by key members of the government suggested that policymakers were in denial. Claims were made that there were no significant risks facing the Turkish economy or its financial system. The President's senior economic adviser is quoted as saying, 'Turkey and all developing countries should do the opposite of what the Fund says'. High interest rates were seen as causing inflation.

What was the Fund's view? In its Article IV report on Turkey in April 2018, the IMF observed that

> the economy is showing clear signs of overheating. Monetary policy appears loose and its credibility is low… fiscal policies… are expansionary and risk undermining Turkey's hard earned fiscal credibility… the economy faces internal and external imbalances… meanwhile political uncertainty and regional instability remain elevated.

In such a situation it is not surprising that a currency crisis became probable.

How did Turkey get into this situation? Certainly the macroeconomic circumstances in 2018 were somewhat different from those in 2001, as shown in Table 2. In the build-up to the 2001 crisis, the rate of inflation had been very high at over 80%, the level of unemployment was relatively low and, except for 1999, economic growth had been modestly positive. The current account deficit had been relatively small measured against GDP, but increased sharply in 2000 to over 3.5% of GDP.

In the build-up to the 2018 crisis, inflation had been much lower but was accelerating, the unemployment rate was higher at over 10%, economic growth was faltering and, by the middle of 2018, the current account deficit had reached over 6% of GDP. Although small relative to what it had been in the late 1990s and early 2000s, the fiscal deficit was beginning to increase. The money supply was also expanding quite rapidly, although not as fast as it had in the period before the 2001 crisis. What was the story behind the figures?

The crisis in 2001 resulted in an IMF program. Technocrats held influential positions and early on there was a relatively good record of implementation. However, as the crisis moderated there was some

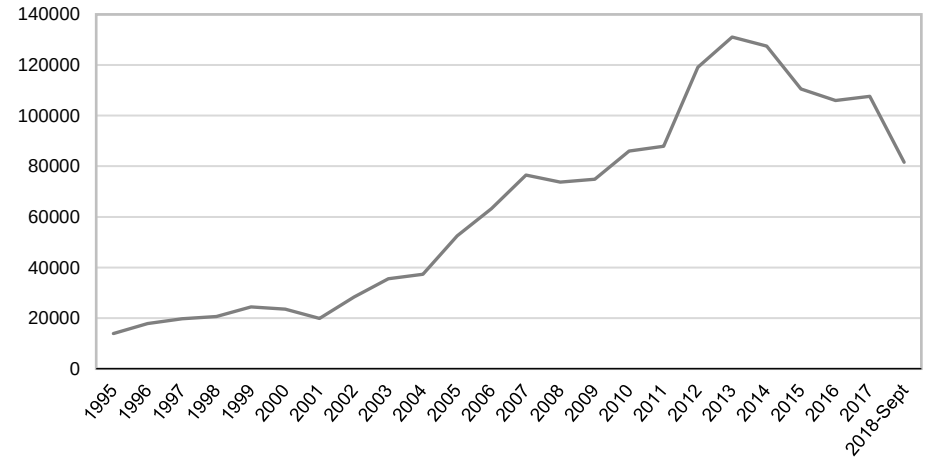
backtracking on economic reform; special interest groups, and in particular those in the banking sector, reasserted their influence. Nevertheless, over the period 2002–8 economic growth was strong and, despite an ongoing current account deficit, Turkey was generally viewed as something of a success story. The fiscal deficit narrowed up until 2008 and the rate of monetary expansion slowed down. The exchange regime was also more flexible. At this stage, it seemed improbable that a currency crisis would recur. But then there was the global economic and financial crisis.

This appeared to bring about a change in the government's economic philosophy and raise doubts about the policies conventionally associated with the IMF. There seemed to be less commitment to policies that ensured macro stability. The underlying aim was to 'go for growth', and in order to try to achieve this, monetary and fiscal discipline were relaxed.[13] The growth was led by consumption and investment (particularly in the construction industry), rather than by exports. The consequences were accelerating inflation, and a weakening current account. For a time, capital inflows helped to finance the current account deficit, but there was an associated increase in external indebtedness. As in Argentina, this increase, alongside a decline in reserves, increased vulnerability.

Figures 3 and 4 provide a picture of what has happening to international reserves and external debt in Turkey. These show a fall in reserves in early 2018 and an increase in debt in the period since mid-2017. Table 3 shows Turkey's debt to reserves ratio up until 2016 and reveals the generally increasing trend in the ratio following an initial decline after the 2001 crisis.

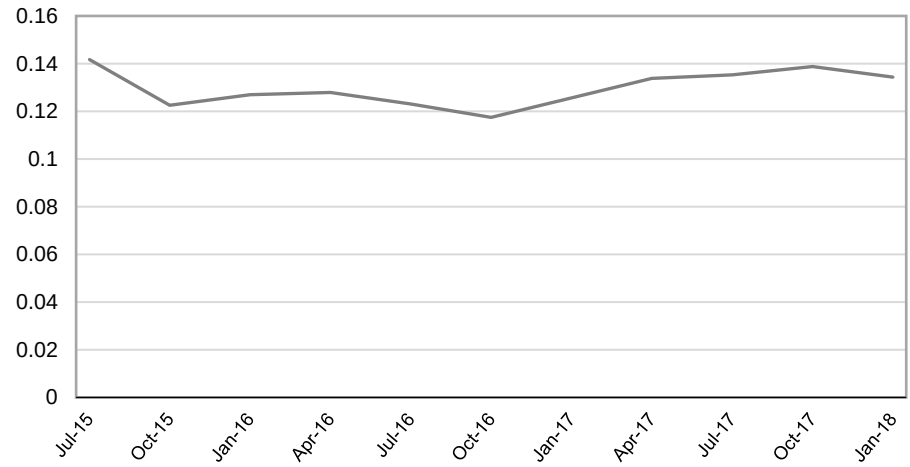
[13] Cavallo and Cavallo (2010) examine empirically the extent to which crises have beneficial long-term effects on economic growth. Their results suggest that only countries with strong democracies, high levels of political competition and external constraints on government can potentially benefit from crises and use them as opportunities to enhance long-term output per capita and productivity growth.

**Figure 3: Total Reserves in Turkey, 1995–2018 (USD millions, gold at market price)**




Source: IMF, International Financial Statistics

**Figure 4: Short-term External Debt in Turkey, 2015–18 (% GDP)**




Sources: CEIC; IMF, *World Economic Outlook*

A series of 'events' in 2018 both in Turkey and elsewhere began to worry the markets. Government announcements did little to suggest that policy would be modified. There were public disagreements about the direction of policy between political leaders on the one hand and technocrats at the central bank on the other, with the latter favoring an increase in interest rates to slow down the overheating and to staunch capital outflows. Regional instability and the migrant issue, combined with other domestic sources of political instability such as the unsuccessful coup attempt and the reaction to it, made the future more uncertain. Again, as in the case of Argentina, the increase in US interest rates and the economic recovery in the USA contributed to a capital reversal. Attempts to moderate the related fall in the lira led to a decline in reserves. But the lira still fell sharply in value, by as much as 40% over a twelve-month period. This created further problems via the effects on inflation and balance sheets. Government announcements continued to understate the extent of the economic malaise. Unlike Argentina there was no attempt to enlist assistance from the IMF and this may have contributed to a lack of credibility that made the situation worse; markets were not reassured.

In Turkey, as in Argentina, the 2018 crisis did not fit neatly and exclusively into one theoretical box. There were elements of all three models at work. The crisis recurred because political influences led to a relaxation in macro policy and to increased short-term borrowing and a fall in reserves. The vulnerability that this created was sharply exposed when global economic events turned against emerging economies such as Turkey. Superimposed on the increasing vulnerability, political tensions and a lack of confidence in both the political and economic future meant that a currency crisis became highly probable.[14]

[14] In 2018 a more extreme example of an economic crisis than in either Argentina or Turkey was to be found in Venezuela. Here all the macroeconomic indicators reflected very poor economic performance and policy, with economic recession, hyperinflation, a large current account deficit and a large fiscal deficit as well as a rapid rate of monetary expansion. The pursuit of populist policies alongside substantial political uncertainty contributed to the crisis. According to the conventional measures, including the ratio of short-term external debt to reserves, a crisis in Venezuela became exceedingly probable. Given Venezuela's high degree of export concentration on oil, things were not helped by an external shock in the form of a decline in the price of oil from US$109 per barrel to US$41 in 2016. In common with Argentina and Turkey, an explanation of the crisis in Venezuela needs to draw on all three generations of currency crisis model.

## Concluding Remarks: Lessons and Policy Implications

In attempting to explain currency crises, three generations of model have been developed. However, the analysis has not enabled crises to be avoided. In some countries currency crises have recurred. In 2018 both Argentina and Turkey experienced currency crises, as they had in 2001. The 2018 crises involved a combination of causes; explaining them requires an amalgam of the currency crisis models. Crises recur because a mixture of economic and political factors recreate conditions of vulnerability that are then exposed by a particular event or series of events. There is something that triggers the crisis. Looking at the crises in Argentina and Turkey allows a number of general lessons about the recurrence of crises to be learned.

First, as the first-generation model stresses, large and persistent fiscal deficits, along with monetary laxity are likely to lead to the overheating of economies, to inflation, to current account deficits and to exchange rate depreciation. However, vulnerability does not arise only from overheating. It can also relate to recession and high levels of unemployment. Different combinations of internal and external imbalance can result in vulnerability. In terms of the underlying performance of key macroeconomic indicators, the experience in both Argentina and Turkey suggests that 2018 was different from 2001.

Second, in both countries, vulnerability seems to have been particularly strongly related to low and falling reserve levels, and to high and increasing levels of short-term external debt. The ratio between these two measures appears to offer a fairly unambiguous indicator of vulnerability. While falling reserves, along with increasing interest rates, are themselves indicators of exchange market pressure, the experience in Argentina and Turkey shows how difficult it is to avoid a currency crash once markets believe that the reserve/debt ratio has fallen too much.

Third, the crises in 2001 and 2018 are different in terms of the exchange rate regimes adopted both in Turkey and, in particular, in Argentina. The lesson is that a flexible exchange rate regime does not guarantee that

currency crashes will be avoided.[15] It is possible that even under a flexible rate regime currencies will still appear overvalued. It is also possible that there will be overshooting and that rapid exchange rate depreciation can contribute to accelerating inflation and to stagnation and recession. The short-term costs of rapid depreciation may be recessionary even if, in the longer term, such depreciation helps to strengthen the current account. The lesson may be that the middle range of exchange rate regimes is preferable to either of the polar extremes. However, the ability of countries to operate in this middle range depends on reserve levels, and on the scope for sterilizing any harmful economic effects that are associated with intervention in the foreign exchange market.

Fourth, the time that is bought during a period of stabilization following a crisis needs to be used effectively to introduce required structural reforms. The recurrence of currency crises may, for example, reflect missed opportunities to reform the tax system, the structure of government subsidies and expenditure, or of the banking and financial sector. Failing to reform the tax system will make it more likely that fiscal deficits are difficult to control. Failing to carry out macroprudential reform may mean that financial markets remain fragile. Improving the chances of conducting an appropriate macroeconomic strategy is likely to depend in the longer term on whether appropriate microeconomic and structural reforms are adopted. Such reforms may, in many cases, be impeded by special interest groups. As crises fade into the past, the bargaining power of such groups is likely to be reasserted. Resistance to structural reform may then increase the probability of future crises.

Fifth, but in relation to the above point, domestic financial fragility is likely to increase the probability of there being a future trigger event that exposes vulnerability. Structural reform, therefore, may reduce not only

[15] Bubula and Otker-Robe (2003) investigate whether pegged and intermediate exchange rate regimes are more prone to experience currency crises. They find that pegged regimes, as a group, have been characterized by a higher incidence of crises than floating regimes, for countries that are more integrated with international capital markets; and that intermediate regimes (mainly soft pegs and tightly managed floating regimes) have been more crisis-prone than both hard pegs and other floating regimes. The degree of crisis-proneness seems to be broadly similar across different types of intermediate regime. However, Bird and Rowlands (2009), who investigate the impact of choice of exchange rate regime on the incidence of IMF programs, which themselves may stand as a proxy for economic crisis, find no evidence that countries with intermediate exchange rate regimes require more frequent IMF assistance.

vulnerability but also the incidence of triggers. On both counts this would reduce the risk of currency crises recurring. Beyond this, triggers that set off a currency crisis can operate through both the current and the capital account. International attempts to stabilize commodity prices have been tried in the past but have generally failed. This implies that in the longer term countries need to seek to become less exposed to terms-of-trade shocks by reducing their degree of export concentration. Global reform could, in principle, seek to reduce capital volatility. But individual countries may also need to minimize the impact of such volatility, and thereby reduce the incidence of currency crises, by a more aggressive approach to using capital flow management measures.

Sixth, the political environment in which economic policy is designed and implemented can play a key role in determining whether currency crises recur. The political calculus relating to economic policy is likely to change over time and as the memory of previous crises recedes. There may be only a limited period during which governments can pursue policies of fiscal consolidation and monetary stringency without paying a high political cost. This helps to explain why it might appear that policy mistakes are repeated. The recurrence of crises may be reduced by transferring the design of economic policy to technocrats. But this is likely to involve only monetary policy. The scope for imposing fiscal rules is likely to be limited, especially in those countries that are likely to want to retain the discretion to use fiscal policy as a political tool. However, even handing over the design of economic policy to technocrats does not ensure that currency crises will always be avoided. A large and negative external shock may still result in a crisis even where vulnerability has been reduced.

What emerges from our analysis? There are various contingent combinations of economic and political factors that cause currency crises and that lead to their recurrence. Experiencing one crisis at one moment of time does not ensure that lessons will be learned and acted upon in such a way that further crises are avoided. This may be because the lessons are not learned, or because it is difficult to translate the lessons into actions. Either way, vulnerability increases. At some stage, this is then exposed by a trigger that detonates the crisis. In the cases of Argentina and Turkey, the amount

of their short-term external debt relative to reserves made them more vulnerable than many other emerging economies. When US interest rates rose and were expected to rise further, and with the US economy apparently enjoying a sustained period of economic recovery, Argentina and Turkey were the most likely to experience a currency crisis and an eventual currency crash. And they did.

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