

Delaying the Inevitable

A Political Economy Approach to Currency Defenses and Depreciation

Stefanie Walter

University of Heidelberg

Thomas D. Willett

Clairemont Graduate University and Claremont McKenna College

Abstract

When faced with speculative pressure on their currencies, policymakers often delay devaluations by spending billions of dollars in defense of a given exchange-rate peg, only to succumb and devalue their currency later on. Using a political economy approach we argue that the interaction of distributional concerns, cognitive limitations, time-consistency problems, and institutional structures can keep governments from implementing the economically optimal policy response. We argue that distributional concerns often lead to a "bias" in favor of currency defense as long as market pressures are mild. The political incentives to initially delay devaluations can be exacerbated by institutions that either increase the size of interest groups vulnerable to depreciation or give policymakers incentives to adopt a short time-horizon. Once market pressure becomes strong, however, the politically salient alternative to not depreciating becomes raising interest rates rather than just running down reserves. This acts as a wake-up call that changes perceptions of the underlying distributional considerations and hence the political trade-off between the costs and benefits of an exchange rate defense. As the coalition of devaluation-proponents grows, the likelihood of a devaluation increases. We illustrate our argument by discussing the salient distributional issues and their interaction with domestic institutions in four brief case studies.

Keywords: exchange-rate politics, delayed devaluation, political economy of adjustment, policy preferences, political institutions

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1. Introduction

Speculative attacks and ensuing currency crises have imposed enormous costs on economies around the globe. Research into the causes of such crises has therefore proliferated in recent years. However, while our understanding of why currencies come under speculative pressure has grown, our understanding of how policymakers respond to such pressure remains more limited. It is particularly puzzling that policymakers often delay devaluations by spending billions of dollars in defense of a given exchange rate peg against speculative pressure, only to succumb to this pressure and to devalue their currency later on. Mexico in 1994, Thailand and Korea in 1997, Russia in 1998, Argentina in 2001, and more recently Hungary and South Africa are some examples.

From an economic efficiency perspective, this behavior is perplexing, especially when bad macroeconomic conditions suggest that eventual exchange-rate adjustment will be inevitable. The recent political economy literature, however, points to two aspects of the political process that help to explain this puzzle: distributional considerations and the mediating effect of institutions (e.g. Frieden 1991; Leblang 2003; Bernhard and Leblang 2006; Willett 2007; Kinderman 2008; Walter 2008, 2009).¹ We build on these explanations and augment them with insights from cognitive psychology and neuroeconomics, which focus on imperfect information and cognitive limitations, that have so far have been underutilized in the IPE literature (Elms 2008).²

We argue that responding to speculative pressures has strong distributional consequences that can interact with the institutional setting and behavioral considerations to

¹ This paper in effect combines and extends some of our previous analyses (Walter 2008; Willett 2007; Bird and Willett 2008), which investigated exchange-rate policymaking in open economies more generally. In contrast to these older studies, this paper concentrates on explaining the specific puzzle of why devaluations are so often delayed.

² There are some exceptions, such as Odell (2002) and Willett (2002). This emphasis is consistent with the more positivistic approaches in constructivist IPE. While constructivist approaches are sometimes presented as attacks on rationalist analysis we agree with Abdelal (2009) that constructivist approaches should be viewed as complements to, rather than substitutes for, rationalist materialistic approaches. We hope that this paper illustrates the usefulness of this broader synthetic approach.

create a strong “status quo” bias toward initial defenses of the currency and a higher incidence of currency crashes.³ In the early stages of balance of payments problems the market pressures to depreciate often tend to be mild and can be contained through sterilized interventions in the foreign exchange market as long as the country has adequate levels of international reserves. In this situation, interest groups and voters typically only focus only on the distributional effects associated with a depreciation, rather than considering that such reserve sales increase the odds of stronger speculative pressure in the future. This often results in strong popular pressures to defend the exchange rate, even though this is not the [economically](#) adequate response if the balance of payments problems continue for a longer period and mount in intensity. The political incentives to initially delay devaluations can be exacerbated by institutions that either increase the size of the group of actors vulnerable to depreciation or give policymakers incentives to privilege the short-term consequences of their actions over the long-run effects. An example for the first type of institutions is a rigid or intermediate exchange rate regime, an example for the second type are upcoming elections.

When speculative pressure escalates from mild to strong pressure, defending the currency requires more drastic actions, most notably a substantial increase in interest rates. Faced with the trade-off between depreciation and a considerable tightening of monetary policy, some interest groups and voters will reevaluate their position on how to respond to this pressure. The escalation of speculative pressure can therefore expose policymakers to changing policy demands.⁴ Policymakers who face strong demands to depreciate rather than raise interest rates, therefore have incentives to stop defending the exchange rate. However, because of the initial decision to delay a depreciation, the currency is likely to substantially depreciate

³ Our focus is on speculative pressures toward depreciation, which make up the substantial majority of currency crises. While there are important cases of upward speculative pressures such as those associated with the large Chinese payments surpluses, for which some aspects of our analysis will be relevant as well, we have decided to reserve the case of appreciation pressure for separate analysis.

⁴ While the notion of changing policy preferences is inconsistent with the high information unified rational actor models of economic policymaking, limited information, lack of agreement on “true” macroeconomic models, and limitations on human cognitive power can explain such behavior.

in response to severe pressure. This explains why currency defenses often end with a major crash of the currency.

The next section lays out this argument in more detail. We then illustrate our theoretical framework with brief case studies of four well-known modern balance of payments crises. The case studies show that whether balance of payments problems are resolved in time, or whether they end in a currency crash, depends not just on the distributional effects of defending versus depreciating, but also on a country's institutional structure.

2. The Political Economy of Responding to Pressure on the Currency

The large literature on currency crises in economics mostly provides insights into the determinants and ultimate outcomes of currency crises. This research distinguishes between different types of currency crises. The first type of currency crisis arises as a consequence of deteriorating macroeconomic fundamentals, such as high budget deficits coupled with high growth rates of money and domestic credit, overvaluation, and large current account deficits. In such "first-generation" crises, speculative pressure inevitably results in a depreciation of the exchange rate (Krugman 1979). Consequently, policymakers' options for responding to speculative pressure are very limited when speculative pressure arises because of bad macroeconomic fundamentals. A second type of currency crises occurs when economic fundamentals are not bad, but merely of an intermediate quality (Obstfeld 1994). In these crises the expected policy reactions of government become relevant. as, speculators' mere belief that speculation might be successful can cause the emergence of speculative pressure. Such beliefs can emerge, for example, when a country is in recession so that the necessary macroeconomic policy adjustments might be judged too painful. In these situations policymakers have more scope for action and the responses to such crises consequently vary considerably.

The economics literature on currency crises thus suggests that the optimal response to a crisis depends on the nature of the crisis. When the underlying macroeconomic fundamentals

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are bad, the exchange rate or domestic macroeconomic policy will have to be adjusted for certain, but adjustment may not be necessary when the fundamentals are of an intermediate quality.⁵. Interestingly, however, policymakers frequently try to defend the exchange rate in both types of situation. This behavior is particularly puzzling when the underlying fundamentals are so bad that an eventual exchange rate adjustment appears inevitable to most independent observers. Nonetheless, we often see policymakers trying to do just that. Thailand is a case in point: even though the exchange rate was clearly overvalued and the currency crisis that engulfed the country in 1997 was a typical first-generation crisis, the authorities tenaciously tried to defend their exchange-rate until they had fully depleted their foreign currency reserves.⁶ Only then did they succumb to the pressure and let the exchange rate depreciate.

To explain this type of puzzling policy responses, we focus on the political process and the decision making of policymakers. In a first step, we will analyze the distributional effects of the possible responses to speculative pressure and how they interact [cognitive limitations](#). In a second step we then examine how different institutions channel the policy preferences that emerge from these distributional considerations. We will show that an institutional setting that promotes certain inopportune distributional structures and that encourages policymakers to discount the future is particularly likely to result in a policy of initially defending the exchange rate through substantial reserve sales, followed by a subsequent currency crash.

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2.1 How the Distributional Effects of Responding to Exchange Market Pressure can Result in a Short-term “Pro-Defense-Bias” in Private Sector Preferences.

The distributional implications of exchange rate politics are widespread. Faced with speculative pressure on their currency, some benefit from exchange rate stability, while for

⁵ The literature on optimal currency areas addresses the costs and benefits of adjusting the exchange rate versus domestic macroeconomic policy (e.g. Willett 2003)).

⁶ While there has been much controversy about the causes of the spread of the Asian contagion, there is widespread agreement among economists that the Thai crisis, which sparked the Asian Financial Crisis, was due to fundamental disequilibrium. See the analysis and references in Willett et al. (2005)

others a depreciation is more advantageous. Following the approach suggested by Walter (2008), we argue that which of these policy outcomes individuals or groups prefer depends on how vulnerable they are to each of these outcomes. When their vulnerability to depreciation exceeds their vulnerability to policies required for defense, they will prefer a defense, and vice versa.

2.1.1 Vulnerability to Depreciation and Defense

Actors' vulnerability to depreciation is mainly determined by how a depreciation affects their competitiveness, purchasing power, and balance sheets. The former effect works mostly through changes in relative prices and affects agents as producers and consumers of internationally tradable goods and services and their close substitutes. Depreciation makes exports more competitive internationally and imports more expensive. Export-oriented and import-competing industries therefore tend to favor a more depreciated exchange rate, while consumers and industries that rely on internationally tradable inputs are vulnerable to depreciation (Frieden 1991). Changes in the exchange rate also affect foreign-currency denominated assets and liabilities in firms' and individuals' balance sheets (Woodruff 2005; Walter 2008). When these positions are unhedged, a depreciation of the exchange rate can significantly influence the debt burden in terms of domestic currency. Thus, the more a firm or individual depends on imports and the more unhedged foreign currency debt is held, the more vulnerable this agent will be to depreciation.

In contrast, an actor's vulnerability to an exchange rate defense depends on the policy tools employed to stabilize the currency. These tools are primarily sterilized sales of foreign currency reserves and increases in short-term interest rates.⁷ Typically, the choice between these policy tools will be strongly conditioned by the severity of speculative pressure relative to the country's stock of international reserves. As long as market pressure remains mild (stage

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⁷ Countries sometimes use capital controls as well. We leave consideration of that option for future analysis.

I), the target level of the exchange rate can be maintained through sales of foreign reserves alone. Sterilizing such reserve sales means that they will have minimal effects on the domestic money supply and interest rates and hence tend to have little effect on domestic individuals and firms. Therefore, most actors are typically not very vulnerable to the effects of a defense against mild pressure. In periods of severe pressure (stage II), however, sterilized reserve sales are no longer sufficient to offset market forces and a defense now requires painful measures, most notably a significant tightening of monetary policy and sometimes also of fiscal policy.⁸ Short-term interest rates often have to be raised considerably and maintained at high levels for some time in order to successfully defend the currency against severe speculative pressure, which increases the debt servicing costs on domestic liabilities and makes it more difficult and costly to repay these loans or to undertake new investments. This effect is particularly severe when interest rates on loans are closely tied to short-term rates and when debtors have not hedged their liabilities against interest rate changes. Thus, individuals and firms holding substantial quantities of debt tied to the domestic interest rate are very vulnerable to a tightening of monetary conditions and can therefore be expected to oppose an interest rate defense.

These effects of exchange rate and monetary policy can either reinforce or cancel each other out. For example, an individual may be vulnerable to depreciation as a consumer but benefit from it as a worker in the export industry. Likewise, an individual that holds foreign-denominated debt may be even more vulnerable to increases in domestic interest rates. It is the net effect – overall vulnerability – that determines firms' and individuals' overall policy preference for a defense or a devaluation.⁹ Agents who display a high overall vulnerability to depreciation can be expected to strongly prefer a defense to a depreciation. In contrast, when

⁸ Of course, the transition from stage I to stage II is not always abrupt and these two stages are not always easy to distinguish empirically, but we believe that conceptualizing currency crises as a two-stage process facilitates the analysis of the time-asymmetric nature of these crises.

⁹ Overall vulnerability also depends on the relative sizes of the changes in interest and exchange rates, the duration of an interest rate defense, and the extent to which positions are hedged. Agents' vulnerabilities can change over time as well, but a significant shift is usually not possible in the short-run. We therefore focus on short-term preferences, which are likely to matter most in a policymaking context.

depreciation benefits individuals or firms and their balance sheets are more vulnerable to interest rate increases than to depreciation, they can be expected to prefer depreciation to an interest-rate defense. Other agents may face offsetting balance sheet and relative price effects, making them more indifferent between defending or depreciating the currency.

Given that these vulnerabilities can have far-reaching effects on individual actors economic situation, it is not surprising that these vulnerabilities translate into policy preferences for or against a depreciation or a defense. In this context, an interesting feature of interest-group demands for exchange-rate policy is that groups sometimes switch from demanding exchange rate stability to demanding depreciation (Walter 2008).

2.1.2 How the Severity of Speculative Pressure and the Framing of the Debate Can Change Policy Preferences

While such a change in policy preferences may seem irrational, it can be explained with distributional concerns and framing effects. As we have seen, maintaining exchange rate stability in the face of mild speculative pressure requires very different policies than defending against severe exchange-market pressure. While sterilized reserve sales are sufficient to offset mild speculative pressures and have little immediate effect on most actors, defending the currency against severe pressure typically requires substantial interest rate increases. As a consequence, in the case of mild pressure actors' policy preferences are based primarily on the effects of an exchange rate adjustment, but not an interest rate adjustment. Competitiveness concerns and concerns about foreign-currency debt exposure are likely to dominate the policy debate, whereas little attention is given to actors' vulnerability to monetary tightening. The emergence of strong speculative pressures then acts as a 'wake-up-call,' that makes the full trade-off between exchange rate and interest rate stability apparent and salient. This leads to a reframing of the problem and causes voters and special interests to base their policy preferences on more accurate assessments of their actual overall vulnerability. If actors' then

recognize that their vulnerability to high interest rates is larger than their vulnerability to a depreciation of the exchange rate, they will now correctly determine that depreciation will be the less hurtful option left and reframe their policy preferences accordingly, even if they initially preferred a defense of the currency as long as pressure was mild.¹⁰

Such behavior is inconsistent with the full information rational expectations models that have become popular in the economic and political economy literature. According to these models, actors should anticipate that defending today increases the risk of a greater adjustment in the exchange or interest rate tomorrow, so that actors should always determine their preferred policy responses based on their overall vulnerability. However, where information is costly and there is a high level of uncertainty about both future developments and true models of the economy, rational expectations models often do not provide the best descriptions of reality. Episodes of speculative pressure display both of these characteristics.

Economic forecasting is a very inexact science and this is especially true with respect to the balance of payments. Even though in theory one can make a sharp distinction about appropriate policy responses to fundamental versus non-fundamental payments disequilibria, in practice the borderline between the two can be an enormous gray area where there is considerable scope for experts to disagree, and where a lot of information is needed to make informed judgements. On top of this, as emphasized in the second-generation of currency crisis models (Obstfeld 1994), there can also be considerable uncertainty about whether speculative pressure will emerge or intensify or not. Given the disagreements even among experts, it should not be surprising that many actors do not understand the complex interrelationships between the exchange rate and the interest rate (McNamara 1998).

¹⁰ Note that we are referring to the degree of severity of speculative pressures not in terms of quantitative magnitudes but in terms of the policy reactions they induce. Pressure is conceptualized as severe when officials believe that continuing to sell reserves is no longer a viable strategy. This will be a function not only of the size of the gap between the demand and supply for their currency in the private market but also the size of their reserves and their estimates of minimal safe levels of reserves (for a discussion of adequate reserve levels see Li et al. 2009).

Limitations on human cognitive abilities reinforce the conclusion that most actors are unlikely to base their policy demands on fully informed assessments of their overall vulnerability at all times. Psychological research finds that one of the most powerful biases in decision-making is the tendency to leave out relevant considerations because they are not sending strong signals at the time a decision is being made and there is considerable evidence that such lack of foresight frequently characterizes actual decision-making in policy arenas (Gilbert 2006). In addition, the often-discussed failure of policymakers, voters, and special interests to give sufficient attention to early warning signals is also¹¹ at least partially explained by the well-known tendency toward confirmation bias, implying that agents often ignore information that conflicts with what they want to hear (Nickerson 1998). This tendency is strongly amplified where the interpretation of facts is not clear-cut and the ambiguity of developments is high. Reconciling these findings with the rationalist framework, economists have developed the concept of “rational inattention” (Sims 2003). Since individuals have a limited capacity for processing information, it is impossible for them to consider all the information available. This implies that many actors may have only limited knowledge about the state of the economy and the likelihood that the economy is facing fundamental problems.

All these factors suggest that many individuals and firms will not pay attention to difficult-to-observe macroeconomic policies such as sterilized foreign reserve sales, in particular since such sales have little immediate effects on the economy. Individuals, firms, and often even policymakers will therefore tend to give little weight to their vulnerability to interest rate increases and focus primarily on the effects of a potential depreciation as long as speculative pressure is mild.¹¹ This failure to take sufficiently into account that a defense today under mild pressure will increase the probability of more severe pressures in the future can create a bias toward initial defenses of currencies as compared with a highly informed, objective, and forward-looking analysis of expected costs and benefits of defenses versus

¹¹ Note that such analysis undercuts one of the arguments that pegged exchange rates will exert substantial discipline over domestic macroeconomic policy (Willett et al. 2010).

depreciations. Actors are able and likely to allot more attention to macroeconomic policy when a severe economic crisis erupts, so that they are more likely to more thoroughly evaluate their overall vulnerability to the different policy options under these circumstances.

Table 1 summarizes how these cognitive limitations combined with different vulnerability profiles can lead to time-consistent and time-inconsistent policy preferences over time. Actors with a very high vulnerability to depreciation and a low vulnerability to interest-rate increases should always prefer a defense of the currency [\(type 1\)](#). Similarly, actors with a low vulnerability to depreciation but a high vulnerability to a tightening of monetary policy should always prefer a depreciation of the exchange rate [\(type 2\)](#). Both types of actors display time-consistent policy preferences: they always prefer the same policy option, regardless of the severity of speculative pressure.

* Table 1 about here *

A third type of actor, however, is both highly vulnerable to a depreciation of the currency and highly vulnerable to interest rate increases [\(type 3\)](#). Faced with mild speculative pressure and the option to either incur the costs of a depreciation for sure or face the discounted, or not even calculated, costs associated with high interest rates in the future, this type of actor initially disregards his vulnerability to monetary tightening and will consequently prefer a defense for as long as the exchange rate can be defended through sterilized reserve sales. When large interest rate increases are needed in order to continue to defend the exchange rate, however, this type of actor will switch her focus to the trade-off between exchange-rate and interest stability and will change her policy preferences from defense to depreciation if the costs of a substantial monetary tightening exceed the costs of a depreciation. This type of actor thus prefers different policy responses in mild-pressure and severe-pressure periods: an

exchange rate defense in the former and a depreciation in the latter case, resulting in a time-inconsistent policy preference structure and a pro-defense bias when pressure is mild.

2.2 Mitigating or Exacerbating the Pro-Defense-Bias? The Role of Institutions

How the resulting societal pressures are filtered through the political process importantly depends on the institutional setting. Institutions can mitigate or exacerbate the short-term pro-defense bias in societal policy preferences when speculative pressure is mild in two main ways: First, by encouraging or discouraging the emergence of a sizeable group of actors with time-inconsistent policy preferences, and second, by affecting policymakers' time horizons. Institutions that encourage actors to accumulate vulnerabilities to both a depreciation of the currency and an increase in interest rates confront policymakers with a growing pro-defense bias in societal policy demands. As a consequence, such institutions increase the likelihood that policymakers will initially try to defend an exchange rate that has come under speculative pressure, only to devalue it when the intensity of this pressure increases.¹² Institutions that shorten policymakers' effective time horizons equally increase the likelihood of delayed devaluations if they operate in an environment characterized by a large and influential group of type-3 actors (but not otherwise).¹³ This is because government officials influenced by short time horizons have a strong incentive to favor a currency defense if their voters or other influential groups oppose a depreciation: The shorter the time horizon, the stronger is the incentive to heed the constituents' short-term policy preferences, even if they are biased.

We illustrate these two effects of institutions in an exemplary manner. For this purpose, we selected two institutions whose effects have been discussed prominently in the literature on

¹² This effect is likely to be particularly large if these institutions also increase the time asymmetry between short-term costs and long-term benefits of devaluations.

¹³ We use short time horizons in the loose sense that there are incentives for policymakers to give heavy weight to the short run effects of their policies, not that they give exclusive attention to factors expected to occur within a fixed short time period.

exchange-rate politics. The effects of the exchange rate regime are discussed to demonstrate how institutions can mitigate or foster the emergence of actors with time-inconsistent policy preferences, and the effect of elections to show how institutions can increase policymakers' incentives to delay reform by encouraging them to discount the future. While these institutions only represent a small fraction of all the institutions in a political system, we believe that our selection is well suited to highlighting our argument about the potentially bias-mitigating or -exacerbating nature of the institutional setting.¹⁴

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2.2.1 Exchange Rate Regimes

The institutional structure of the exchange rate regime influences the size of the group of voters and interest groups with time-inconsistent policy preferences because it affects agents' expectations about the future behavior of the exchange rate, and, as a result, their accumulation of exchange rate and interest rate vulnerabilities.¹⁵ A fixed or pegged exchange rate inspires much more confidence in exchange-rate stability among market actors than a flexible exchange rate, and this confidence increases the longer the exchange rate regime has been in place (Carlson and Valev 2008). Agents in an environment of fixed or pegged exchange rates are therefore more likely to accumulate foreign-currency denominated liabilities, to forego hedging these positions, and to engage in other activities based on the expectation that the exchange rate will be maintained.¹⁶ This can strongly exacerbate actors' vulnerability to depreciation. By increasing actors' vulnerability to exchange rate depreciation, pegged and fixed exchange rates hence increase the probability that these actors will exhibit a short-run pro-defense bias.

At the same time, in a financially open world, genuinely fixed exchange rate regimes usually require automatic monetary policy adjustments against speculative pressure that do not

¹⁴ Other institutions that may affect policymakers' incentives to defend or depreciate include central bank independence, the number of veto players, and labor market institutions.

¹⁵ The size of these groups can also be manipulated by the government itself, for example when governments try to signal their determination to defend to speculators by increasing the social costs of devaluation.

¹⁶ See the analysis and references in Angkinand and Willett (forthcoming).

leave much room for discretion (this is the so-called “Unholy Trinity,” see Cohen 1995). Hong Kong’s currency board, for example, is designed in such a way that speculative pressure automatically leads to higher interest rates, rather than allowing sterilized intervention. The experience that interest rates tend to be more volatile in such a fixed regime makes agents more likely to decrease their vulnerability to interest rate changes. This suggests that in truly fixed exchange rate regimes, agents’ vulnerability to interest rate defenses should be comparatively low, while their vulnerability to depreciations should be comparatively high. The opposite holds in flexible exchange rate regimes. Here, agents are more likely to expect changes in the exchange rate and less adjustment in the interest rate, or at least a monetary policy that is geared towards domestic economic exigencies. This is likely to discourage actors to build up substantial vulnerabilities to depreciation, but may result in the emergence of substantial vulnerabilities to monetary tightening.

As a result, “extreme” exchange rate regimes such as fully fixed exchange rates and fully flexible exchange rates should discourage the build-up of vulnerabilities to both depreciation and interest rate increases. The prevalence of type-3 actors, characterized by time-inconsistent policy preferences should therefore be lower in countries with exchange rate regimes at one of the corners of the fixed-flexible continuum of possible exchange rate regime types. Fixed exchange rate regimes should lead to a large group of type-1 actors and flexible exchange rate to a prevalence of type-2 actors, the two groups of actors with time-consistent preferences. A “hard” fix like a currency board should therefore increase governments’ incentives to defend it strongly against all levels of speculative pressure, while the distributional implications and the political payoffs in flexible exchange rate regimes give policymakers incentives to let the exchange rate depreciate without long hesitations.

More intermediate exchange rate regimes, such as softer pegs, frequently adjusted parities, or crawling bands, however, often result in a relatively high level of both exchange rate and interest rate stability, at least in the short run. As a consequence, voters and special

interests tend to accumulate vulnerabilities to both depreciations and interest rate defenses in these regimes, which results in a vulnerability structure that leads to time-inconsistent policy preferences. Intermediate exchange rate regimes should consequently exacerbate the short-term bias against timely devaluations. These distributional consequences of exchange rate regimes thus help provide an explanation for what has been called the “unstable middle” hypothesis (Obstfeld and Rogoff 1995; Summers 2000). Not surprisingly, there is strong evidence that adjustable pegs are the most crisis-prone type of regime in financially open economies (for example Angkinand et al. 2009).¹⁷ The example of the exchange rate regime consequently shows that institutions can both mitigate or exacerbate the incentives to delay adjustment by way of influencing the strength and the direction of societal pressures the government is likely to face.

2.2.2 *Elections*

In addition, institutions can mediate the distributional effects by influencing policymakers’ time horizons. To illustrate this effect we focus on the role of elections. As the literature on political business cycles has demonstrated, elections can create strong incentives to discount the future and to deviate from optimal economic policy in the short run. The link between electoral timing and economic policy-manipulation appears to be particularly strong in exchange-rate policy (Frieden et al. 2001; Stein and Streb 2004; Blomberg et al. 2005; Bonomo and Terra 2005). This is not surprising if one considers the distributional consequences discussed above: Voters value their individual purchasing power, which decreases when a devaluation causes prices to increase and the debt burden to grow. The more vulnerable voters are to a decrease in the value of the currency, the more likely they are to punish policymakers on election day for any recent devaluation.

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¹⁷ Of course, it also matters whether the exchange rate regime is appropriate for the economy in question.

This will be particularly true in periods of mild pressure, where voters are unlikely to consider that the alternative to not depreciating ~~today~~ may be future interest increases and thus evaluate the costs of a depreciation against the status quo of exchange-rate stability. When elections are approaching, policymakers then have strong incentives to delay an adjustment of the exchange rate. This incentive is compounded by the fact that the painful effects of exchange-rate adjustment of a depreciation, such as higher import prices, a higher burden of foreign-currency denominated debt, and lost credibility and reputation tend to show up quickly, while the benefits, such as an improved export performance, tend to materialize only with some delay and in a more indirect way (Willett 1998, 2007).¹⁸ It is therefore not surprising that devaluations significantly lower politicians' re-election chances (Frankel 2005). When the electorate displays a high vulnerability to depreciation, the incumbent government has strong incentives to defend the exchange rate against mild pressure, a finding that is reflected in the ample evidence that the probability of a defense increases significantly as an election approaches (Walter 2009).

Elections have a different effect on exchange-rate policy decisions when speculative pressure becomes more severe. When maintaining exchange rate stability requires significant interest rate increases, more and more actors begin to consider their actual overall vulnerability, which includes their vulnerability to a tightening of monetary policy. As we have seen above, for the group of type 3-actors, such considerations will shift their policy preferences to depreciation rather than a continued defense of the currency. The electoral incentives to defend the exchange rate are therefore weakened when speculative pressure intensifies. This implies that when the incumbent government faces a large group of voters vulnerable to interest rate increases and severe speculative pressure on their currency, it has an incentive to devalue the exchange rate even before election day.

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¹⁸ Abandoning a strong commitment to a particular exchange rate regime decreases policymakers' credibility and usually damages their reputation (e.g. Broz 2002).

The effect of elections is thus conditional on the severity of speculative pressure and on the vulnerability structure of the country's electorate. Elections should exacerbate policymakers' incentive to delay adjustment when pressure is mild and when large portions of the electorate are vulnerable to a depreciation. In contrast, elections should facilitate a depreciation once speculative pressure has become so strong that it can no longer be contained through sterilized sales of foreign reserves. Walter (2009) shows that elections indeed increase the likelihood of a defense of the exchange rate when pressure is low, but that this effect is significantly smaller when speculative pressure is higher.

Note that three additional considerations can exacerbate the electoral effects on delaying adjustment policies in mild pressure periods: psychological effects, policymakers' choice of mental models, and the popularity of the government. Research in behavioral economics and finance shows that two of the most pervasive biases are over-optimism and exaggerated perceptions of one's abilities. Faced with situations where the costs of undertaking policy adjustments today are quite high, these biases can contribute to rationalizations for delaying actions such as "*maybe things will turn around soon*" or "*in a few months we'll be able to come up with a better policy strategy.*" Such beliefs are of course encouraged when there is considerable uncertainty about just how bad the situation is. With many signals flashing, there are usually a few that are positive and in this case confirmation bias tempts policymakers to focus on those and to underestimate the severity of the problem.

Moreover, decision makers can also usually find some theory that argues that inaction is the best possible course of action. In this regard, views that speculators are wrong and are creating a false crisis, and that exchange rate adjustments do not really work are especially popular. The adoption of particular mental models can have important independent influences on policy and there can be little doubt that many officials have a bias toward choosing models that suggest that it is better to not do things that they do not want to do in the first place.

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A third consideration is government popularity. Popular governments, who know that they will very likely be reelected, have to heed popular vulnerabilities to a lesser degree than governments who know that the next election will be highly contested. Since their political survival is on the line, the latter type of government is more likely to avoid implementing reforms that are painful for voters. As a consequence, they are more likely to address mild speculative pressure through foreign reserve sales as long as possible, rather than adjusting the exchange rate quickly. Especially when faced with a pro-defense bias in voters' and interest groups' policy preferences, '*let's do nothing and hope something will turn up*' will be a very popular policy strategy among st governments with uncertain electoral prospects. This suggests that under less popular governments the pro-defense bias among the country's voters and special interests will likely be exacerbated. However, since defending at all cost is rarely a viable strategy in the long-run, it is not surprising that weak governments are substantially more likely to eventually experience severe speculative pressure (Chiu and Willett 2009).

This discussion of the effects of elections indicates that institutions can both exacerbate and mitigate the interest-based incentives to delay adjustment via their effect on policymakers' effective time horizon. When speculative pressure is comparatively low and large segments of the electorate are vulnerable to depreciation, elections are likely to increase policymakers' incentive to delay a devaluation, especially when the electoral race is expected to be close. In these situations, upcoming elections exacerbate the short-term bias against timely devaluations. In contrast, when speculative pressure is severe and large segments of the electorate are highly sensitive to even small increases in interest rates, elections are likely to increase incentives to adjust the exchange rate quickly.

The example of elections shows that institutions, which intensify the short-run consequences of policymakers' decisions, interact with the society's vulnerability structure to either increase or decrease its effects on policymakers' incentives to delay adjustment. In a wider perspective, this also suggests that institutions, which lengthen policymakers' time

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horizons – such as inflation targeting and central bank independence –, should be able to decrease the importance of societal pro-defense biases.

3. Taking the Framework for an Empirical Test Drive: Evidence from Four Short Case Studies

Our argument suggests that distributional concerns and institutional structures can interact to create strong incentives for policymakers to delay necessary depreciations and to defend their exchange rate against speculative pressures as long as possible. In countries where influential groups of voters or special interests are vulnerable to a depreciation of the currency and even more vulnerable to interest rate increases, a strong pro-defense bias can emerge that encourages policymakers to delay depreciations through sterilized reserve sales as long as speculative pressure on the currency is mild. We have argued that emergence of such a vulnerability structure is facilitated by an intermediate exchange rate regime, and that elections in such a setting tend to exacerbate the tendency to delay adjustment as long as the pressure can be contained through sterilized foreign reserve sales. In contrast, fixed exchange rate regimes should facilitate an early interest rate adjustment, while flexible exchange rates facilitate an early depreciation. Elections that occur in times of severe speculative pressure and in a country where the electorate exhibits a high vulnerability to monetary tightening should increase the likelihood of a devaluation of the currency.

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To illustrate the usefulness of our theoretical framework, we present four short case studies on how policymakers reacted to the emergence of speculative pressure on their currencies. All of the countries studied experienced speculative pressure, but the authorities reacted differently to this pressure. In the first case, Taiwan in 1997, the authorities let their exchange rates depreciate rather quickly when speculative pressure on their currencies emerged, which contrasts with the second case, Latvia in the current crisis, whose authorities have successfully defended their exchange rate. Since we are particularly interested in

explaining delayed devaluations, the remaining two cases are examples of such incidents. With the United Kingdom in 1992 we present a case in which the authorities abandoned their initial
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attempts to defend the exchange rate relatively quickly when severe pressure emerged, while
South Korea in 1997 represents a case where the authorities tenaciously tried to defend their currency even when the pressure grew increasingly severe, but ultimately failed, leading to a sharp depreciation of the currency. Table 2 summarizes the four episodes of speculative pressure discussed in this paper.

* Table 2 about here *

We selected these cases to represent a large variety of well-known modern balance of payments crises in both developed and emerging economies, in which the policy responses and the factors emphasized in our analysis vary widely.¹⁹ While our argument cannot be conclusively tested with only four cases, the purpose of our discussion is to demonstrate how the characteristics of these crises can be explained by our argument and to serve as an initial plausibility probe whether our argument is worthy of being the subject of more extensive analysis and critical testing.

3.1 Taiwan in the 1997/8 Asian Financial Crisis: Prompt Depreciation

When Taiwan's currency came under pressure in the wake of the Asian Financial crisis, policymakers responded to this pressure against the backdrop of a highly export-oriented but financially domestic-oriented economy. Because of the government's conservative attitude toward financial liberalization, Taiwanese companies had borrowed mostly in domestic currency, relied strongly on the domestic capital market, and foreign assets greatly exceeded foreign liabilities in 1997 (Corsetti et al. 1999: 339). This resulted in a low vulnerability to

¹⁹ Given that one of our institutional variables is the timing of elections, we only selected countries that are at least semi-democratic.

depreciation and a moderate to high vulnerability to monetary tightening of domestic interest rates for most Taiwanese firms and individuals (Walter 2008). As we have discussed above, this vulnerability profile suggests time-consistent policy preferences, with the majority of Taiwanese voters and special interests preferring depreciation over an interest rate defense. This vulnerability profile can partly be attributed to the exchange rate regime: Taiwan's exchange rate had been pegged to the US dollar on a de facto basis, but was de jure a flexible regime, which facilitated the low vulnerability to exchange-rate fluctuations and hence the emergence of time-consistent preferences among Taiwanese citizens and interest groups. Moreover, since the next national legislative elections lay over a year ahead, and the next presidential election more than two years into the future, Taiwanese policymakers also operated in an institutional environment that allowed them to adopt a long-term focus. Our argument suggests that in this setting – time-consistent preferences favoring a depreciation, combined with a fairly flexible exchange rate and an absence of close elections – policymakers should quickly respond to the emergence of mild pressure by allowing the exchange-rate to depreciate.

This prediction maps the actual Taiwanese experience fairly well. When speculative pressure emerged on the New Taiwan dollar early in the fall of 1997, the Taiwanese authorities initially tried to stabilize the currency through reserve sales and some modest interest rate increases. However, since reserve sales were not fully sterilized, the resulting credit squeeze quickly began to hurt the economy, particularly the stock market. When speculative pressure grew (though not as strong as in other Asian Crisis countries), the elevated level of interest rates and the continuous outflow of foreign funds began to take its toll on the stock market and strong pro-depreciation demands surfaced. Confronted with the choice to either continue or to stop defending the currency, the authorities chose the latter option, stopped intervening in the foreign exchange market, and let the currency depreciate in October 1997. This decision was made even though the authorities still held large foreign currency reserves and although

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exchange-market pressure was not (yet) particularly severe (IMF 2004). The currency subsequently depreciated considerably, but substantially less than the currencies of other crisis countries such as Thailand, South Korea, or Indonesia.

Overall, Taiwan's experience illustrates how a low vulnerability to depreciation, combined with an institutional structure (a flexible exchange rate), which discourages actors to build up vulnerabilities to both exchange-rate and interest rate adjustments and encourages policymakers to adopt a longer time horizon (through the absence of looming elections), can make policymakers unwilling to defend the currency at great cost and to opt for a timely external adjustment instead.

3.2 Latvia in the 2008/9 Global Financial Crisis: Successful Defense

Latvia is a small, open economy that experienced an unprecedented boom in the early 2000s. As a consequence, ~~its exchange rate became increasingly overvalued in the years preceding the 2008/9 global financial crisis, contributing to a huge current account deficit and a low competitiveness of Latvian exports (IMF 2009).~~ While this translates into a moderate vulnerability to depreciation, because a loss in the currency's value would increase competitiveness but would also increase the price of imported goods, these relative price effects of external adjustment are by far outweighed by Latvian balance sheet vulnerabilities to depreciation: The country exhibits an extremely high degree of euroisation: 90% of all private loans and 70% of deposits are in foreign currency. This means that both households and corporations hold mostly foreign currency debt. Private external debt stood at 128.8% of GDP in 2007, and one third of this debt was short-term (IMF 2009). This implies that overall, the vulnerability of Latvian voters and interest groups to external adjustment is extremely high. In contrast, vulnerability to interest rate increases is moderate, because most loans denominated in

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foreign currency are not tied to domestic interest rates.²⁰ Latvian banks are highly vulnerable to a tightening of monetary policy, but households, enterprises and the public sector face low or even positive risks associated with interest rate increases (IMF 2006).²¹ Overall, Latvian voters and interest groups are therefore much more vulnerable to external adjustment than to internal adjustment and should therefore exhibit time-consistent policy preferences in favor of a defense of the currency. In line with our argument, this vulnerability structure has arisen at least in part in response to Latvia's exchange rate regime. The country has a fixed exchange rate in the form of a currency board with the euro. Given the high level of exchange rate stability associated with such an institutional structure, it is not surprising that such a large proportion of Latvian debt is denominated in euros. The resulting time-consistent preferences for a defense were intensified by a relatively favorable electoral calendar, which scheduled the next legislative elections for two years after the balance of payments problems began to deteriorate in Latvia. Our argument suggests that under these circumstances, we should see a defense of the Latvian exchange-rate against both mild and severe speculative pressure on the currency.

In line with this argument, the Latvian government refused to allow any significant exchange-rate adjustment to take place when speculative pressure on its currency increased in 2008, even though it experienced one of the worst economic crises in the country's history.

Instead, the authorities countered the pressure through a combination of foreign reserve sales (bolstered with funds from international sources such as the IMF and the EU) and internal adjustment measures, especially monetary tightening and severe budget cuts. This internal adjustment has been very harsh on the economy, leading to a decline in output by about a quarter and led to rioting and a government collapse in early 2009. In light of our discussion of time horizons it is surprising in this context that the authorities nonetheless were able to pursue

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²⁰ For example, in March 2009 interest rates on personal loans denominated in lats rose by 0.73% to 20.27%, but interest rates on forex loans declined from 7.32% to 6.27% (Baltic News Service, 21.4.2009).

²¹ It should be noted, however, that Latvian voters are vulnerable to other types of internal adjustment, such as fiscal restraint and wage compression.

such a painful and politically costly reform agenda.²² However, the argument also suggests that the very high vulnerability of the Latvian economy and electorate to a depreciation of the currency, these distributional concerns gave the governments enough incentives to defend rather than abandon the currency board.

The Latvian case also fits with the cases of other successful defenses of currency boards by Argentina in 1995 and Hong Kong in 1997. However, the very rigid exchange rate institution of a currency board itself is not sufficient to assure that it will always be successfully defended, as the case of Argentina in 2001 shows. This country's competitive position had markedly declined after 1995, and public demands to stop the recessive economic policies required for stabilizing the overvalued currency began to mount (Steinberg 2008). Combined with fears of default on Argentina's sovereign debt, the belief that the Argentine public would not be willing to carry the costs of defending the currency led to the emergence of severe pressure on the currency. The authorities ultimately abandoned the currency board in 2001, letting the peso depreciate.²³

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3.3 United Kingdom in the ERM Crisis 1992: Devaluation after some Delay

The British response to the speculative attacks on the British Pound in 1992 is a good example of a case in which many important actors exhibited a moderate vulnerability to devaluation but a very high vulnerability to interest rate increases. In the run-up to this event, British export competitiveness was low. Balance sheet vulnerability to depreciation was moderate and mainly rooted in the belief that the loss in credibility associated with devaluation would make access to international capital more expensive. At the same time, there existed a strong sensitivity to high interest rates. The British mortgage system was based heavily on floating interest rates, so that higher short-term increase rates affected not just new borrowers,

²² Even though one Latvian government failed as a consequence of the crisis, the political consequences of devaluation would probably have been worse.

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²³ It is also worth noting that the small open economies of Hong Kong and Latvia fit the optimum currency area criteria for a hard fix much better than did the much larger and relatively closed economy of Argentina.

but were rapidly passed along to most mortgage holders. Since many British people are homeowners, monetary tightening would hurt a large proportion of the electorate in short order, and the resulting effect on house prices had the potential to be electorally important (Pattie et al. 1997). More generally, the British economy was in a recession. A loose monetary policy would have been most helpful in this context, but was impossible to implement because as a member of the European Exchange Rate Mechanism, Britain had to follow the tight monetary policy set by the German Bundesbank. The British government thus was confronted with a vulnerability structure in which voters and interest groups exhibited a moderate vulnerability to depreciation, but a high vulnerability to monetary tightening (Fratianni and Artis 1996).

According to our argument, this should lead to time-inconsistent preferences with a moderate preference for exchange-rate stability as long as pressure remained mild and a strong preference for devaluation as soon as the pressure intensified. Given the relative rigidity of the exchange rate regime (the British Pound was pegged to the German Mark in the context of the European Monetary System) it is somewhat surprising that vulnerability to devaluation was not higher in the British case. Nonetheless, coupled with the electoral incentive to adopt a short time horizon, the moderate vulnerability seems to have been sufficiently influential to defend the currency as long as speculative pressure remained mild. Even though balance of payments problems had begun to emerge in early 1992, the resulting speculative pressure turned severe only in the late summer of that year, long after elections had been held in April. Our argument suggests that the distributional and institutional context in the UK in early 1992 gave policymakers a moderate incentive to defend the exchange rate against mild pressure, but that we should see a devaluation relatively quickly after the emergence of severe speculative pressure on the Pound.

This expectation squares with the actual behavior of British authorities. Initially, they defended the currency and maintained this position as long as speculative pressure remained

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mild. However, once George Soros and other speculators had begun attacking the currency more severely in early September 1992, the authorities maintained their interest rate defense for less than a day before capitulating and devaluing the currency in order to prevent spoiling the begin of an economic recovery with high interest rates (Fratianni and Artis 1996). Even though the authorities delayed the devaluation, their eventually promptly taken decision to devalue in response to intensifying speculative pressure enabled them to prevent a crash of the sorts seen in the next example.

3.4 South Korea in the 1997/8 Asian Financial Crisis: Delayed Devaluation and Currency Crash

The South Korean experience during the fall of 1997 represents one of the tragic cases in which a delayed devaluation resulted in a currency crash. The country had experienced a prolonged period of export-led growth and an investment boom principally financed through foreign capital, which resulted in a high level of foreign-currency denominated, which made Korean banks and the large industrial conglomerates extremely vulnerable to depreciation (Lee et al. 2000). Nonetheless, Korean companies were even more vulnerable to interest rate increases, because debt ratios were extraordinarily high and debt was often short-term and denominated in domestic currency (IMF 1998). Overall, this resulted in a corporate sector highly vulnerable to changes in both the exchange rate and the interest rate, but ultimately most vulnerable to monetary tightening. Our analysis argues that such a vulnerability profile gives rise to time-inconsistent policy preferences and a pro-defense bias in mild pressure periods. This vulnerability structure was partly caused by the Korean exchange rate regime. While officially declared as a managed float, the currency's actual behavior suggests that it followed a much more intermediate exchange rate regime in the form of a de facto crawling peg (Reinhart and Rogoff 2004). As discussed above, this intermediate type of exchange rate regime provides incentives for economic agents to accumulate vulnerabilities to changes in

both exchange and interest rates. In addition, elections were scheduled in Korea for mid-December 1997. Our argument predicts that in this situation, the government faces strong incentives to delay adjustment as long as it can combat speculative pressure with foreign reserve sales. However, once the pressure becomes strong enough to require substantial interest rate increases, the authorities should be more likely to devalue, rather than continue to defend, the exchange rate, even before the election has taken place.

As predicted by our argument, Korean officials initially engaged in massive sterilized foreign reserve sales when the won came under increasing speculative pressure in early fall 1997, even though the economic situation continued to deteriorate further. When the pressure became so strong that it was no longer possible to contain them through foreign-exchange market interventions, however, the government decided ~~to~~ abandon the defense of the won on 17 November 1997 – about one month before the next presidential election. While this decision runs against the usual expectation that governments are highly reluctant to devalue the exchange rate in the run-up to elections, our theoretical framework offers an explanation. We have argued above that the pro-defense effect of the electoral cycle should be less pronounced when speculative pressure becomes more severe and voters are highly sensitive to increases in interest rates. The intensifying pressure in the middle of the election campaign in Korea changed policymakers' incentives when it became clear that monetary policy would have to be significantly tightened to support the exchange rate any further. Because of the high vulnerability to interest rate increases, this seemed an even less attractive option than devaluing.²⁴ The authorities consequently abandoned the defense of the won, after which it depreciated sharply and only stabilized after the Korean authorities had received a sizeable rescue package from the IMF. The prolonged but ultimately unsuccessful exchange-rate defense can thus be explained by a short-term pro-defense bias that was exacerbated by the institutional setting, particularly (initially) upcoming elections. When the time-inconsistent

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²⁴ The fact that the current president was not running for reelection probably reinforced this assessment.

preference structure was confronted with intensifying speculative pressure, the authorities aborted their defense of the currency and the crisis ended with a currency crash.

4. Concluding Comments

Using a political economy approach, we have argued that the frequent tendency of policymakers to delay devaluations for substantial periods before capitulating to market forces and devaluing later on can be explained by the interplay of distributional considerations, the institutional setting, time-consistency problems, and cognitive limitations. Our vignettes of developments in Taiwan, Latvia, the United Kingdom, and South Korea illustrated the roles of these factors. Time-consistent preferences and conducive institutional settings facilitated a prompt depreciation in Taiwan and a continued defense of the exchange rate in Latvia. In the latter two cases, time-inconsistent policy preferences, partly fostered by exchange-rate regimes that encouraged the build-up of substantial vulnerabilities to depreciation, were associated with delayed devaluations. The timing of elections in Britain seem to have contributed initially to the decision to defend, while the Korean government devalued shortly before an election because the costs of defending the currency against the severe speculative pressure would have been too high.

The experiences of these countries demonstrate the importance of taking the interplay between distributional concerns, time assymmetries, cognitive limitations and the institutional setting into account in order to understand why devaluations are frequently delayed. While we only have discussed the implications of our argument for four selected cases, we are confident that our sample is far from the only set of cases where our analysis has considerable explaining power. We hope that others will join us in the project of testing this conjecture.

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Table 1: Policy Preferences in mild and severe pressure periods

		Type 1	Type 2	Type 3
Competitiveness / price vulnerability to depreciation	Depreciation	High	Low	High
	Defense	High	Low	High
Balance sheet vulnerability to interest rate increases	Depreciation	Low	High	Very High
Stage I Policy Preference (Mild Pressure)	Defense	Depreciation	Defense	
Stage II Policy Preference (Severe Pressure)	Defense	Depreciation	Depreciation	
Policy Preference Structure	Time-Consistent	Time-Consistent	Time-Inconsistent	

Table 2: Vulnerability Structure and Institutional Setting in the Cases Studied

	Taiwan (1997)	Latvia (2008/9)	United Kingdom (1992)	South Korea (1997)
Policy Preference				
Competitiveness / Price Vulnerability	Low	Moderate	Low	Low
Balance Sheet Vuln. to depreciation	Low	Very high	Moderate	Very high
Vulnerability to monetary tightening	High	Moderate	High	Very high
	Time-consistent Depreciation rather than interest rate defense	Time-consistent Interest rate defense rather than depreciation	Time-consistent Depreciation rather than interest rate defense	Time-inconsistent No depreciation, no interest rate defense
Institutions				
Exchange rate regime type	Flexible	Fixed	Peg	Peg
Upcoming elections	No	No	Yes	Yes
Policy Response				
	Prompt depreciation	Successful defense	Devaluation after some delay	Delayed devaluation and currency crash

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