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A FAITH-BASED INITIATIVE:
DOES A FLEXIBLE EXCHANGE RATE REGIME REALLY FACILITATE CURRENT ACCOUNT ADJUSTMENT?

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A Faith-based Initiative: Does a Flexible Exchange Rate Regime Really Facilitate Current Account Adjustment?
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ABSTRACT

The assertion that a flexible exchange rate regime would facilitate current account adjustment is often repeated in policy circles. In this paper, we compile a data set encompassing data for over 170 countries are included, over the 1971-2005 period, and examine whether the rate of current account reversion depends upon the de facto degree of exchange rate fixity, as measured by two popular indices. We find that there is no strong, robust, or monotonic relationship between exchange rate regime flexibility and the rate of current account reversion, even after accounting for the degree of economic development, the degree of trade and capital account openness. We also find that the endogenous selection of exchange rate regimes does not explain the observed lack of correlation.

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"We also agreed that an orderly unwinding of global imbalances, while sustaining global growth, is a shared responsibility involving ... greater exchange rate flexibility ..."

G20 Communiqué, Meeting of Finance Ministers and Central Bank Governors, Cape Town, South Africa, November 17-18, 2007.

"*The third part of the strategy [to address global current account imbalances] was to increase exchange rate flexibility in order to facilitate the adjustment of the current account over time."*

John Taylor, Professor of Economics at Stanford University and former Under Secretary of Treasury for International Affairs, speech at the IMF conference on April 21, 2006.

"From a global perspective, exchange rate flexibility ... would also help contribute to an orderly process for resolving global current account imbalances."

IMF Staff, "People's Republic of China: Staff Report for the 2006 Article IV Consultation."

1. Introduction

The assertion that a more flexible exchange rate regime would promote current account adjustment has been repeated so often that policy makers and economic analysts take it as self-evident that this must be true. There is in fact no systematic evidence supporting this supposition. *Until one finds persuasive empirical evidence, the policy recommendation for a more flexible exchange rate regime in pursuit of current account adjustment is a faith-based initiative – based on something widely assumed to be true, actively peddled to countries as a truth, but with little solid empirical support.*

Indeed, it is not difficult to find counter-examples. While both Egypt and China have a relatively rigid exchange rate regime, Egypt has a relatively fast current account convergence but China does not. On the other hand, while both South Africa and Japan have a flexible exchange rate regime, South Africa has a relatively fast convergence but

Japan does not. While we can come up with other examples, there is a limit to how much we can learn from individual cases.

In this paper, we seek to address this deficiency by systematically investigating any relationship in the data between exchange rate regimes and speed of current account adjustment. Rather than using officially announced exchange rate regimes, we appeal to de facto regimes in place. We utilize two well-established and familiar approaches to classifying a country's exchange rate regime on a de facto basis, by Levy-Yeyati and Sturzenegger (2003a,b), and by Reinhart and Rogoff (2004), respectively.

To anticipate the results, after experimenting with a large number of statistical specifications, we find no support in the data for the notion that countries on a *de facto* flexible exchange rate regime robustly exhibit a faster convergence of their current account (as a percentage of their GDP) to the long run equilibrium, regardless of which *de facto* exchange rate regime classification scheme we employ. This is true when we control for trade and financial openness; and when we separate large and small countries.

To be sure, the current account balance does have a tendency to revert to its long run steady state; it does not wander off or stay away from the long run equilibrium forever. This is clearly reflected in our empirical work. However, the speed of adjustment to the steady state is not systematically related to the degree of flexibility of a country's nominal exchange rate regime.

Should we be surprised by this finding? Perhaps not. The current account responds to real exchange rate, not the nominal exchange rate. If the real exchange rate adjustment does not depend very much on the nominal exchange rate regime, then the current account adjustment would not depend very much on nominal exchange rate regime either. That is why another key part of our analysis examines whether the nature of a country's nominal exchange rate regime significantly affects the pace of real exchange rate adjustment.

We conclude that the answer is no: the real exchange rate adjustment is not systematically related to how flexible a country's nominal exchange rate regime is. Again, this is true regardless of which *de facto* exchange rate regime classification we use. If anything, there is slight, but not very robust evidence that less flexible nominal exchange rate regimes sometimes exhibit faster real exchange rate adjustment.

The literature on current account is too large to be comprehensively summarized here. In terms of relatively recent theoretical work, Blanchard (2007) points out that one cannot automatically assume that a current account imbalance needs to be corrected by a policy unless one has clearly identified the relevant distortions. For recent empirical work on estimating current account adjustment, an excellent set of papers is collected in Clarida (2007), which in turn contains references to the earlier literature. As far as we know, the existing literature has not systematically addressed the question of whether a flexible exchange rate regime speeds up convergence of the current account. In this sense, this paper fills an important void.

The rest of the paper is organized as follows. Section 2 lays out the empirical methodology, data, and benchmark results. Section 3 conducts a series of extensions and robustness checks. Finally, Section 4 concludes.

2. Benchmark Statistical Results

2.1 Methodology

We estimate the rate at which current account balances (expressed as a share of GDP) revert to their mean values, using variations on this basic autoregression:

$$ca_{it} = \rho_0 + \rho_1 ca_{it-1} + v_{it} \qquad (1)$$

Where *ca* is the current account to GDP ratio for country *i*.[1] One can determine how the autoregressive coefficient varies with the exchange rate regime in a variety of ways. The simplest would be to order the exchange rate regimes by degree of flexibility, and then interact with a single variable. An alternative would be to stratify the sample by exchange rate regime and run separate regressions per regime. The third (nearly equivalent) approach would be use dummy variables for each regime but in a single regression.

The first approach imposes the condition that there is a monotonic and linear relationship between flexibility and current account reversion. The second approach imposes the fewest assumptions, but might yield imprecise estimates due to substantially decreased number of observations for each regression. The third approach will yield the same point estimates as obtained in the second approach but different estimated standard errors. The validity of this approach for making inference depends on the condition that the error term is distributed in a similar fashion across exchange rate regimes.

[1] We check for higher order autoregressive terms, and find that an AR(1) seems sufficient for the annual data used in this study.

We will focus on the second and third approaches, although we will discuss the results from the first briefly. The second approach relies upon estimating equation (1) for each category of exchange rate regime. The third approach involves estimating (2):

$$ca_{it} = \rho_0 + \rho_1 ca_{it-1} + \theta_0 regime_{it} + \theta_1 (ca_{it-1} \times regime_{it}) + v_{it} \qquad (2)$$

The variable *regime* is the de facto exchange rate regime. We estimate specifications where this variable is polychotomous ordered variable (e.g., ranging from 0 to 3) or a series of dichotomous dummy variables taking a value of 1 or 0 depending upon the regime.[2]

In all instances, we would like to control for other structural variables that might also affect the rate of reversion. In the case of equation (2), we augment the equation with level and interaction effects.

$$ca_{it} = \rho_0 + \rho_1 ca_{it-1} + \theta_0 regime_{it} + \theta_1 (ca_{it-1} \times regime_{it}) + controls + v_{it} \qquad (3)$$

Where *controls* includes different measures of economic openness, including trade and financial openness, described in greater depth below.

2.2. Data

The current account and trade openness data are from the World Bank's *World*

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[2] We have checked the results using the *de jure* index based upon the IMF's *Annual Report on Exchange Arrangements and Exchange Restrictions* instead of the *de facto* measures, to little effect. The results indicate no systematic relationship.

Development Indicators. The trade openness variable is the standard measure (the sum of imports and exports divided by GDP). Over 170 countries are included, over the 1971-2005 period. The sample encompasses both developed and developing countries (as classified by the IMF).

The de facto exchange rate regime variables come from two sources: the Levy-Yeyati and Sturzenegger (2003a,b) and the Reinhart and Rogoff (2004) measures. The Levy-Yeyati and Sturzenegger index ranges from 1 to 5, with 1 indicating "inconclusive" determination, 2 free float, 3 dirty float, 4 dirty float/crawling peg, and 5 fix. In this study, we drop 1's, and subtract 2 off the index, so that the revised index ranges from 0 to 3 (hereafter the LYS index).

The Reinhart and Rogoff index ranges from 1 to 14, ranging from more to less fixity. We aggregated the series into 3 categories. The first is fixed (from no legal tender to de facto peg); the second is intermediate (from pre announced crawling peg to moving band that is narrower than or equal to ± 2%); the third is floating (managed floating to freely floating).[3] These categories are then reversed so the index (hereafter the RR index) ranges from low values (high flexibility) to high values (high fixity).

Figures 1 and 2 present the histograms for the LYS and RR indices, respectively. The number of observations on LYS and RR are comparable, at around 4000. There are some differences in the distribution of regimes, but the same general pattern is replicated. The fewest observations are in the freest floating category, while the greatest number of observations are to be found in the most fixed category.

[3] This means we have omitted the "freely falling" regime observations, following Graciela Kaminsky's observation that such episodes are fundamentally distinct from freely *floating*.

2.3 The Basic Results

We estimate country by country the autoregressive parameter in (1), incorporating shifts due to different exchange rate regimes. Keeping in mind the caveat that some of the autoregressive parameters might be estimated over very short samples (recall, some countries will only be on the same exchange rate regime for a short period), one sees in Figure 3 a slight impression of higher degrees of persistence as one moves to higher degrees of exchange rate fixity.[4] However, a closer examination indicates that the impression is being driven by the lack of negative coefficients in the least flexible regimes. The mean of the estimated coefficients are virtually the same across regimes. This result holds up if a deterministic trend is included in the specifications; the resulting distributions are displayed in Figure 4. The bottom line: No clear evidence that more flexible exchange rate regimes are associated with a faster current account adjustment.

Another way to get at this question is to interact the LYS variable with the autoregressive parameter in a pooled regression. Table 1 displays the results obtained when the LYS index is included as an interaction term, and no additional controls are included. The first two columns report the simple autoregression, and the autoregression incorporating the LYS index. The results indicate that there is no evidence that a greater degree of exchange rate fixity induces slower adjustment (as measured by the autoregressive parameter). In the baseline specification for the full sample (column 1), the autoregressive coefficient is about 0.75. Allowing for differential effects, as the exchange rate regime shifts from free floating to fixed, the implied rate of reversion falls

[4] The samples have been truncated below at -1.5 and above at 2, to eliminate imprecisely estimated coefficients.

from 0.32 to 0.26; however, since the coefficient on the interaction term is not statistically significant (see column 2), one should discount this implication.

To allow for heterogeneity, results are presented for several subsamples, including the industrial country group, the non-industrial country group, and the ex-oil non-industrial country group. It appears to be important to allow for different rates of reversion for different groups. The rate of reversion is 0.91 for industrial countries, but 0.74 for non-industrial group. The standard errors are sufficiently small that there is little doubt that the current account balances behave in a different manner in the two groups. Excluding the oil-exporting countries does not change the rate of reversion. In no case does the interactive term show up significantly. That is, there is no evidence that a more flexible exchange rate implies a faster current account convergence.

Now we move to stratifying the sample by exchange rate regime. In Table 2, the LYS index is used to categorize. Moving from left to right is increasing degrees of fixity. In the first four columns of Table 2A, pertaining to the full sample, the degree of persistence is 0.63 under the most flexible regime, and rises to 0.76 and 0.79 as the regime gets progressively less flexible. Thus far, these results are in accord with the conventional wisdom. However, this is not robust or at least non-linear. When one gets to the most fixed regime, the degree of persistence *declines* to 0.74.

As previously remarked, there is a high degree of heterogeneity in the sample. Focusing on the industrial countries, one finds the greatest degree of persistence (essentially a random walk) in an intermediate regime category. In any case, the industrial countries have not been the focus of the policy discussions. Rather it is the non-industrial countries upon which most analysts have concentrated on.

Moving to Table 2B, one finds that indeed the fastest rate of reversion is in the floating category. However, once again the relationship is nonlinear. Increasing degrees of fixity lead to greater persistence, until one gets to the fixed regime. Then the degree of persistence declines. This pattern is replicated if one focuses on non-oil exporting non-industrial countries. While this outcome might be taken as partial vindication of the conventional wisdom, it's of interest that transition that is most relevant to the current policy debate is that between the fixed and dirty float/crawling peg. And here the results are counter to what has been argued. For instance, China's move from de facto fixed regime to dirty float would result – if other countries' experience is any guide based on our estimation – in *slower* current account reversion.

An alternative means of identifying the differences in current account persistence across regimes is to use interactive dummies. The only substantive difference between the two methods involves the second moment; the dummy variable approach assumes that the same error distribution applies to all regimes. To verify this, note that in Table 3, the point estimate for the full sample rate of reversion under freely floating is the same using the two methods. The estimated coefficient on the interaction term (lagcurrent1) is the implied effect on the reversion coefficient of being in the dirty float versus the free float, in the LYS schema. Adding 0.132 to 0.630 yields 0.762, which equals the point estimate in column (2) of Table 2A. The only additional information provided by this dummy variable approach is that it allows for direct assessment of whether the differences in reversion rates are statistically significant or not.[5]

[5] It's been pointed out that the response of current account reversion to exchange rate regime might differ if the regimes change every year or couple of years. Hence, we have checked to see if the results remain unchanged if we drop all observations where the regime has changed over the past three years. We then find that for LDC samples, CA persistence does rise with exchange rate fixity, but that this finding is *not*

Consider column 1 (all Countries) in Table 3. Using a standard t-test, none of the coefficients on the interaction terms are statistically significant. In other words, there are no statistically significant differences in estimated degrees of persistence across exchange rate regimes. This continues to be true when we look at various subsamples of countries (the set of industrial countries in Column 2, developing countries in Column 3, and ex-oil developing countries in Column 4), with the sole exception of the industrial country category. There, the current account in the managed floating category exhibits more persistence than in either the floating or other categories (including fixed). This exception is hardly the case in which most policy discussions have been focused on. These results hold if time fixed effects are included in the specifications (not reported to save space).

Are our results sensitive to the measure of de facto exchange rate regime? To address this question, Tables 4A and 4B report the results using the Reinhart and Rogoff classification of exchange rate regimes (now there are only three different regimes, instead of four), and the stratification approach (analogous to Table 2A, B). A similar pattern is detected. Focusing on the non-industrial country results (Table 4B), one finds in columns 1-3 that while the intermediate regimes exhibit slower reversion than the floating, it is also slower than that exhibited by the fixed regimes. Excluding the oil exporters does not change the basic pattern. Interestingly, now the fastest rate of reversion is for the fixed regimes!

The bottom line of this section is a conspicuous absence of a strong and robust association in the data between the degree of exchange rate flexibility and the speed of current account adjustment. This empirical pattern rejects the widely accepted wisdom in

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robust to inclusion of openness variables. Once these variables are included, there is no evidence that greater exchange rate fixity leads to greater exchange rate persistence.

the corridors of international financial institutions and powerful national treasuries that more exchange rate flexibility brings about a faster speed of current account adjustment.

3. Extensions and Other Robustness Tests

The conclusion of the last section could arise either because it is true, or because the empirical relationship is mis-specified. In order to ensure that our results are robust, we undertake several additional checks, including controlling for other plausible determinants of the speed of current account adjustment, and investigating possible endogeneity of exchange rate regimes.

3.1 Openness to trade and to capital flows

Two key missing regressors are trade openness and capital account openness. One might conjecture that greater trade openness makes it easier for trade account to respond to real exchange rate changes, and therefore is associated with a faster current account reversion. On the other hand, greater capital account openness makes an economy more susceptible to financing shocks, which may result in more frequent current account reversals. Without controlling for the effects of trade and capital account openness, the true relationship between exchange rate regimes and current account adjustment may be more difficult to detect.

There are a number of variables that could be used to proxy for trade and capital account openness. We appeal to two commonly used and easy to interpret measures. For trade openness, we use the sum of imports and exports to GDP ratio (OPEN). On the capital account openness side, we appeal to the Chinn and Ito (2006) financial openness index (KAOPEN). This measure is the first principal component of four categories of restrictions on external transactions, including dual foreign exchange rates, restrictions on current account transactions, restrictions on capital account transactions and finally the surrender of export proceeds. We switch the sign so that higher values of this index represent greater financial openness.

Table 5 presents the results from specifications incorporating these variables (in the context of the LYS index). Notice first in the full sample that the estimated rates of reversion do differ from those obtained in Table 2. This outcome is to be expected, to the extent that the openness terms, when interacted with the lagged current account balance, are statistically significant.

What the results indicate is that there is no clear pattern – for any country grouping – of increasing degrees of exchange rate fixity and current account persistence. The estimated autoregressive coefficient (holding at zero trade and financial openness) is never the highest in the fixed regime. Rather it is often the dirty float/managed peg category that exhibits the greatest persistence.

Here are some other notable points. First, in the dummy variable regressions (not shown), current account balances in the fixed exchange rate regimes exhibit *less* persistence than the freely floating regimes. In the full sample and the non-industrial country sample, the difference is statistically significant.

Second, trade openness does not appear to be an important determinant of current account persistence, but financial openness does. In the dummy variable regressions (not shown), a country with a more open capital account tends to exhibit a greater persistence in current account imbalance, and this is true in every country grouping. The effect is statistically significant for every grouping save the non-industrial ex-oil group, and is most pronounced for the industrial country group. Similar results are obtained using the Reinhart-Rogoff measure, although in this case, we also find lower persistence for the non-industrial ex-oil group as well.

3.2 Size

Country size could affect pattern of current account dynamics: for a large country, the only way for its current account deficit to shrink, is for the rest of the world to do an opposite adjustment. This means that the adjustment of a large country's current account depends on factors that affect other countries' adjustment, potentially including other countries' exchange rate regimes (Ju and Wei, 2007). A simple way to account for this possibility is to run separate regressions for large and small economies.

Table 6 reports results stratified by economic size. We used both the dollar measure and the PPP measure of GDP to split the samples by average GDP. That is, for each year, we calculated the average GDP for the entire sample, and placed countries in either the high or low sub-sample. We then re-estimated the dummy variable specifications to examine whether the effect of exchange rate regimes differed depending on economic size.

We report only the results for PPP-defined size (the results using market exchange rates are similar, but less statistically significant). First note that a simple autoregressive characterization (no controls) indicates very similar degrees of current account persistence across large and small countries. However, differences become highlighted when additional controls are added. With the exchange regime dummy variables are included, the large country current account balances are much less persistent than those for the smaller countries, even though few of the regime variables are statistically significant. The big difference comes when the openness variables are also included. Then for the large countries, all regimes exhibit less persistence than the free float, although the difference is not significant for the dirty float/crawling peg.

Another way to break the groups into large and small is to focus on the G-7 countries as opposed to all others. The results are reported in Table 7. In this case, the most important features are that, unconditionally, G-7 current account balances are much more persistent than other countries'. When regime and openness effects are allowed for, it appears that financial openness in particular induces much greater persistence (especially in the G-7 countries, although the effect is visible for both sets of countries).

Turning to the regime results, for the G-7, a dirty float/crawling peg induces much greater persistence, in both economic and statistical terms. For the non-G-7, a fixed exchange rate induces much *less* persistence. This effect is statistically significant. This seems counter to the general presumption (although it must be allowed that the result obtains only when the openness variables are included).

3.3 Inflation

One could argue that the exchange rate regimes proxy for other, more central, factors. Given the popularity of nominal anchor argument as a means of reducing inflation rates, it makes sense to examine whether our results are overturned by including inflation in our regressions.

We augment the basic specifications using dummies for the LYS indicator variable with CPI inflation measured as the log difference in the CPI (the results are not reported to save space). It turns out that we retain the basic pattern of results highlighted in Table 3. In particular, exchange rate regimes still do not display a statistically significant impact on reversion rates, and to the extent that they do, more rigid regimes are associated with faster reversion rates after controlling for inflation. Indeed, the only instances in which the inflation rate variable comes into play are those involving the industrial countries. There, higher inflation *is* associated with faster reversion.

3.4 Endogeneity

The preceding discussion assumes that one can take the exchange rate regime selection as exogenous with respect to current account persistence. But we cannot take this assumption for granted. Hence, we undertake an examination to see whether the conclusions are robust to possible endogeneity of exchange rate regimes.

What variables enter into the determination of de facto exchange rate regimes? Levy-Yeyati and Sturzenegger's (2003b) present evidence that the regime selection depends upon initial foreign exchange reserves, a dummy for islands, economic size, area and average exchange rate regime in the region.

Motivated by their results, we use a two-stage procedure to re-estimate the equations for specifications excluding and including openness variables. In the first stage, we estimate a probit model for each indicator variable (regime 0 through regime 3, ranging from floating to fixed), using as regressors the initial foreign exchange reserve to GDP ratio, GDP in PPP terms, land area, and a dummy variable for islands. We also include dummy variables for regions to approximate the regional exchange rate regime effect. The probit regressions yield probabilities, which we then convert back to binary variables. We use the 0.5 cutoff for regimes 0 and 3 (pure float, fixes), and 0.1 and 0.2 for the intermediate regimes. Note that the probit regressions are more successful for the extreme regimes (pseudo-R-squareds of about 0.2) than for the intermediates (about 0.05). We report the results of these first stage probit regressions in Table 8a.

In the second stage, these predicted regime variables are then used instead of the actual regime variables. These results are reported in Table 8b. In the regressions excluding openness variables, they indicate that, except for the full sample, there is no evidence that differing exchange rate regimes are associated with statistically significantly differing rates of current account reversion. In the full sample *only*, moving from a fully floating to a dirty float results in an increase in current account persistence from 0.68 to 0.78, implying an increase in the half life of a current account deviation from about 1.8 to 2.8 years. Even this result seems specific to the choice of the sample and specification. In no other case does the regime matter in a statistically significant manner, according to standard t-tests.

One might be concerned that weak instruments is hindering the ability to find an impact. Interestingly, the largest *economic* impact is in moving from flexible to dirty float. Relative to floating, current account balances under the fixed regime exhibit roughly the same degree of persistence, at least for the non-industrial ex-oil sample.

The existing literature has not focused on the impact of exchange rate regimes on the current account balance, perhaps in part due to the concern that regime selection is likely a function of the current account. However, in this set of results, where we have addressed the endogeneity issue, that concern is mitigated. The key point is that only two patterns appear robust to specification: managed floats induce larger current account surpluses for industrial countries, and fixed exchange rates induce *smaller* current surpluses for developing countries. This latter finding is not in accord with the currently prevailing views in policy circles, although a little reflection on the wide diversity of experiences with fixed exchange rates should make this finding in the end unsurprising.

An alternative approach uses the probabilities – instead of the predicted regimes – as regressors. Here, we do obtain more statistically significant results, for the specifications corresponding to those in columns 1-4 in Table 8b. Interestingly, except for moving from fully flexible to dirty float, the more flexible the regime, the *slower* the rate of reversion! The statistical significance of the differences in the convergence speeds across exchange rate regimes disappears when estimating the specifications including more covariates (Columns 5-8 of Table 8b). Therefore, we are getting back to the same bottom line: the most salient feature of the data is a lack of a robust relationship between exchange rate flexibility and speed of current account adjustment.

4. Exchange Rate Regimes and Persistence of the Real Exchange Rate

Why doesn't a more flexible exchange rate regime generate a faster convergence of the current account? This section aims to investigate this question. Our hypothesis is that the current account responds to *real* exchange rate, not nominal exchange rate. If the real exchange rate adjustment does not depend very much on the nominal exchange rate regime, then the current account adjustment would not depend very much on nominal exchange rate regime either. We now examine whether the nature of a country's nominal exchange rate regime significantly affects the adjustment process of its real exchange rate.

In order to accomplish this aim, we repeat a similar process in the previous section, except that we replace the current account with real effective exchange rates - CPI-deflated trade-weighted indices[6] - as calculated by the IMF.

We estimate the basic specification, then augment with dummy variables for the regime, and then incorporate the openness measures. In Table 9, one finds that the results indicate little evidence that the nature of the exchange rate regime matters. In column 1, a simple AR(1) specification indicates a 20% rate of real exchange rate reversion for the entire sample of countries; adding in regime interaction terms yields an essentially unchanged rate of reversion (22%), and no hint that any of the interaction terms with exchange rate regimes are anywhere near statistical significance (column 2). And this conclusion is not altered at all by the inclusion of two openness measures. The rate of reversion is still the same (21%); the only difference is that greater trade openness is associated with faster reversion of the real exchange rate. (Trade openness is also associated with a stronger real exchange rate on average).

These results appear to be driven by the developing countries; they do not appear in the industrial country category (columns 4-6). It is notable that for the developing countries the estimated rate of real exchange rate persistence is not altered noticeably when one includes indicators for exchange rate regimes, and measures of economic openness.

It turns out that the results – at least pertaining to the exchange rate regime – do depend upon whether one accounts for time fixed effects or not. In Table 10, the

[6] See Chinn (2006) for a discussion of effective exchange rates.

specifications are augmented with time fixed effects. More fixed exchange rate regimes are not generally associated with slower reversion. That is, going from a floating rate to a dirty float/crawling peg does not result in a slower rate of reversion. While we do find that – except for the industrial country sample – the fixed regime induces substantially slower real exchange rate reversion, we suspect that this finding is not robust.[7] In a recent paper, Mark and Sul (2008) have argued that the standard practice of using time fixed effects overstates the rate of convergence when there is serial correlation in the common factor. To the extent that their argument is valid in our sample, it would tend to reduce the discrepancy between the reversion rates estimated for each exchange rate regime.

To put our estimates into perspective, for the non-industrial ex-oil countries, the rate of reversion under flexible rates is 0.37. Under fixed exchange rates, the rate of reversion is 0.18. The half-life of a deviation in the former case is 1.5 years, while in the latter it is 3.5 years. However, this result is sensitive to the choice of specifications and country samples. For example, without the two openness measures (as in Columns 2, 5, and 8), there is no statistical difference between fixed and flexible exchange rate regimes.

To summarize, there is no strong and robust evidence of a monotonic relationship from more flexibility in an exchange rate regime to a faster speed in the convergence of real exchange rates toward the long run equilibrium. This pattern is consistent with a lack of a strong and robust relationship between exchange rate regimes and adjustment speed of current accounts.

5. Conclusion

The notion that more flexibility in an exchange rate regime implies speedier adjustment in current account is very plausible *ex ante*. The only problem is that it does

[7] Cashin and McDermott (2004) obtain similar results using the Reinhart-Rogoff classifications.

not hold in the data. In this paper, we examine the connection between the two for over 170 economies during 1971-2005. We make use of two leading classification schemes of *de facto* exchange rate regimes. The key finding is an utter absence of any robust association between the *de facto* nominal exchange rate regime and the speed of current account adjustment.

We further explore the reasons behind the disconnect. What matters for current account adjustment is real, not nominal, exchange rate. Yet, there is no strong monotonic relationship between flexibility of a nominal exchange regime and the speed of convergence in real exchange rates. This finding again is independent of which *de facto* exchange rate regime classification scheme we use.

Accounting for the most obvious explanations – such as the omission of important determinants of current account reversion – fails to overturn these findings. The endogeneity of the exchange rate regimes also does not seem to explain the lack of a relationship between exchange rate regimes and rates of current account adjustment.

We therefore conclude that there is no robust and systematic association between a country's nominal exchange rate regime and the speed of current account adjustment. If public policies can work on the level of real exchange rate directly, they may have some hope of altering the pattern of current account imbalances. However, changing nominal exchange rate regimes does not reliably alter the *pace* of real exchange rate reversion.

Data Appendix

The data used in this paper were drawn from a number of different sources. We provide below a listing of the mnemonics for the variables used in the analysis, descriptions of these variables and the source(s) from which the primary data for constructing these variables were taken. A listing of the countries in the final sample, along with the country groupings used in the analysis, is provided in the working paper version of this paper. For most countries, data were available from 1971 through 2005.

Mnemonic	Source*	Variable description
CAGDP	WDI	Current account to GDP ratio
REER	IFS	Real effective exchange rate, CPI deflated
OPEN	WDI	Openness indicator: ratio of exports plus imports of goods and nonfactor services to GDP
RYUS	WDI	Real GDP in USD.
RYPPP	WDI	Real GDP in PPP terms
RER	IFS	Real effective exchange rate
KAOPEN**	CI	Capital account openness
LYS	LYS	De facto exchange rate regime measure
RR	RR	De facto exchange rate regime measure
AREA	Rose	Area in square km
ISLAND	Rose	Island dummy
Reserves	IFS	Foreign exchange reserves ex. gold

* These are mnemonics for the sources used to construct the corresponding. CI: Chinn and Ito (2006); WDI: *World Development Indicators* (2006). IFS: *International Financial Statistics*. LYS: Levy-Yeyati and Sturzenegger (2003), updated to 2004 from http://200.32.4.58/~fsturzen/Base_2005.zip . RR: Reinhart and Rogoff (2004), updated to 2004 by Eichengreen and Razo-Garcia from http://www.econ.berkeley.edu/~eichengr/updated_rr_nat_class.pdf .
Rose denotes data set downloaded from http://faculty.haas.berkeley.edu/arose/StabData.zip .

RR is an aggregated version of the Reinhart Rogoff index, with a reversed ordering. RR1 encompasses regimes from freely floating to managed floating; RR2 encompasses regimes from moving band that is narrower than or equal to ± 2% to pre announced crawling peg to; RR3 encompasses regimes from de facto peg to no legal tender.

** *KAOPEN* is the first principal component of four indices; in order to simplify interpretation, this variable is adjusted such that the minimum value is zero, i.e., *KAOPEN* ranges between zero and some positive value.

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TABLE 1: Current Account Persistence and Exchange Rate Regime

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	All		Industrial Countries		Non-Industrial Countries		Non-Industrial Countries ex-oil	
CA(-1)	0.747	0.68	0.908	0.936	0.739	0.643	0.738	0.625
	(0.023)***	(0.085)***	(0.025)***	(0.047)***	(0.024)***	(0.094)***	(0.027)***	(0.104)***
CA(-1) x LYS		0.020		0.000		0.030		0.029
		(0.030)		(0.020)		(0.030)		(0.040)
LYS		-0.001		0.000		-0.001		-0.002
		(0.000)		(0.000)		(0.000)		(0.000)
Constant	-0.009	-0.007	0.000	0.000	-0.011	-0.010	-0.013	-0.011
	(0.001)***	(0.003)**	(0.00)	(0.00)	(0.002)***	(0.004)**	(0.002)***	(0.005)**
Observations	4565	3560	728	573	3837	2987	3432	2648
Adjusted R-squared	0.59	0.57	0.76	0.79	0.58	0.55	0.56	0.51

Notes: Dependent Variable: CA. LYS ranges from 0 to 3, with higher values indicating more exchange rate fixity.

Table 2A: Current Account Persistence by Country Sample, by Regime

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		All				Industrial Countries		
	Floating	Dirty float	Dirty/Crwl	Fixed	Floating	Dirty float	Dirty/Crwl	Fixed
CA(-1)	0.630	0.762	0.788	0.735	0.867	1.060	0.893	0.929
	(0.111)***	(0.068)***	(0.065)***	(0.030)***	(0.044)***	(0.066)***	(0.120)***	(0.033)***
Constant	-0.010	0.002	-0.006	-0.012	-0.001	0.003	-0.001	0.000
	(0.004)***	(0.003)	(0.003)**	(0.002)***	(0.001)	(0.003)	(0.004)	(0.001)
Observations	769	278	388	2125	209	50	35	279
Adjusted R-squared	0.38	0.55	0.64	0.58	0.71	0.88	0.8	0.78

Robust standard errors in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: Dependent Variable: CA. Exchange rate regimes are based on Levy-Yeyati and Sturzenegger definitions.

Table 2B: Current Account Persistence by Country Sample, by Regime

	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
		Non-Industrial Countries				Non-Industrial Countries ex-Oil		
	Floating	Dirty float	Dirty/Crwl	Fixed	Floating	Dirty float	Dirty/Crwl	Fixed
CA(-1)	0.596	0.726	0.781	0.728	0.564	0.717	0.797	0.701
	(0.122)***	(0.078)***	(0.068)***	(0.031)***	(0.133)***	(0.071)***	(0.072)***	(0.039)***
Constant	-0.014	0.000	-0.007	-0.014	-0.016	-0.001	-0.006	-0.020
	(0.005)***	(0.004)	(0.004)*	(0.002)***	(0.006)***	(0.004)	(0.004)	(0.003)***
Observations	560	228	353	1846	529	209	331	1579
Adjusted R-squared	0.34	0.5	0.62	0.57	0.33	0.49	0.65	0.51

Robust standard errors in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: Dependent Variable: CA. Exchange rate regimes are based on Levy-Yeyati and Sturzenegger definitions.

Table 3: Current Account Persistence, by Country Sample

	(1)	(2)	(3)	(4)
	All	Industrial Countries	Non-Industrial Countries	Non-Industrial Countries ex-oil
CA(-1)	0.630	0.867	0.596	0.564
	(0.111)***	(0.044)***	(0.122)***	(0.133)***
CA(-1) x LYS1	0.132	0.193	0.131	0.153
	(0.130)	(0.079)**	(0.145)	(0.151)
CA(-1) x LYS2	0.158	0.026	0.185	0.233
	(0.128)	(0.125)	(0.140)	(0.152)
CA(-1) x LYS3	0.105	0.062	0.132	0.137
	(0.115)	(0.055)	(0.126)	(0.139)
LYS1	0.012	0.003	0.014	0.016
	(0.005)**	(0.003)	(0.007)**	(0.007)**
LYS2	0.004	-0.001	0.007	0.011
	(0.005)	(0.004)	(0.006)	(0.007)
LYS3	-0.002	0.001	0.000	-0.003
	(0.004)	(0.002)	(0.006)	(0.006)
Constant	-0.010	-0.001	-0.014	-0.016
	(0.004)***	(0.001)	(0.005)***	(0.006)***
Observations	3560	573	2987	2648
Adjusted R-squared	0.57	0.79	0.56	0.52

Robust standard errors in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: Dependent Variable: CA. LYS1 is a dummy variable for dirty float regime; LYS2 is a dummy variable for dirty float/crawling peg; LYS3 is a dummy variable for fixed.

Table 4A: Current Account Persistence, by Country Sample, by Reinhart Rogoff Regime

	(1)	(2)	(3)	(4)	(5)	(6)
	All			Industrial Countries		
	Floating	Band/Crwl	Fixed	Floating	Band/Crwl	Fixed
CA(-1)	0.663***	0.799***	0.719***	0.925***	0.840***	0.946***
	(0.0639)	(0.0595)	(0.0455)	(0.0427)	(0.0424)	(0.0417)
Constant	-0.005*	-0.005**	-0.015***	-0.000	-0.001	0.001
	(0.003)	(0.002)	(0.003)	(0.001)	(0.002)	(0.001)
Observations	619	1275	1179	204	307	200
Adjusted R-squared	0.442	0.666	0.51	0.784	0.663	0.84

Robust standard errors in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: Dependent Variable: CA. Exchange rate regimes are based on Reinhart-Rogoff definitions. “Free fall” regime observations omitted.

Table 4B: Current Account Persistence, by Country Sample, by Reinhart Rogoff Regime

	(7)	(8)	(9)	(10)	(11)	(12)
	Non-Industrial Countries			Non-Industrial ex-oil		
	Floating	Band/Crwl	Fixed	Floating	Band/Crwl	Fixed
CA(-1)	0.621***	0.795***	0.688***	0.656***	0.800***	0.655***
	(0.071)	(0.063)	(0.048)	(0.084)	(0.066)	(0.054)
Constant	-0.007**	-0.006**	-0.021***	-0.009**	-0.007**	-0.026***
	(0.004)	(0.003)	(0.003)	(0.005)	(0.003)	(0.004)
Observations	415	968	979	348	921	905
Adjusted R-squared	0.391	0.662	0.47	0.445	0.673	0.431

Robust standard errors in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: Dependent Variable: CA. . Exchange rate regimes are based on Reinhart-Rogoff definitions. “Free fall” regime observations omitted.

Table 5A: Current Account Persistence with Openness, by Country Sample, by Regime

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	All				Industrial Countries			
	Floating	Dirty float	Dirty/Crwl	Fixed	Floating	Dirty float	Dirty/Crwl	Fixed
CA(-1)	0.725	0.536	0.832	0.656	0.809	0.569	1.959	0.657
	(0.055)***	(0.102)***	(0.150)***	(0.073)***	(0.123)***	(0.382)	(0.644)***	(0.107)***
CA(-1) x Trade	0.086	0.257	-0.067	0.037	-0.127	0.368	-1.845	0.064
Openness	(0.073)	(0.084)***	(0.116)	(0.075)	(0.21)	(0.570)	(0.848)**	(0.110)
CA(-1) x Financial	0.059	-0.001	0.078	0.034	0.063	0.188	0.166	0.108
Openness	(0.019)***	(0.057)	(0.030)**	(0.017)*	(0.027)**	(0.091)**	(0.087)*	(0.035)***
Trade Openness	-0.001	-0.001	0.000	-0.008	0.007	-0.029	0.006	0.001
	(0.004)	(0.008)	(0.009)	(0.004)*	(0.005)	(0.033)	(0.013)	(0.003)
Financial Openness	0.002	0.001	0.002	0.007	0.003	0.000	0.004	0.002
	(0.001)**	(0.002)	(0.002)	(0.001)***	(0.001)**	(0.003)	(0.003)	(0.001)**
Constant	-0.006	0.000	-0.006	-0.009	-0.010	0.008	-0.010	-0.007
	(0.003)**	(0.007)	(0.006)	(0.003)***	(0.003)***	(0.015)	(0.006)	(0.003)**
Observations	727	245	357	1917	206	36	31	266
Adjusted R-squared	0.6	0.58	0.65	0.54	0.72	0.92	0.83	0.79

Robust standard errors in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: Dependent Variable: CA. Exchange rate regimes are based on Levy-Yeyati and Sturzenegger definitions.

Table 5B: Current Account Persistence with Openness, by Country Sample, by Regime

	Non-Industrial Countries				Non-Industrial Countries ex-Oil			
	Floating	Dirty float	Dirty/Crwl	Fixed	Floating	Dirty float	Dirty/Crwl	Fixed
CA(-1)	0.705	0.436	0.834	0.647	0.690	0.675	0.839	0.630
	(0.078)***	(0.130)***	(0.161)***	(0.076)***	(0.069)***	(0.177)***	(0.173)***	(0.091)***
CA(-1) x Trade Openness	0.101	0.323	-0.067	0.041	0.101	0.103	-0.052	0.063
	(0.09)	(0.097)***	(0.120)	(0.080)	(0.090)	(0.120)	(0.120)	(0.090)
CA(-1) x Financial Openness	0.047	-0.050	0.079	0.032	0.067	0.065	0.068	0.020
	(0.035)	(0.072)	(0.034)**	(0.018)*	(0.031)**	(0.088)	(0.034)**	(0.026)
Trade Openness	0.000	0.005	-0.001	-0.008	-0.001	-0.002	0.008	-0.007
	(0.01)	(0.010)	(0.010)	(0.005)*	(0.010)	(0.010)	(0.010)	(0.010)
Financial Openness	0.001	-0.003	0.002	0.007	0.003	0.004	0	0.006
	(0.000)	(0.000)	(0.000)	(0.002)***	(0.002)*	(0.000)	(0.000)	(0.002)***
Constant	-0.007	-0.006	-0.005	-0.009	-0.008	0.002	-0.010	-0.014
	(0.004)*	(0.010)	(0.010)	(0.004)**	(0.003)**	(0.010)	(0.010)	(0.005)***
Observations	521	209	326	1651	490	190	305	1407
Adjusted R-squared	0.57	0.55	0.64	0.52	0.62	0.54	0.67	0.51

Robust standard errors in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: Dependent Variable: CA.

Table 6: Current Account Persistence by Country Size

	(1)	(2)	(3)	(4)	(5)	(6)
		Large			Small	
CA(-1)	0.760	0.475	1.021	0.731	0.691	0.652
	(0.042)***	(0.271)*	(0.111)***	(0.028)***	(0.050)***	(0.073)***
CA(-1) x LYS1		0.076	-0.358		0.119	0.111
		(0.297)	(0.204)*		(0.092)	(0.093)
CA(-1) x LYS2		0.239	-0.165		0.121	0.086
		(0.280)	(0.119)		(0.096)	(0.099)
CA(-1) x LYS3		0.269	-0.275		0.026	-0.012
		(0.277)	(0.091)***		(0.059)	(0.054)
LYS1		0.009	0.006		0.014	0.014
		(0.007)	(0.006)		(0.005)***	(0.005)***
LYS2		0.003	0.001		0.005	0.005
		(0.005)	(0.005)		(0.005)	(0.006)
LYS3		0.001	-0.003		-0.003	-0.005
		(0.007)	(0.005)		(0.004)	(0.004)
CA(-1) x Trade Openness			-0.144			0.066
			(0.130)			(0.070)
Trade Openness			-0.006			-0.005
			(0.006)			(0.004)
CA(-1) x Financial Openness			0.017			0.043
			(0.026)			(0.018)**
Financial Openness			0.003			0.005
			(0.001)*			(0.001)***
Constant	-0.005	-0.006	0.000	-0.011	-0.012	-0.008
	(0.002)**	(0.004)	(0.003)	(0.002)***	(0.003)***	(0.004)**
Observations	1126	889	770	3365	2655	2462
Adjusted R-squared	0.64	0.61	0.5	0.55	0.53	0.56

Robust standard errors in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: Dependent Variable: CA. LYS1 is a dummy variable for dirty float regime; LYS2 is a dummy variable for dirty float/crawling peg; LYS3 is a dummy variable for fixed.

Table 7: Current Account Persistence by G-7 versus non-G-7

	(1)	(2)	(3)	(4)	(5)	(6)
	G-7 Countries			Non G-7 Countries		
CA(-1)	0.889	0.886	0.720	0.746	0.604	0.730
	(0.039)***	(0.046)***	(0.162)***	(0.024)***	(0.118)***	(0.066)***
CA(-1) x LYS1		-0.319	-0.025		0.160	0.007
		(0.216)	(0.169)		(0.136)	(0.086)
CA(-1) x LYS2		0.271	0.325		0.185	0.002
		(0.177)	(0.183)*		(0.135)	(0.079)
CA(-1) x LYS3		-0.031	0.028		0.131	-0.087
		(0.138)	(0.148)		(0.122)	(0.049)*
LYS1		-0.004	-0.002		0.015	0.010
		(0.004)	(0.004)		(0.006)***	(0.005)**
LYS2		-0.006	-0.006		0.007	0.002
		(0.003)**	(0.004)*		(0.006)	(0.004)
LYS3		0.000	0.000		0.001	-0.008
		(0.002)	(0.002)		(0.005)	(0.003)***
CA(-1) x Trade Openness			-0.464			0.053
			(0.196)**			(0.063)
Trade Openness			0.005			-0.005
			(0.005)			(0.003)
CA(-1) x Financial Openness			0.145			0.039
			(0.060)**			(0.015)**
Financial Openness			0.001			0.005
			(0.001)			(0.001)***
Constant	-0.001	0.001	-0.004	-0.010	-0.013	-0.003
	(0.001)	(0.001)	(0.003)	(0.001)***	(0.005)***	(0.003)
Observations	230	196	196	4335	3364	3050
Adjusted R-squared	0.73	0.75	0.77	0.59	0.57	0.55

Robust standard errors in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: Dependent Variable: CA. LYS1 is a dummy variable for dirty float regime; LYS2 is a dummy variable for dirty float/crawling peg; LYS3 is a dummy variable for fixed.

Table 8A: Probit Regression for Determinants of Exchange Rate Regimes

	(1)	(2)	(3)	(4)
	Floating	Dirty float	Dirty/Crwl	Fixed
Island	0.586	-0.247	-0.129	-0.386
	(0.088)***	(0.118)**	(0.098)	(0.082)***
Log(area)	0.101	0.002	0.040	-0.087
	(0.018)***	(0.021)	(0.019)**	(0.016)***
Log(GDP)	0.273	0.090	0.106	-0.322
	(0.019)***	(0.022)***	(0.020)***	(0.018)***
Initial Reserves/GDP	-0.503	-0.524	1.201	0.062
	(0.551)	(0.627)	(0.561)**	(0.444)
East Asia-Pacific	-1.521	5.064	0.603	5.480
	(0.261)***	(0.628)***	(0.250)**	(0.493)***
E.Europe/ Central Asia	-0.587	5.318	0.525	4.530
	(0.270)**	(0.589)***	(0.267)**	(0.460)***
MidEast/N.Africa	-1.433	5.184	0.267	5.560
	(0.263)***	(0.599)***	(0.257)	(0.475)***
S. Asia	-0.895	4.798	1.193	4.402
	(0.278)***	(0.638)***	(0.267)***	(0.497)***
W. Europe	-1.932	5.196	0.312	5.894
	(0.261)***	(0.615)***	(0.250)	(0.490)***
Sub-Saharan Africa	-1.250	5.120	0.324	5.329
	(0.265)***	(0.554)***	(0.258)	(0.441)***
Latin America/ Caribbean	-1.144	5.212	0.880	4.953
	(0.259)***	(0.567)***	(0.249)***	(0.447)***
Constant	-7.390	-8.702	-4.870	3.801
	(0.604)***	0.000	(0.631)***	0.000
Observations	3377	3377	3377	3377

Standard errors in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: Dependent Variable: CA. LYS0 is a dummy variable for free float; LYS1 is a dummy variable for dirty float regime; LYS2 is a dummy variable for dirty float/crawling peg; LYS3 is a dummy variable for fixed.

Table 8B: Current Account Persistence Accounting for Regime Endogeneity

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	All	Industrial	Non-Industrial	Non-Industrial ex oil	All	Industrial	Non-Industrial	Non-Industrial ex oil
CA(-1)	0.676	0.888	0.666	0.743	0.600	0.677	0.591	0.653
	(0.048)***	(0.046)***	(0.052)***	(0.053)***	(0.067)***	(0.095)***	(0.075)***	(0.083)***
CA(-1) x LYS1hat	0.094	0.055	0.050	0.032	0.072	0.085	0.036	0.075
	(0.045)**	(0.059)	(0.050)	(0.065)	(0.051)	(0.070)	(0.057)	(0.058)
CA(-1) x LYS2hat	-0.070	-0.065	-0.022	-0.021	0.010	-0.055	0.041	-0.026
	(0.053)	(0.182)	(0.056)	(0.064)	(0.059)	(0.127)	(0.065)	(0.060)
CA(-1) x LYS3hat	0.042	0.002	0.044	-0.030	0.042	0.020	0.046	-0.019
	(0.046)	(0.050)	(0.050)	(0.052)	(0.046)	(0.075)	(0.051)	(0.049)
LYS1hat	0.008	0.001	0.005	0.000	0.007	0.005	0.005	0.001
	(0.002)***	(0.002)	(0.003)	(0.003)	(0.002)***	(0.002)**	(0.003)	(0.004)
LYS2hat	-0.003	-0.001	-0.001	0.000	0.001	0.004	0.001	-0.001
	(0.003)	(0.003)	(0.004)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)
LYS3hat	-0.005	0.002	-0.007	-0.012	-0.004	-0.001	-0.008	-0.012
	(0.002)**	(0.002)	(0.003)**	(0.003)***	(0.003)*	(0.002)	(0.004)**	(0.004)***
CA(-1) x Trade Openness					0.074	0.009	0.077	0.092
					(0.064)	(0.133)	(0.066)	(0.074)
CA(-1) x Financial Openness					0.027	0.085	0.026	0.020
					(0.015)*	(0.022)***	(0.016)	(0.022)
Trade Openness					-0.003	0.003	-0.003	-0.002
					(0.003)	(0.004)	(0.004)	(0.004)
Financial Openness					0.004	0.002	0.004	0.003
					(0.001)***	(0.001)***	(0.001)***	(0.002)**
Constant	-0.009	-0.002	-0.009	-0.006	-0.009	-0.010	-0.006	-0.003
	(0.002)***	(0.002)	(0.003)***	(0.003)*	(0.003)***	(0.003)***	(0.004)	(0.004)
Observations	3805	607	3198	2832	3358	572	2786	2456
Adjusted R-sq	0.58	0.78	0.57	0.54	0.59	0.78	0.57	0.58

Robust standard errors in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: Dependent Variable: CA. LYS1hat is a predicted dummy variable for dirty float regime; LYS2hat is a predicted dummy variable for dirty float/crawling peg; LYS3hat is a predicted dummy variable for fixed.

Table 9: Real Exchange Rate Persistence, by Country Sample

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
		All			Industrial			Non-industrial			Non-industrial ex-oil	
REER(-1)	0.797	0.782	0.785	0.624	0.579	0.704	0.803	0.814	0.832	0.779	0.733	0.728
	(0.024)***	(0.056)***	(0.053)***	(0.055)***	(0.103)***	(0.102)***	(0.024)***	(0.054)***	(0.060)***	(0.030)***	(0.043)***	(0.066)***
REER(-1) x LYS1		-0.042	-0.029		0.035	-0.119		-0.063	-0.034		0.001	0.019
		(0.075)	(0.072)		(0.159)	(0.141)		(0.077)	(0.074)		(0.083)	(0.083)
REER(-1) x LYS2		-0.101	-0.115		-0.124	-0.107		-0.120	-0.125		-0.033	-0.068
		(0.111)	(0.106)		(0.152)	(0.159)		(0.110)	(0.106)		(0.095)	(0.096)
REER(-1) x LYS3		0.064	0.093		0.075	0.022		0.032	0.074		0.097	0.126
		(0.083)	(0.073)		(0.104)	(0.095)		(0.084)	(0.076)		(0.099)	(0.094)
LYS1		0.181	0.121		-0.171	0.546		0.280	0.136		-0.002	-0.092
		(0.349)	(0.340)		(0.732)	(0.647)		(0.360)	(0.353)		(0.394)	(0.403)
LYS2		0.450	0.517		0.611	0.518		0.529	0.557		0.140	0.307
		(0.507)	(0.487)		(0.701)	(0.729)		(0.503)	(0.483)		(0.444)	(0.449)
LYS3		-0.248	-0.377		-0.351	-0.106		-0.073	-0.270		-0.366	-0.500
		(0.386)	(0.339)		(0.490)	(0.445)		(0.390)	(0.352)		(0.471)	(0.450)
REER(-1) x Trade Openness			-0.115			-0.122			-0.130			-0.134
			(0.052)**			-0.135			(0.056)**			(0.057)**
REER(-1) x Financial Openness			-0.029			-0.055			-0.007			-0.036
			(0.024)			(0.037)			(0.029)			(0.044)
Trade Openness			0.359			0.408			0.423			0.410
			(0.212)*			(0.602)			(0.233)*			(0.242)*
Financial Openness			0.129			0.267			0.025			0.148
			(0.112)			(0.171)			(0.139)			(0.206)
Constant	0.956	1.001	1.129	1.749	1.957	1.454	0.932	0.840	0.918	1.037	1.205	1.420
	(0.111)***	(0.258)***	(0.255)***	(0.256)***	(0.481)***	(0.462)***	(0.112)***	(0.245)***	(0.295)***	(0.139)***	(0.205)***	(0.333)***
Observations	2489	1936	1728	687	571	515	1802	1365	1213	1587	1176	1024
Number of cn	92	90	88	24	23	22	92	67	66	92	59	58
R-squared	0.64	0.63	0.66	0.46	0.47	0.49	0.65	0.64	0.67	0.61	0.59	0.64

Robust standard errors in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: Dependent Variable: REER. LYS1 is a dummy variable for dirty float regime; LYS2 is a dummy variable for dirty float/crawling peg; LYS3 is a dummy variable for fixed.

Table 10: Real Exchange Rate Persistence with Time Fixed Effects, by Country Sample

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
		All			Industrial			Non-industrial			Non-industrial ex-oil	
REER(-1)	0.776	0.739	0.731	0.624	0.585	0.696	0.768	0.731	0.719	0.750	0.645	0.627
	(0.024)***	(0.055)***	(0.050)***	(0.057)***	(0.097)***	(0.112)***	(0.026)***	(0.056)***	(0.063)***	(0.032)***	(0.046)***	(0.071)***
REER(-1) x LYS1		-0.011	0.001		-0.026	-0.135		-0.011	0.013		0.062	0.067
		(0.071)	(0.070)		(0.142)	(0.151)		(0.072)	(0.069)		(0.077)	(0.077)
REER(-1) x LYS2		-0.092	-0.102		-0.071	-0.096		-0.092	-0.100		0.017	-0.016
		(0.110)	(0.104)		(0.195)	(0.214)		(0.111)	(0.104)		(0.099)	(0.099)
REER(-1) x LYS3		0.089	0.122		0.059	-0.040		0.095	0.141		0.164	0.192
		(0.080)	(0.068)*		(0.093)	(0.107)		(0.082)	(0.071)*		(0.093)*	(0.085)**
LYS1		0.034	-0.023		0.091	0.609		0.023	-0.099		-0.304	-0.336
		(0.331)	(0.329)		(0.655)	(0.695)		(0.338)	(0.330)		(0.363)	(0.373)
LYS2		0.411	0.455		0.357	0.462		0.387	0.426		-0.107	0.046
		(0.507)	(0.478)		(0.915)	(0.997)		(0.506)	(0.475)		(0.462)	(0.460)
LYS3		-0.381	-0.533		-0.290	0.173		-0.425	-0.650		-0.739	-0.885
		(0.368)	(0.313)*		(0.439)	(0.500)		(0.383)	(0.332)*		(0.443)	(0.405)**
REER(-1) x Trade Openness			-0.107			-0.057			-0.113			-0.104
			(0.056)*			(0.165)			(0.057)*			(0.058)*
REER(-1) x Financial Openness			-0.032			-0.061			-0.023			-0.046
			(0.021)			(0.038)			(0.028)			(0.040)
Trade Openness			0.326			0.047			0.352			0.309
			(0.245)			(0.784)			(0.255)			(0.253)
Financial Openness			0.162			0.289			0.110			0.206
			(0.100)			(0.175)			(0.128)			(0.186)
Constant	1.052	1.236	1.487	1.763	1.965	1.553	1.089	1.218	1.635	1.174	1.615	2.123
	(0.113)***	(0.265)***	(0.257)***	(0.287)***	(0.494)***	(0.587)**	(0.118)***	(0.322)***	(0.338)***	(0.149)***	(0.298)***	(0.370)***
Time Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	2489	1936	1728	687	571	515	1802	1365	1213	1587	1176	1024
Number of cn	92	90	88	24	23	22	92	67	66	92	59	58
R-squared	0.68	0.68	0.73	0.52	0.53	0.57	0.71	0.71	0.77	0.67	0.67	0.74

Robust standard errors in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: Dependent Variable: REER. LYS1 is a dummy variable for dirty float regime; LYS2 is a dummy variable for dirty float/crawling peg; LYS3 is a dummy variable for fixed.

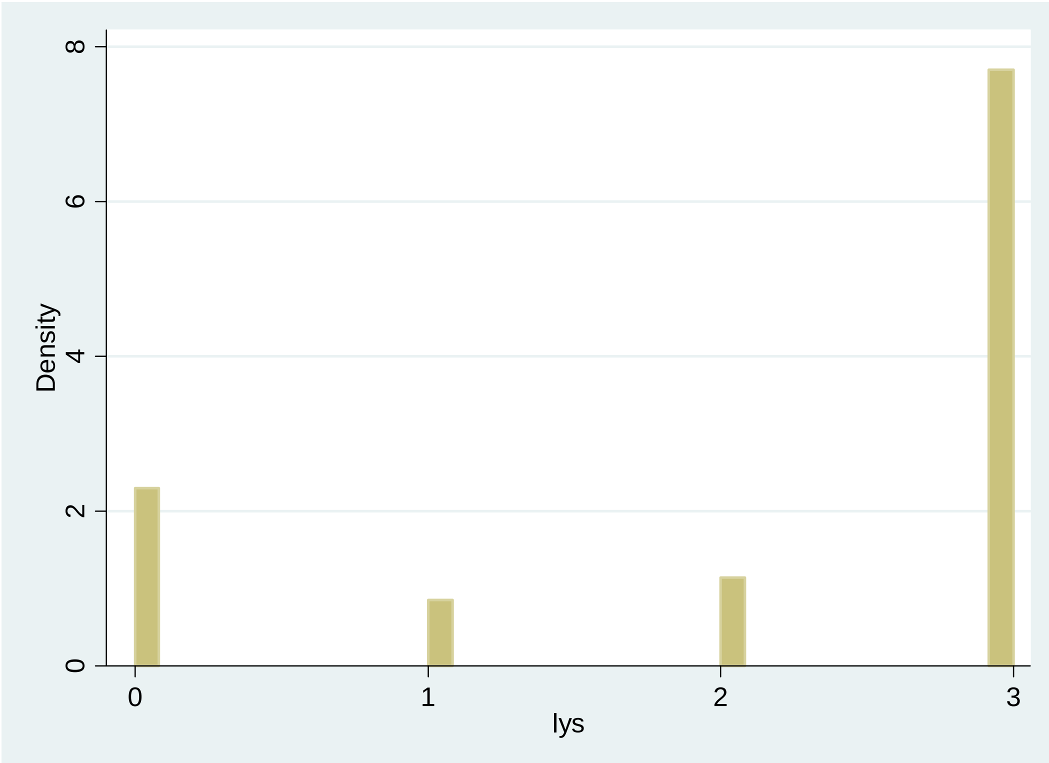

Figure 1: Levy-Yeyati and Sturzennegger index (higher values are more fixed)

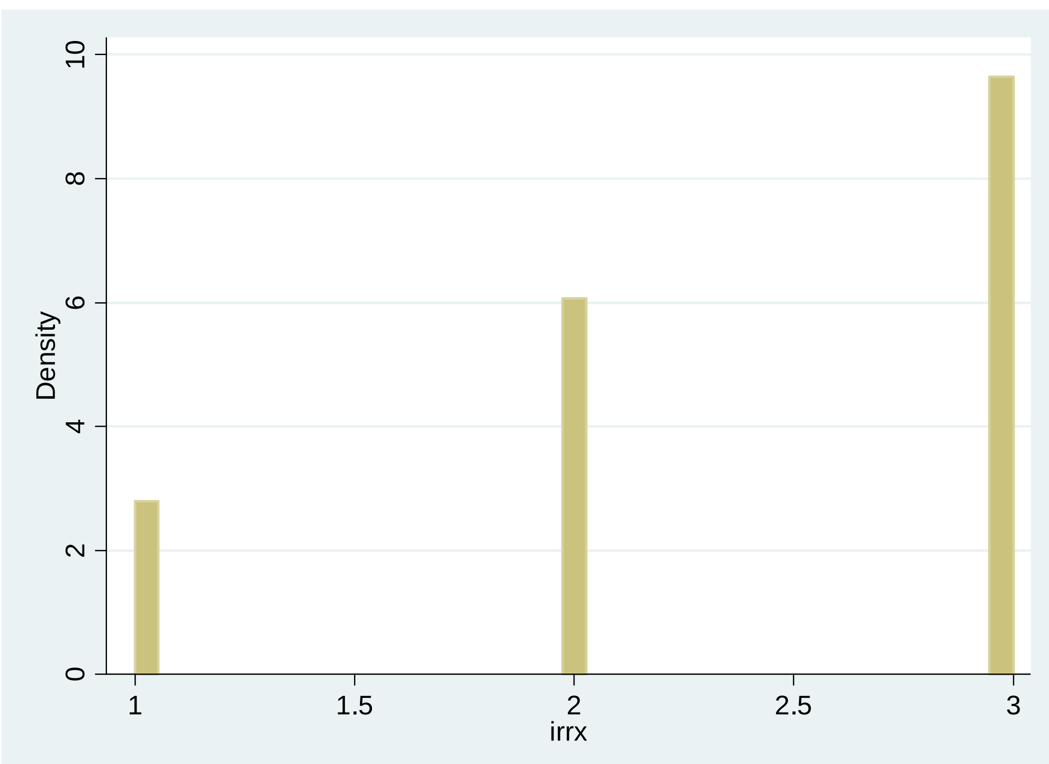

Figure 2: Reinhart and Rogoff index, aggregated and inverted (higher values are more fixed). "Freely falling" regime observations omitted

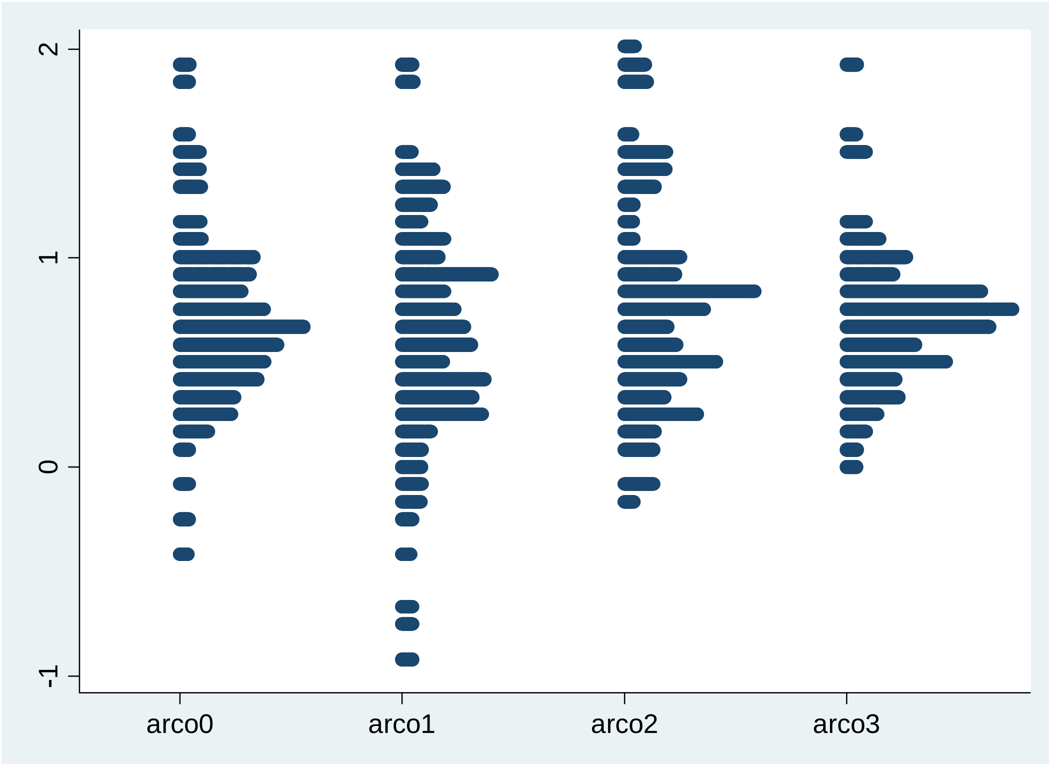

Figure 3: Individual autoregressive coefficients (no trend) for LYS categories (higher indicates more fixity).

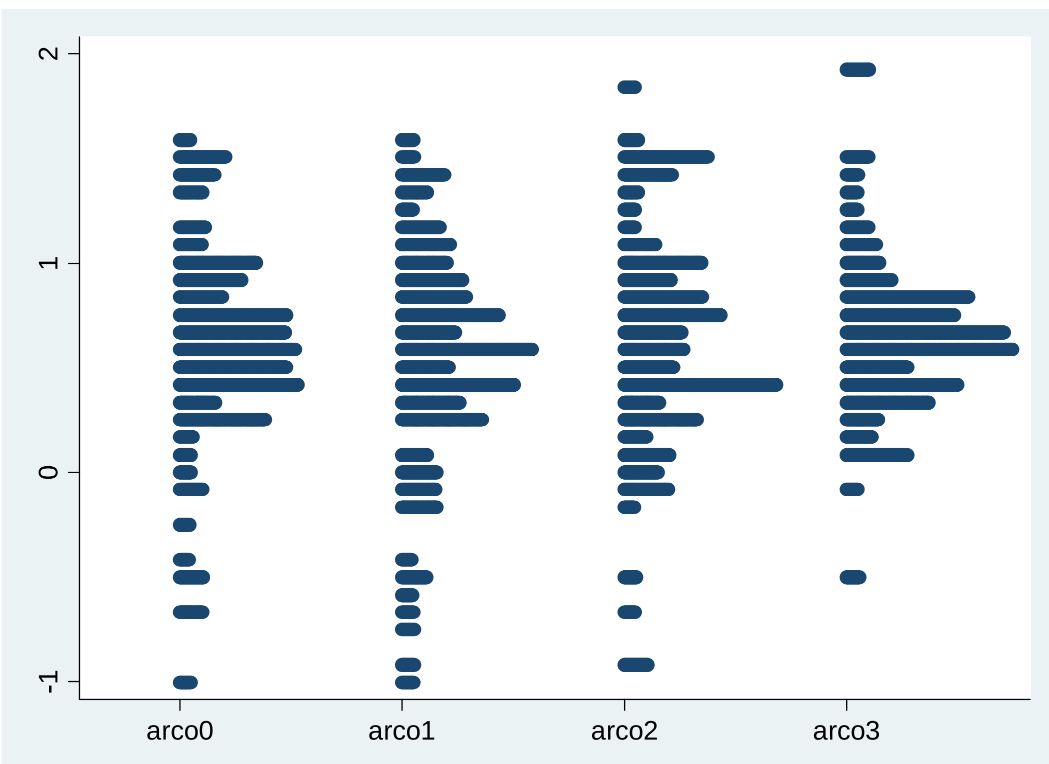

Figure 4: Individual autoregressive coefficients (with trend) for LYS categories (higher indicates more fixity).