Trilemma, Dilemma and Global Players - Supplementary Material

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Contents

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1 Stylized Facts

Does the Global Financial Cycle affect the trend of monetary policy independence? To ensure the link with monetary policy independence, I analyze the possible comovement between the monetary policy independence de facto index, the VIX, and the presence of global players in domestic economies. Figure A1 suggests that the global financial cycle could play a role in the trilemma at least through global banks. At first sight, the negative comovement seems to appear, especially for the VIX and the high presence of global banks in domestic economies. But this worldwide index of monetary policy independence is also driven by general trends in terms of financial openness, the degree of fixity of the exchange rate, and the level of international reserves. In addition, the global financial cycle is a recent phenomenon, especially in emerging and developing countries.

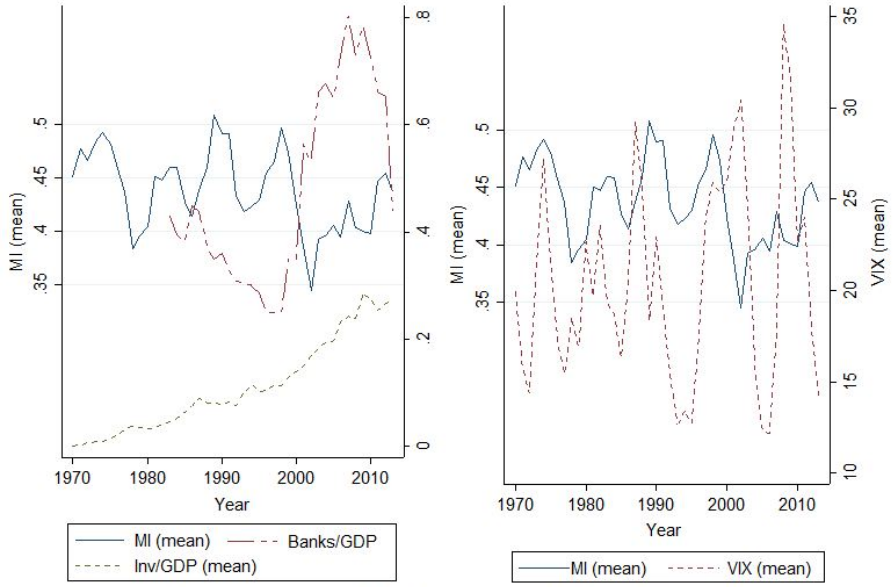

Figure A 1: Does the Global Financial Cycle affect the trend of monetary policy independence?

Inflation Cycles. I account for the correlation of interest rates by controlling for the correlation of monthly consumer price indices between domestic country i and base country j. It is the same methodology as Aizenman et al. (2008) and the index of inflation cycle desynchronization is defined as follows:

$$DesynchCPI_{it} = 1 - \frac{corr(CPI_{imt}, CPI_{jmt}) + 1}{2} \tag{1}$$

The decomposition of the inflation cycle according to open versus closed countries and advanced economies versus the developing world provides a similar trend in the following Figure A2.

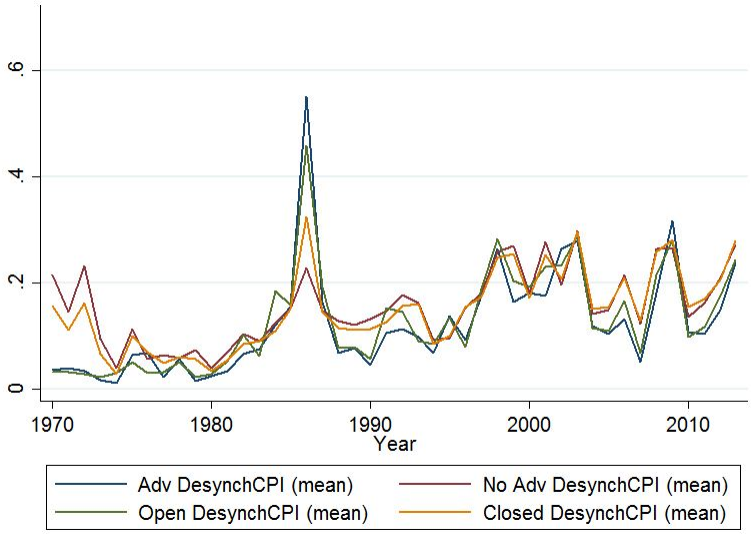

Figure A 2: Various Inflation cycles desynchronization.

2 Variables Definition and Multicollinearity Concerns

Tables in the paper suggest multicollinearity and I do not find any effect of timing in trilemma configurations through conditional terms. Thus, I can test the stability of the results with simpler trilemma decision variables, namely *Peg*, *Open*, and the interaction term. Table A1 provides the same results as my baseline. The small difference in the coefficient reflecting the worst trilemma case is explained by the three feasible cases of the interaction term, including a shift from closed peg to open peg, a shift from open float to open peg, or a simultaneous shift from closed float to open peg. Table A2 investigates the role of global players based on the previous methodology. It sharply restricts multicollinearity problems, even if the *Global Investors* variable appears quite highly correlated to other variables. I find close quantitative results, especially when the domestic country is highly dependent on global players and decides to go to the worst trilemma configuration.

Table A1 provides a close specification to the baseline but without conditional terms. Table A2 highlights that the results are consistent with multicollinearity troubles and includes mean VIF coefficients.

Table A 1: Trilemma Mechanisms - Sensitivity Analysis

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. Var.	Monetary Policy Independence Index					
Peg	-0.0395***	-0.0143	-0.0115	-0.00877	-0.00948	-0.00735
	(0.0121)	(0.0102)	(0.0104)	(0.0106)	(0.0104)	(0.0105)
Open	-0.0207	-0.0285**	-0.0120	-0.00682	-0.0111	-0.00668
	(0.0137)	(0.0134)	(0.0142)	(0.0145)	(0.0143)	(0.0146)
Peg x Open	-0.141***	-0.124***	-0.132***	-0.127***	-0.124***	-0.121***
	(0.0255)	(0.0237)	(0.0227)	(0.0220)	(0.0221)	(0.0217)
Int. Res.	0.0641	0.0702	0.101*	0.103*	0.0847	0.0885
	(0.0418)	(0.0514)	(0.0567)	(0.0583)	(0.0556)	(0.0575)
Dom. Fin.	-0.0652***	-0.0860***	-0.0725***	-0.0604***	-0.0548***	-0.0466***
	(0.0150)	(0.0160)	(0.0183)	(0.0178)	(0.0177)	(0.0174)
DesynchCPI	-0.0101	-0.0222*	-0.0101	-0.00987	-0.0116	-0.0112
	(0.0172)	(0.0118)	(0.0124)	(0.0126)	(0.0124)	(0.0126)
VIX (log)	-0.000590	-0.00327				
	(0.0104)	(0.00993)				
Global Investors				-0.0602***		-0.0528***
				(0.0157)		(0.0153)
Global Banks					-0.0527***	-0.0454***
					(0.0130)	(0.0129)
Constant	0.510***	0.521***	0.503***	0.491***	0.500***	0.490***
	(0.0328)	(0.0328)	(0.0201)	(0.0210)	(0.0198)	(0.0208)
Country FE	No	Yes	Yes	Yes	Yes	Yes
Year FE	No	No	Yes	Yes	Yes	Yes
Obs.	4427	4427	4427	4427	4427	4427
Countries	161	161	161	161	161	161
adj. R^2	0.194	0.103	0.142	0.151	0.150	0.156

*, **, and *** respectively denote significance at the 10, 5, and 1% levels.

Robust standard errors in parentheses.

Table A 2: Multicollinearity Concerns - Sensitivity Analysis

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. Var.	Monetary Policy Independence Index							
Peg	-0.0803***	-0.0393***	-0.0304***	-0.0245***	-0.0333**	-0.0115	-0.00683	-0.00786
	(0.0124)	(0.00720)	(0.00720)	(0.00732)	(0.0130)	(0.00825)	(0.00821)	(0.00829)
Open	-0.0577***	-0.0442***	-0.0237***	-0.0235***	-0.00353	-0.0133	0.00157	-0.00406
	(0.0133)	(0.00875)	(0.00870)	(0.00895)	(0.0134)	(0.00993)	(0.00993)	(0.0102)
Peg x Open					-0.137***	-0.0967***	-0.0820***	-0.0671***
					(0.0239)	(0.0147)	(0.0151)	(0.0156)
Int. Res.	0.0542	0.108***	0.0715***	0.0723***	0.0632	0.101***	0.0659**	0.0704***
	(0.0441)	(0.0273)	(0.0272)	(0.0271)	(0.0439)	(0.0271)	(0.0270)	(0.0270)
Dom. Fin.	-0.0517***	-0.0619***	-0.0487***	-0.0433***	-0.0461***	-0.0573***	-0.0476***	-0.0409***
	(0.0150)	(0.0101)	(0.0102)	(0.0103)	(0.0122)	(0.0101)	(0.0102)	(0.0103)
DesynchCPI	-0.00404	-0.00307	-0.00663	-0.00677	-0.0116	-0.00829	-0.0114	-0.0107
	(0.0203)	(0.0133)	(0.0132)	(0.0131)	(0.0196)	(0.0132)	(0.0131)	(0.0131)
Global Inv.	-0.0752***	0.000655		-0.0284	-0.0699***	-0.0621***		-0.0799***
	(0.0184)	(0.0178)		(0.0177)	(0.0159)	(0.0210)		(0.0209)
Peg x Inv.		-0.0871***		-0.0480***		0.0397		0.0558*
		(0.0155)		(0.0162)		(0.0288)		(0.0289)
Open x Inv.		-0.0312*		0.0144		0.0330		0.0698***
		(0.0176)		(0.0181)		(0.0230)		(0.0239)
Peg x Open x Inv						-0.120***		-0.110***
						(0.0331)		(0.0341)
Global Banks	-0.0278*		0.0464***	0.0410***	-0.0222*		0.0230	0.0254*
	(0.0146)		(0.0125)	(0.0127)	(0.0127)		(0.0140)	(0.0141)
Peg x Banks			-0.0938***	-0.0785***			-0.0407**	-0.0440**
			(0.0133)	(0.0141)			(0.0199)	(0.0201)
Open x Banks			-0.120***	-0.112***			-0.0886***	-0.0943***
			(0.0140)	(0.0147)			(0.0184)	(0.0194)
Peg x Open x Banks							-0.0504*	-0.0246
							(0.0269)	(0.0281)
Constant	0.533***	0.495***	0.486***	0.487***	0.494***	0.469***	0.463***	0.468***
	(0.0208)	(0.0310)	(0.0304)	(0.0306)	(0.0223)	(0.0308)	(0.0304)	(0.0305)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean VIF	1.87	1.94	1.91	2.02	1.91	2.13	2.05	2.31
Obs.	4427	4427	4427	4427	4427	4427	4427	4427
Countries	161	161	161	161	161	161	161	161
adj. R^2	0.209	0.387	0.401	0.404	0.239	0.398	0.407	0.411

*, **, and *** respectively denote significance at the 10, 5, and 1% levels.

Robust standard errors in parentheses.

3 The Exposure to the Global Financial Cycle: Robustness Tests

Key Comments: I provide details on the measures of the exposure to the global financial cycle through global investors and global banks. The results are not driven by specific outliers such as offshore centers around the world. I assess the strength of the results by comparing the *ad hoc* thresholds with new ones. I successively investigate continuous measures for both trilemma policymakers' decisions and the domestic presence of global players by providing various interaction terms and plotting elasticities. They do not substantively bias the baseline estimates.

Outliers of Global Players. Stylized facts from Appendix 2 in the paper confirm the existence of offshore centers around the world. By consequence, the upper tail of the global players' distribution is specific, especially the highest 5^{th} percentile with very high thresholds. Table A3 shed light on the upper tail of the global players' distributions. The new dummies are equal to 1 if the continuous measure is higher than its 95^{th} percentile of the distribution. Columns (1) and (3) suggest that these outliers drive monetary policy independence if and only if I consider global investors. But when I compare the two dummies that reflect the 75^{th} and 95^{th} of the distribution, the baseline dummies encompass all available information. Other columns approve that the effects of the presence of both global players on monetary policy independence is not driven by outliers that supports my identification strategy.

Various thresholds of Global Players. The *ad hoc* threshold raises questions about their level. I compare the key results with the first quartile and the median for both global investors and global players in Table A4. The presence *per se* of global players affects trilemma trade-offs if their presence is higher than 15% of domestic GDP while I find no effect for a lower threshold. Tables A5 and A6 investigate interaction terms in cases of more pegged countries and more financially open country, respectively. When I combine the conditional terms, the high presence of the global player and the interaction terms, the amplification effect of this global players is confirmed. Its magnitude goes up with the threshold level for global banks.

Data Assumption. Table A7 investigates the effects of conditional terms according to the presence of global investors and global banks. It follows the same approach as Tables 3 and 4 in the paper but without the previous assumption on global players' data. I restrict again my database to BIS limitations.

This table supports the assumption because of small differences between them. This restriction drops 51 countries, especially in the developing world. There is lower information in the data and the number of shifts to peg for open countries presumably shrinks down. It explains the drop of statistical significance of conditional terms *Peg_Open* when there are no global banks. The same argument holds for the level of financial development, namely specific determinant of developing countries. There is mixed evidence about the presence of global investors per se according to previous tables, due to various geographical and time coverages. About interaction terms, there may be a multicollinearity problem for the little differences, but they are consistent with the mechanisms.

Dummies versus continuous measures. This study crucially depends on how global players presence is measured. The sequential use of continuous and dummy variables helps to ensure the reliability of the results. Table A8 distinguishes these two kinds of variables for both global players. In the same way, I examine data without the previous assumption about the non-significant presence of global players. The dummies of Global Players still remain highly statistically significant that supports the previous proposition: the effect is non-linear and depends on a threshold. Quantitatively, the sensitivities of monetary policy independence to their presence are close to the baseline result.

Continuous Indexes of Trilemma and Elasticities. Table A9 studies the role of global players by providing a slightly different angle. So far, I investigate the exchange rate regime and the financial openness policies through dummies and it confirms the baseline results with continuous measures. Remarkably, the set of control variables and policy options follow previous findings. When there are no global players, a marginal increase of the degree of fixity of the exchange rate regime leads to a decrease in monetary policy autonomy. The same holds for financial openness in similar proportions. trilemma is simply more about trade-offs than extreme choices. Columns (1) and (2) indicate that the presence of global players appears negatively correlated to the monetary policy autonomy. The interaction term with the two trilemma policy decision is highly significant, suggesting international pressures from these two combining forces. The comparison with the other columns confirms results from Tables 3 and 4: the presence per se of global players does not worsen trilemma, but their presence associated with specific policymaker decisions exacerbate these trade-offs. The average effect of a shift to a more pegged exchange rate regime is magnified by both global investors and global banks. By comparison, this amplification effect occurs only for global banks in the case of financial liberalization. It suggests that global investors

reinforce transmission channels between the exchange rate regime and monetary policy autonomy but not with the degree of financial openness. Some explanations are conceivable. For instance, the behavior of these two global players could be different in the event of a currency crisis. Global investors are by definition non-resident while the presence of global banks means bank affiliates. On the one hand, global banks have the opportunity to use their informative benefit and profit from local and foreign loanable funds. On the other hand, global investors could suffer from the risk exposure, which in turn might generate a self-fulfilling currency crisis. In line with Table A2 and with Goldberg (2013)'s argument, the coefficient of global banks alone is sometimes positive when an interaction is included. This effect only exists for columns (7) to (9) when trilemma decisions interact with the degree of financial openness. It means that the high presence of global banks in relatively financially closed country is positively associated with monetary policy independence. Besides, interaction terms in this table are only average effect and can hide important disparities, including for global investors with financial openness.

To refine and supplement this study, I suppose that effects of trilemma variables are non-linear. Until now, dichotomic variables are used to define the presence of global players and continuous measures will help us to better understand this heterogeneity of roles. I plot variable elasticities at many values of the independent variable by using the previous specification with trilemma continuous terms. Figure A3 illustrates that the effect of financial liberalization on monetary policy autonomy is non-linear and increasing as expected. The following two Figures A4 and A5 are characterized by the presence or not of these global players. Again, the sensitivity to the global financial cycle depends less on the whims of these financial forces than the presence of global investors and global banks.

The Figure A6 investigates the interactions between financial openness and the exchange rate regime. When there are no global players, the effect of financial liberalization on monetary policy conditions does not depend on the fixity of exchange rate. But when global players have a major impact on the economy, the effect of financial openness seems higher and increases with the degree of pegged exchange rate. In turn, too large interval confidences in non-reported Figures preclude the reciprocal of these conclusions: I cannot say anything about the effect of a shift to a more pegged exchange rate regime according to the level of financial liberalization and the global players. Next, Figure A7 extends this approach by using a continuous measure of the presence of global investors that is the ratio of international debt securities to GDP. The results for the continuous measure of global banks are not reported, but there is a purely linear effect according to their economic size. In the same way, I do not report the figure for financial openness because of too large confidence interval but Figure A7 relies on the effect of the presence of

global investors on the trilemma trade-offs. The increasing confidence interval suggests this heterogeneity of role when their presence is large in comparison to the domestic economy: this phenomenon appears when it exceeds a threshold of 200% of GDP. Finally, Figure A8 plots the potential non-linear effect of the role of global investors in the economy, which supports my strategy with successive dummies and continuous measures.

Both Continuous Interaction Terms. One drawback of my analysis is the presence of *ad hoc* thresholds of global players. Even if I motivate this approach, the use of binary variables compresses information. By contrast, Tables A10 and A11 consider continuous interaction terms. It is the more restrictive view of my dataset and it is another direct test of my data assumption. When there is no global players, a marginal increase *on average* of the degree of exchange rate fixity and of the financial openness still generally decreases room for manoeuvre for monetary policy. About the role of global investors, columns (1) to (3) of Table A10 suggest a key role but the specification is probably driven by outliers and specificities of continuous interaction terms. Consequently, columns (4) to (6) drop the main feasible outliers of global investors, global banks and both, respectively. This process removes a very small number of countries and corresponds to my methodology detailed in Table A3. It confirms the amplification effect about exchange rate regime but it also suggests the same thing about financial liberalization. However, this last effect is not consistent because the coefficient of financial openness for countries without any global investors becomes significantly positive. It is hard to correctly interpret these interaction terms. In addition, there is likely not enough variation in terms of financial liberalization process for these specific countries.

Table A11 highlights continuous interaction terms for both global players. Columns (4) and (8) confirm that there is no amplification effect of Global Investors on financial openness. The amplification effect of global investors on exchange rate regime is conditional on the absence of the outliers, confirmed by Table A10. But the marginal effect of global banks associated with policy shifts suffers from noisy outliers, as suggested by columns (6) to (8). Finally, the comparison between Tables A9 and A11 provides at least one insight. The marginal growing presence of global banks per se or associated with a policy shift has no effect on monetary policy autonomy while a sufficiently high presence of them sharply worsen trilemma's trade-offs.

Table A 3: Outliers of Global Players - Sensitivity Analysis

	(1)	(2)	(3)	(4)	(5)
Dep. Var.	Monetary Policy Independence Index				
Peg_Open	-0.0839***	-0.0789***	-0.0835***	-0.0780***	-0.0740***
	(0.0209)	(0.0211)	(0.0214)	(0.0218)	(0.0215)
Peg_Closed	-0.0104	-0.00813	-0.00961	-0.00777	-0.00671
	(0.0101)	(0.0102)	(0.0102)	(0.0102)	(0.0102)
Open_Peg	-0.0917***	-0.0842***	-0.0926***	-0.0868***	-0.0794***
	(0.0216)	(0.0211)	(0.0220)	(0.0211)	(0.0207)
Open_Float	-0.00834	-0.00329	-0.00871	-0.00801	-0.00322
	(0.0135)	(0.0137)	(0.0135)	(0.0136)	(0.0138)
Int. Res.	0.0910	0.0936	0.0878	0.0739	0.0759
	(0.0556)	(0.0574)	(0.0550)	(0.0540)	(0.0557)
Dom. Fin.	-0.0575***	-0.0497***	-0.0663***	-0.0506***	-0.0361**
	(0.0178)	(0.0175)	(0.0179)	(0.0172)	(0.0171)
DesynchCPI	-0.0115	-0.0110	-0.0109	-0.0122	-0.0129
	(0.0122)	(0.0124)	(0.0125)	(0.0125)	(0.0126)
Global Inv 95%	-0.0611**	-0.0483			-0.0401
	(0.0295)	(0.0295)			(0.0279)
Global Inv 75%		-0.0518***			-0.0473***
		(0.0153)			(0.0148)
Global Banks 95%			-0.0324	-0.0269	-0.0327
			(0.0227)	(0.0237)	(0.0226)
Global Banks 75%				-0.0486***	-0.0398***
				(0.0128)	(0.0124)
Constant	0.514***	0.506***	0.519***	0.517***	0.507***
	(0.0168)	(0.0175)	(0.0165)	(0.0166)	(0.0177)
Country FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Obs.	4427	4427	4427	4427	4427
Countries	161	161	161	161	161
adj. R^2	0.153	0.159	0.150	0.157	0.163

With the Within estimator, Peg_Open means a shift from float to peg given that a country is open.
With the Within estimator, Open_Peg means a shift from closed to open given that a country is pegged.
*, **, and *** respectively denote significance at the 10, 5, and 1% levels.
Robust standard errors in parentheses.

Table A 4: Various Thresholds of Global Players - Sensitivity Analysis

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. Var.	Monetary Policy Independence Index							
	Global Investors				Global Banks			
% of GDP	1%	5%	15%	50%	7%	16%	35%	173%
Peg_Open	-0.0845***	-0.0827***	-0.0788***	-0.0839***	-0.0817***	-0.0810***	-0.0786***	-0.0835***
	(0.0214)	(0.0217)	(0.0216)	(0.0209)	(0.0215)	(0.0218)	(0.0218)	(0.0214)
Peg_Closed	-0.00967	-0.00837	-0.00737	-0.0104	-0.0113	-0.0107	-0.00773	-0.00958
	(0.0102)	(0.0102)	(0.0103)	(0.0101)	(0.0101)	(0.0104)	(0.0102)	(0.0102)
Open_Peg	-0.0934***	-0.0914***	-0.0849***	-0.0917***	-0.0924***	-0.0920***	-0.0873***	-0.0926***
	(0.0217)	(0.0216)	(0.0212)	(0.0216)	(0.0216)	(0.0217)	(0.0209)	(0.0220)
Open_Float	-0.00885	-0.00609	-0.00319	-0.00834	-0.00787	-0.00826	-0.00799	-0.00872
	(0.0134)	(0.0135)	(0.0136)	(0.0135)	(0.0133)	(0.0136)	(0.0136)	(0.0135)
Int. Res.	0.0940*	0.0919*	0.0956*	0.0910	0.0832	0.0871	0.0782	0.0879
	(0.0555)	(0.0552)	(0.0569)	(0.0556)	(0.0564)	(0.0554)	(0.0544)	(0.0550)
Dom. Fin.	-0.0691***	-0.0666***	-0.0581***	-0.0575***	-0.0616***	-0.0581***	-0.0527***	-0.0663***
	(0.0179)	(0.0176)	(0.0175)	(0.0178)	(0.0173)	(0.0176)	(0.0174)	(0.0179)
DesynchCPI	-0.0101	-0.0100	-0.00987	-0.0115	-0.0123	-0.0112	-0.0115	-0.0110
	(0.0123)	(0.0124)	(0.0125)	(0.0122)	(0.0124)	(0.0125)	(0.0124)	(0.0125)
Global Pl. 25%	0.00240				-0.0377***			
	(0.0127)				(0.0127)			
Global Pl. 50%		-0.0170				-0.0303**		
		(0.0124)				(0.0120)		
Global Pl. 75%			-0.0557***				-0.0493***	
			(0.0151)				(0.0127)	
Global Pl. 95%				-0.0611**				-0.0325
				(0.0295)				(0.0230)
Constant	0.518***	0.515***	0.508***	0.514***	0.519***	0.518***	0.516***	0.519***
	(0.0165)	(0.0166)	(0.0172)	(0.0168)	(0.0163)	(0.0164)	(0.0166)	(0.0165)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	4427	4427	4427	4427	4427	4427	4427	4427
Countries	161	161	161	161	161	161	161	161
adj. R^2	0.150	0.151	0.157	0.153	0.155	0.153	0.156	0.150

With the Within estimator, Peg_Open means a shift from float to peg given that a country is open.

With the Within estimator, Open_Peg means a shift from closed to open given that a country is pegged.

*, **, and *** respectively denote significance at the 10, 5, and 1% levels.

Robust standard errors in parentheses.

Table A 5: Interaction Terms Between Peg Decisions and Various Thresholds - Sensitivity Analysis

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. Var.	Monetary Policy Independence Index					
Global Pl.	Global Investors			Global Banks		
Threshold	1st quart.	Med.	Third quart.	1st quart.	Med.	Third quart.
% of GDP	1%	5%	15%	7%	16%	35%
Peg_Open	-0.0151	-0.0208	-0.0649***	-0.0135	-0.0271	-0.0400*
	(0.0348)	(0.0282)	(0.0226)	(0.0257)	(0.0253)	(0.0223)
Peg_Closed	-0.00677	-0.00877	-0.00887	-0.00978	-0.0167	-0.00851
	(0.0115)	(0.0109)	(0.0104)	(0.0118)	(0.0109)	(0.0102)
Open_Peg	-0.0926***	-0.0772***	-0.0762***	-0.0835***	-0.0766***	-0.0717***
	(0.0211)	(0.0202)	(0.0206)	(0.0200)	(0.0202)	(0.0201)
Open_Float	-0.0101	-0.00749	-0.00511	-0.0106	-0.00953	-0.0118
	(0.0132)	(0.0133)	(0.0132)	(0.0133)	(0.0133)	(0.0134)
Int. Res.	0.0959*	0.0888	0.0944	0.0760	0.0741	0.0646
	(0.0557)	(0.0555)	(0.0586)	(0.0551)	(0.0540)	(0.0531)
Dom. Fin.	-0.0667***	-0.0618***	-0.0552***	-0.0579***	-0.0540***	-0.0479***
	(0.0179)	(0.0172)	(0.0172)	(0.0176)	(0.0179)	(0.0172)
DesynchCPI	-0.00995	-0.00796	-0.00827	-0.0124	-0.0103	-0.0121
	(0.0125)	(0.0128)	(0.0129)	(0.0124)	(0.0127)	(0.0123)
Global Pl.	0.00993	-0.000246	-0.0377**	-0.0281**	-0.0231*	-0.0205
	(0.0135)	(0.0137)	(0.0181)	(0.0138)	(0.0125)	(0.0141)
Peg_Open x Global Pl.	-0.0884**	-0.118***	-0.0616**	-0.104***	-0.105***	-0.126***
	(0.0375)	(0.0306)	(0.0311)	(0.0212)	(0.0242)	(0.0222)
Peg_Closed x Global Pl.	-0.00815	-0.00212	0.0160	-0.00298	0.0290	0.000795
	(0.0211)	(0.0259)	(0.0354)	(0.0162)	(0.0195)	(0.0218)
Constant	0.484***	0.507***	0.506***	0.486***	0.518***	0.512***
	(0.0176)	(0.0172)	(0.0174)	(0.0174)	(0.0163)	(0.0168)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	4427	4427	4427	4427	4427	4427
Countries	161	161	161	161	161	161
adj. R^2	0.152	0.159	0.160	0.161	0.163	0.168

With the Within estimator, Peg_Open means a shift from float to peg given that a country is open.

With the Within estimator, Open_Peg means a shift from closed to open given that a country is pegged.

*, **, and *** respectively denote significance at the 10, 5, and 1% levels.

Robust standard errors in parentheses.

Table A 6: Interaction Terms Between Openness Decisions and Various Thresholds - Sensitivity Analysis

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. Var.	Monetary Policy Independence Index					
Global Pl.	Global Investors			Global Banks		
Threshold	1st quart.	Med.	Third quart.	1st quart.	Med.	Third quart.
% of GDP	1%	5%	15%	7%	16%	35%
Peg_Open	-0.0736***	-0.0721***	-0.0736***	-0.0752***	-0.0699***	-0.0712***
	(0.0218)	(0.0228)	(0.0214)	(0.0219)	(0.0227)	(0.0216)
Peg_Closed	-0.00833	-0.00877	-0.00784	-0.0113	-0.00960	-0.00865
	(0.0103)	(0.0103)	(0.0102)	(0.0103)	(0.0104)	(0.0102)
Open_Peg	-0.0223	-0.0217	-0.0681***	-0.0209	-0.0286	-0.0355
	(0.0315)	(0.0229)	(0.0218)	(0.0216)	(0.0207)	(0.0216)
Open_Float	0.0213	0.000908	-0.00656	0.0245	0.0153	0.00371
	(0.0186)	(0.0184)	(0.0138)	(0.0211)	(0.0177)	(0.0146)
Int. Res.	0.0989*	0.0894	0.0941	0.0779	0.0754	0.0598
	(0.0553)	(0.0553)	(0.0586)	(0.0546)	(0.0528)	(0.0524)
Dom. Fin.	-0.0637***	-0.0617***	-0.0556***	-0.0565***	-0.0523***	-0.0469***
	(0.0175)	(0.0172)	(0.0174)	(0.0174)	(0.0178)	(0.0173)
DesynchCPI	-0.00896	-0.00794	-0.00864	-0.0112	-0.00911	-0.0129
	(0.0124)	(0.0127)	(0.0127)	(0.0124)	(0.0127)	(0.0123)
Global Pl.	0.0172	0.00420	-0.0379	-0.0208	-0.00507	-0.000427
	(0.0128)	(0.0137)	(0.0240)	(0.0132)	(0.0132)	(0.0154)
Open_Peg x Global Pl.	-0.106***	-0.127***	-0.0614*	-0.106***	-0.123***	-0.151***
	(0.0385)	(0.0340)	(0.0353)	(0.0210)	(0.0241)	(0.0221)
Open_Float x Global Pl.	-0.0459**	-0.0178	0.00511	-0.0471**	-0.0501***	-0.0625***
	(0.0216)	(0.0249)	(0.0285)	(0.0193)	(0.0186)	(0.0231)
Constant	0.510***	0.508***	0.507***	0.479***	0.514***	0.512***
	(0.0172)	(0.0172)	(0.0174)	(0.0174)	(0.0166)	(0.0170)
Obs.	4427	4427	4427	4427	4427	4427
Countries	161	161	161	161	161	161
adj. R^2	0.155	0.159	0.159	0.162	0.164	0.171

With the Within estimator, Peg_Open means a shift from float to peg given that a country is open.

With the Within estimator, Open_Peg means a shift from closed to open given that a country is pegged.

*, **, and *** respectively denote significance at the 10, 5, and 1% levels.

Robust standard errors in parentheses.

Table A 7: Looking for the Role of Global Players: Data Assumption - Sensitivity Analysis

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. Var.	Monetary Policy Independence Index					
	Global Investors			Global Banks		
Peg_Open	-0.0532*	-0.0570**	-0.0535*	-0.0149	-0.0591**	-0.0169
	(0.0284)	(0.0277)	(0.0309)	(0.0286)	(0.0279)	(0.0331)
Peg_Closed	-0.0184	-0.0167	-0.0199	-0.00874	-0.0158	-0.00329
	(0.0230)	(0.0220)	(0.0228)	(0.0219)	(0.0220)	(0.0227)
Open_Peg	-0.0846***	-0.0839***	-0.0884***	-0.0782***	-0.0296	-0.0616*
	(0.0275)	(0.0285)	(0.0319)	(0.0249)	(0.0306)	(0.0338)
Open_Float	-0.0165	-0.0216	-0.0226	-0.0206	-0.00151	0.00548
	(0.0182)	(0.0194)	(0.0196)	(0.0185)	(0.0222)	(0.0223)
Int. Res.	0.128	0.127	0.129	0.115	0.103	0.0995
	(0.0811)	(0.0809)	(0.0812)	(0.0768)	(0.0764)	(0.0744)
Dom. Fin.	-0.0237	-0.0236	-0.0237	-0.0176	-0.0188	-0.0171
	(0.0250)	(0.0248)	(0.0248)	(0.0250)	(0.0249)	(0.0245)
DesynchCPI	0.00822	0.00676	0.00749	0.00478	0.00533	0.00484
	(0.0211)	(0.0210)	(0.0211)	(0.0204)	(0.0205)	(0.0204)
Global Player	-0.0457*	-0.0520*	-0.0654*	-0.00221	0.00637	0.0375
	(0.0272)	(0.0279)	(0.0363)	(0.0178)	(0.0251)	(0.0260)
Peg_Open x Global Pl.	-0.0194		-0.0179	-0.111***		-0.120**
	(0.0402)		(0.0728)	(0.0294)		(0.0588)
Peg_Closed x Global Pl.	0.0172		0.0352	-0.0376		-0.0732*
	(0.0484)		(0.0521)	(0.0353)		(0.0387)
Open_Peg x Global Pl.		-0.0108	0.0198		-0.125***	-0.0404
		(0.0404)	(0.0612)		(0.0345)	(0.0518)
Open_Float x Global Pl.		0.0197	0.0307		-0.0538	-0.0835**
		(0.0356)	(0.0396)		(0.0331)	(0.0357)
Constant	0.444***	0.445***	0.446***	0.482***	0.443***	0.439***
	(0.0328)	(0.0327)	(0.0328)	(0.0397)	(0.0337)	(0.0339)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	2216	2216	2216	2216	2216	2216
Countries	110	110	110	110	110	110
adj. R^2	0.114	0.114	0.114	0.120	0.121	0.124

With the Within estimator, Peg_Open means a shift from float to peg given that a country is open.

With the Within estimator, Open_Peg means a shift from closed to open given that a country is pegged.

*, **, and *** respectively denote significance at the 10, 5, and 1% levels.

Robust standard errors in parentheses.

Table A 8: Dummies versus continuous measures of Global Players - Sensitivity Analysis

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. Var.	Monetary Policy Independence Index					
Constraint		Yes		Yes		Yes
Peg_Open	-0.0617***	-0.0576**	-0.0802***	-0.0787***	-0.0593**	-0.0543*
	(0.0223)	(0.0229)	(0.0260)	(0.0263)	(0.0272)	(0.0279)
Peg_Closed	-0.0117	-0.00856	-0.0109	-0.01000	-0.0172	-0.0153
	(0.0164)	(0.0167)	(0.0142)	(0.0141)	(0.0216)	(0.0218)
Open_Peg	-0.108***	-0.104***	-0.0744***	-0.0724***	-0.0911***	-0.0845***
	(0.0234)	(0.0227)	(0.0262)	(0.0253)	(0.0292)	(0.0266)
Open_Float	-0.000706	0.00341	-0.0229	-0.0225	-0.0192	-0.0152
	(0.0163)	(0.0164)	(0.0152)	(0.0153)	(0.0185)	(0.0181)
Int. Res.	0.188**	0.185**	0.0589	0.0545	0.132	0.125
	(0.0839)	(0.0822)	(0.0655)	(0.0654)	(0.0801)	(0.0813)
Dom. Fin.	-0.0298	-0.0348*	-0.0511**	-0.0439*	-0.0215	-0.0169
	(0.0227)	(0.0203)	(0.0226)	(0.0224)	(0.0286)	(0.0256)
DesynchCPI	0.00309	0.00194	-0.00960	-0.00994	0.00723	0.00596
	(0.0189)	(0.0192)	(0.0141)	(0.0141)	(0.0209)	(0.0206)
IDS/GDP	-0.0290				-0.0104	
	(0.0219)				(0.0238)	
Global Investors		-0.0487***				-0.0474**
		(0.0155)				(0.0187)
CFC/GDP			-0.00120		-0.00701	
			(0.00831)		(0.00965)	
Global Banks				-0.0251**		-0.0313*
				(0.0126)		(0.0170)
Constant	0.509***	0.501***	0.496***	0.496***	0.446***	0.452***
	(0.0281)	(0.0287)	(0.0256)	(0.0257)	(0.0354)	(0.0338)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	2734	2734	3552	3552	2216	2216
Countries	111	111	158	158	110	110
adj. R^2	0.201	0.206	0.081	0.083	0.107	0.117

With the Within estimator, Peg_Open means a shift from float to peg given that a country is open.
With the Within estimator, Open_Peg means a shift from closed to open given that a country is pegged.
*, **, and *** respectively denote significance at the 10, 5, and 1% levels.
Robust standard errors in parentheses.

Table A 9: Continuous Indexes of Trilemma - Sensitivity Analysis

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Dep. Var.	Monetary Policy Independence Index								
ERS	-0.0944***	0.0379*	0.0376*	0.0395*	0.0374*	0.0364	0.0334	0.0346	0.0351
	(0.0218)	(0.0221)	(0.0222)	(0.0220)	(0.0221)	(0.0221)	(0.0215)	(0.0215)	(0.0219)
Kaopen	-0.0857***	0.101***	0.0867***	0.109***	0.0898***	0.0772**	0.117***	0.0984***	0.0888***
	(0.0209)	(0.0306)	(0.0322)	(0.0312)	(0.0326)	(0.0308)	(0.0303)	(0.0305)	(0.0320)
ERS x Kao		-0.313***	-0.294***	-0.324***	-0.290***	-0.282***	-0.293***	-0.260***	-0.242***
		(0.0442)	(0.0486)	(0.0442)	(0.0488)	(0.0453)	(0.0425)	(0.0437)	(0.0472)
Int. Res.	0.0953*	0.0842	0.0934*	0.0959*	0.0930*	0.0729	0.0706	0.0635	0.0660
	(0.0571)	(0.0541)	(0.0554)	(0.0548)	(0.0557)	(0.0512)	(0.0513)	(0.0502)	(0.0525)
Dom. Fin.	-0.0526***	-0.0451***	-0.0568***	-0.0559***	-0.0559***	-0.0530***	-0.0487***	-0.0496***	-0.0447***
	(0.0177)	(0.0163)	(0.0162)	(0.0166)	(0.0163)	(0.0159)	(0.0166)	(0.0162)	(0.0160)
DesynchCPI	-0.00349	-0.0142	-0.0124	-0.0128	-0.0118	-0.0137	-0.0140	-0.0133	-0.0129
	(0.0130)	(0.0124)	(0.0123)	(0.0125)	(0.0125)	(0.0122)	(0.0123)	(0.0123)	(0.0124)
Global Inv.	-0.0500***	-0.0448***	-0.00407	-0.0258	0.0234				-0.0164
	(0.0162)	(0.0139)	(0.0268)	(0.0319)	(0.0416)				(0.0394)
ERS x Inv.			-0.0747*		-0.0758*				-0.0526
			(0.0380)		(0.0385)				(0.0360)
Kao x Inv.				-0.0328	-0.0351				0.0210
				(0.0385)	(0.0382)				(0.0382)
Global Banks	-0.0497***	-0.0383***				0.00803	0.0373*	0.0827***	0.0729**
	(0.0136)	(0.0117)				(0.0230)	(0.0205)	(0.0278)	(0.0280)
ERS x Banks						-0.0865***		-0.0788***	-0.0621**
						(0.0299)		(0.0265)	(0.0271)
Kao x Banks							-0.138***	-0.134***	-0.128***
							(0.0283)	(0.0276)	(0.0293)
Constant	0.580***	0.483***	0.482***	0.480***	0.479***	0.490***	0.480***	0.477***	0.471***
	(0.0275)	(0.0242)	(0.0243)	(0.0243)	(0.0243)	(0.0233)	(0.0234)	(0.0235)	(0.0241)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	4427	4427	4427	4427	4427	4427	4427	4427	4427
Countries	161	161	161	161	161	161	161	161	161
adj. R^2	0.150	0.176	0.174	0.173	0.174	0.175	0.182	0.184	0.187

*, **, and *** respectively denote significance at the 10, 5, and 1% levels.

Robust standard errors in parentheses.

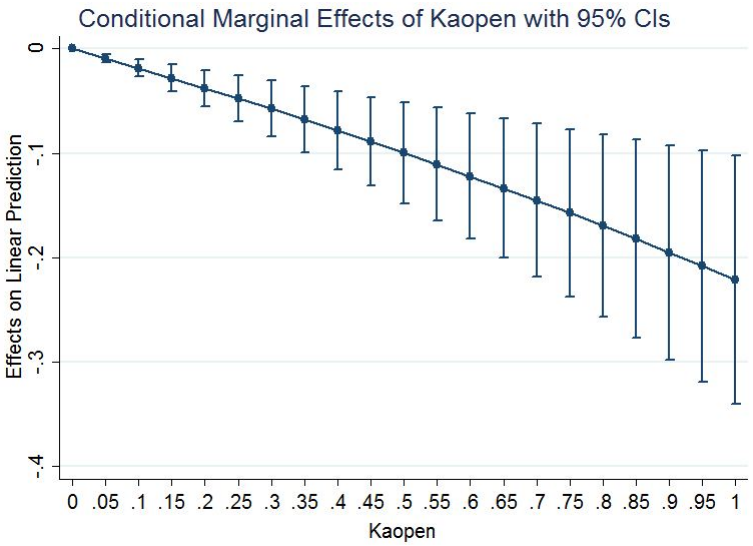

Figure A 3: The non-linear effect of the financial openness.

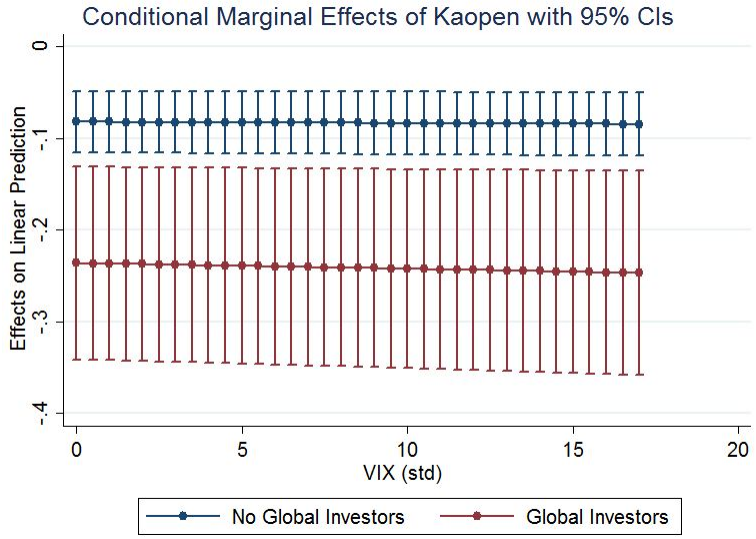

Figure A 4: Global Investors matter, not the fluctuations of the Global Financial Cycle.

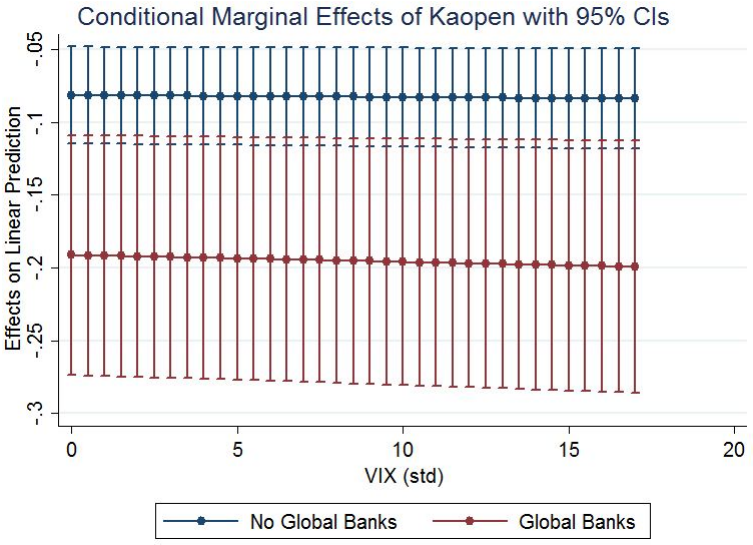

Figure A 5: Global Banks matter, not the fluctuations of the Global Financial Cycle.

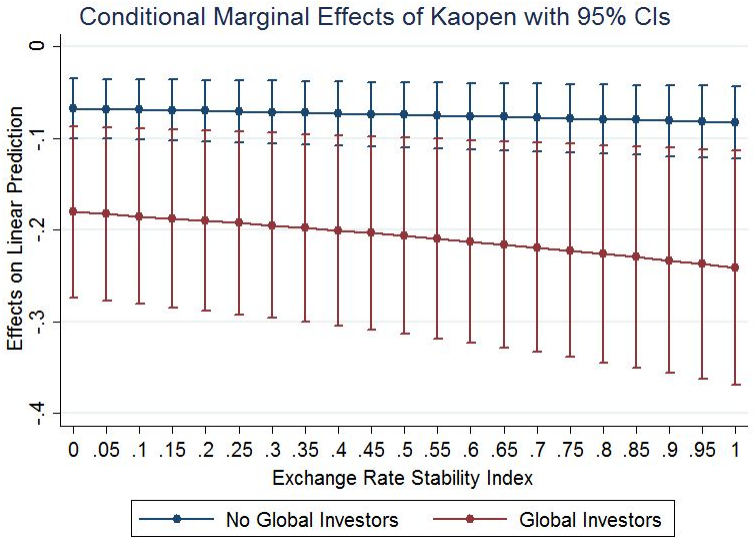

Figure A 6: The destabilizing role of financial openness according to exchange rate regime and Global Investors.

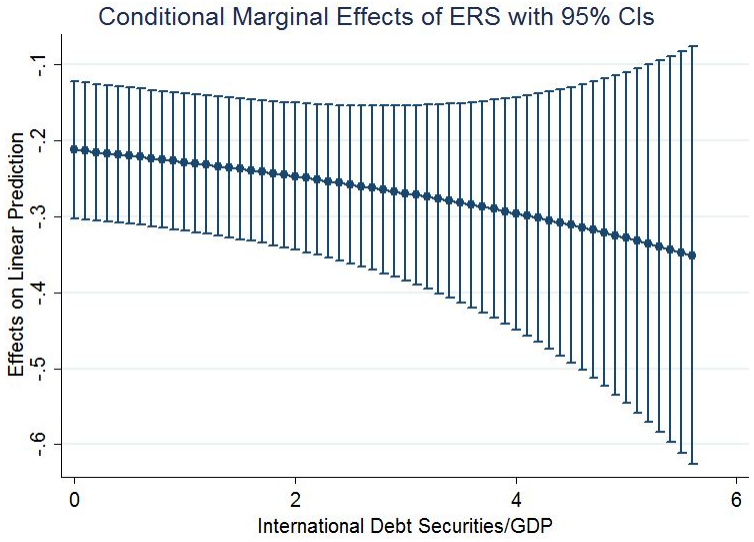

Figure A 7: The effect of exchange rate regime depends on heterogenous Global Investors.

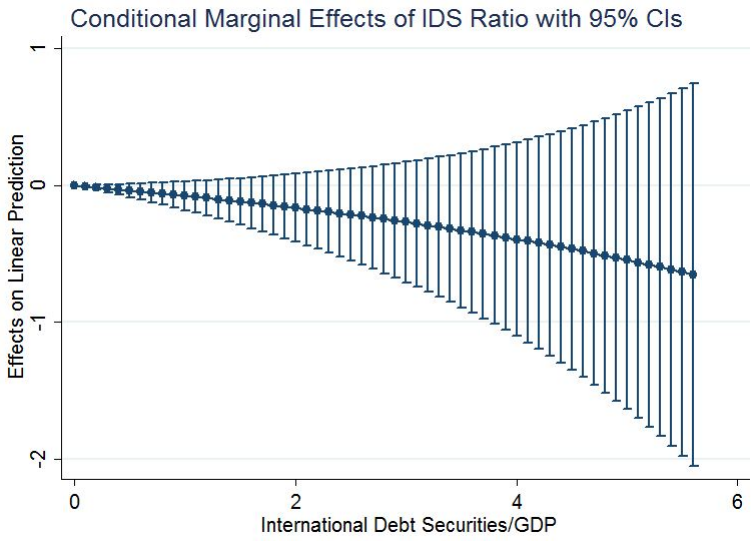

Figure A 8: The heterogeneous effect of Global Investors.

Table A 10: Interaction Terms with Continuous Measures of Trilemma and of Global Investors.

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. Var.	Monetary Policy Independence Index					
Drop Outliers 5%				Inv.	Banks	Inv, Banks
ERS	0.0276	0.0268	0.0273	0.0439	0.0308	0.0475
	(0.0368)	(0.0367)	(0.0366)	(0.0368)	(0.0369)	(0.0369)
Kaopen	0.101**	0.121***	0.115***	0.114**	0.128***	0.115**
	(0.0408)	(0.0395)	(0.0425)	(0.0456)	(0.0445)	(0.0473)
ERS x Kao	-0.322***	-0.335***	-0.329***	-0.283***	-0.320***	-0.263***
	(0.0582)	(0.0554)	(0.0579)	(0.0631)	(0.0615)	(0.0659)
Int. Res.	0.162**	0.159**	0.158**	0.108	0.111	0.0620
	(0.0762)	(0.0740)	(0.0742)	(0.0735)	(0.0865)	(0.0824)
Dom. Fin.	-0.0440**	-0.0395*	-0.0415*	-0.0281	-0.0380*	-0.0273
	(0.0208)	(0.0206)	(0.0212)	(0.0222)	(0.0223)	(0.0237)
DesynchCPI	-0.000545	-0.00157	-0.000951	-0.00859	0.00325	-0.00322
	(0.0186)	(0.0185)	(0.0187)	(0.0190)	(0.0196)	(0.0202)
IDS/GDP	0.0496	0.0772	0.0857*	0.329*	0.173**	0.345*
Gl. Investors	(0.0427)	(0.0609)	(0.0491)	(0.185)	(0.0736)	(0.186)
ERS x IDS/GDP	-0.0818*		-0.0318	-0.360**	-0.0486	-0.472***
	(0.0454)		(0.0575)	(0.159)	(0.0870)	(0.168)
Kao x IDS/GDP		-0.110*	-0.0895	-0.310*	-0.240***	-0.325*
		(0.0641)	(0.0822)	(0.175)	(0.0872)	(0.177)
Constant	0.526***	0.518***	0.520***	0.491***	0.507***	0.485***
	(0.0341)	(0.0342)	(0.0347)	(0.0365)	(0.0343)	(0.0365)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	2734	2734	2734	2589	2565	2460
Countries	111	111	111	110	108	107
adj. R^2	0.222	0.223	0.223	0.188	0.220	0.189

*, **, and *** respectively denote significance at the 10, 5, and 1% levels.

Robust standard errors in parentheses.

Table A 11: Interaction Terms with Continuous Measures of Trilemma and of both Global Players.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. Var.	Monetary Policy Independence Index							
Drop Outliers 5%					Inv.	Banks	I&Bk	I&Bk
ERS	0.0302	0.0301	0.0309	0.0236	0.0331	0.0460*	0.0491*	0.0572
	(0.0264)	(0.0262)	(0.0262)	(0.0389)	(0.0255)	(0.0277)	(0.0274)	(0.0403)
Kaopen	0.0536	0.0634*	0.0606*	0.0443	0.0671*	0.0550	0.0533	0.0253
	(0.0342)	(0.0355)	(0.0353)	(0.0451)	(0.0347)	(0.0390)	(0.0391)	(0.0535)
ERS x Kao	-0.248***	-0.255***	-0.244***	-0.235***	-0.239***	-0.205***	-0.200***	-0.160**
	(0.0524)	(0.0511)	(0.0522)	(0.0619)	(0.0504)	(0.0535)	(0.0511)	(0.0639)
Int. Res.	0.0645	0.0657	0.0640	0.114	0.0345	0.00550	-0.0202	0.00576
	(0.0636)	(0.0632)	(0.0626)	(0.0772)	(0.0603)	(0.0666)	(0.0635)	(0.0829)
Dom. Fin.	-0.0510**	-0.0510**	-0.0515**	-0.0337	-0.0484**	-0.0330	-0.0268	0.00761
	(0.0218)	(0.0216)	(0.0215)	(0.0295)	(0.0238)	(0.0238)	(0.0250)	(0.0324)
DesynchCPI	-0.0117	-0.0120	-0.0118	0.00651	-0.0135	-0.0162	-0.0167	0.00445
	(0.0138)	(0.0138)	(0.0138)	(0.0205)	(0.0137)	(0.0146)	(0.0145)	(0.0219)
CFC/GDP	-0.000455	0.0142	0.0229	-0.0240	0.0293	0.0608	0.0559	0.00189
Gl. Banks	(0.00667)	(0.0292)	(0.0308)	(0.0240)	(0.0300)	(0.0639)	(0.0692)	(0.106)
ERS x CFC/GDP	-0.00793		-0.0118	-0.00377	-0.0110	-0.122**	-0.139**	-0.151*
	(0.0106)		(0.0136)	(0.0101)	(0.0139)	(0.0581)	(0.0662)	(0.0867)
Kao x CFC/GDP		-0.0206	-0.0273	0.0196	-0.0355	-0.0638	-0.0456	0.000457
		(0.0309)	(0.0324)	(0.0276)	(0.0327)	(0.0620)	(0.0692)	(0.0940)
IDS/GDP				0.0859*				0.0920
Gl. Investors				(0.0516)				(0.225)
ERS x IDS/GDP				-0.0785				-0.331*
				(0.0679)				(0.186)
Kao x IDS/GDP				-0.0415				0.0672
				(0.0989)				(0.224)
Constant	0.496***	0.490***	0.491***	0.457***	0.492***	0.478***	0.481***	0.477***
	(0.0305)	(0.0309)	(0.0308)	(0.0429)	(0.0310)	(0.0309)	(0.0316)	(0.0499)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	3552	3552	3552	2216	3409	3374	3271	1944
Countries	158	158	158	110	156	155	153	105
adj. R^2	0.091	0.091	0.092	0.121	0.083	0.086	0.080	0.115

*, **, and *** respectively denote significance at the 10, 5, and 1% levels.

Robust standard errors in parentheses.

4 The Fluctuations of the Global Financial Cycle: Robustness Tests

Key Comments: I carefully test the assumptions on the fluctuations of the global financial cycle. I investigate various global factors like the TED spread which could be estimated as a proxy for the global financial cycle. Again, I test other thresholds and extend this analysis by estimating an endogenous threshold. In all cases, the results remain close to the baseline estimates.

Global Variables. I have so far analyzed differences across year fixed effects and a unique global variable. Table A12 offers an overview of potential other global variables used in this literature, that is an alternative measure of the VIX, the TED spread and the oil price. Because of the three feasible variables of the VIX, I employ here its standard deviation rather than its annual mean.[1] The TED spread is not directly used in the baseline specification because it begins in 1986. It is the difference between the interest rates on interbank loans and on short-term US government debt. The TED spread reflects the funding conditions for global banks and may be a good proxy of private credit risk perceptions, close to the VIX. As emphasized by Bruno and Shin (2015), the TED spread is a significant driver of cross-border bank flows. An increase of the TED spread should drop cross-border bank flows, which in turn has an ambiguous effect on monetary policy autonomy. It could be a positive impact through the limited exposure of the future capital flows. The impact of global banks on monetary policy independence is unclear, as suggested by Goldberg (2013). I find significant and positive coefficient of TED spread in opposition to the role of the VIX. Columns (3) and (4) emphasize that the VIX is the main driver of the global financial cycle in line with Miranda-Agrippino and Rey (2015) and Rey (2015) whereas the TED spread covers the rest of year fixed effects. Furthermore, I have tried to combine the VIX and the oil price to catch more year fixed effects but without significant change. Taken together, these tests never change the effect of conditional shifts and of global players on monetary policy autonomy. Finally, I re-examine estimated year fixed effects and their reaction to these global variables. The two-step approach in column (8) confirms the role of this global variables but does not catch a higher part of year fixed effect than the baseline specification.

Various VIX Thresholds. The definition of my *ad hoc* threshold allows testing other possibilities, such as cases of a VIX equal to 17 and 20, namely the first quartile and the medium of the time distribution, respectively. These values are sufficiently high to capture potential non-linearities. Table A13 illustrates

[1] The three variables provide similar insights.

that the results are robust to other thresholds. The VIX threshold at 17 is sometimes positive because it catches part of all global factors. Because the financial forces are growing over time, I disentangle the time coverage in two sets in Table A14. They highlight the increasing trilemma trade-offs in recent years, especially on the shift from closed pegged to open pegged countries and particularly via global players. Again, the low and middle-thresholds capture many global shocks, so it is quite hard to interpret conditional and interaction terms, especially in columns (4) and (6).

Endogenous Thresholds. Furthermore, I estimate an endogenous threshold through Panel Smooth Transition Regression *à la* González et al. (2005) in Tables A15 and A16. I find VIX thresholds close to my previous approach, from 17 to 21. They also support the key result, because the new regime characterized by this high value of VIX increases trilemma trade-offs, especially on financial openness. This methodology never supports the idea of a dilemma.

Table A 12: Other Global Financial Variables - Sensitivity Analysis

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. Var.	Monetary Policy Independence Index							
Peg_Open	-0.0933***	-0.0939***	-0.0900***	-0.0789***	-0.0868***	-0.0880***	-0.0743***	-0.0746***
	(0.0229)	(0.0228)	(0.0231)	(0.0240)	(0.0212)	(0.0213)	(0.0219)	(0.0219)
Peg_Closed	-0.00565	-0.00584	-0.00550	-0.00247	-0.0103	-0.0108	-0.00703	-0.00603
	(0.0143)	(0.0144)	(0.0142)	(0.0140)	(0.00994)	(0.00990)	(0.00994)	(0.0103)
Open_Peg	-0.0940***	-0.0944***	-0.0902***	-0.0762***	-0.0977***	-0.0968***	-0.0810***	-0.0807***
	(0.0262)	(0.0265)	(0.0260)	(0.0237)	(0.0229)	(0.0230)	(0.0212)	(0.0205)
Open_Float	-0.0195	-0.0201	-0.0128	-0.00653	-0.0210	-0.0207	-0.0108	-0.00325
	(0.0149)	(0.0153)	(0.0148)	(0.0156)	(0.0129)	(0.0129)	(0.0135)	(0.0137)
Int. Res.	0.0793	0.0751	0.114*	0.119*	0.0778	0.0793	0.0797	0.0822
	(0.0603)	(0.0660)	(0.0619)	(0.0619)	(0.0528)	(0.0527)	(0.0531)	(0.0563)
Dom. Fin.	-0.0660***	-0.0674***	-0.0533***	-0.0274	-0.0761***	-0.0755***	-0.0440***	-0.0452***
	(0.0200)	(0.0213)	(0.0196)	(0.0188)	(0.0167)	(0.0167)	(0.0163)	(0.0171)
DesynchCPI	-0.0199	-0.0197	-0.0107	-0.0128	-0.0230*	-0.0206*	-0.0177	-0.0112
	(0.0140)	(0.0140)	(0.0142)	(0.0141)	(0.0120)	(0.0118)	(0.0119)	(0.0126)
TED Spread (mean)	0.0304***	0.0305***	0.0585***	0.0513***				
	(0.00930)	(0.00922)	(0.0121)	(0.0122)				
Oil Price (mean)		0.00318			-0.00949	-0.00710	0.00281	
		(0.0163)			(0.0119)	(0.0122)	(0.0124)	
VIX (std)			-0.00453***	-0.00368***		-0.00116*	-0.000793	
			(0.000915)	(0.000948)		(0.000663)	(0.000668)	
Global Inv.				-0.0507***			-0.0551***	-0.0490***
				(0.0175)			(0.0146)	(0.0148)
Global Banks				-0.0431***			-0.0470***	-0.0427***
				(0.0129)			(0.0125)	(0.0126)
Constant	0.478***	0.475***	0.465***	0.464***	0.517***	0.517***	0.494***	0.508***
	(0.0200)	(0.0249)	(0.0202)	(0.0196)	(0.0168)	(0.0168)	(0.0168)	(0.0174)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	No	No	No	No	No	No	No	Yes
Second-stage								
TED Spread								0.0308*
Oil Price								-0.0132*
VIX (std)								-0.0029
% of Year FE								0.212
Obs.	3558	3558	3558	3558	4427	4427	4427	4427
Countries	159	159	159	159	161	161	161	161
adj. R^2	0.088	0.088	0.096	0.109	0.111	0.112	0.127	0.162

With the Within estimator, Peg_Open means a shift from float to peg given that a country is open.

With the Within estimator, Open_Peg means a shift from closed to open given that a country is pegged.

*, **, and *** respectively denote significance at the 10, 5, and 1% levels.

Robust standard errors in parentheses.

Table A 13: Various Thresholds of Financial Stress - Sensitivity Analysis

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. Var.	Monetary Policy Independence Index							
Threshold							17	20
Peg_Open	-0.0887***	-0.0875***	-0.0887***	-0.0857***	-0.0887***	-0.0846***	-0.0882***	-0.0719***
	(0.0212)	(0.0209)	(0.0211)	(0.0211)	(0.0211)	(0.0212)	(0.0313)	(0.0242)
Peg_Closed	-0.0108	-0.00896	-0.0106	-0.00957	-0.0109	-0.00904	0.00174	-0.00228
	(0.00992)	(0.0100)	(0.00994)	(0.00997)	(0.00993)	(0.00998)	(0.0126)	(0.0114)
Open_Peg	-0.0978***	-0.0986***	-0.0982***	-0.0981***	-0.0977***	-0.0993***	-0.0900***	-0.100***
	(0.0231)	(0.0229)	(0.0231)	(0.0229)	(0.0230)	(0.0229)	(0.0311)	(0.0288)
Open_Float	-0.0220*	-0.0224*	-0.0225*	-0.0191	-0.0219*	-0.0189	-0.0174	-0.0116
	(0.0127)	(0.0126)	(0.0127)	(0.0125)	(0.0127)	(0.0125)	(0.0165)	(0.0145)
Int. Res.	0.0676	0.0672	0.0676	0.0692	0.0675	0.0704	0.0670	0.0652
	(0.0497)	(0.0499)	(0.0498)	(0.0494)	(0.0497)	(0.0494)	(0.0498)	(0.0497)
Dom. Fin.	-0.0797***	-0.0810***	-0.0802***	-0.0788***	-0.0797***	-0.0790***	-0.0810***	-0.0805***
	(0.0153)	(0.0155)	(0.0153)	(0.0153)	(0.0153)	(0.0154)	(0.0155)	(0.0152)
DesynchCPI	-0.0199*	-0.0260**	-0.0209*	-0.0192*	-0.0200*	-0.0180	-0.0257**	-0.0194
	(0.0116)	(0.0119)	(0.0117)	(0.0116)	(0.0116)	(0.0116)	(0.0119)	(0.0118)
Stress (VIX=23)	-0.00590			-0.0201***	-0.00762	-0.00826		
	(0.00583)			(0.00621)	(0.00734)	(0.00736)		
Stress (VIX=17)		0.0187***		0.0293***		0.0349***	0.0263***	
		(0.00609)		(0.00652)		(0.00670)	(0.00991)	
Stress (VIX=20)			-0.00377		0.00206	-0.0175***		0.0105
			(0.00548)		(0.00680)	(0.00667)		(0.00921)
Peg_Open x St.							0.00135	-0.0391
							(0.0377)	(0.0355)
Peg_Closed x St.							-0.0155	-0.0183
							(0.0122)	(0.0127)
Open_Peg x St.							-0.0125	0.00777
							(0.0364)	(0.0380)
Open_Float x St.							-0.00707	-0.0233
							(0.0166)	(0.0162)
Constant	0.508***	0.494***	0.508***	0.491***	0.508***	0.490***	0.488***	0.502***
	(0.0132)	(0.0141)	(0.0133)	(0.0141)	(0.0133)	(0.0140)	(0.0155)	(0.0138)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	No	No	No	No	No	No	No	No
Obs.	4427	4427	4427	4427	4427	4427	4427	4427
Countries	161	161	161	161	161	161	161	161
adj. R^2	0.111	0.114	0.111	0.117	0.111	0.117	0.113	0.112

With the Within estimator, Peg_Open means a shift from float to peg given that a country is open.

With the Within estimator, Open_Peg means a shift from closed to open given that a country is pegged.

*, **, and *** respectively denote significance at the 10, 5, and 1% levels.

Robust standard errors in parentheses.

Table A 14: Financial Forces Over Time - Sensitivity Analysis

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. Var.	Monetary Policy Independence Index							
Coverage	96-2013	70-95		96-2013			70-95	
Threshold	23	23	17	20	23	17	20	23
Peg_Open	-0.0781**	-0.0185	-0.0662	-0.0322	-0.0363	-0.0682**	-0.0288	-0.0231
	(0.0331)	(0.0265)	(0.0587)	(0.0436)	(0.0417)	(0.0282)	(0.0300)	(0.0265)
Peg_Closed	-0.0203	-0.0147	0.0160	0.0165	0.00370	-0.0173	-0.0182	-0.0162
	(0.0193)	(0.0127)	(0.0328)	(0.0240)	(0.0221)	(0.0147)	(0.0142)	(0.0131)
Open_Peg	-0.0760**	-0.0297	-0.0837	-0.0991**	-0.0954**	0.0134	-0.00720	-0.0170
	(0.0320)	(0.0262)	(0.0523)	(0.0441)	(0.0415)	(0.0262)	(0.0283)	(0.0272)
Open_Float	-0.0451*	-0.00778	-0.0394	-0.0189	-0.0236	-0.0188	-0.00757	-0.00414
	(0.0251)	(0.0228)	(0.0389)	(0.0313)	(0.0294)	(0.0234)	(0.0253)	(0.0239)
Int. Res.	0.100	0.0195	0.106*	0.109*	0.108*	0.0448	0.0331	0.0312
	(0.0620)	(0.0962)	(0.0621)	(0.0604)	(0.0606)	(0.0956)	(0.0962)	(0.0963)
Dom. Fin.	-0.0585**	-0.0273	-0.0559**	-0.0370	-0.0375	-0.0195	-0.0117	-0.0131
	(0.0248)	(0.0343)	(0.0251)	(0.0247)	(0.0246)	(0.0333)	(0.0350)	(0.0353)
DesynchCPI	0.0100	-0.0566***	0.00695	0.0110	0.00983	-0.0597***	-0.0563***	-0.0540***
	(0.0168)	(0.0160)	(0.0163)	(0.0164)	(0.0166)	(0.0161)	(0.0163)	(0.0164)
Global Investors				-0.0438**	-0.0430**		-0.0428*	-0.0431
				(0.0204)	(0.0204)		(0.0251)	(0.0262)
Global Banks				-0.0436***	-0.0440***		0.000218	0.00131
				(0.0162)	(0.0161)		(0.0314)	(0.0314)
Stress	-0.00537	0.00262	0.0228	0.0156	0.0120	0.0216**	0.00100	-0.00759
	(0.00814)	(0.00699)	(0.0253)	(0.0169)	(0.0148)	(0.00935)	(0.00829)	(0.00910)
Peg_Open x St.			-0.00961	-0.0875*	-0.0902*	0.103***	0.0560	0.138***
			(0.0617)	(0.0520)	(0.0530)	(0.0385)	(0.0343)	(0.0293)
Peg_Closed x St.			-0.0441	-0.0542**	-0.0348*	0.00476	0.0121	0.0149
			(0.0319)	(0.0237)	(0.0210)	(0.0158)	(0.0130)	(0.0150)
Open_Peg x St.			0.0142	0.0777	0.0808	-0.0761**	-0.0597	-0.118***
			(0.0604)	(0.0539)	(0.0541)	(0.0317)	(0.0378)	(0.0356)
Open_Float x St.			-0.00362	-0.0326	-0.0259	0.0353**	0.0320	0.0408
			(0.0318)	(0.0245)	(0.0216)	(0.0173)	(0.0236)	(0.0255)
Constant	0.488***	0.475***	0.463***	0.478***	0.481***	0.453***	0.467***	0.469***
	(0.0234)	(0.0222)	(0.0338)	(0.0253)	(0.0243)	(0.0231)	(0.0224)	(0.0224)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	No	No	No	No	No	No	No	No
Obs.	2529	1898	2529	2529	2529	1898	1898	1898
Countries	159	124	159	159	159	124	124	124
adj. R^2	0.034	0.008	0.036	0.049	0.046	0.024	0.013	0.012

With the Within estimator, Peg_Open means a shift from float to peg given that a country is open.

With the Within estimator, Open_Peg means a shift from closed to open given that a country is pegged.

*, **, and *** respectively denote significance at the 10, 5, and 1% levels.

Robust standard errors in parentheses.

4.1 Endogenous Thresholds

This paper demonstrates that the stance of the trilemma becomes more uncertain. The path is doubtfully non-linear. I employ thresholds but the previous specification is not designed to perfectly include continuous indexes and to endogenously provide thresholds. I propose using Panel Smooth Transition Regression by González et al. (2005). This specification transforms the sample into various regimes with their own coefficient for each of them. This distribution is cut-off through transition variable. In other words, non-linearity is characterized as a function of an observable variable. This model endogenously provides the optimal number of regimes, the threshold(s) and the speed of the transition. In line with the potential move from trilemma to dilemma, I analyze two regimes, namely *Trilemma* and *Dilemma* and I adopt the VIX as transition variable. The specification becomes:

$$MI_{it} = \beta_0\ ERS_{it} + \beta_1\ ERS_{it} \times g(VIX_t, \gamma, c) + \beta_2\ Kaopen_{it} + \beta_3\ Int.Res._{it} + \mu_i + \epsilon_{it} \tag{2}$$

The transition function is a continuous function of the observable transition variable VIX_t[2] and is normalized from 0 to 1. It is defined by González et al. (2005), among others, as follows:

$$g(VIX_t, \gamma, c) = (1 + exp(-\gamma \prod_{j=1}^{m}(VIX_t - c_j)))^{-1} \tag{3}$$

The parameter $\gamma > 0$ reflects the smoothness of the transition(s). The thresholds[3] are defined in the vector $c = (c_1, ...c_m)$ and respect $\gamma > 0, c_1 < ... < c_m$. According to González et al. (2005), set m equal to 1 or 2 is generally sufficient to capture all non-linearities. When m is equal to 1, this function transition reflects a logistic function and the two regimes are characterized by different dynamics. These extreme values are associated with coefficients β_0 and $\beta_0 + \beta_1$. This β_1 represents the slope of the change between these two regimes and so this statistical significance is the key to prove the dilemma. When m is equal to 2, this transition function transforms into a quadratic logistic function. In this case, β_0 is the coefficient associated with the two extreme cases in this distribution and $\beta_0 + \beta_1$ is the value of the mean of the VIX.

Nonetheless, this specification is subject to criticism, because I only interact transition function with the exchange rate regime in order to test the dilemma. But it is straightforward to think that the international financial pressures also magnify the impact of financial openness. As robustness check, I

[2]The VIX is country-invariant but it does not change properties of the PSTR.
[3]They are called location parameters in this literature.

interact this transition function with the exchange rate regime and the financial openness. The quadratic logistic function would not appear designed for this debate but it could be useful if I use a continuum of exchange rate regimes. You may have critical effects with extreme exchange rate regimes or with intermediate regimes *à la* Fischer (2001). Before estimating the PSTR model, there is a test on the non-linearity. The previous section points out convincing empirical evidence of non-linearity but this homogeneity test also help to choose between $m = 1$ (logistic function) and $m = 2$ (quadratic logistic function). It tests the null hypothesis $H_0 : \beta_1 = 0$ or its equivalent $H_0 : \gamma = 0$. It is not a standard test because of the presence of nuisance parameters which are unidentified under both null hypothesis[4]. For instance, there is no location parameter c under linearity hypothesis.

The process is quite simple: I test the linearity ($m = 0$) against non-linearity with one threshold ($m = 1$). If linearity is rejected, I test non-linearity with one threshold against two thresholds ($m = 2$) until I find the optimal number of thresholds. I simultaneously choose the optimal transition function. The table A15 reports the homogeneity test according to the two possible transition function.

The non-linearities are significant for every specification and for all every specific function transition. The other tests are not reported but the best specification is a double thresholds model ($r = 2$) for every case. Following Couharde and Generoso (2015), I minimize the Akaike Information Criterion (AIC) and the Bayesian Information Criterion (BIC) in order to find the best value of m. These criteria are perhaps surprisingly very close, so I adopt the specification close to the test of trilemma against dilemma. A logistic function will make the direct interpretation of β_1 easier.

The table A16 highlights the estimates of these three specifications. The columns (1) and (2) consider non-linearity only on financial openness, (3) and (4) on the exchange rate regime and (5) and (6) both. For each specification, the first column gives the results for coefficients β_0, i.e. below the threshold and the second for $\beta_0 + \beta_1$, i.e. over the threshold. I also provide β_1 and its statistical significance in order to examine the slope of the change between these two regimes.

These estimates emphasize the large role of non-linearities, especially on financial openness. The double thresholds are consistent with my previous analysis. The smooth parameters γ are relatively high that indicates a sharp transition between the two regimes. But the β_1 in column (4) is at odds with the idea of dilemma. The negative β_1 for both trilemma variables means that trilemma is worsened by the financial globalization. The column (6) emphasizes the key role of financial openness in this mechanism.

[4]This test uses first-order Taylor expansion of transition function around $\gamma = 0$. More details on González et al. (2005) or on Couharde and Generoso (2015).

Table A 15: Homogeneity Tests

	Financial openness subject to non-linearity	
	m=1	m=2
LM test	5.967	13.16
	(0.01457)	(0.00139)
Pseudo LRT test	5.97	13.20
	(0.0145)	(0.00136)
	Exchange rate subject to non-linearity	
	m=1	m=2
LM test	4.80	17.70
	(0.028)	$(1.43.10^{-4})$
Pseudo LRT test	4.80	17.77
	(0.028)	$(1.38.10^{-4})$
	Exchange rate and financial openness subject to non-linearity	
	m=1	m=2
LM test	6.3478	18.56
	(0.04)	$(9.57.10^{-4})$
Pseudo LRT test	6.357	18.64
	(0.04)	$(9.24.10^{-4})$

Table A 16: PSTR Estimates

Non-linearity	Kaopen		Exchange Rate Regime		Kaopen and Exchange Rate	
	(1)	(2)	(3)	(4)	(5)	(6)
	β_0	$\beta_0 + \beta_1$	β_0	$\beta_0 + \beta_1$	β_0	$\beta_0 + \beta_1$
ERS	-0.138***	-0.138***	-0.051**	-0.149**	-0.116***	-0.116***
	(0.000)	(0.000)	(0.0013)	(0.0013)	(0.000)	(0.000)
Kaopen	-0.097***	-0.203***	-0.189***	-0.189***	-0.111***	-0.120***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
IR	0.1157***	0.1157***	0.1132***	0.1132***	0.1177***	0.1177***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.007)	(0.007)
β_1 ERS				-0.098***		-0.02
				(0.000)		(0.18)
β_1 Kaopen		-0.106***				-0.09***
		(0.000)				(0.000)
Smooth Parameter	25.46		37.73		25.98	
Location Parameters	[17.74; 21.05]		[17.77; 19.56]		[17.74; 21.05]	
Obs.	2200	2200	2200	2200	2200	2200
Countries	50	50	50	50	50	50

Dependent variable is the Monetary Policy Independence index.

*, **, and *** respectively denote significance at the 10, 5, and 1% levels.

Standard errors in parentheses.

5 Is It Really Monetary Policy Autonomy? Other Monetary Condition Variables

Key Comments: I test multiple measures for the correlation of GDP and inflation cycles. I also investigate an alternative definition of monetary policy independence in which the correlations whether positive or negative is a sign of dependence. I ensure that the results imply effective monetary policy independence.

Controlling for GDP Cycles. Klein and Shambaugh (2015) add Taylor rules in their specification to prove that interest rate differentials really mean autonomy. They use the first difference of interest rate differential between a country and a base country as dependent variable. They add the economic growth and the first difference of inflation of the country in a robustness check to demonstrate that it does not change their results about trilemma. I control the correlation of interest rates with the correlation of business cycles and of inflation in a similar manner. Ideally, I should use the annual correlation between monthly or quarterly production and inflation between the domestic country i and the base country j but this kind of data does not exist for production according to my time and geographical coverage. I employ the correlation of monthly consumer price indexes with the same methodology outlined in Aizenman et al. (2008). For comparison, the index of inflation synchronization and of GDP synchronization are defined as follows:

$$Sync\ Infl_{it} = \frac{|\Delta Infl_{it} + \Delta Infl_{jt}|}{|\Delta Infl_{it}| + |\Delta Infl_{jt}|} \tag{4}$$

$$Sync\ GDP_{it} = \frac{|\Delta GDP_{it} + \Delta GDP_{jt}|}{|\Delta GDP_{it}| + |\Delta GDP_{jt}|} \tag{5}$$

where ΔGDP_{it} represents the real annual growth rate and $\Delta Infl_{it}$ is the first difference of annual inflation rate. By construction, this kind of measure is normalized and equal to 1 if the two countries follow the same inflation or business cycle. This index is also equal to one if the growth is equal to 0 but it never happens in the data. The synchronization of cycles of the two countries leads to an increase of this measure and should generate some positive comovement of policy interest rates, which in turn reduces monetary policy independence. I can simultaneously employ my first index of the inflation cycle desynchronization with monthly consumer price indexes (CPI), the second with the first difference of annual inflation rate and the third with the first difference of GDP growth. The data coverage does not perfectly match for

two reasons. Monthly CPI does not exist in some cases. Besides, this database begins with the first year of monthly CPI and so the first difference of annual inflation rate is unavailable.

The additional control variables in Table A17 do not change at all the findings. In addition, the VIX is always strongly significant. By contrast, my inflation index with annual data or with monthly data[5] never affects monetary policy autonomy. Finally, this table suggests that this index related to GDP cycles is always statistically relevant. Perhaps surprisingly, the coefficient is positive while monetary policy independence and GDP cycles synchronization seem contrary. But the mean of this variable $SyncGDP$ is equal to 0.834, close to 1 and generally reflects positive growth. Yet, positive GDP growth for these two countries allows more room for monetary policy manoeuvre than GDP growth mismatch. This index imperfectly reflects upward or downward slope, but again, the results are consistent.

Table A18 investigates potential shifts with the addition of both inflation and GDP control variables. It confirms the results about conditional terms according to the presence of global investors and global banks. The same ranking of shifts and the same role for the VIX hold.

Alternative Monetary Policy Independence Measure. The monetary policy independence is defined as the ability of countries to set their interest rates. The baseline dependent variable analyzes the absence of correlation or a negative correlation as a sign of monetary policy independence. But a potential other interpretation links monetary policy dependence and correlations, whether positive or negative, which in turn provides the following alternative dependent variable

$$\widetilde{MI_{it}} =\mid corr(i_{imt}, i_{jmt}) \mid \tag{6}$$

By contrast with the baseline dependent variable, here 0 means independence and higher values of this index mean more monetary policy dependence. The average value is 0.292 for the sample and the standard deviation is quite high (0.260). Going into more detail, over 57.4 percent (2541) observations provide a positive correlation, while 32.7 percent (1446) of the observations yield a negative correlation.[6] These heterogeneous responses of the domestic policy rate to foreign base country rate clearly fit Ricchi and Shi (2016)'s argument. Table A19 replicates the baseline empirical strategy with this alternative dependent

[5]The index of inflation cycle desynchronization with monthly data is negative at a high level of statistical significance if and only if there are no year fixed effects. It is explained by a worldwide monetary policy movement in favor of disinflation policies. As mentioned above, the year 1986 reflects a high increase of inflation desynchronization and a drop of monetary policy independence in open economies. The disinflation policies were trending upwards with partial and heterogeneous results at this time.

[6]Because of constant interest rates, over 9.9 percent (440) of the observations artificially reflect a complete decorrelation.

variable. Again, the domestic exposure to global players worsens the trilemma. My results are overall unaffected by this alternative specification, but one difference: the role of exchange rate regime on monetary policy autonomy disappears in the baseline specification. Similarly, the shift from float to peg has no effect in column (3) when the domestic exposure to global players is low. This runs against to the accepted trilemma mechanisms before the existence of the global financial cycle (Shambaugh, 2004; Obstfeld et al., 2005; Aizenman et al., 2008).

It is therefore likely that positive and negative correlations do not have the same meaning. A positive correlation should reflect a high pass-through from the interest rate for the base country, whereas a negative correlation could be explained by various channels. Three arguments emerge from Ricchi and Shi (2016), namely (i) the central bank mandate, (ii) the willingness to tolerate large swings in the exchange rate (*fear of floating*) and (iii) the degree of synchronization of business cycles. Indeed, the central bank may have different priorities in terms of domestic/foreign objectives and of inflation/unemployment trade-off. Consequently, Table A20 differentiates positive and negative correlation. When I focus on the positive correlation in the first four columns, the move to peg for open countries generally reduces the monetary policy independence and the high presence of global players magnifies this mechanism. Yet, the opposite case with negative correlation provides insignificant coefficients. Besides, Klein and Shambaugh (2015) find a significant and positive coefficient on all their subsamples, including for their closed non-peg subsample. It means that an increase in the base interest rate is associated with an increase in the domestic interest rate, whatever the choice of financial openness and of exchange rate regime. These various arguments support my baseline definition of monetary policy independence.

Effective Monetary Policy Independence. The comovement of interest rates appears a good proxy of monetary policy independence but Rey (2015) and Rey (2016) distinguish monetary policy instruments and results because I cannot credibly say that all monetary policy channels go through the short-term interest rate. She uses credit volumes, house prices and equity indices as other proxies of monetary policy autonomy whereas Borio (2014) and Drehmann et al. (2012) analyze them as proxies of national financial cycles. Tables 21, 22 and 23 replicate this strategy by using the dependent variable of the base country as an explanatory variable. This alternative approach could reflect effective monetary policy autonomy because they are determinants of these national financial cycles.

I employ dummies and conditional dummies for trilemma configuration in Tables 21 and 22 while Table 23 extends to continuous measures of financial openness and exchange rate regime. But there is no

monthly data of these financial variables to closely follow the baseline specification. The financial variable of the base country is generally irrelevant, probably because of this data frequency. The VIX explains a large share of year fixed effects. This process fits better with financial variables as dependent variable than comovement of policy short-term interest rates. The former reflects more the investors' appetite for risk than the latter, which is subject to policy decisions.

This approach complements the trilemma-dilemma debate. On the one hand, the presence of global players positively affects the financial variable, with the notable exception of global investors on equity markets at a very low level of statistical significance.[7] On the other hand, trilemma decisions have some impact. Financial openness pushes up equity prices and credit with cross-border flow supply. But the effect of exchange rate regime is quite unclear: my conditional trilemma variables in Table 21 suggest no role whereas simple dummies or continuous measures provide other mixed results. Table 22 highlights that the move to the worst trilemma configuration is associated with a high drop in equity indices. According to Table 23, a marginal increase of the degree of fixity of the exchange rate regime leads to an increase in house prices in monetary policy autonomy. This unlinear and mixed evidence about exchange rate regime is not sufficient to validate the Rey (2015) hypothesis on this effective monetary policy independence. But again, when respectively comparing the first and second columns for each dependent variable in Tables 21, 22 and 23, this effect is mainly driven by global players.

[7] I could argue that these international debt issues allow for international portfolio rather than domestic investment on national assets. It could also be driven by sample effect.

Table A 17: Is There Really Autonomy? - Sensitivity Analysis With Year Fixed Effects

	(1)	(2)	(3)	(4)	(5)
Dep. Var.	Monetary Policy Independence Index				
Peg_Open	-0.0843***	-0.0870***	-0.0841***	-0.0863***	-0.0834***
	(0.0214)	(0.0215)	(0.0216)	(0.0216)	(0.0215)
Peg_Closed	-0.00959	-0.0105	-0.00772	-0.00811	-0.00720
	(0.0102)	(0.0103)	(0.0102)	(0.0102)	(0.0101)
Open_Peg	-0.0934***	-0.0942***	-0.0938***	-0.0949***	-0.0941***
	(0.0218)	(0.0219)	(0.0217)	(0.0218)	(0.0217)
Open_Float	-0.00870	-0.00984	-0.00896	-0.00980	-0.00853
	(0.0134)	(0.0134)	(0.0134)	(0.0134)	(0.0134)
Int. Res.	0.0933*	0.0983*	0.0921	0.0980*	0.0929*
	(0.0552)	(0.0552)	(0.0559)	(0.0559)	(0.0559)
Dom. Fin.	-0.0690***	-0.0651***	-0.0679***	-0.0639***	-0.0679***
	(0.0179)	(0.0180)	(0.0182)	(0.0183)	(0.0182)
DesynchCPI	-0.0101				-0.0117
	(0.0123)				(0.0123)
Sync_Infl		-0.00631		-0.00679	
		(0.00794)		(0.00795)	
Sync_GDP			0.0219**	0.0229**	0.0220**
			(0.00990)	(0.00999)	(0.00987)
Constant	0.518***	0.520***	0.493***	0.496***	0.494***
	(0.0165)	(0.0177)	(0.0199)	(0.0210)	(0.0199)
Country FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Second-stage					
VIX(log)	-0.0078***	-0.0078***	-0.0070***	-0.0069***	-0.0069***
% of Year FE	0.307	0.302	0.257	0.244	0.25
Obs.	4427	4385	4400	4358	4400
Countries	161	160	161	160	161
adj. R^2	0.150	0.152	0.152	0.154	0.152

Samples with $Sync\_Infl$ or $Sync\_GDP$ are restricted to DesynchCPI data.

*, **, and *** respectively denote significance at the 10, 5, and 1% levels.

Robust standard errors in parentheses.

Table A 18: Looking for the Role of Global Players: Other Variables - Sensitivity Analysis

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. Var.	Monetary Policy Independence Index					
	Global Investors			Global Banks		
Peg_Open	-0.0642***	-0.0729***	-0.0666***	-0.0383*	-0.0701***	-0.0476**
	(0.0227)	(0.0216)	(0.0229)	(0.0224)	(0.0217)	(0.0227)
Peg_Closed	-0.00632	-0.00538	-0.00660	-0.00597	-0.00613	-0.00249
	(0.0103)	(0.0101)	(0.0103)	(0.0101)	(0.0102)	(0.0102)
Open_Peg	-0.0770***	-0.0689***	-0.0748***	-0.0722***	-0.0352	-0.0536**
	(0.0206)	(0.0217)	(0.0228)	(0.0202)	(0.0217)	(0.0226)
Open_Float	-0.00493	-0.00603	-0.00636	-0.0116	0.00466	0.00686
	(0.0132)	(0.0138)	(0.0140)	(0.0134)	(0.0146)	(0.0148)
Int. Res.	0.0941	0.0939	0.0943	0.0627	0.0575	0.0584
	(0.0593)	(0.0593)	(0.0593)	(0.0539)	(0.0532)	(0.0533)
Dom. Fin.	-0.0543***	-0.0547***	-0.0545***	-0.0475***	-0.0463***	-0.0457***
	(0.0175)	(0.0176)	(0.0176)	(0.0174)	(0.0175)	(0.0174)
DesynchCPI	-0.00994	-0.0103	-0.00999	-0.0142	-0.0150	-0.0141
	(0.0128)	(0.0127)	(0.0128)	(0.0122)	(0.0123)	(0.0123)
Sync_GDP	0.0197**	0.0196**	0.0197**	0.0194**	0.0223**	0.0225**
	(0.00978)	(0.00979)	(0.00980)	(0.00978)	(0.00955)	(0.00959)
Global Player	-0.0373**	-0.0370	-0.0438	-0.0202	0.00118	0.0220
	(0.0183)	(0.0239)	(0.0303)	(0.0141)	(0.0154)	(0.0193)
Peg_Open x Global Pl.	-0.0608*		-0.0406	-0.128***		-0.102**
	(0.0313)		(0.0490)	(0.0224)		(0.0505)
Peg_Closed x Global Pl.	0.0146		0.0208	0.000785		-0.0402
	(0.0351)		(0.0392)	(0.0216)		(0.0251)
Open_Peg x Global Pl.		-0.0609*	-0.0144		-0.155***	-0.0770
		(0.0353)	(0.0411)		(0.0224)	(0.0468)
Open_Float x Global Pl.		0.00358	0.00948		-0.0660***	-0.0865***
		(0.0285)	(0.0332)		(0.0233)	(0.0270)
Constant	0.485***	0.485***	0.486***	0.491***	0.488***	0.485***
	(0.0207)	(0.0207)	(0.0207)	(0.0202)	(0.0204)	(0.0206)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Second-stage						
VIX(log)	-0.0051***	-0.0051***	-0.0052***	-0.00627***	-0.0070***	-0.0068***
% of Year FE	0.163	0.162	0.163	0.234	0.277	0.263
Obs.	4400	4400	4400	4400	4400	4400
Countries	161	161	161	161	161	161
adj. R^2	0.161	0.161	0.161	0.170	0.174	0.175

With the Within estimator, Peg_Open means a shift from float to peg given that a country is open.

With the Within estimator, Open_Peg means a shift from closed to open given that a country is pegged.

Samples with *Sync_Infl* or *Sync_GDP* are restricted to DesynchCPI data.

*, **, and *** respectively denote significance at the 10, 5, and 1% levels.

Robust standard errors in parentheses.

Table A 19: Alternative Monetary Policy Independence Measure - Sensitivity Analysis

Dep. Var.	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	$\widetilde{MI_{it}} =\mid corr(i_{imt}, i_{jmt}) \mid$						
	Baseline	Global Investors			Global Banks		
Peg_Open	0.0596	0.00556	0.0354	0.0164	-0.0244	0.0330	0.0111
	(0.0375)	(0.0371)	(0.0359)	(0.0362)	(0.0377)	(0.0354)	(0.0381)
Peg_Closed	0.00514	0.00611	0.00416	0.00653	0.00253	0.00419	0.00111
	(0.0158)	(0.0156)	(0.0155)	(0.0156)	(0.0160)	(0.0155)	(0.0161)
Open_Peg	0.171***	0.131***	0.102***	0.119***	0.132***	0.0683*	0.0864**
	(0.0364)	(0.0332)	(0.0342)	(0.0347)	(0.0333)	(0.0365)	(0.0387)
Open_Float	-0.0205	-0.0194	-0.0171	-0.0168	-0.0134	-0.0192	-0.0211
	(0.0200)	(0.0184)	(0.0186)	(0.0187)	(0.0187)	(0.0199)	(0.0199)
Int. Res.	-0.209***	-0.207**	-0.207**	-0.207**	-0.161**	-0.154**	-0.155**
	(0.0781)	(0.0874)	(0.0876)	(0.0876)	(0.0760)	(0.0752)	(0.0759)
Dom. Fin.	0.0604**	0.0382	0.0386	0.0381	0.0279	0.0277	0.0272
	(0.0300)	(0.0274)	(0.0275)	(0.0275)	(0.0298)	(0.0299)	(0.0296)
DesynchCPI	-0.00858	-0.0140	-0.0131	-0.0138	-0.00545	-0.00373	-0.00453
	(0.0209)	(0.0216)	(0.0215)	(0.0215)	(0.0202)	(0.0201)	(0.0202)
Global Player		-0.000369	0.000627	0.0104	0.00919	0.00859	-0.00942
		(0.0196)	(0.0294)	(0.0392)	(0.0207)	(0.0214)	(0.0248)
Peg_Open x Global Pl.		0.214***		0.128	0.250***		0.0981
		(0.0507)		(0.0873)	(0.0388)		(0.0658)
Peg_Closed x Global Pl.		-0.0284		-0.0389	0.0149		0.0341
		(0.0433)		(0.0542)	(0.0339)		(0.0364)
Open_Peg x Global Pl.			0.215***	0.0799		0.263***	0.187***
			(0.0556)	(0.0794)		(0.0382)	(0.0638)
Open_Float x Global Pl.			-0.00896	-0.0170		0.0145	0.0324
			(0.0338)	(0.0422)		(0.0318)	(0.0338)
Constant	0.0812**	0.1000***	0.0994***	0.0993***	0.0927***	0.0904***	0.0929***
	(0.0327)	(0.0322)	(0.0320)	(0.0321)	(0.0315)	(0.0309)	(0.0312)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	4427	4427	4427	4427	4427	4427	4427
Countries	161	161	161	161	161	161	161
adj. R^2	0.196	0.216	0.215	0.216	0.223	0.224	0.225

With the Within estimator, Peg_Open means a shift from float to peg given that a country is open.

With the Within estimator, Open_Peg means a shift from closed to open given that a country is pegged.

Dependent variable: Alternative Monetary Policy Independence Index.

*, **, and *** respectively denote significance at the 10, 5, and 1% levels.

Robust standard errors in parentheses.

Table A 20: Alternative Monetary Policy Independence Measure - Sensitivity Analysis

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. Var.				$\widetilde{MI_{it}} =\mid corr(i_{imt}, i_{jmt}) \mid$				
		$corr(i_{imt}, i_{jmt}) > 0$				$corr(i_{imt}, i_{jmt}) < 0$		
Peg_Open	0.0950**	0.0767*	0.0281	0.00681	-0.0592	-0.0590	-0.0633	-0.0633
	(0.0424)	(0.0427)	(0.0435)	(0.0433)	(0.0430)	(0.0435)	(0.0445)	(0.0458)
Peg_Closed	0.00849	0.00325	0.0117	0.00727	0.0139	0.0152	0.0179	0.0159
	(0.0210)	(0.0210)	(0.0210)	(0.0210)	(0.0202)	(0.0203)	(0.0207)	(0.0210)
Open_Peg	0.175***	0.157***	0.132***	0.134***	-0.00436	-0.00223	-0.00921	-0.00685
	(0.0409)	(0.0375)	(0.0362)	(0.0371)	(0.0426)	(0.0428)	(0.0431)	(0.0414)
Open_Float	-0.0158	-0.0222	-0.0138	-0.0148	0.00129	0.00273	0.00218	0.00276
	(0.0251)	(0.0246)	(0.0226)	(0.0231)	(0.0224)	(0.0221)	(0.0222)	(0.0222)
Int. Res.	-0.271***	-0.244***	-0.242**	-0.213**	0.0377	0.0384	0.0376	0.0377
	(0.0944)	(0.0930)	(0.0951)	(0.0889)	(0.0796)	(0.0799)	(0.0795)	(0.0797)
Dom. Fin.	0.0738**	0.0375	0.0299	0.0321	-0.0686***	-0.0598**	-0.0617**	-0.0590**
	(0.0348)	(0.0342)	(0.0323)	(0.0349)	(0.0251)	(0.0249)	(0.0250)	(0.0252)
DesynchCPI	-0.0274	-0.0246	-0.0326	-0.0259	-0.0258	-0.0268	-0.0269	-0.0259
	(0.0270)	(0.0260)	(0.0266)	(0.0259)	(0.0366)	(0.0370)	(0.0370)	(0.0370)
Global Inv.		0.0640**	0.00102	0.0548**		-0.0165	-0.0157	-0.0147
		(0.0251)	(0.0263)	(0.0243)		(0.0302)	(0.0358)	(0.0309)
Global Banks		0.0776***	0.0719***	0.0112		-0.0189	-0.0183	-0.0195
		(0.0246)	(0.0234)	(0.0269)		(0.0231)	(0.0234)	(0.0280)
Peg_Open x Gl. Inv.			0.188***				0.0396	
			(0.0482)				(0.0766)	
Peg_Closed x Gl. Inv.			-0.0576				-0.0627	
			(0.0449)				(0.0463)	
Peg_Open x Gl. Banks				0.214***				0.0372
				(0.0413)				(0.0589)
Peg_Open x Gl. Banks				0.00592				-0.0124
				(0.0502)				(0.0417)
Constant	0.166***	0.185***	0.196***	0.192***	0.398***	0.397***	0.399***	0.397***
	(0.0402)	(0.0410)	(0.0425)	(0.0432)	(0.0685)	(0.0683)	(0.0687)	(0.0684)
Obs.	2541	2541	2541	2541	1446	1446	1446	1446
Countries	156	156	156	156	154	154	154	154
adj. R^2	0.266	0.280	0.295	0.298	0.044	0.044	0.043	0.043

With the Within estimator, Peg_Open means a shift from float to peg given that a country is open.

With the Within estimator, Open_Peg means a shift from closed to open given that a country is pegged.

Dependent variable: Alternative Monetary Policy Independence Index.

*, **, and *** respectively denote significance at the 10, 5, and 1% levels.

Robust standard errors in parentheses.

Table A 21: Effective Monetary Policy Autonomy - Sensitivity Analysis

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. Var.:	Private Credit		House Prices		Equity Index	
Base_Variable	-0.112	-0.0724	-0.202	-0.119	-0.0904	-0.0370
	(0.0695)	(0.0596)	(0.208)	(0.196)	(0.136)	(0.134)
Peg_Open	0.0692**	0.0359	0.0239	0.0316	0.0336	0.0405
	(0.0318)	(0.0287)	(0.0254)	(0.0254)	(0.0502)	(0.0482)
Peg_Closed	0.0404*	0.0285	0.0268	0.0307	0.108	0.120*
	(0.0218)	(0.0200)	(0.0322)	(0.0320)	(0.0655)	(0.0676)
Open_Peg	0.120***	0.0796**	0.0185	0.0145	-0.0369	-0.0153
	(0.0383)	(0.0328)	(0.0246)	(0.0224)	(0.0389)	(0.0369)
Open_Float	0.0735**	0.0591**	0.0336*	0.0416**	0.102*	0.107**
	(0.0300)	(0.0256)	(0.0186)	(0.0178)	(0.0537)	(0.0534)
Int. Res.	-0.341***	-0.232**	-0.0816	0.00365	0.119	0.0314
	(0.112)	(0.105)	(0.131)	(0.113)	(0.206)	(0.190)
DesynchCPI	-0.0138	-0.00984	-0.0616*	-0.0402	-0.0180	-0.0285
	(0.0195)	(0.0187)	(0.0346)	(0.0302)	(0.0684)	(0.0713)
Global Inv.		0.0970**		-0.0496**		-0.104*
		(0.0381)		(0.0193)		(0.0560)
Global Banks		0.182***		0.104***		-0.0814
		(0.0318)		(0.0364)		(0.0685)
Constant	0.306***	0.270***	2.126***	1.945***	3.477***	3.398***
	(0.0600)	(0.0534)	(0.419)	(0.393)	(0.499)	(0.494)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Second-stage						
VIX(log)	0.0774***	0.0599***	0.0377***	0.0377***	-0.2864***	-0.2966***
% of Year FE	0.641	0.663	0.559	0.559	0.699	0.695
Obs.	4416	4416	1184	1184	1703	1703
Countries	161	161	56	56	67	67
adj. R^2	0.363	0.426	0.413	0.449	0.617	0.622

With the Within estimator, Peg_Open means a shift from float to peg given that a country is open.
With the Within estimator, Open_Peg means a shift from closed to open given that a country is pegged.
*, **, and *** respectively denote significance at the 10, 5, and 1% levels.
Robust standard errors in parentheses.

Table A 22: Effective Monetary Policy Autonomy - Sensitivity Analysis

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. Var.:	Private Credit		House Prices		Equity Index	
Base_Variable	-0.116*	-0.0743	-0.200	-0.115	-0.0845	-0.0311
	(0.0699)	(0.0597)	(0.206)	(0.195)	(0.133)	(0.131)
Peg	0.0451**	0.0321	0.0323	0.0378	0.108	0.120*
	(0.0228)	(0.0209)	(0.0316)	(0.0313)	(0.0647)	(0.0667)
Open	0.0762**	0.0620**	0.0412**	0.0497**	0.105*	0.110*
	(0.0306)	(0.0260)	(0.0205)	(0.0197)	(0.0563)	(0.0565)
Peg x Open	0.0484	0.0102	-0.0255	-0.0348	-0.189**	-0.181**
	(0.0560)	(0.0511)	(0.0521)	(0.0444)	(0.0776)	(0.0762)
Int. Res.	-0.350***	-0.236**	-0.0812	0.00521	0.142	0.0468
	(0.113)	(0.106)	(0.130)	(0.111)	(0.208)	(0.192)
DesynchCPI	-0.0143	-0.0104	-0.0624*	-0.0408	-0.0153	-0.0268
	(0.0198)	(0.0189)	(0.0342)	(0.0296)	(0.0686)	(0.0717)
Global Inv.		0.101***		-0.0500**		-0.104*
		(0.0382)		(0.0192)		(0.0564)
Global Banks		0.183***		0.105***		-0.0846
		(0.0324)		(0.0361)		(0.0681)
Constant	0.266***	0.238***	2.122***	1.936***	3.440***	3.366***
	(0.0595)	(0.0527)	(0.415)	(0.391)	(0.488)	(0.485)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Second-stage						
VIX(log)	0.0924***	0.0707***	0.0362***	0.0316***	-0.2836***	-0.2948***
% of Year FE	0.712	0.731	0.541	0.600	0.699	0.694
Obs.	4416	4416	1184	1184	1703	1703
Countries	161	161	56	56	67	67
adj. R^2	0.359	0.425	0.415	0.452	0.616	0.622

*, **, and *** respectively denote significance at the 10, 5, and 1% levels.

Robust standard errors in parentheses.

Table A 23: Effective Monetary Policy Autonomy - Sensitivity Analysis

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. Var.:	Private Credit		House Prices		Equity Index	
Base_Variable	-0.128*	-0.0799	-0.153	-0.0795	-0.0820	-0.0304
	(0.0697)	(0.0599)	(0.197)	(0.185)	(0.119)	(0.120)
ERS	0.0872**	0.0490	0.0987**	0.0894*	-0.0539	-0.0166
	(0.0388)	(0.0344)	(0.0474)	(0.0481)	(0.0669)	(0.0678)
Kaopen	0.137***	0.0901**	0.00695	0.0238	0.223**	0.227**
	(0.0458)	(0.0376)	(0.0467)	(0.0462)	(0.0994)	(0.0992)
Int. Res.	-0.363***	-0.244**	-0.0533	0.0285	0.199	0.102
	(0.117)	(0.107)	(0.130)	(0.112)	(0.219)	(0.202)
DesynchCPI	-0.0151	-0.00952	-0.0622*	-0.0417	-0.00487	-0.0161
	(0.0194)	(0.0187)	(0.0344)	(0.0296)	(0.0722)	(0.0758)
Global Inv.		0.0998***		-0.0496**		-0.0992*
		(0.0380)		(0.0191)		(0.0573)
Global Banks		0.184***		0.0973***		-0.0941
		(0.0327)		(0.0357)		(0.0700)
Constant	0.217***	0.213***	2.008***	1.842***	3.328***	3.252***
	(0.0596)	(0.0541)	(0.407)	(0.376)	(0.435)	(0.441)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Second-stage						
VIX(log)	0.0924***	0.0698***	0.0334***	0.0298***	-0.2683***	-0.2813***
% of Year FE	0.703	0.720	0.516	0.579	0.702	0.698
Obs.	4416	4416	1184	1184	1703	1703
Countries	161	161	56	56	67	67
adj. R^2	0.358	0.424	0.424	0.457	0.618	0.624

ERS and Kaopen are continuous measures of exchange rate regime and financial openness, respectively.

*, **, and *** respectively denote significance at the 10, 5, and 1% levels.

Robust standard errors in parentheses.

6 Other Robustness Tests

Key Comments: Country size and various types of financial crises do not change the main result. They also reflect the potential heterogenous role of global banks *à la* Goldberg (2013), notably because of differences between advanced economies and the emerging world.

Does Size Matter? I am looking for other determinants of trilemma. The domestic financial system and goals of central banks depend on the level of development. Country's size matters for at least two reasons. First, countries do not have the same financial vulnerability with respect to global financial cycle. Second, a sovereign monetary policy is costly for small countries. Consequently, smaller countries are more prone to peg their currencies. Tables A24 and A25 control the country's sensitivity to financial forces in two ways. The size of the country does not appear as a good determinant but it could be driven by other control variables. I also discriminate countries according to their level of development. This indicates substantial heterogeneity across countries. Table A24 shows conditional terms through thresholds while Table A25 provides continuous measures. The coefficients of conditional terms are different across groups of countries because of historical trend. In line with Klein (2012), the shift to financial liberalization for pegged countries is generally specific to highly developed countries, as suggested by column (2) in Table A24. Table 25 goes into more detail about trilemma trade-off with continuous measures. The richest countries are generally more sensitive to trilemma's trade-offs, probably because of their financial linkages. A marginal increase of financial openness is determinant only for no-OECD countries because many OECD countries are mainly open in the 1970s. The high presence of global investors plays a role in richest countries and in lower middle countries whereas the high presence of global banks seems to have a small stabilizing role in poorest countries. The high role of global players only in advanced economies is probably due to the long time coverage, as highlighted by Hofmann and Takàts (2015). The loss of statistical significance compared to column (1) is likely explained by the few observations.

Controlling for Financial Crises. In addition, financial crises are generally associated with massive changes in exchange rates and this monetary policy independence index only reflects emergency situation. Table A26 controls for various kinds of financial crises. Laeven and Valencia (2012) provide us all systemic banking, currency and sovereign debt crises as year dummies. In the first three columns, I investigate these crises as additional control variables of the baseline specification. Only systemic banking

crisis are statistically significant but does not affect the results. In the last three columns, I examine the relationship between these crises and my baseline specification. The high presence of global investors is positively correlated to the possibility of all kinds of financial crises. This broad exposure to the global financial cycle fuels domestic credit in line with Schularick and Taylor (2012). About trilemma trade-offs, currency crises are logically associated to the shift to high pegged currency notably because of the relatively high number of one-year pegged countries, following di Giovanni and Shambaugh (2008). This CPI cycle desynchronization measure is statistically significant with a negative coefficient in the case of currency crises. It seems at odds with the traditional mechanism of currency crises trough currencies divergences but it raises reverse causality issues. When I lag these CPI cycle desynchronization measure (as unreported results), the coefficient becomes statistically significant and positive. It confirms a lagged correlation between these CPI cycles and comovement in policy interest rates, probably due to inflation forecast changes or monetary policy effectiveness.

Reverse Causality. Finally, Table A27 investigates reverse causality risk: the stance of monetary policy is perhaps a determinant of financial openness and exchange rate regime. Following Aizenman and Ito (2014) and Aizenman et al. (2016), I use lagged explanatory variables. They provide the same story as Tables 3 and 4 in the paper, the only difference is the significant coefficient of *Open* conditional on floating exchange rate, but it is statistically significant at 10% level.

Table A 24: Does Size Matter? - Sensitivity Analysis

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. Var.	Monetary Policy Independence Index					
Income Group		High, OECD	High, No OECD	Upper middle	Lower middle	Low
Peg_Open	-0.0747***	-0.0245	-0.0867**	-0.103*	-0.0558*	0.0790
	(0.0220)	(0.0360)	(0.0358)	(0.0612)	(0.0324)	(0.0617)
Peg_Closed	-0.00618	-0.0126	0.0231	-0.0138	0.00204	-0.00199
	(0.0103)	(0.0241)	(0.0522)	(0.0278)	(0.0161)	(0.0192)
Open_Peg	-0.0808***	-0.139***	-0.0350	-0.00357	0.0212	-0.0955**
	(0.0206)	(0.0308)	(0.0410)	(0.0474)	(0.0278)	(0.0361)
Open_Float	-0.00351	0.0182	-0.00773	0.00506	0.000578	-0.0778
	(0.0137)	(0.0233)	(0.0477)	(0.0247)	(0.0223)	(0.0562)
Int. Res.	0.0819	0.563***	0.108	-0.0408	0.0705	-0.279
	(0.0563)	(0.155)	(0.0845)	(0.0914)	(0.148)	(0.187)
Dom. Fin.	-0.0452***	-0.0353*	-0.0956	-0.00385	-0.0573	-0.0784**
	(0.0172)	(0.0200)	(0.0577)	(0.0530)	(0.0526)	(0.0375)
DesynchCPI	-0.0111	-0.0193	-0.0366	-0.0156	0.0115	-0.0632**
	(0.0126)	(0.0458)	(0.0312)	(0.0291)	(0.0273)	(0.0236)
Global Inv.	-0.0489***	-0.0504*	0.0449	-0.0404	-0.0668***	-0.0289
	(0.0148)	(0.0250)	(0.0273)	(0.0262)	(0.0207)	(0.0662)
Global Banks	-0.0427***	-0.00954	-0.00988	-0.0249	-0.0387	0.164***
	(0.0127)	(0.0240)	(0.0436)	(0.0206)	(0.0286)	(0.0335)
Country Size	0.00524					
	(0.0369)					
Constant	0.460***	0.372***	0.473***	0.594***	0.496***	0.557***
	(0.123)	(0.0732)	(0.0385)	(0.0445)	(0.0357)	(0.0451)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	4426	1041	524	1090	1119	653
Countries	161	30	21	42	43	25
adj. R^2	0.162	0.438	0.201	0.043	0.082	0.122

With the Within estimator, Peg_Open means a shift from float to peg given that a country is open.

With the Within estimator, Open_Peg means a shift from closed to open given that a country is pegged.

*, **, and *** respectively denote significance at the 10, 5, and 1% levels.

Robust standard errors in parentheses.

Table A 25: Does Size Matter? - Sensitivity Analysis

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. Var.		Monetary Policy Independence Index				
Income Group		High, OECD	High, No OECD	Upper middle	Lower middle	Low
ERS	-0.0953***	-0.295***	-0.202***	-0.0274	-0.00494	0.0485
	(0.0220)	(0.0278)	(0.0502)	(0.0442)	(0.0280)	(0.0288)
Kaopen	-0.0881***	-0.0579	-0.119***	-0.0461	-0.0215	-0.0827
	(0.0214)	(0.0398)	(0.0341)	(0.0374)	(0.0423)	(0.0489)
Int. Res.	0.0938	0.474***	0.0795	-0.0520	0.0787	-0.238
	(0.0573)	(0.144)	(0.0790)	(0.0930)	(0.150)	(0.193)
Dom. Fin.	-0.0528***	-0.0602**	-0.0706	-0.0110	-0.0534	-0.0798*
	(0.0178)	(0.0219)	(0.0506)	(0.0538)	(0.0518)	(0.0414)
DesynchCPI	-0.00333	-0.0125	-0.0473	-0.0226	0.0116	-0.0677**
	(0.0130)	(0.0441)	(0.0303)	(0.0289)	(0.0275)	(0.0266)
Global Inv.	-0.0496***	-0.0534**	0.0492	-0.0320	-0.0719***	-0.0306
	(0.0162)	(0.0236)	(0.0321)	(0.0313)	(0.0190)	(0.0583)
Global Banks	-0.0491***	-0.0139	-0.00916	-0.0254	-0.0395	0.154***
	(0.0137)	(0.0208)	(0.0356)	(0.0229)	(0.0283)	(0.0335)
Country Size	0.0244					
	(0.0353)					
Constant	0.502***	0.598***	0.708***	0.537***	0.502***	0.532***
	(0.116)	(0.0804)	(0.0406)	(0.0651)	(0.0447)	(0.0452)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	4426	1041	524	1090	1119	653
Countries	161	30	21	42	43	25
adj. R^2	0.150	0.459	0.216	0.036	0.082	0.128

*, **, and *** respectively denote significance at the 10, 5, and 1% levels.

Robust standard errors in parentheses.

Table A 26: Controlling For Financial Crises - Sensitivity Analysis

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. Var.	MI	MI	MI	BankingCrisis	CurrencyCrisis	DebtCrisis
Peg_Open	-0.0706***	-0.0700***	-0.0703***	-0.0147*	-0.0205**	0.00108
	(0.0226)	(0.0226)	(0.0226)	(0.00830)	(0.00833)	(0.00418)
Peg_Closed	-0.00401	-0.00345	-0.00377	-0.0117	-0.0237***	-0.00144
	(0.00998)	(0.00997)	(0.00996)	(0.00739)	(0.00869)	(0.00434)
Open_Peg	-0.0832***	-0.0830***	-0.0832***	0.000744	-0.0123	-0.00338
	(0.0205)	(0.0205)	(0.0206)	(0.00657)	(0.00768)	(0.00442)
Open_Float	0.000823	0.00152	0.00137	-0.0246***	-0.0127	0.00402
	(0.0140)	(0.0140)	(0.0140)	(0.00909)	(0.0105)	(0.00412)
Int. Res.	0.0798	0.0809	0.0805	-0.0383	-0.0251	-0.0246
	(0.0540)	(0.0539)	(0.0540)	(0.0247)	(0.0207)	(0.0152)
Dom. Fin.	-0.0438**	-0.0453**	-0.0448**	0.0498***	0.0316***	0.00968
	(0.0177)	(0.0177)	(0.0176)	(0.0112)	(0.0100)	(0.00657)
DesynchCPI	-0.00488	-0.00394	-0.00460	-0.0117	-0.0521***	0.00536
	(0.0132)	(0.0133)	(0.0133)	(0.0108)	(0.0117)	(0.0112)
Global Inv.	-0.0486***	-0.0493***	-0.0490***	0.0236**	0.0171**	0.0120*
	(0.0150)	(0.0150)	(0.0150)	(0.00976)	(0.00795)	(0.00657)
Global Banks	-0.0411***	-0.0416***	-0.0413***	0.0111	0.0173*	0.0115
	(0.0126)	(0.0126)	(0.0126)	(0.00881)	(0.00938)	(0.00710)
BankingCrisis	-0.0216*					
	(0.0130)					
CurrencyCrisis		0.0130				
		(0.0137)				
DebtCrisis			-0.00422			
			(0.0232)			
Constant	0.506***	0.506***	0.506***	0.000499	0.0184**	0.00143
	(0.0176)	(0.0176)	(0.0177)	(0.00695)	(0.00706)	(0.00530)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	4317	4317	4317	4317	4317	4317
Countries	161	161	161	161	161	161
adj. R^2	0.163	0.162	0.162	0.048	0.040	0.019

*, **, and *** respectively denote significance at the 10, 5, and 1% levels.

Robust standard errors in parentheses.

Table A 27: Endogeneity Issues - Sensitivity Analysis

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. Var.	Monetary Policy Independence Index					
	Global Investors			Global Banks		
L.Peg_Open	-0.0731***	-0.0815***	-0.0773***	-0.0524**	-0.0791***	-0.0635**
	(0.0260)	(0.0248)	(0.0262)	(0.0265)	(0.0246)	(0.0271)
L.Peg_Closed	-0.0137	-0.0120	-0.0144	-0.0122	-0.0122	-0.00928
	(0.0108)	(0.0107)	(0.0108)	(0.0107)	(0.0106)	(0.0107)
L.Open_Peg	-0.0830***	-0.0751***	-0.0794***	-0.0784***	-0.0460**	-0.0585***
	(0.0200)	(0.0216)	(0.0220)	(0.0206)	(0.0208)	(0.0216)
L.Open_Float	-0.0220*	-0.0244*	-0.0254*	-0.0274**	-0.0135	-0.0119
	(0.0129)	(0.0135)	(0.0136)	(0.0125)	(0.0141)	(0.0142)
L.Int. Res.	0.0781	0.0772	0.0785	0.0462	0.0409	0.0417
	(0.0632)	(0.0634)	(0.0633)	(0.0564)	(0.0560)	(0.0562)
L.Dom. Fin.	-0.0476**	-0.0484**	-0.0480**	-0.0410**	-0.0401*	-0.0397*
	(0.0198)	(0.0198)	(0.0198)	(0.0203)	(0.0205)	(0.0204)
L.DesynchCPI	-0.00885	-0.00926	-0.00890	-0.0141	-0.0142	-0.0139
	(0.0135)	(0.0133)	(0.0134)	(0.0127)	(0.0128)	(0.0128)
L.Global Player	-0.0457**	-0.0445*	-0.0611*	-0.0263**	-0.00627	0.00949
	(0.0183)	(0.0239)	(0.0340)	(0.0133)	(0.0156)	(0.0176)
L.Peg_Open x Global Pl.	-0.0569*		-0.0198	-0.114***		-0.0736
	(0.0326)		(0.0649)	(0.0239)		(0.0565)
L.Peg_Closed x Global Pl.	0.0280		0.0425	0.00326		-0.0319
	(0.0336)		(0.0420)	(0.0224)		(0.0247)
L.Open_Peg x Global Pl.		-0.0589	-0.0228		-0.141***	-0.0856
		(0.0370)	(0.0589)		(0.0239)	(0.0528)
L.Open_Float x Global Pl.		0.00748	0.0225		-0.0585**	-0.0739***
		(0.0289)	(0.0368)		(0.0231)	(0.0260)
Constant	0.499***	0.500***	0.500***	0.505***	0.505***	0.502***
	(0.0172)	(0.0171)	(0.0172)	(0.0169)	(0.0169)	(0.0171)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	4358	4358	4358	4339	4339	4339
Countries	160	160	160	160	160	160
adj. R^2	0.163	0.162	0.163	0.168	0.171	0.171

With the Within estimator, Peg_Open means a shift from float to peg given that a country is open.

With the Within estimator, Open_Peg means a shift from closed to open given that a country is pegged.

*, **, and *** respectively denote significance at the 10, 5, and 1% levels.

Robust standard errors in parentheses.

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