#### Appendix

## to 'Classifying *de facto* exchange rate regimes of financially open and closed economies: A statistical approach'

(for on-line publication)

### Details of the trimmed k-means method

Financially open country-years are divided into clusters with the trimmed *k*-means method.

- The algorithm of trimmed k-means consists of following steps (García-Escudero et al. 2010):
  - 1. Random step: k initial centres  $\{m_1^0, ..., m_k^0\}$  are chosen randomly.
  - 2. Concentration step:
    - 2.1 Keep the set *H* made of the  $n(1-\alpha)$  observations closest to the centres  $\{m_1^l, ..., m_k^l\}$
    - 2.2 Partition *H* onto *k* subsets { $H_1, ..., H_k$ }, where  $H_j$  contains the observations in *H* closer to the centre  $m_j^l$  than to the other centres.
    - 2.3 Update the centres  $m_1^{l+1}, ..., m_1^{l+k}$  such that each centre  $m_j^{l+1}$  is the sample mean of the observations in  $H_j$ .
  - 3. Repeat Step 1 and Step 2 several times and keep the solution which minimize the objective function given in (5).

#### Details of the k-nearest neighbours method

Financially closed country-years are divided into clusters with the *k*-nearest neighbours method. The algorithm consists of four steps:

- 1. A positive integer *k* is specified, along with a new sample.
- 2. *k* new entries in the training set, which are closest (statistical distance is used to measure the distance) to the new sample, are selected.
- 3. The most common classification of the entries is determined.

4. The new sample is classified to the category determined in Step 3.

In order to choose the value of k, it is recommended to try several values of k and to use one with the lowest error rate. Such an exercise is made within a training set.

Table AL												
Symbol	Name	Description	Source									
KAO	Capital account openness	The Chinn-Ito index	The updated database developed by Chinn and Ito (2006, 2008)									
EA	Exchange rate variability I	The average absolute monthly percentage change in the exchange rate against an anchor currency	Authors' calculations based on data from the IMF									
EO	Exchange rate variability II	The standard deviation of monthly percentage change in the exchange rate against an anchor currency	Authors' calculations based on data from the IMF									
RA	FX reserves variability I	The average absolute monthly percentage change of foreign exchange reserves (raw data on reserves in USD)	Authors' calculations based on data from the IMF									
RO	FX reserves variability II	The standard deviation of monthly percentage change of foreign exchange reserves (raw data on reserves in USD)	Authors' calculations based on data from the IMF									

 Table A1. Description of underlying variables

Source: Authors' compilation.

Anchor currency	Number of countries <sup>*</sup>	Countries
Australian dollar	1	Kiribati
(AUD)	(0.6%)	
Euro	53	Albania Austria Belgium Benin Bosnia and Herzegovina Bulgaria
(EUR)	(29.8%)	Burkina Faso, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Republic of Congo, Cote d'Ivoire, Croatia, Cyprus, Czech Republic, Denmark, Equatorial Guinea, Estonia, Finland, France, Gabon, Germany, Greece, Guinea-Bissau, Hungary, Iceland, Ireland, Italy, Luxembourg, FYR Macedonia, Madagascar, Mali, Malta, Montenegro, Morocco, Netherlands, Niger, Norway, Poland, Portugal, Romania, San Marino, Senegal, Serbia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Togo, Tunisia, Turkey, United Kingdom, United States of America
Indian rupee	1	Bhutan
(INR)	(0.6%)	
South African	4	Botswana, Lesotho, Namibia, Swaziland
Rand	(2.2%)	
(ZAR)		
U.S. dollar	113	Afghanistan, Angola, Anguilla, Antigua and Barbuda, Argentina,
(USD)	(63.5%)	Armenia, Aruba, Australia, Azerbaijan, Bahamas, Bahrain, Bangladesh, Barbados, Belarus, Belize, Bolivia, Brazil, Brunei Darussalam, Burundi, Cambodia, Canada, Chile, China, Colombia, Democratic Republic of Congo, Costa Rica, Curacao & St. Maarten, Djibouti, Dominica, Dominican Republic, Egypt, El Salvador, Eritrea, Ethiopia, Fiji, Gambia, Georgia, Ghana, Grenada, Guatemala, Guinea, Guyana, Haiti, Honduras, Hong Kong, India, Indonesia, Iran, Iraq, Israel, Jamaica, Japan, Jordan, Kazakhstan, Kenya, South Korea, Kuwait, Kyrgyzstan, Laos, Lebanon, Liberia, Macao, Malawi, Malaysia, Maldives, Mauritania, Mauritius, Mexico, Federated States of Micronesia, Moldova, Mongolia, Montserrat Mozambique, Nepal, New Zealand, Nicaragua, Nigeria, Oman, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Qatar, Russia, Rwanda, Samoa, Saudi Arabia, Seychelles, Sierra Leone, Singapore, Solomon Islands, South Africa, Sri Lanka, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Sudan, Suriname, Tajikistan, Tanzania, Thailand, Tonga, Trinidad and Tobago, Uganda, Ukraine, United Arab Emirates, Uruguay, Vanuatu, Venezuela, Vietnam, Yemen, Zambia
Special drawing	2	Libya, Myanmar
rights (SDR)	(1.1%)	
Change	4	From EUR to USD: Algeria (2003)
C	(2.2%)	From USD to EUR: Lithuania (2002), Sao Tome and Principe (2008) From SDR to EUR: Latvia (2005)

Table A2.	Anchor	currencies,	1995-2015

Notes: \* percentage of total in parentheses. Anchor currencies are available in an xlsx format.

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Afghanistan																				
Albania	Float	Float	Outlier	Float	Float	Float	Float	Float	Float	Float	Float	Incon	Float	Incon	Float	Fix	Incon	Incon	Incon	Incon
Algeria	Float	Fix	Float	Float	Fix	Float	Float	Float	Float	Incon	Float	Float	Float	Float	Incon	Incon	Float	Float	Float	Float
Angola		Outlier	U_press	U_press	Outlier	Outlier	Float	Fix	Float	Float	Float	Fix	Fix	Fix	Float	Fix	Float	Fix	Fix	Float
Anguilla																				
Antigua and Barbuda	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix					
Argentina	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Float	Float	Float	Fix	Fix	Fix	Float	Float	Incon	Incon	Float	Float	Float
Armenia		Fix	Fix	Fix	Float	Float	Incon	Float	Fix	Float	Float	Float	Float	Incon	Float	Float	Float	Float	Float	Float
Aruba	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Australia	Float	Fix	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Outlier	Fix	Float	Float	Float
Austria	Fix	Float	Incon	Incon	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Azerbaijan		Fix	Fix	Incon	Float	Incon	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Bahamas	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Bahrain	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Bangladesh	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Float	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Barbados	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Belarus		Float	Float	U_press	Outlier	Outlier	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	U_press	U_press	Outlier	Float	Fix	Fix
Belgium	Fix	Fix	Incon	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Belize	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Benin	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Bhutan	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Bolivia	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Incon	Incon	Fix	Fix	Fix
Bosnia and Herzegovina					Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Botswana	Fix	Incon	Incon	Incon	Incon	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float
Brazil	Float	Incon	Fix	Fix	Outlier	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float
Brunei Darussalam																				
Bulgaria	Float	Outlier	Outlier	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Burkina Faso	Fix	Fix	Incon	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Burundi	Float	Float	Float	Float	Float	Float	Float	Float	Fix	U_press	Float	U_press	U_press	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Cabo Verde	Fix	Outlier	U_press	U_press	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Cambodia	Float	Float	Float	Float	Incon	Incon	Incon	Fix	Fix	Incon	Incon	Fix	Fix	Fix	Incon	Incon	Incon	Fix	Fix	Fix
Cameroon	Outlier	Outlier	U_press	Outlier	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Canada	Float	Float	Fix	Fix	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float
Central African Rep.	Fix	Fix	Incon	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Chad	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Chile	Float	Incon	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float
China	Fix	Incon	Incon	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Incon	Incon	Incon	Incon	Incon	Incon	Incon	Incon	Incon	Incon
Colombia	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float
Comoros		Fix	Incon	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix

# Table A3. De facto exchange rate regime classification, 1995-2014

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Congo, Democratic Rep. of	Outlier	Outlier						Fix	U_press	U_press	Outlier	U_press	U_press	U_press	Outlier	Fix	Fix	Fix		
Congo, Rep. of	Fix	U_press	Outlier	U_press		Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Costa Rica	Float	Float	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Float	Float	Float	Float	Incon	Fix	Fix	Float
Cote d'Ivoire	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix						
Croatia		Float	Incon	Incon	Fix	Fix	Float	Fix	Fix	Float	Float	Fix	Incon	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Curacao																				
Cyprus	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix						
Czech Rep.		Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Incon
Denmark	Fix	Fix	Fix	Incon	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Incon	Incon	Fix						
Djibouti	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix						
Dominica	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix						
Dominican Rep.	Float	Float	Fix	Fix	Fix	Fix	Fix	Float	Outlier	Outlier	Float	Float	Float	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Egypt	Fix	Incon	Fix	Fix	Incon	Float	Float	Fix	Float	Incon	Float	Incon	Incon	Incon	Incon	Incon	Fix	Fix	Fix	Fix
El Salvador	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix						
Equatorial Guinea	Fix	Outlier		Outlier	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Eritrea				U_press	U_press	Outlier	Outlier	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix			
Estonia		Incon	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Ethiopia	Float	Fix	Float	Float	Float	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix					
Euro area																				
Fiji	Float	Fix	Float	Float	Float	Float	Float	Float	Float	Float	Float	Fix	Float	Float	Float	Float	Fix	Float	Float	Float
Finland	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix						
France	Fix	Incon	Incon	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Gabon	Fix	U_press	U_press	U_press	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Gambia	Fix	Incon	Fix	Incon	Float	Float	Float	Float	Float	Fix	Float	Fix	Outlier	Float	Fix	Float	Float	Float	Outlier	Float
Georgia		Fix	Fix	U_press	Outlier	Float	Float	Fix	Float	Float	Fix	Fix	Fix	Fix	Fix	Float	Float	Incon	Float	Float
Germany	Fix	Incon	Incon	Incon	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Ghana	Float	Fix	Fix	Fix	Float	Outlier	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Float	Float	
Greece	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix						
Grenada	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix						
Guatemala	Float	Float	Float	Fix	Float	Float	Fix	Float	Fix	Fix	Incon	Incon	Incon	Incon	Incon	Fix	Float	Float	Fix	Incon
Guinea	Fix	U_press	U_press	U_press	Float	Float	Fix	Fix		Float	Float							Outlier	Outlier	Outlier
Guinea-Bissau	Float	U_press	U_press	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Guyana	Fix	Incon	Incon	Float	Float	Incon	Incon	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Haiti	Float	Float	Float	Float	Float	Float	Float	Incon	Fix	Float	Incon	Fix	Fix	Fix						
Honduras	Float	Fix	Fix	Fix	Float	Incon	Fix	Fix	Fix	Fix	Incon	Fix	Fix	Incon	Fix	Fix	Fix	Fix	Fix	
Hong Kong SAR, China			Fix	Incon	Incon	Incon	Fix	Fix	Fix	Incon	Incon	Incon	Incon	Incon	Fix	Incon	Incon	Incon	Incon	Incon
Hungary	Float	Float	Float	Float	Float	Fix	Float	Float	Fix	Float	Float	Float	Float	Float						
Iceland	Fix	Fix	Fix	Fix	Fix	Float	Float	Fix	Float	Float	Float	Outlier	Float	Float	Float	U_press	Fix	Float	Float	Float
India	Float	Float	Float	Float	Incon	Float	Incon	Fix	Fix	Float	Float	Float	Float	Float						
Indonesia	Fix	Incon	Outlier	Float	Outlier	Outlier	Outlier	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float

 Table A3. De facto exchange rate regime classification, 1995-2014, cont'd

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Iran, Islamic Rep. of																				
Iraq																				
Ireland	Float	Fix																		
Israel	Float																			
Italy	Float	Fix																		
Jamaica	Float	Float	Incon	Incon	Float	Fix	Fix	Fix	Float	Fix	Fix	Fix	Float	Fix	Float	Fix	Fix	Fix	Fix	Fix
Japan	Float																			
Jordan	Fix																			
Kazakhstan		Fix	Fix	Fix	Outlier	Fix	Fix	Fix	Fix	Fix	Fix	Float	Fix	Fix	Float	Fix	Fix	Fix	Fix	Float
Kenya	Float	Fix	Float	Float	Float	Float	Incon	Fix	Float	Fix	Float	Fix								
Kiribati																				
Korea, Rep. of	Float	Float	Outlier	Float																
Kuwait	Fix																			
Kyrgyz Rep.			Fix	Fix	Float	Float	Float	Fix	Float	Fix	Incon	Float	Float	Float	U_press	Incon	Float	Incon	Fix	Float
Lao People's Democratic Rep.	Float	Fix	Float	Float	Outlier	Float	Float	Float	Fix	Float	Float	Float	Fix	Fix	Incon	U_press	Fix	U_press	U_press	U_press
Latvia		Incon	Incon	Fix	Incon	Fix	Fix	Fix	Float	Fix	Incon	Fix								
Lebanon	Fix	Incon	Incon	Incon	Fix															
Lesotho	Fix																			
Liberia	Fix	Fix	Fix	Outlier	Float	Float	Outlier	Outlier	Outlier	Outlier	Float	Float	Float	Fix	Float	Float	Float	Fix	Fix	Fix
Libya					Fix	Float	Fix	Fix	Fix	Fix	Fix	Fix	Incon	Fix						
Lithuania		Fix																		
Luxembourg					Fix															
Macao SAR, China																				
Macedonia, FYR			Float	Fix	Fix	Fix	Fix	Float	Fix	Incon	Fix									
Madagascar	Float	Float	Fix	Float	Float	Float	Float	Float	Float	Outlier	Float	Fix								
Malawi	Fix	U_press	U_press	Float	Fix	Outlier	Float	Fix	Float	Fix	U_press	U_press	Outlier	Outlier	U_press	Outlier	U_press	Outlier	Outlier	Outlier
Malaysia	Float	Incon	Float	Float	Fix	Float														
Maldives	Fix	Fix	Fix	Fix	Fix	Fix	Float	Fix	Float	Fix	Fix	Fix								
Mali	Fix																			
Malta	Float	Incon	Fix	Incon	Float	Float	Float	Fix	Fix	Incon	Fix	Float	Fix							
Mauritania	Float	Fix	Fix								Outlier	Fix	U_press	Outlier	U_press	Outlier	U_press	U_press		
Mauritius	Float	Float	Float	Float	Fix	Fix	Fix	Fix	Float	Float	Incon	Float	Fix							
Mexico	Outlier	Float																		
Micronesia, Fed. Sts.		Fix																		
Moldova		Fix	Fix	Float	Fix	Float	Float	Float	Fix	Float	Float	Float	Float	Float						
Mongolia	Float	Float	Float	Fix	Float	Fix	Float	Fix	Float	Float	Float	Float								
Montenegro																				
Montserrat																				
Morocco	Fix	Float	Incon	Incon	Float	Float	Fix	Fix	Fix	Incon	Fix	Incon	Incon	Fix	Float	Fix	Fix	Fix	Fix	Fix
Mozambique	Float	Fix	Fix	Float	Float	Float	Float	Fix	Fix	Float	Outlier	Float	Float	Fix	Float	Float	Float	Float	Fix	Float

 Table A3. De facto exchange rate regime classification, 1995-2014, cont'd

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Myanmar	Fix	U_press	U_press	Float	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Incon	Fix	Fix	Incon	Outlier		
Namibia	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix						
Nepal	Float	Float	Float	Float	Incon	Float	Fix	Fix	Fix	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float
Netherlands	Fix	Incon	Fix	Incon	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
New Zealand	Float	Fix	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float
Nicaragua	Float	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Incon	Incon	Incon	Fix	Fix	Fix	Incon	Fix
Niger	Fix	Fix	Fix	Outlier	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Nigeria	Fix	Fix	Fix	Fix	Outlier	Float	Float	Float	Float	Fix	Fix	Fix	Float	Fix	Float	Incon	Float	Fix	Fix	Float
Norway	Fix	Fix	Fix	Float	Float	Fix	Fix	Float	Float	Float	Float	Float	Float	Fix	Float	Fix	Fix	Fix	Float	Float
Oman	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix						
Pakistan	Float	U_press	U_press	Outlier	Fix	Float	U_press	Fix	Fix	Incon	Fix	Fix	Fix	Fix	Fix	Fix	Float	Float	U_press	U_press
Panama	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix						
Papua New Guinea	Fix	U_press	Float	U_press	Outlier	Outlier	Float	Float	Float	Fix	Fix	Fix	Float	Fix	Float	Float	Float	Float	Float	Fix
Paraguay	Fix	Fix	Fix	Float	U_press	Fix	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float
Peru	Float	Float	Incon	Incon	Float	Incon	Float	Float	Fix	Float	Float	Float	Float	Float	Float	Fix	Incon	Float	Float	Float
Philippines	Float	Fix	Float	Float	Float	Float	Float	Float	Float	Incon	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float
Poland	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Incon						
Portugal	Float	Float	Incon	Incon	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Qatar	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix						
Romania	Float	Fix	Outlier	Fix	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Fix	Float	Float	Float	Float
Russian Federation		Fix	Fix	U_press	Float	Fix	Fix	Fix	Fix	Float	Float	Float	Float	Float	Float	Float	Float	Outlier	Float	Outlier
Rwanda	Outlier	Fix	Float	Fix	Fix	Fix	Fix	Fix	Float	Fix	Fix	Incon	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Samoa	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Fix	Float	Fix	Float						
San Marino																				
Sao Tome and Principe		Float	Outlier	Fix	Fix	Float	Fix	Fix	Fix	Fix	U_press	U_press	Fix	Fix	Float	Fix	Fix	Fix	Fix	Fix
Saudi Arabia	Fix	Fix	Fix	Fix	Outlier	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix						
Senegal	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix						
Serbia																				
Seychelles	Float	Fix	U_press	U_press	U_press	U_press	Float	Fix	Float	Fix	Fix	Fix	Outlier	Outlier	Outlier	Fix	Float	Float	Float	Float
Sierra Leone	Float	Float	Float	Float	Float	Outlier	U_press	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Float	Fix	Fix	Fix	Fix	Float
Singapore	Float	Incon	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float
Slovak Rep.		Incon	Float	Float	Fix	Float	Float	Fix	Fix	Fix	Float	Float	Float	Float	Fix	Fix	Fix	Fix	Fix	Fix
Slovenia		Fix	Incon	Fix	Incon	Fix	Fix	Fix	Fix	Incon	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Solomon Islands	Fix	Fix	Float	Float	Float	Fix	Fix	Float	Fix	Fix	Fix	Incon	Fix	Fix	Fix	Fix	Fix	Fix	Incon	Float
South Africa	Fix	U_press	U_press	Float	Float	Float	Float	Float	Float	Float	Float	Outlier	Float	Float	Float	Float	Float	Float	Float	Float
Spain	Float	Float	Incon	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix
Sri Lanka	Float	Incon	Fix	Float	Incon	Float	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Float	Fix	Fix
St. Kitts and Nevis	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix						
St. Lucia	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix						
St. Vincent and the Grenadines	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix						

### Table A3. De facto exchange rate regime classification, 1995-2014, cont'd

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Sudan	Float	Float	Float	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Float	Fix	Fix		U_press	Outlier				
Suriname	Float	Fix	Fix	Fix	Outlier	Outlier	Outlier	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Float	Fix	Fix	Fix
Swaziland	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix							
Sweden	Float	Fix	Fix	Fix	Float	Float	Fix	Float	Fix	Float	Float	Float	Float	Fix	Fix	Float	Float	Float	Fix	Float
Switzerland		Float	Float	Float	Incon	Float	Float	Fix	Fix	Float	Fix	Incon	Float	Float	Fix	Float	Float	Fix	Float	Incon
Tajikistan			Outlier	U_press	U_press	Outlier	Fix	Float	Fix	Fix	Incon	Float	Outlier	Fix	Outlier	Outlier	Outlier	Outlier	Fix	Outlier
Tanzania, United Rep. of	Float	Float	Float	Float	Float	Fix	Float	Float	Fix	Float	Float	Float	Float	Float	Float	Float	Float	Fix	Float	Float
Thailand	Fix	Incon	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Incon	Float	Float	Float	Float	Float
Togo	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix							
Tonga	Fix	Fix	Fix	Fix	Fix	Float	Fix	Fix	Fix	Fix	Float	Float	Fix	Fix	Float	Float	Fix	Float	Float	Float
Trinidad and Tobago	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Incon	Incon	Incon	Incon	Incon	Fix							
Tunisia	Fix	Float	Fix	Float	Float	Float	Float	Incon	Float	Fix	Fix	Float	Float							
Turkey	Float	Float	Float	Float	Float	Float	Outlier	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float
Uganda	Float	Fix	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float						
Ukraine		U_press	Fix	U_press	Float	U_press	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Float	Fix	Fix	Fix	Fix	Fix	Outlier
United Arab Emirates	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix	Fix							
United Kingdom	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float							
United States	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float							
Uruguay	Float	Float	Float	Fix	Float	Fix	Float	Float	Float	Fix	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float
Vanuatu	Float	Incon	Float	Float	Float	Float														
Venezuela	Fix	Outlier	Fix	Fix	Float	Fix	Fix	Float	Float	Fix	Fix	Fix	Fix	Fix	Fix	Outlier	Outlier	Fix	Outlier	Fix
Vietnam	Fix	Fix	Float	Incon			Float	Fix	Fix	Incon	Fix	Fix	Fix	Fix	Float	Fix	Fix	Fix	Fix	Fix
Yemen	Outlier	Outlier	Incon	Fix	Float	Float		Fix	Fix	Incon	Float	Incon	Incon	Incon	Incon	Float	Fix	Fix	Fix	
Zambia	U_press	U_press	Fix	Fix	U_press		Outlier	U_press	Float	Float	Outlier	Outlier	Float	Float	Float	Float	Fix	U_press	Float	Outlier

Table A3. De facto exchange rate regime classification, 1995-2014, cont'd

Notes: 'Incon' stands for inconclusive, 'U\_press' – for under pressure. The classification is available in an xlsx format.

Classifi-	No. of	Period	Mapping **	Source
cation	countries			
LYS	183	1974-	Peg <sup>+</sup> – Peg	http://growthlab.cid.harvard.edu/
		2013	Crawling peg (1st round) – Peg	files/growthlab/files/
			Dirty float (1st round) – Float	wp_319_v2.pdf
			Float <sup>‡</sup> – Float	and direct correspondence with
			Intermediate (2 <sup>nd</sup> round) – Other	Eduardo Levy-Yeyati
			Inconclusive – Other	
			Outlier – Other	
IMF	201	1970-	Hard peg $^{\dagger}$ (1) – Peg	http://www.carmenreinhart.
		2010	Soft peg (2) – Peg	com/data/browse-by-
			Intermediate (3) – Float	topic/topics/11/
			Freely floating $\ddagger$ (4) – Float	(accessed on 13.07.2016)
RR	201	1940-	Hard peg $^{\dagger}$ (1) – Peg	http://www.carmenreinhart.
		2016	Soft peg $(2)$ – Peg	com/data/browse-by-
			Intermediate (3) – Float	topic/topics/11/
			Freely floating $\ddagger$ (4) – Float	(accessed on 28.10.2017)
			Freely falling $(5)$ – Other	
			Dual market in which parallel	
			market data is missing $(6)$ – Other	
DPS	183	1995-	Peg <sup>†</sup> -Peg	Authors
		2014	Float <sup>‡</sup> – Float	
			Inconclusive – Other	
			'Under pressure' – Other	
			Outlier – Other	
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**Table A4.** Alternative exchange rate regime classifications

*Notes:* \* LYS stands for Levy-Yeyati and Sturzenegger's (2016) classification, IMF for the International Monetary Fund's classification, RR for Ilzetzki et al.'s (2017) classification and DPS for classification by the authors; \*\* numbers in parenthesis in the RR and IMF classifications are 'the coarse classification codes'; † considered 'peg' in dichotomous divisions; ‡ considered 'float' in dichotomous divisions. *Source:* Authors' compilation.

Classifications considered	Period considered	Pearson chi-square <sup>a)</sup>	Cramér's V <sup>b)</sup>	Lambda <sup>b)</sup>	Apparent correct classification rate
Our Class. vs LYS	1995-2013	646.7***	0.470	0.300	0.712
Our Class. vs RR	1995-2014	1200.1***	0.610	0.519	0.791
Our Class. vs IMF	1995-2010	328.4***	0.376	0.231	0.673
LYS vs RR	1995-2013	1000.1***	0.566	0.516	0.342
LYS vs IMF	1995-2010	357.1***	0.391	0.274	0.302
RR vs IMF	1995-2010	538.4***	0.465	0.374	0.740

**Table A5.** Association measures: new classification vs. alternatives under mapping into pegs and non-pegs

*Notes:* see Table 8 in the main text.

Classifications considered	Period considered	Pearson chi-square <sup>a)</sup>	Cramér's V <sup>b)</sup>	Lambda <sup>b)</sup>	Apparent correct classification rate
Our Class. vs LYS	1995-2013	692.6***	0.486	0.307	0.771
Our Class. vs RR	1995-2014	111.7***	0.184	0.051	0.702
Our Class. vs IMF	1995-2010	213.6***	0.304	0.077	0.714
LYS vs RR	1995-2013	71.4***	0.151	0.039	0.672
LYS vs IMF	1995-2010	99.3***	0.206	0.025	0.666
RR vs IMF	1995-2010	118.2***	0.218	0.056	0.802

**Table A6.** Association measures: new classification vs. alternatives under mapping into floats

 and non-floats

Notes: see Table 8 in the main text.

	Fi	nancially ope	en economie	es	Financially closed and open economies						
	Floating exo regi	change rate me	Fixed exc reg	hange rate ime	Floating ex regi	change rate ime	Fixed exc reg	hange rate ime			
Statistic	DPS	LYS	DPS	LYS	DPS	LYS	DPS	LYS			
Mean	0.4702	0.3666	0.3183	0.3979	0.4835	0.4073	0.3842	0.4298			
Median	0.4612	0.3900	0.3516	0.3987	0.4858	0.4397	0.4171	0.4506			
Maximum	1.0000	1.0000	0.9401	1.0000	1.0000	1.0000	0.9679	1.0000			
Minimum	0.0106 0.0000		0.0000	0.0166	0.0106	0.0000	0.0000	0.0113			
Std. deviation	0.2064	0.2680	0.2363	0.1993	0.1963	0.2532	0.2221	0.1912			
Skewness	0.2976	0.1505	0.0540	0.0089	0.1290	-0.1257	-0.3023	-0.2139			
Kurtosis	2.9920	2.2282	1.9005	2.4653	2.9920	2.3312	2.2428	2.7009			
WW-M test (p value in parentheses)	7.16	566 000)	6.3 (0.0	252 000)	5.9 (0.0	516 000)	4.7 (0.0	451 000)			

**Table A7.** Descriptive statistics of monetary independence index under alternative exchange rate regime classifications

*Notes:* DPS stands for our classification, LYS – for Levy-Yeyati and Sturzenegger's classification; WW-M test stands for Wilcoxon/Mann-Whitney (tie-adjusted) test; the null is that medians are equal.





*Note:* The standard deviation of the (log of the) exchange rate in: three-year overlapping windows (data for a given year and two adjacent years are included) in panel (a) and one-year non-overlapping windows in panel (b).



**Figure A2.** Capital account openness according to the Chinn-Ito index *Source:* Authors' calculations based on data from Chinn and Ito (2006 and 2008).





*Notes:* 0 – outlier; 1 – inconclusive; 2 – float; 3 – peg; 4 – 'under pressure.' See also Table 1. Measures of variability are defined in Table A1. All measures are standardised (see the main text). Horizontal lines correspond to quartiles of distribution.



Figure A4. Exchange rate and FX reserves variabilities across groups identified in the second stage clustering

*Notes:* 1 – peg; 2 – 'deep inconclusive'; 3 – float. See also Table 1. Measures of variability defined in Table A1. All measures are standardised (see the main text). Horizontal lines correspond to quartiles of distribution.



(a) Adjusted Rand index
 (b) Fraction of wrong classifications
 Figure A5. Clustering with the *k*-nearest neighbour method – diagnostics for a training set *Note*: The number of neighbours on the horizontal axes.



Figure A6. Distribution of second-maximal monthly absolute change of the exchange rate across floaters

Note: number of country-year observations on a vertical axis.



Figure A7. Distribution of the Chinn-Ito index for country-years with non-unitary exchange rates



**Figure A8.** Distribution of monetary independence index under the floating exchange rate regime in financially closed and open economies



Figure A9. Distribution of monetary independence index under the fixed exchange rate regime in financially closed and open economies