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REAL EFFECTIVE EXCHANGE RATES FOR
178 COUNTRIES: A NEW DATABASE

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Real effective exchange rates for 178 countries: A new database

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Abstract

We use data on exchange rates and consumer price indices and the weighting matrix derived by Bayoumi, Lee and Jaewoo (2006) to calculate consumer price index-based REER. The main novelties of our database are that (1) it includes data for 178 countries –many more than in any other publicly available database– plus an external REER for the euro area, using a consistent methodology; (2) it includes up-to-date REER values, such as data for January 2012; and (3) it is relatively easy to calculate REER against any arbitrary group of countries. The annual database is complete for 172 countries and the euro area for 1992-2011 and data is available for six other countries for a shorter period. For several countries annual data is available for earlier years as well, eg data is available for 67 countries from 1960. The monthly database is complete for 138 countries for January 1995-January 2012, and data is also available for 15 other countries for a shorter period. The indicators calculated by us are freely downloadable and will be irregularly updated.

Keyword: effective exchange rates

JEL code: F31

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1. Introduction

The real effective exchange rate (REER), which measures the development of the real value of a country's currency against the basket of the trading partners of the country, is a frequently used variable in both theoretical and applied economic research and policy analysis. It is used for a wide variety of purposes, such as assessing the equilibrium value of a currency, the change in price or cost competitiveness, the drivers of trade flows, or incentives for reallocation production between the tradable and the non-tradable sectors.

The REER is calculated from the nominal effective exchange rate (NEER) and a measure of the relative price or cost between the country under study and its trading partners. The most popular price and costs measures are consumer prices (CPI), producer prices (PPI), GDP deflator, unit labour costs (ULC) – see Chinn (2006) for a nice overview of the theoretical underpinnings of various REER measures. In this working paper we focus on CPI-based REERs.

Due to the importance of the REER in economic research and policy analysis, several institutions, such as the World Bank, the Eurostat, the BIS, the OECD, just to name a few, publish various REER indicators which are freely downloadable[1]. Altogether, these institutions publish data for 113 countries. Of these 113 countries, the World Bank reports data for 109, the BIS for 61, Eurostat for 42 and the OECD for 34 at the monthly and for 40 at the annual frequency. The countries for which data are available include all advanced and several emerging and developing countries. However, different databases may have different methodologies and even the 109 countries included in the World Bank database miss several dozen countries of the world.

Our database has three novelties. First, using a consistent methodology, we calculate CPI-based REER for 178 countries (plus the euro area) for annual data and for 153 countries (plus the euro area) for monthly data. Second, we calculate the REER for all countries up to date, eg in the current vintage of the database we calculate up to January 2012. Third, it is relatively easy to calculate REER against any arbitrary group of countries – what is needed for this is a re-scaling of the weighting matrix. For example, in Darvas and Pisani-Ferry (2010) we have calculated the REER against 19 emerging countries that entered the so called 'currency war', ie those countries with floating exchange rate regimes which introduced various policy measures during the global financial and economic crisis in order to limit the appreciation of their currencies, or even to achieve exchange rate depreciation.

In the next section we discuss our methodology and the data sources, which is followed by the presentation of our results in Section 4, where we also compare our calculation to data included in some other databases.

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1 The IMF International Financial Statistics database also includes REERs, as well as nominal USD exchange rates and consumer price indices which are used to calculate the REERs, but this database is not freely available and therefore we do not rely on this database. A quick comparison suggests that the IMF and World Bank data are very similar.

2. Methodology

The REER is calculated as:

$$REER_t = \frac{NEER_t \cdot CPI_t}{CPI_t^{(\text{foreign})}} \; ,$$

where $REER_t$ is the real effective exchange rate of the country under study against a basket of currencies of trading partners, CPI_t is the consumer price index of the country under study, $NEER_t = \prod_{i=1}^{N} S(i)_t^{w^{(i)}}$ is the nominal effective exchange rate of the country under study, which is in turn the geometrically weighted average of $S(i)_t$, the nominal bilateral exchange rate between the country under study and its trading partner i (measured as the foreign currency price of one unit of domestic currency), $CPI_t^{(\text{foreign})} = \prod_{i=1}^{N} CPI(i)_t^{w^{(i)}}$ is the geometrically weighted average of CPI indices of trading partners, $CPI(i)_t$ is the consumer price index of trading partner i, $w^{(i)}$ is the weight of trading partner i, and N is the number of trading partners considered. The weights sum to one, ie $\sum_{i=1}^{N} w^{(i)} = 1$. We use geometrically weighted averages, because this is the most frequently used method in the literature.

We use time-invariant weights and therefore our REER index is measured against a basket of countries, which composition is constant. This basket is representative of foreign trade in 1998-2003 (see Bayoumi, Lee and Jaewoo, 2006). Most likely the IMF and the World Bank use the same weighting matrix for calculating REERs for 1990-2012, but for earlier years the IMF and the World Bank used another weighting.

Our use of time-invariant weights could be considered a weakness for our long-run calculation for 1960-2011. Some authors argue for time-varying weights due to the time-varying characteristic of the composition of foreign trade. Adopting time-varying weights make sense, but they have a serious drawback as well, which can be easily illustrated by a simple three-country example.

Suppose country A trades with countries B and C and initially the bilateral real exchange rate (RER) between A and B and between A and C is flat, because the nominal exchange rate changes fully compensate for the inflation differential (if any). The real effective exchange rate (REER) of A against the basket of B and C is also flat, irrespective whether the weights of A and B are constant or time-varying. Suppose that the bilateral RER between A and B temporality changes, but a few years later returns to its initial value, while the bilateral RER between A and C continues to remain flat. If weights are time-varying and have changed during the temporary period when the bilateral RER between A and B oscillated, then the REER against the basket of B and C will not return to its initial value, even though both bilateral RERs against B and C have returned to their initial values. But when the weights are constant, such an anomaly does not arise.

3 Data

3.1 Time periods and country coverage

We collected consumer price index and USD exchange rate data only from publicly available data sources for the longest available time periods both at the annual and monthly frequencies, for the largest number of countries.

Our annual database covers the period 1960-2011, but there are missing data for earlier years for several countries. Therefore, we calculate REERs against two baskets: the broader basket is calculated against 172 trading partners and the narrower basket is calculated against 67 countries. The borad REER is available for the 172 countries for 1992-2011, plus the data is available for 6 other countries and the euro area for a shorter period. The narrow REER is available for the 67 for 1960-2011, and for shorter periods for the other countries in our sample.

Our monthly database covers the period January 1995 to January 2012 and we calculate the REER against 138 countries. This monthly REER is available for these 138 countries and the euro area for the January 1995 to January 2012 period and for additional 15 countries for a shorter period. We note that the World Bank reports monthly REER data for the following countries, but we could not calculate because of missing consumer price index data: Equatorial Guinea, Gambia, Guyana, Kiribati, Lesotho, Nicaragua, Saint Kitts and Nevis, Solomon Islands and Zambia[2].

3.2 The weight matrix

When assessing the role of one country as a competitor in another country's foreign trade, then not just the bilateral export and import shares matter, because the two countries compete on third markets as well. For example, Czech produces compete with Slovakian producers not just in the Czech Republic and Slovakia, but in many other countries, such as Austria and Germany. Bayoumi, Lee and Jaewoo (2006) derived a weight matrix for 184 countries that considers competition in third markets that we use.

We also calculate an external REER for the euro area, by considering the first 12 euro-area members. In order to derive the weights for this euro-area-12 aggregate, we have first normalised the weights of non-euro-area-12 countries to one for each of the 12 countries. Then we weighted these normalised weights with the share of total trade of the 12 countries, ie Germany's share is 28.3 percent, Greece's share is 1.7 percent, etc. A weakness of this approach is that we use total trade (that also includes intra-euro-area trade) and not only extra-euro area trade to derive the shares of the 12 countries, though the bias arising from this simplification may not be large. Observe on Figure 1.c that the REER for the euro area that we have calculated is rather similar to the REER published by three institutions (World Bank, Eurostat, BIS), though there is a further difference: we consider the first 12 euro-area countries, while eg Eurostat published data for the euro area 17. The main reason for considering the first 12 countries only is that allows the calculation of this REER for a longer period.

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2   Nevertheless all of these countries but Kiribati are included in our annual database.

3.3 Exchange rates

We have collected exchange rate against the US dollar and used them to calculate the bilateral rates between all countries. The main source is the on-line databases of the World Bank, which are freely accessible. The annual data starting in 1960 (when available) is from the World Development Indicators, while monthly data starting in January 1991 (when available) is from the Global Economic Monitor. Data was downloaded on 14 February 2012 for the current vintage of our database. Table 1 lists the web addresses of these and all other databases we use.

For euro-area members, since their entry to the euro area, we multiplied the euro/dollar exchange rate with the conversion rate to the euro in order to extend the exchange rate of their earlier national currencies. Pre-euro national currency exchange rates were available from Eurostat against the ECU that we used, along with the USD exchange rate against the ECU, to calculate the USD rate of pre-euro national currencies.

Taiwan's exchange rate is from the National Statistics of Republic of China (Taiwan).

Filling the gaps of missing annual data

Missing annual data is taken form the Penn World Tables (PWT) for Albania (1970-92), Argentina (1950-61), Armenia (1990-92), Belarus (1990-94), Bosnia & Herzegovina (1990-96), Bulgaria (1975-85), Cambodia (1974-89), Croatia (1990-91), Czechoslovakia – used for the Czech Republic and Slovakia (1980-92), Estonia (1991-92), Georgia (1990-95), Indonesia (1960-66), Iraq (1991-2003), Kazakhstan (1990-93), Kyrgyz Republic (1990-93), Latvia (1987-91), Lithuania (1987-91), Macedonia – former Yugoslav Republic (1990-93), Mauritania (2004), Moldova (1990-94), Mongolia (1970-90), Montenegro (1990-98), Poland (1960-94), Russia (1990-92), Serbia (1990-96), Slovenia (1990), Somalia (1990-2009), Tajikistan (1990-91), Turkmenistan (1990-2009), Ukraine (1987-92), Uzbekistan (1990-2009), Venezuela (1960-63), Vietnam (1970-85), and Yemen (1969-89). In each case we have carefully checked that later data of the PWT and WDI are identical or almost identical.

Data is taken form the EBRD for Azerbaijan (1989-1991).

For Turkmenistan, 2010-11 data is taken from the Central Bank of Turkmenistan.

For Somalia the PWT has data till 2009, but Oanda data is available more recently as well, which is different from the PWT data for the overlapping period. For example, monthly Oanda suggests a fixed rate to the dollar in 1995-2002 at a rate about 2,620, while the annual PWT data indicates depreciation from 5,725 in 1995 to 20,025 in 2002. For 2010 and 2011 we calculated the percent change in Oanda data and used these percent changes to extend the PWT data for 2010-11.

Filling the gaps of missing monthly data

For Georgia the monthly data is available from October 1995, although the annual average is available for the full year. We set a fixed valued for January-September so that the average of the twelve months of the year equals the annual average. Note that the exchange rate was practically unchanged from October 1995 to till mid-1998 –and quite close to the annual average for 1995 – and hence assuming a constant rate for the first nine month of 1995 may not be distorting.

For most countries the World Bank database included data for January 2012 at the time we accessed it. But for a few countries data for some recent months was missing. In order to fill these gaps, we used some other data sources. For Armenia, the 2012m01 figure is from the Central Bank of Armenia. For Turkmenistan 2009-2012 data is from the Central Bank of Turkmenistan (earlier data is not available at the monthly frequency). Oanda data is used for Afghanistan (2011m12-2012m01), Cambodia (2012m01), Cape Verde (2012m01), Laos (2011m03-2012m01), Liberia (2011m06-2012m01), Libya (2012m01), Somalia (1995m05-2012m01), Tanzania (2011m10-2012m1), Tajikistan (2011m10-2012m1), Zambia (2011m10-2012m1) and Myanmar (2012m01). For Myanmar the World Bank and Oanda data were not identical for the overlapping period when both were available and hence we chained the 2012m01 Oanda data to the World Bank data.

For Syria we used World Bank data but note that data from Oanda (available for 1995-2012) and Reuters (1999-2012) are very close to each other and fluctuate between 40 and 58 during 1995-2012, but rather different from the from the World Bank data, which has a constant value of 11.225 since 1988).

3.4 Consumer prices

Similarly to exchange rates, the primary source of consumer price data are also the World Development Indicators (annual) and Global Economic Monitor (monthly) databases of the World Bank. However, for annual CPI data we also used data from the (freely accessible) IMF's September 2011 World Economic Outlook database, which includes data for 1980-2016, ie it also includes forecasts.

Filling the gaps of missing annual data

Annual inflation rate was taken from EBRD for the following countries and time periods, which was chained backward to the World Bank data: Armenia (1989-1993), Georgia (1990-94), Kazakhstan (1991-92), Kyrgyz Republic (1991-92), Latvia (1989-92), Lithuania (1989-92), FYI Macedonia (1989-91), Russia (1989-92), Serbia (1994-97), Slovenia (1989-92), Azerbaijan (1990-92), Belarus (1989-92), Tajikistan (1989-92), Ukraine (1989-92), Turkmenistan (1989-92), Uzbekistan (1989-92), Montenegro (1995-2000) and Estonia (1989-1991).

For Aruba, data is missing for 1981-83, but in order to have a continuous time series, we assumed that the annual inflation rate was equal from 1980 to 1984.

For Chile the data is from the National Statistical Institute of Chile.

For the Czech Republic data for 1960-1995 is from the Czech statistics office, and refers to the Czech Socialist Republic before 1993.

For Slovakia data for 1970-92 is from the Statistical Office of the Slovak Republic, and refers to Czechoslovakia up to 1990 and the Slovak Socialist Republic for 1991-92.

For Dominica data for 1979 is missing and we assumed that the annual inflation rate in 1979 and 1980 was equal in order to have a continuous time series.

For Germany and UK data before 1980 is from the AMECO.

For South Korea (1960-1966) and Slovenia (1981-88) the data is from http://www.inflation.eu/

For Taiwan the data is from the National Statistics of the Republic of China (Taiwan).

The (freely accessible) 2002 IMF World Economic Outlook was used for obtaining pre-1980 data for the following countries: Angola (1970-80), Antigua and Barbuda (1970-80), Bangladesh (1970-80), Belize (1970-80), Benin (1970-80), Bhutan (1970-80), Botswana (1970-74), Brazil (1970-80), Cape Verde (1970-80), Chad (1970-80), China mainland (1970-80), Comoros (1970-80), Djibouti (1970-91), Dominica (1980), Equatorial Guinea (1970-80), Guinea (1970-80), Guinea-Bissau (1970-80), Guyana (1970-80), Hong Kong (1970-80), Lao (1970-80), Lebanon (1970-80), Malawi (1970-80), Maldives (1970-80), Mali (1970-80), Moldova (1990-92), Namibia (1970-90), Nicaragua (1970-88), Republic of Congo (1970-80), Romania (1970-80), Sierra Leone (1970-80), Tunisia (1970-80), Vanuatu (1970-76) and Zambia (1970-80).

For Hungary, pre-1972 data is from the Central Statistical Office of Hungary.

Filling the gaps of missing monthly data

Data from the national central statistical office was used for Anguilla, Belize, Bhutan, Bosnia and Herzegovina, Grenada, Kosovo, Netherlands Antilles, Moldova, Papua New Guinea, Serbia, St. Lucia, Turkey and United Arab Emirates. Only quarterly data was available for Anguilla, Belize, Bhutan and Papua New Guinea that we interpolated to monthly frequency. For Djibouti the source is the Ministry of Economy and Finance. The source of the 1995 data of Indonesia is http://www.inflation.eu/. For Serbia, the CPI was available from 2007, but the cost of living index was available from 2001 (which was very similar to the CPI in the overlapping period when both indices are available). We have chained the earlier cost of living index to CPI.

For Kazakhstan and Lithuania the World Bank database included improper series because they indicated a deflation from 1994 to 2011, while other datasets indicated very significant cumulative inflation during this period. Therefore, we have used data from the National Bank of Kazakhstan and the Statistics Lithuania instead.

For Qatar (December 2007 and December 2008) and the United Arab Emirates (December 2007) the respective end-year inflation rates from the IMF WEO were used to calculate the CPI by chaining the inflation rates to later monthly data available from the central statistical officies. This allowed us to normalise the REERs we calculate to December 2007 = 100 for all countries.

For most countries the World Bank database included data for December 2011 at the time we accessed it, but the January 2012 data is not available, and for a number of countries one or more months are missing for 2011 as well. In order to fill these gaps and also approximate the REER for January 2012, we assume that the latest available data on the 12-month inflation has remained unchanged since. Consumer prices do not use to change abruptly and in the short-run the nominal exchange rate is the main determinant of movement in REER. Therefore, this approximation should not distort much the results.

4. Results

Table 2 shows the composition of our two baskets of countries used for annual and the one basket used for monthly calculations. It also shows the share of these baskets of trading partners in total trade, where total trade is represented by the total of the 184 countries included in Bayoumi, Lee and Jaewoo (2006).

Figure 1 (after Table 2) shows our monthly REER for January 1995-January 2012 in comparison with data from World Bank, Eurostat, BIS and OECD (whenever available)[3], while Figure 2 shows annual data for 1960-2011 in comparison with the World Bank and OECD data (whenever available). Since the 67 countries for which data is available since 1960 comprise a large share of trade of several countries of the world, there is not much difference between the REER calculated against 172 and against 67 countries for a large number of countries.

For those countries for which data is available in other data sources the REER calculated by us is similar to data in other databases.

5. Access and updating

The REERs and NEERs calculated in this working paper are freely downloadable at the following website:
http://www.bruegel.org/publications/publication-detail/publication/716-real-effective-exchange-rates-for-178-countries-a-new-database/

Note that we do not republish the underlying CPI and USD exchange rate data, which are freely available from the data sources listed in Table 1.

The dataset will be irregularly updated.

References

Bayoumi, Tamim, Jaewoo Lee and Sarma Jayanthi (2006) 'New Rates from New Weights', *IMF Staff Papers* 53(2), 272-305
http://www.imf.org/External/Pubs/FT/staffp/2006/02/pdf/bayoumi.pdf

Chinn, Menzie D. (2006) 'A Primer on Real Effective Exchange Rates: Determinants, Overvaluation, Trade Flows and Competitive Devaluation', *Open Economies Review* 17, 115–143 http://www.springerlink.com/content/n4745m7668314m72/

Darvas, Zsolt and Jean Pisani-Ferry (2010) 'The Threat of Currency Wars: A European Perspective', *Policy Contribution* 2010/12, Bruegel
http://www.bruegel.org/publications/publication-detail/publication/461-the-threat-of-currency-wars-a-european-perspective/

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3 Eurostat publishes REERs against various baskets: we plot the broadest indicator, which is calculated against 41 trading partners except for Belgium and Luxembourg, for which this indicator is not available and therefore we use the REER against 34 partners. BIS publishes REERs against a broad (61 countries) and a narrow (26 countries) baskets and we plot the broader one.

Table 1.a Data sources

Source	Country	Series	Date Accessed	Link
Main sources				
World Bank, Global Economic Monitor	Various	CPI, USD	2/14/2012	http://data.worldbank.org/data-catalog/global-economic-monitor
World Bank, World Development Indicators	Various	CPI, USD	2/14/2012	http://data.worldbank.org/data-catalog/world-development-indicators
Other sources				
EBRD	Various	CPI, USD	10/1/2011	http://www.ebrd.com/pages/research/economics/data/macro.shtml#macro
National Statistics, Republic of China (Taiwan)	Taiwan	CPI	2/14/2012	http://eng.stat.gov.tw/ct.asp?xItem=12092&ctNode=1558
National Bureau of Statistics of the National Republic of Moldova	Moldova	CPI	3/6/2012	http://www.statistica.md/pageview.php?l=en&idc=335&id=2344
United Arab Emirates National Bureau of Statistics	United Arab Emirates	CPI	3/6/2012	http://www.uaestatistics.gov.ae/ReportDetailsEnglish/tabid/121/Default.aspx?ItemId=1978&PTID=104&MenuId=1
Zambia Central Statistical Office	Zambia	CPI	2/14/2012	http://www.zamstats.gov.zm/media.php?id=6
National Institute of Statistics and Census Nicaragua	Nicaragua	CPI	2/14/2012	http://www.inide.gob.ni/
National Statistical Office Papua New Guinea	Papua New Guinea	CPI	2/15/2012	www.nso.gov.pg/
Solomon Islands National Statistics Office	Solomon Islands	CPI	2/16/2012	http://www.spc.int/prism/country/sb/stats/Economic/cpi/Cpi-Summary.htm
Equatorial Guinea General Directorate for Statistics and National Accounts	Equatorial Guinea	CPI	2/17/2012	http://www.dgecnstat-ge.org/
Eastern Carribean Central Bank (this is the source of the data, which was taken by the bank from the following):	Various	CPI	3/6/2012	http://www.eccb-centralbank.org/Statistics/index.asp#cpidata
Central Statistical Office, Antigua and Barbuda	Antigua and Barbuda	CPI	3/6/2012	http://www.eccb-centralbank.org/Statistics/index.asp#cpidata
Central Statistical Office, Grenada	Grenada	CPI	3/6/2012	http://www.eccb-centralbank.org/Statistics/index.asp#cpidata
Central Statistical Office, Saint Lucia	Saint Lucia	CPI	3/6/2012	http://www.eccb-centralbank.org/Statistics/index.asp#cpidata
Gambia Bureau of Statistics	Gambia	CPI	3/6/2012	http://www.gbos.gm/prices
Kiribati National Statistice Office	Kiribati	CPI	3/6/2012	http://www.spc.int/prism/Country/KI/Stats/Economic/CPI/cpi-summary.htm
Department of National Planning Republic of Maldives	Maldives	CPI	3/6/2012	http://planning.gov.mv/en/content/view/400/1/
Timor Leste National Statistics Directorate	Timor Leste	CPI	3/6/2012	http://dne.mof.gov.tl/cpi/index.htm
Chad National Statistics Institute	Chad	CPI	2/14/2012	http://www.inseed-tchad.org/
Statistics Indonesia	Indonesia	CPI	2/14/2012	http://www.bps.go.id/
Central Service for Statistics and Economic Studies Luxembourg	Luxembourg	CPI	2/14/2012	http://www.statistiques.public.lu/stat/ReportFolders/ReportFolder.aspx?IF_Language=eng&MainTheme=5&FldrName=5
Turkish Statistical Institute	Turkey	CPI	2/14/2012	http://www.turkstat.gov.tr/PreHaberBultenleri.do?id=10764
Bosnia and Herzegovina Agency for Statistics	Bosnia and Herzegovina	CPI	2/14/2012	http://www.bhas.ba/index.php?lang=en
Republic of Kosovo, Office of the prime minister statistical agency of Kosovo	Kosovo	CPI	2/14/2012	http://esk.rks-gov.net/ENG/tables/173-statistikat-e-mireqenies-sociale
National Bank of Serbia	Serbia	CPI	2/14/2012	http://www.nbs.rs/internet/english/80/index.html
Anguilla Statistics Department	Anguilla	CPI	2/14/2012	http://www.gov.ai/statistics/consumer.htm
Statistical Institute of Belize	Belize	CPI	2/14/2012	http://www.statisticsbelize.org.bz/dms20uc/dm_browse.asp?2pid=7
National Statistics Bureau Bhutan	Bhutan	CPI	2/14/2012	http://www.nsb.gov.bt/download/cpiPRdetails4thQtr2011.php
Department of Economic Planning and Development, Prime Minister's Office, Brunei Darussalam	Brunei Darussalam	CPI	2/14/2012	http://www.depd.gov.bn/cpi/CPI.html

Table 1.b Data sources

Source	Country	Series	Date Accessed	Link
Djibouti Ministry of Economics and Finance, in charge of industry and planification	Djibouti	CPI	2/14/2012	http://www.ministere-finances.dj/IPC.html
Iraq Central Organization for Statistics	Iraq	CPI	2/14/2012	http://cosit.gov.iq/english/indices.php
Curacao Central Bureau of Statistics	Netherlands Antilles	CPI	2/14/2012	http://www.cbs.cw/index.php?option=com_jumi&fileid=31&t=15&Itemid=76
Statistics Authority Qatar	Qatar	CPI	2/14/2012	http://www.qix.gov.qa/discovere/app/open?event=switchWorksheet&worksheetName=ECONOMY%2F2077&stateStr=eNrtUsFu3CAQ/RnsC9qV7Vir9uBDlU1z5pOm6qGnFQZs47XBAQRmv75j41WiHtJlufbCDI9h3vAeyI9NZ1FSlMydmlGYFIdmTG6O8hA$lkY05gUeQbl/fEJ1wFzqqQaBcWEWuGEDfhWSWOltHISgnJcE8Nx4ETiIsvK/XLt5zP$8fNh6zdDvzzZz2/zhmsu4ZYVI98Kwh/C/ZcrSVJ8upNtUnyGlqI8HDdkMPxVzw/MeCSW4CcIpAUas5Hol1ckiBnHNQDSqhUs83mXiwMG1AgIL z7fZx6fw8wcdL942GgrDaAYJ3ZIwTxQ7vH0f5p45eGipGSwbS9nSdSH9LgxOFQrcsPWbftg6zLUwg10C7dIRiwerABvZrSZS/j5pDakDxMovoFXubqf03VS3add2VgtkO211S8SX8jH4BOv7azv4F3mvCBAFJaHf9OLFJ317H9m4ZOsSzPH7O9Q2ISpO6aivIWErIualNiUAJIhnAIGxARYhDDCYGSWNkC4z4PA0oNVOVsSvI4IHc1QpOGh hp5WCja9tVSCwk6G728dvjw$/kuLr4XCDqA0TcoJ7rn8DxR1ykg==&stateID=
National Bureau of Statistics Tanzania	Tanzania	CPI	2/14/2012	http://www.nbs.go.tz/index.php?option=com_content&view=category&id=50&Itemid=118
Statistics Lithuania	Lithuania	CPI	3/12/2012	http://db1.stat.gov.lt/statbank/SelectVarVal/Define.asp?Maintable=M2020101&PLanguage=1
Czech Statistical Office	Czech Republic	CPI	2/4/2012	http://vdb.czso.cz/vdbvo/en/maklist.jsp?kapitola_id=30&expand=1&
Czech Republic National Statistics	Czech Republic	CPI	1/20/2012	http://www.czso.cz/eng/redakce.nsf/i/inflation_consumer_prices_ekon
Slovakia National Statistics	Slovakia	CPI	2/4/2012	http://portal.statistics.sk/showdoc.do?docid=6066
Chile National Institute of Statistics, Operations sub-directorate, Department of statistics and prices	Chile	CPI	1/25/2012	http://www.ine.cl/canales/chile_estadistico/estadisticas_precios/estadisticas_precios_eng.php?lang=eng
Triami Media BV	Various	CPI	2/14/2012	http://www.inflation.eu/
Ameco Price and Cost Competitiveness Data, DG ECFIN	Germany, UK	CPI	12/14/2011	http://ec.europa.eu/economy_finance/db_indicators/competitiveness/data_section_en.htm
IMF World Economic Outlook September 2011	Various	CPI	10/1/2011	http://www.imf.org/external/pubs/ft/weo/2011/02/weodata/index.aspx
IMF World Economic Outlook April 2002	Various	CPI	2/21/2012	http://www.imf.org/external/pubs/ft/weo/2002/01/data/index.htm
The National Bank of Kazakhstan	Kazakhstan	CPI	3/16/2012	http://www.nationalbank.kz/?docid=170
Penn World Tables 7.0	Various	USD	8/1/2011	http://pwt.econ.upenn.edu/
Oanda	Various	USD	3/6/2012	http://www.oanda.com/currency/historical-rates/
Bank of Guyana	Guyana	USD	3/7/2012	http://www.bankofguyana.org.gy/bog/index.php?option=com_content&view=article&id=134&Itemid=137
The following publications contain data from the Czechoslovak State Bank and the National Bank of Slovakia, they were provided to Bruegel by Slovakia National Statistics				
Statistical Yearbook of the Czech and Slovak Federal Republic 1991	Czech Republic and Slovakia	USD	na	
Statistical Yearbook of the Czech and Slovak Federal Republic 1992	Czech Republic and Slovakia	USD	na	
Statistical Yearbook of the Slovak Republic 1993	Czech Republic and Slovakia	USD	na	
Eurostat	Various	SDR	1/20/2012	http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/
National Statistics, Republic of China (Taiwan)	Taiwan	USD (older data)	2/14/2012	http://61.60.106.82/pxweb/Dialog/varval.asp?ma=FM3601A1M&ti=Exchange+Rates+against+the+U.S.+Dollars-Monthly&path=../PXfile/FinancialStatistics/&search=USD&lang=1
Central Bank of the Republlic of China (Taiwan)	Taiwan	USD (recent data)	2/14/2012	http://www.cbc.gov.tw/content.asp?CuItem=1878
Central Bank of Turkmenistan	Turkmenistan	USD	2/14/2012	http://www.cbt.tm/
Central Bank of Armenia	Armenia	USD	2/14/2012	http://www.cba.am/en/SitePages/statexternalsector.aspx

Table 2.a Composition of baskets and the share of trading partners in the baskets in total trade

	Country	code	First year	Included in the basket of 172 countries? (available from 1992)	Included in the basket of 67 countries? (available from 1960)	Share of 172 countries in total tarde	Share of 67 countries in total tarde	First month	Included in the basket of 138 countries? (available since 1995m01)	Share of 138 countries in total tarde
				Annual database				**Monthly database**		
1	Afghanistan	AF	2002			99.8	84.3	#N/A		97.9
2	Albania	AL	1989	yes		99.8	91.4	1995m01	yes	99.1
3	Algeria	DZ	1969	yes		99.6	87.9	1995m01	yes	98.6
4	Angola	AO	1969	yes		99.9	91.8	1995m01	yes	99.0
5	Antigua and Barbuda	AG	1969	yes		99.9	82.8	2001m01		99.5
6	Argentina	AR	1960	yes	yes	99.9	70.7	1995m01	yes	99.3
7	Armenia	AM	1990	yes		99.8	77.3	1995m01	yes	93.7
8	Australia	AU	1960	yes	yes	99.9	87.3	1995m01	yes	98.9
9	Austria	AT	1960	yes	yes	99.7	86.5	1995m01	yes	99.4
10	Azerbaijan	AZ	1989	yes		99.9	68.4	1995m01	yes	92.4
11	Bahamas, The	BS	1966	yes		99.9	95.3	1995m01	yes	99.8
12	Bahrain	BH	1966	yes		99.8	81.6	1995m01	yes	96.0
13	Bangladesh	BD	1971	yes		99.9	86.0	1995m01	yes	99.0
14	Barbados	BB	1966	yes		99.9	85.1	1995m01	yes	95.7
15	Belarus	BY	1990	yes		99.7	37.8	1995m01	yes	98.7
16	Belgium	BE	1960	yes	yes	99.8	90.7	1995m01	yes	99.3
17	Belize	BZ	1969	yes		99.9	89.8	1995m01	yes	98.5
18	Benin	BJ	1969	yes		99.8	68.2	1995m01	yes	98.8
19	Bhutan	BT	1969	yes		99.9	94.9	2004m01		99.5
20	Bolivia	BO	1960	yes	yes	99.6	80.5	1995m01	yes	99.1
21	Bosnia and Herzegovina	BA	1998	yes		93.9	53.1	2005m01		93.4
22	Botswana	BW	1969	yes		98.5	95.1	1995m01	yes	98.0
23	Brazil	BR	1969	yes		99.9	93.0	1995m01	yes	99.4
24	Brunei	BN	1977	yes		100.0	96.3	#N/A		99.7
25	Bulgaria	BG	1980	yes		99.0	82.0	1995m01	yes	98.4
26	Burkina Faso	BF	1960	yes	yes	99.8	83.6	1995m01	yes	97.7
27	Burundi	BI	1965	yes		99.7	77.5	1995m01	yes	91.4
28	Cambodia	KH	1986	yes		99.9	89.4	1995m01	yes	99.6
29	Cameroon	CM	1968	yes		99.8	87.2	1995m01	yes	98.1
30	Canada	CA	1960	yes	yes	100.0	94.1	1995m01	yes	99.7
31	Cape Verde	CV	1969	yes		99.9	89.9	1995m01	yes	99.5
32	Central African Republic	CF	1980	yes		99.8	90.1	1995m01	yes	98.6
33	Chad	TD	1969	yes		99.9	90.1	1995m01	yes	99.1

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Table 2.b Composition of baskets and the share of trading partners in the baskets in total trade

#	Country	code	Annual database					Monthly database		
			First year	Included in the basket of 172 countries? (available from 1992)	Included in the basket of 67 countries? (available from 1960)	Share of 172 countries in total tarde	Share of 67 countries in total tarde	First month	Included in the basket of 138 countries? (available since 1995m01)	Share of 138 countries in total tarde
34	Chile	CL	1960	yes	yes	99.9	83.6	1995m01	yes	99.3
35	China, Mainland	CN	1969	yes		99.9	91.7	1995m01	yes	99.4
36	Colombia	CO	1960	yes	yes	99.9	90.3	1995m01	yes	99.4
37	Comoros	KM	1969	yes		99.8	90.4	#N/A		98.2
38	Congo, Dem. Rep.	CD	1963	yes		99.7	90.0	1995m01	yes	98.4
39	Congo, Rep.	CG	1969	yes		99.8	88.1	1995m01	yes	98.0
40	Costa Rica	CR	1960	yes	yes	99.9	92.6	1995m01	yes	98.6
41	Côte d'Ivoire	CI	1960	yes	yes	99.7	81.5	1995m01	yes	98.4
42	Croatia	HR	1990	yes		94.4	76.5	1995m01	yes	93.7
43	Cyprus	CY	1960	yes	yes	99.5	85.2	1995m01	yes	97.8
44	Czech Republic	CZ	1980	yes		99.7	84.6	1995m01	yes	99.3
45	Denmark	DK	1960	yes	yes	99.9	89.5	1995m01	yes	99.4
46	Djibouti	DJ	1969	yes		99.8	66.7	2005m01		98.3
47	Dominica	DM	1964	yes		99.9	80.9	1995m01	yes	95.5
48	Dominican Republic	DO	1960	yes	yes	99.9	92.8	1995m01	yes	99.2
49	Ecuador	EC	1960	yes	yes	99.9	89.1	1995m01	yes	99.3
50	Egypt, Arab Rep.	EG	1960	yes	yes	99.8	81.4	1995m01	yes	97.2
51	El Salvador	SV	1960	yes	yes	99.9	91.7	1995m01	yes	98.3
52	Equatorial Guinea	GQ	1969	yes		99.9	94.5	#N/A		99.6
53	Eritrea	ER	1992	yes		99.9	87.7	#N/A		98.6
54	Estonia	EE	1990	yes		99.9	82.1	1995m01	yes	99.5
55	Ethiopia	ET	1965	yes		99.8	78.8	1995m01	yes	94.3
56	Fiji	FJ	1969	yes		99.8	90.9	1995m01	yes	98.3
57	Finland	FI	1960	yes	yes	99.9	84.2	1995m01	yes	99.5
58	France	FR	1960	yes	yes	99.8	89.3	1995m01	yes	99.2
59	Gabon	GA	1962	yes	yes	99.7	92.0	1995m01	yes	98.8
60	Gambia, The	GM	1961	yes		99.8	73.9	#N/A		97.9
61	Georgia	GE	1990	yes		99.8	71.0	1995m01	yes	93.5
62	Germany	DE	1960	yes	yes	99.8	84.9	1995m01	yes	99.3
63	Ghana	GH	1964	yes		99.7	86.1	1995m01	yes	98.6
64	Greece	GR	1960	yes	yes	99.5	84.8	1995m01	yes	98.3
65	Grenada	GD	1976	yes		99.9	76.2	2001m01		98.7
66	Guatemala	GT	1960	yes	yes	99.9	90.4	1995m01	yes	98.2

Table 2.c Composition of baskets and the share of trading partners in the baskets in total trade

Country	code	Annual database					Monthly database		
		First year	Included in the basket of 172 countries? (available from 1992)	Included in the basket of 67 countries? (available from 1960)	Share of 172 countries in total tarde	Share of 67 countries in total tarde	First month	Included in the basket of 138 countries? (available since 1995m01)	Share of 138 countries in total tarde
67 Guinea	GN	1969	yes		99.7	79.2	#N/A		97.8
68 Guinea-Bissau	GW	1969	yes		99.9	80.9	1995m01	yes	98.0
69 Guyana	GY	1969	yes		99.8	86.6	#N/A		98.0
70 Haiti	HT	1960	yes	yes	99.9	92.1	1995m01	yes	99.4
71 Honduras	HN	1960	yes	yes	99.9	93.3	1995m01	yes	99.1
72 Hong Kong, China	HK	1969	yes		100.0	76.1	1995m01	yes	99.6
73 Hungary	HU	1968	yes		99.6	88.2	1995m01	yes	99.4
74 Iceland	IS	1960	yes	yes	99.9	90.0	1995m01	yes	99.3
75 India	IN	1960	yes	yes	99.8	84.3	1995m01	yes	97.5
76 Indonesia	ID	1960	yes	yes	99.8	87.0	1995m01	yes	98.7
77 Iran, Islamic Rep.	IR	1960	yes	yes	99.5	73.1	1995m01	yes	91.5
78 Iraq	IQ	1990	yes		99.9	69.7	#N/A		97.8
79 Ireland	IE	1960	yes	yes	99.9	94.2	1995m01	yes	99.7
80 Israel	IL	1960	yes	yes	99.9	92.3	1995m01	yes	99.7
81 Italy	IT	1960	yes	yes	99.7	86.3	1995m01	yes	98.9
82 Jamaica	JM	1960	yes	yes	99.9	85.4	1995m01	yes	98.1
83 Japan	JP	1960	yes	yes	99.9	83.3	1995m01	yes	99.3
84 Jordan	JO	1969	yes		98.7	76.4	1995m01	yes	93.8
85 Kazakhstan	KZ	1990	yes		99.9	58.6	1995m01	yes	98.4
86 Kenya	KE	1960	yes	yes	99.5	77.6	1995m01	yes	94.2
87 Korea, Rep.	KR	1960	yes	yes	99.7	82.4	1995m01	yes	98.9
88 Kuwait	KW	1972	yes		99.9	82.5	1995m01	yes	96.2
89 Kyrgyz Republic	KG	1990	yes		99.7	55.5	1995m01	yes	93.3
90 Lao PDR	LA	1969	yes		99.9	89.2	1995m01	yes	99.5
91 Latvia	LV	1988	yes		99.9	70.6	1995m01	yes	99.4
92 Lebanon	LB	1969	yes		99.5	81.4	#N/A		97.7
93 Lesotho	LS	1973	yes		100.0	93.7	#N/A		99.3
94 Liberia	LR	1999			100.0	89.5	#N/A		99.8
95 Libya	LY	1964	yes		99.9	88.2	#N/A		98.9
96 Lithuania	LT	1988	yes		99.9	72.9	1995m01	yes	99.3
97 Luxembourg	LU	1960	yes	yes	99.9	92.2	1995m01	yes	99.6
98 Macedonia, FYR	MK	1990	yes		91.3	73.1	1995m01	yes	90.7
99 Madagascar	MG	1964	yes		99.9	85.1	1995m01	yes	98.8

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Table 2.d Composition of baskets and the share of trading partners in the baskets in total trade

Country	code	Annual database					Monthly database			
		First year	Included in the basket of 172 countries? (available from 1992)	Included in the basket of 67 countries? (available from 1960)	Share of 172 countries in total tarde	Share of 67 countries in total tarde	First month	Included in the basket of 138 countries? (available since 1995m01)	Share of 138 countries in total tarde	
100 Malawi	MW	1969	yes		95.5	82.0	1995m01	yes	91.7	100
101 Malaysia	MY	1960	yes	yes	99.9	90.1	1995m01	yes	99.3	101
102 Maldives	MV	1969	yes		99.9	89.8	#N/A		98.3	102
103 Mali	ML	1969	yes		99.9	88.6	1995m01	yes	98.9	103
104 Malta	MT	1960	yes	yes	99.9	91.9	1995m01	yes	98.7	104
105 Mauritania	MR	1969	yes		99.9	84.2	1995m01	yes	98.6	105
106 Mauritius	MU	1963	yes		99.7	88.9	1995m01	yes	98.6	106
107 Mexico	MX	1960	yes	yes	100.0	95.6	1995m01	yes	99.8	107
108 Moldova	MD	1990	yes		99.8	67.8	1995m01	yes	98.3	108
109 Mongolia	MN	1990	yes		99.9	79.9	1995m01	yes	98.9	109
110 Morocco	MA	1960	yes	yes	99.9	90.3	1995m01	yes	98.9	110
111 Mozambique	MZ	1980	yes		98.9	88.1	1995m01	yes	97.0	111
112 Namibia	NA	1969	yes		99.8	92.6	2001m12	yes	99.3	112
113 Nepal	NP	1964	yes		99.9	85.2	1995m01	yes	98.7	113
114 Netherlands	NL	1960	yes	yes	99.9	90.1	1995m01	yes	99.3	114
115 Netherlands Antilles	AN	1960	yes		97.6	88.6	1995m01	yes	93.6	115
116 New Zealand	NZ	1960	yes	yes	99.9	89.9	1995m01	yes	99.2	116
117 Nicaragua	NI	1969	yes		99.9	91.8	#N/A		99.2	117
118 Niger	NE	1963	yes		99.8	84.9	1995m01	yes	98.1	118
119 Nigeria	NG	1960	yes	yes	99.9	83.6	1995m01	yes	98.9	119
120 Norway	NO	1960	yes	yes	99.6	90.6	1995m01	yes	99.2	120
121 Oman	OM	1980	yes		99.7	70.4	2001m01		81.8	121
122 Pakistan	PK	1960	yes	yes	99.7	82.5	1995m01	yes	96.8	122
123 Panama	PA	1960	yes	yes	99.9	89.7	1995m01	yes	98.4	123
124 Papua New Guinea	PG	1971	yes		99.8	85.9	2004m11		98.8	124
125 Paraguay	PY	1960	yes	yes	99.8	65.6	1995m01	yes	99.2	125
126 Peru	PE	1960	yes	yes	99.9	87.4	1995m01	yes	99.4	126
127 Philippines	PH	1960	yes	yes	100.0	92.0	1995m01	yes	99.6	127
128 Poland	PL	1970	yes		99.7	86.2	1995m01	yes	99.4	128
129 Portugal	PT	1960	yes	yes	99.9	93.6	1995m01	yes	99.6	129
130 Qatar	QA	1979	yes		99.9	81.9	2008m12		93.5	130
131 Romania	RO	1969	yes		99.5	88.0	1995m01	yes	99.0	131
132 Russian Federation	RU	1990	yes		99.6	68.8	1995m01	yes	98.2	132

Table 2.e Composition of baskets and the share of trading partners in the baskets in total trade

|		Annual database				Monthly database		
Country	First year	Included in the basket of 172 countries? (available from 1992)	Included in the basket of 67 countries? (available from 1960)	Share of 172 countries in total tarde	Share of 67 countries in total tarde	First month	Included in the basket of 138 countries? (available since 1995m01)	Share of 138 countries in total tarde
code								
133 Rwanda RW	1966	yes		99.9	74.7	1995m01	yes	89.8
134 Samoa WS	1961	yes		100.0	93.1	1995m01	yes	99.2
135 São Tomé and Principe ST	1980	yes		99.9	90.8	#N/A		99.1
136 Saudi Arabia SA	1963	yes		99.8	85.9	1995m01	yes	96.3
137 Senegal SN	1967	yes		99.8	86.0	1995m01	yes	98.4
138 Serbia SQ	1994			96.3	70.6	1999m01		95.7
139 Seychelles SC	1970	yes		99.7	88.4	1995m01	yes	98.7
140 Sierra Leone SL	1969	yes		99.8	90.0	2006m01		98.4
141 Singapore SG	1960	yes	yes	99.9	89.0	1995m01	yes	99.3
142 Slovak Republic SK	1980	yes		99.7	79.8	1995m01	yes	99.4
143 Slovenia SI	1990	yes		98.0	79.3	1995m01	yes	97.7
144 Solomon Islands SB	1971	yes		99.9	90.2	#N/A		98.1
145 South Africa ZA	1960	yes	yes	98.4	82.2	1995m01	yes	95.7
146 Spain ES	1960	yes	yes	99.9	91.5	1995m01	yes	99.5
147 Sri Lanka LK	1960	yes	yes	99.9	90.0	1995m01	yes	98.7
148 St. Kitts and Nevis KN	1979	yes		99.9	83.7	#N/A		98.5
149 St. Lucia LC	1965	yes		99.9	81.9	2006m01		98.0
150 St. Vincent and the Grenadines VC	1974	yes		99.9	86.3	1995m01	yes	97.6
151 Sudan SD	1960	yes	yes	99.8	71.8	1995m01	yes	94.4
152 Suriname SR	1960	yes	yes	99.9	87.6	#N/A		98.6
153 Swaziland SZ	1965	yes		98.3	86.9	1995m01	yes	96.4
154 Sweden SE	1960	yes	yes	99.9	89.1	1995m01	yes	99.5
155 Switzerland CH	1960	yes	yes	99.9	91.4	1995m01	yes	99.4
156 Syrian Arab Republic SY	1960	yes	yes	99.9	73.9	1995m01	yes	97.0
157 Taiwan TW	1960	yes	yes	100.0	84.7	1995m01	yes	99.6
158 Tajikistan TJ	1990	yes		99.8	52.1	#N/A		95.0
159 Tanzania TZ	1965	yes		99.7	80.9	#N/A		93.9
160 Thailand TH	1960	yes	yes	99.9	88.4	1995m01	yes	99.3
161 Togo TG	1966	yes		99.6	74.7	1995m01	yes	98.6
162 Tonga TO	1975	yes		99.9	85.5	1995m01	yes	99.3
163 Trinidad and Tobago TT	1960	yes	yes	99.9	90.6	1995m01	yes	97.4
164 Tunisia TN	1969	yes		99.8	92.1	1995m01	yes	98.1
165 Turkey TR	1960	yes	yes	99.8	85.8	1995m01	yes	98.4

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Table 2.f Composition of baskets and the share of trading partners in the baskets in total trade

	Country	code	Annual database					Monthly database		
			First year	Included in the basket of 172 countries? (available from 1992)	Included in the basket of 67 countries? (available from 1960)	Share of 172 countries in total tarde	Share of 67 countries in total tarde	First month	Included in the basket of 138 countries? (available since 1995m01)	Share of 138 countries in total tarde
166	Turkmenistan	TM	1990	yes		99.7	57.9	#N/A		89.6
167	Uganda	UG	1980	yes		99.7	79.7	1995m01	yes	92.1
168	Ukraine	UA	1988	yes		99.6	60.3	1995m01	yes	97.3
169	United Arab Emirates	AE	1980	yes		99.8	82.3	2007m12		95.6
170	United Kingdom	GB	1960	yes	yes	99.9	90.5	1995m01	yes	99.1
171	United States	US	1960	yes	yes	99.9	87.7	1995m01	yes	99.5
172	Uruguay	UY	1960	yes	yes	99.9	75.4	1995m01	yes	99.5
173	Uzbekistan	UZ	1990	yes		99.8	69.0	#N/A		97.1
174	Vanuatu	VU	1969	yes		99.9	93.8	#N/A		99.5
175	Venezuela, RB	VE	1960	yes	yes	99.9	89.5	1995m01	yes	99.6
176	Vietnam	VN	1980	yes		99.9	88.9	1995m01	yes	99.4
177	Yemen, Rep.	YE	1990	yes		99.9	73.3	#N/A		94.7
178	Zambia	ZM	1969	yes		96.6	84.1	#N/A		94.6
	Euro area 12 (external)	EA	1991	n.a.	n.a.	99.6	77.9	1995m01	n.a.	98.7
	Average					**99.6**	**83.8**			97.8
	Maximum					100.0	96.3			99.8
	Minimum					91.3	37.8			81.8

Figure 1.a: Monthly CPI-based real effective exchange rates, January 1995 – January 2012 (December 2007 = 100)
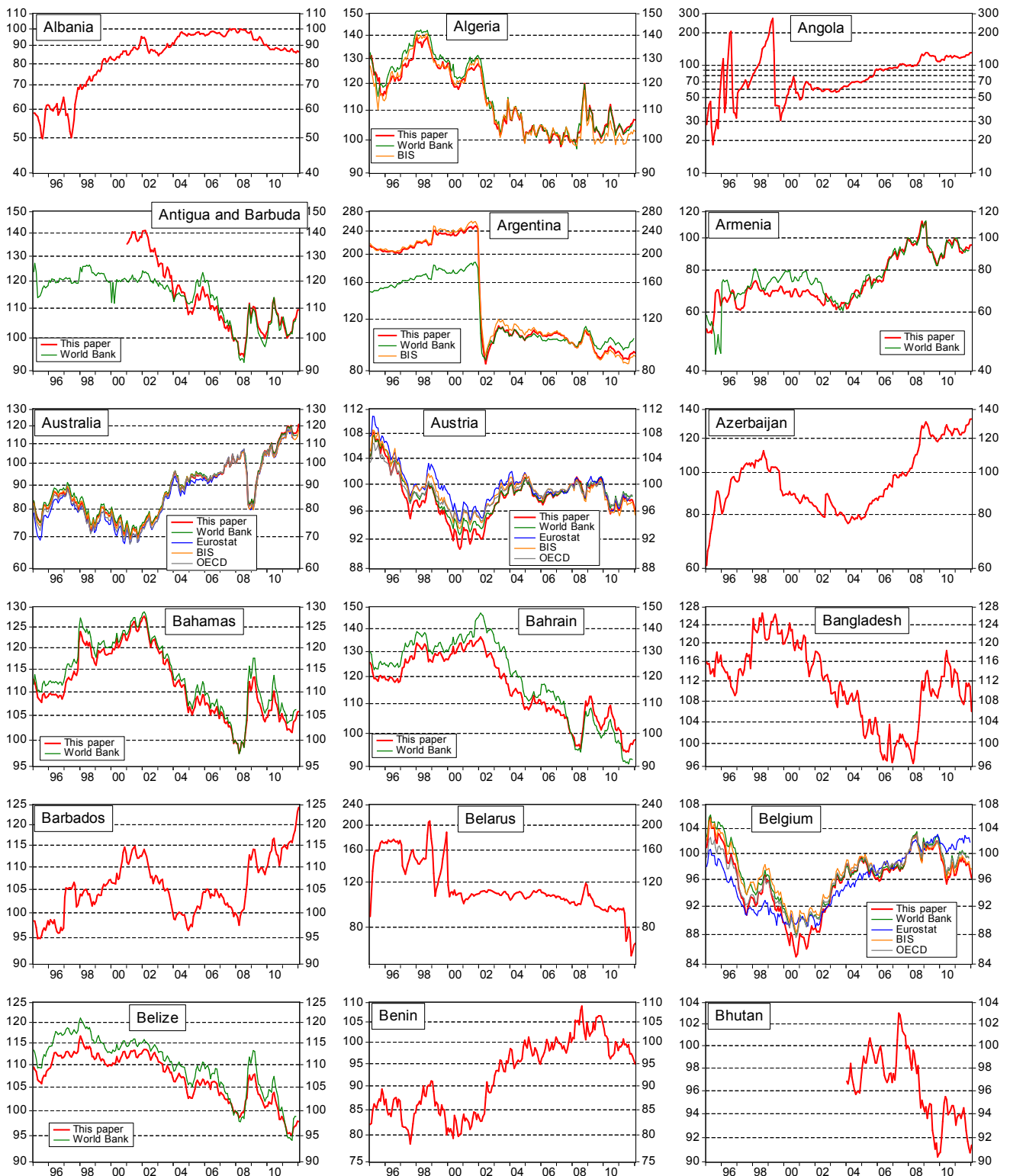
Figure 1.b: Monthly CPI-based real effective exchange rates, January 1995 – January 2012 (December 2007 = 100)
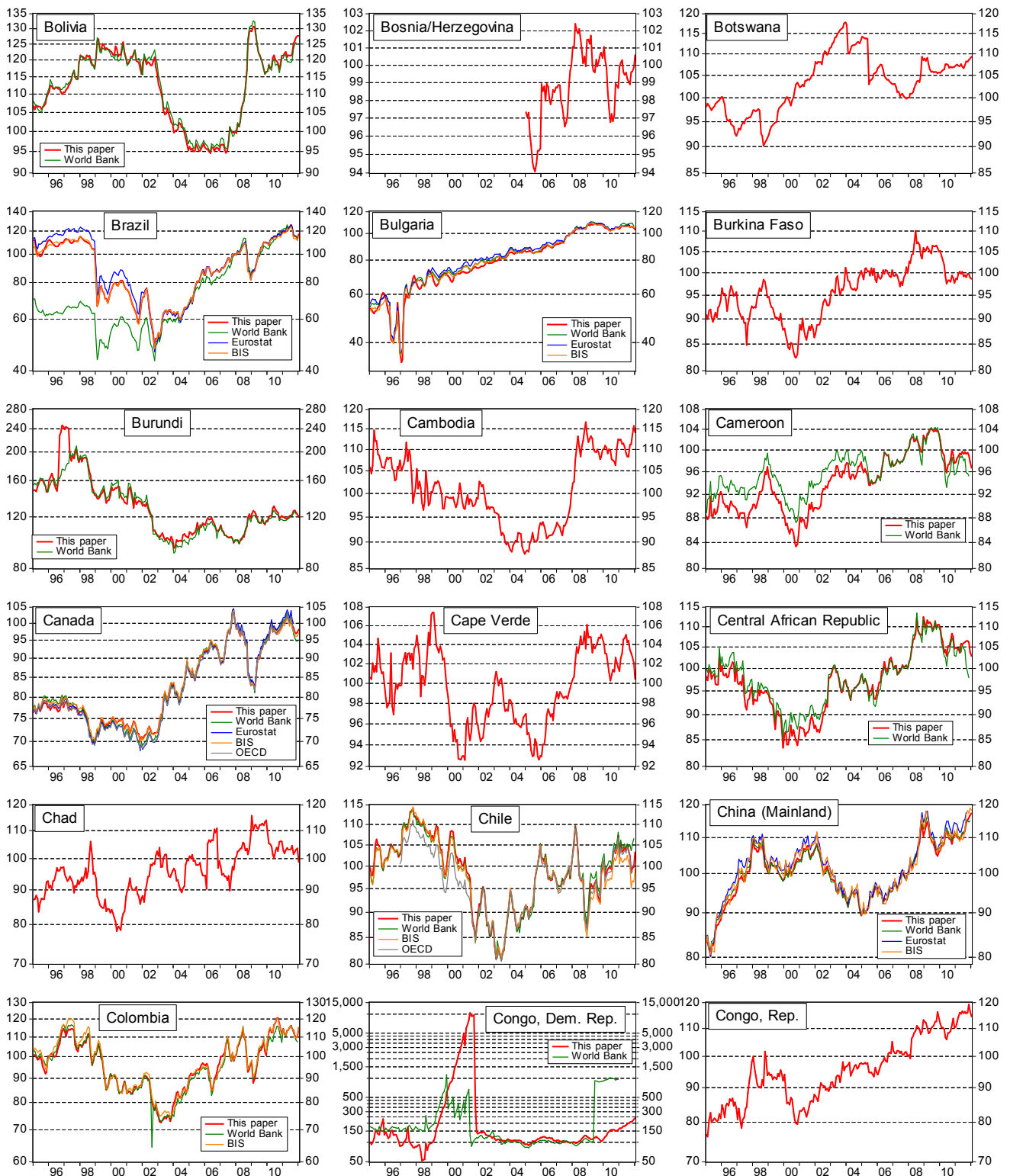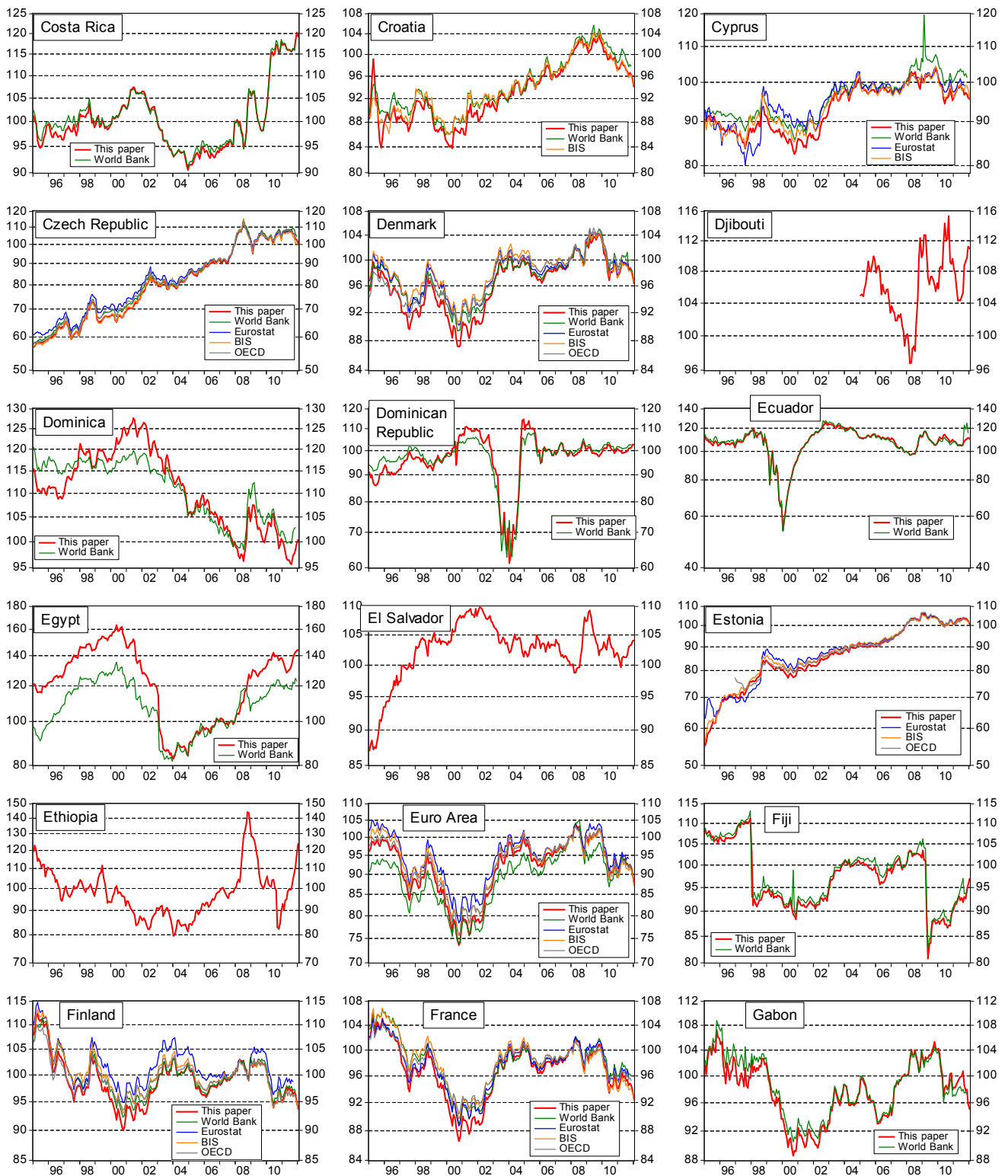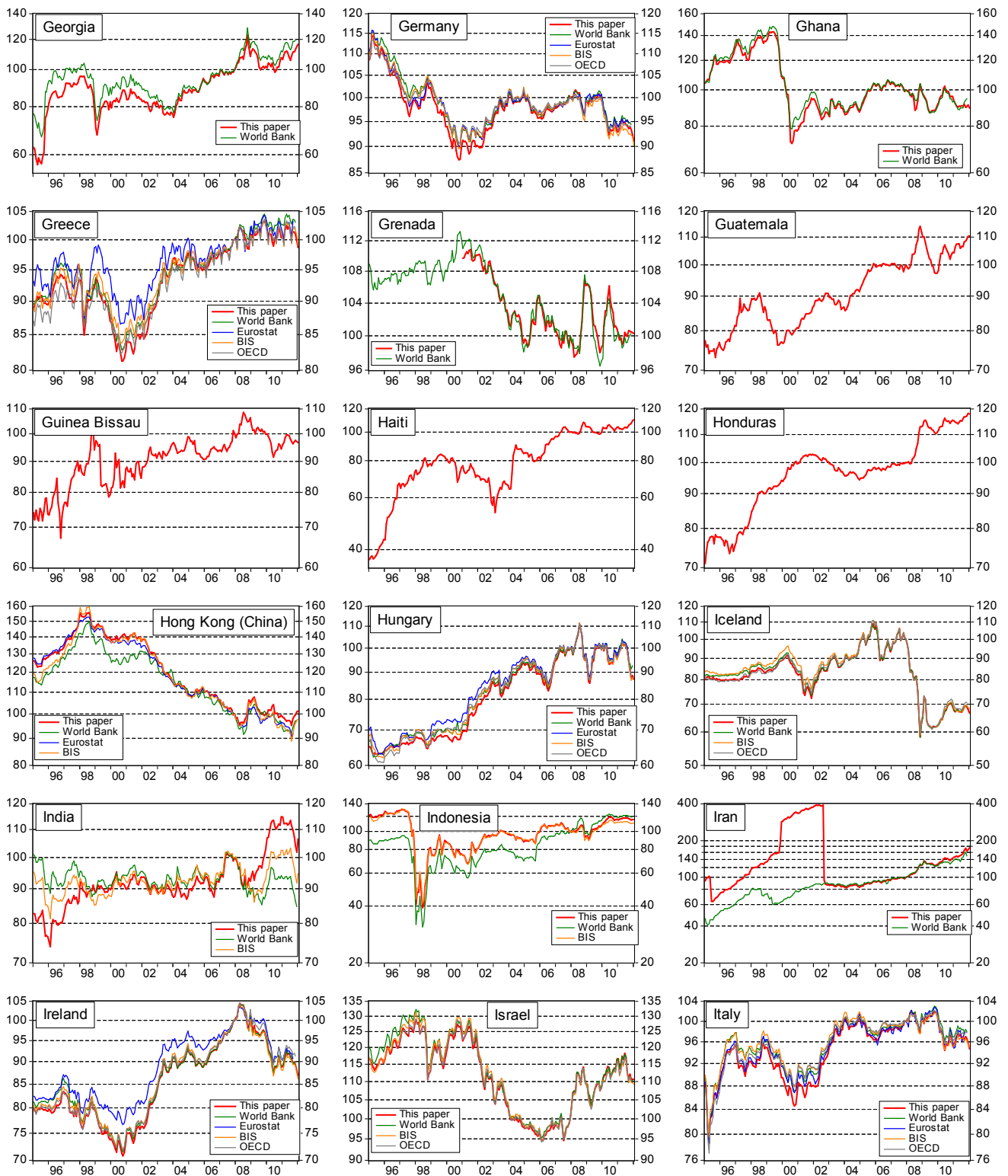
Figure 1.c: Monthly CPI-based real effective exchange rates, January 1995 – January 2012 (December 2007 = 100)

Figure 1.d: Monthly CPI-based real effective exchange rates, January 1995 – January 2012 (December 2007 = 100)

Figure 1.e: Monthly CPI-based real effective exchange rates, January 1995 – January 2012 (December 2007 = 100)

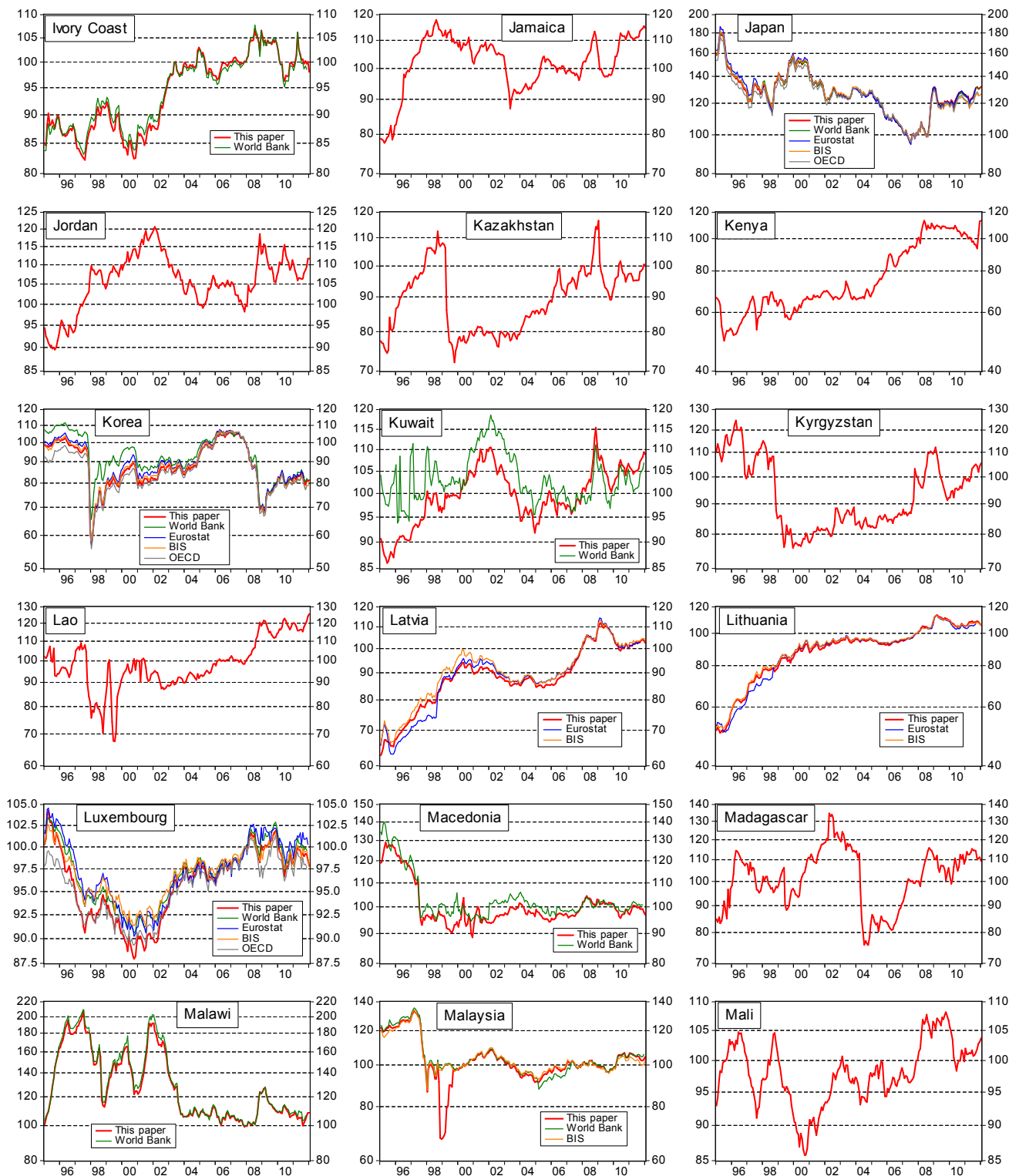**Figure 1.f: Monthly CPI-based real effective exchange rates, January 1995 – January 2012 (December 2007 = 100)**

Figure 1.g: Monthly CPI-based real effective exchange rates, January 1995 – January 2012 (December 2007 = 100)

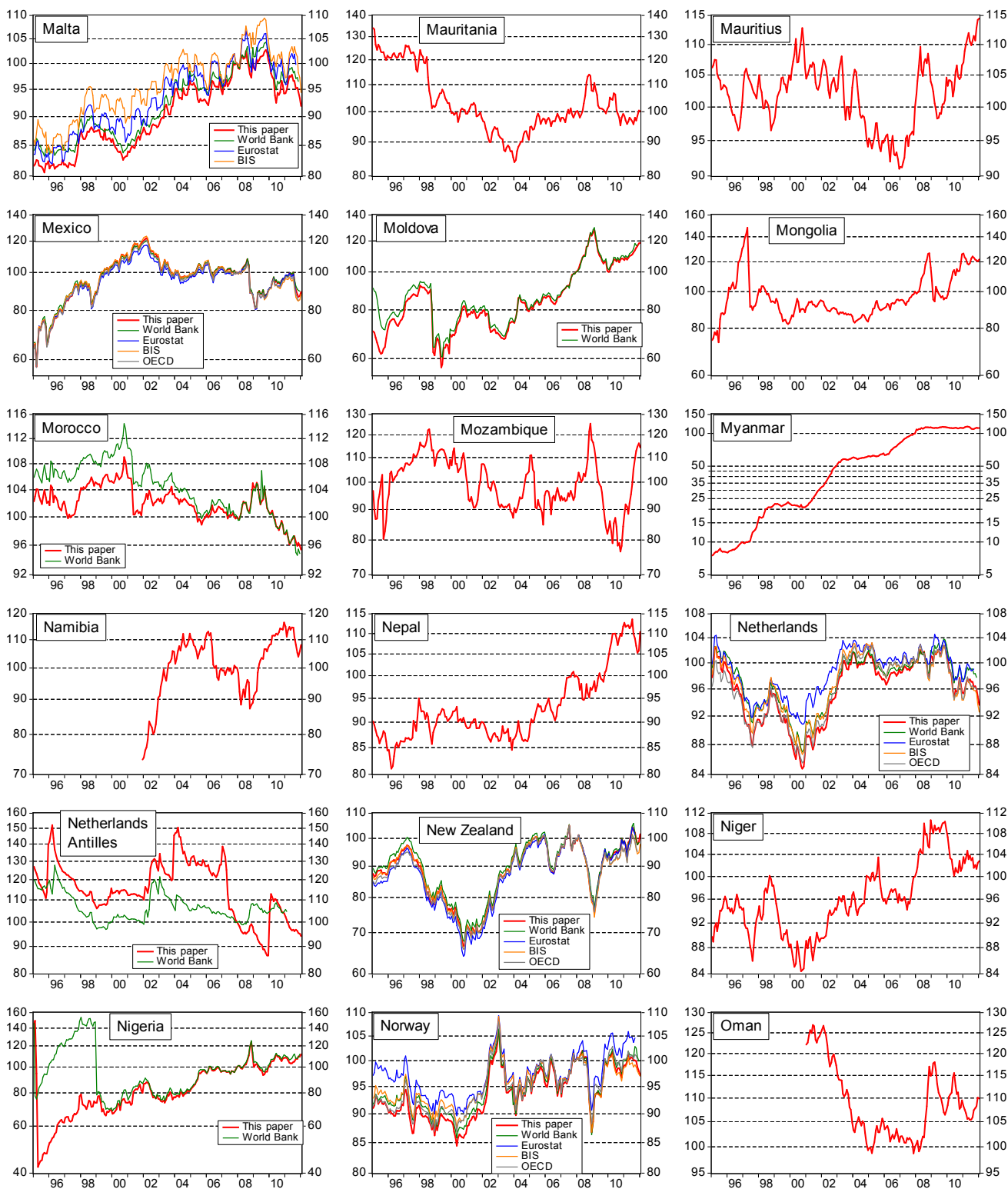**Figure 1.h: Monthly CPI-based real effective exchange rates, January 1995 – January 2012 (December 2007 = 100)**
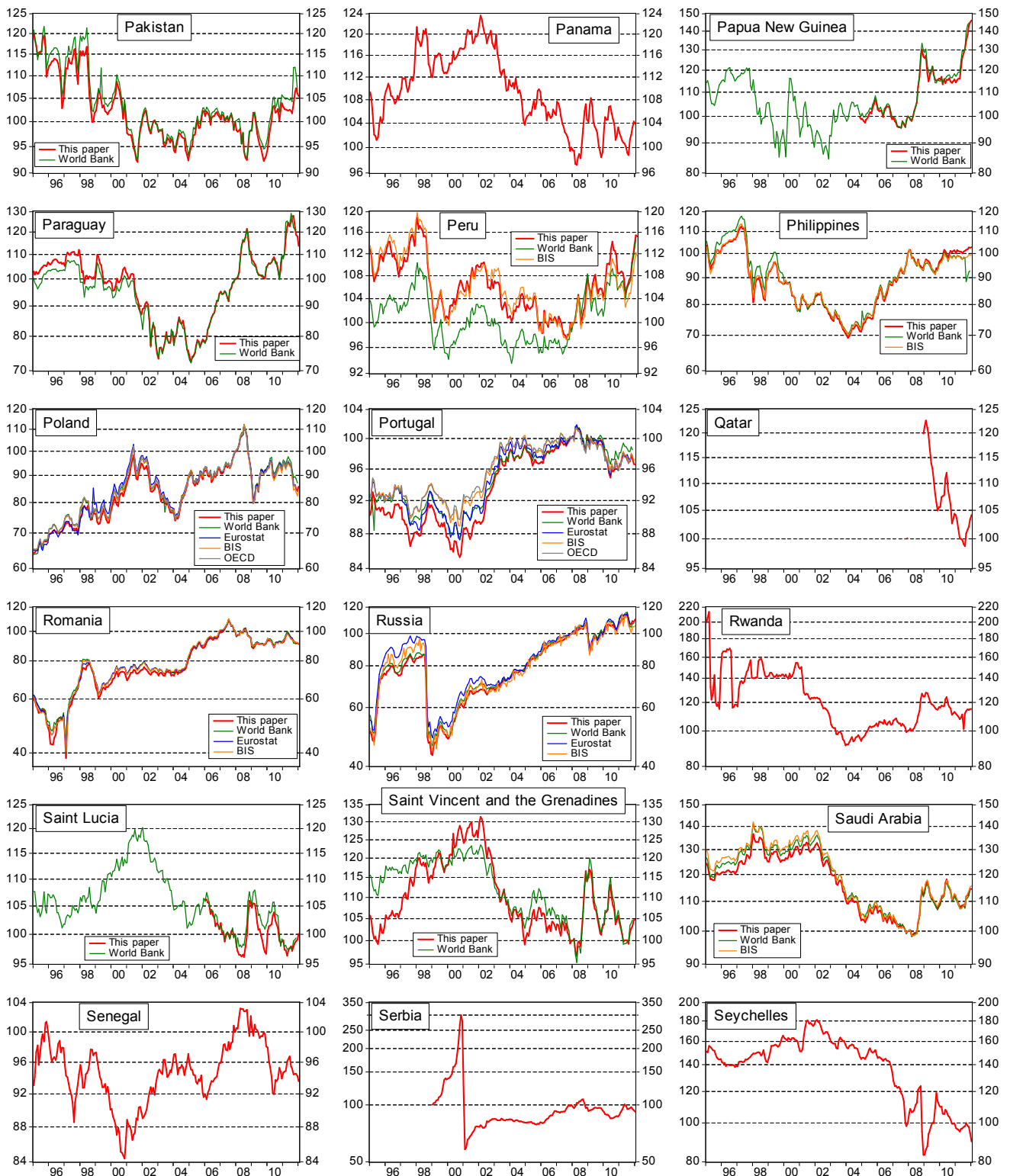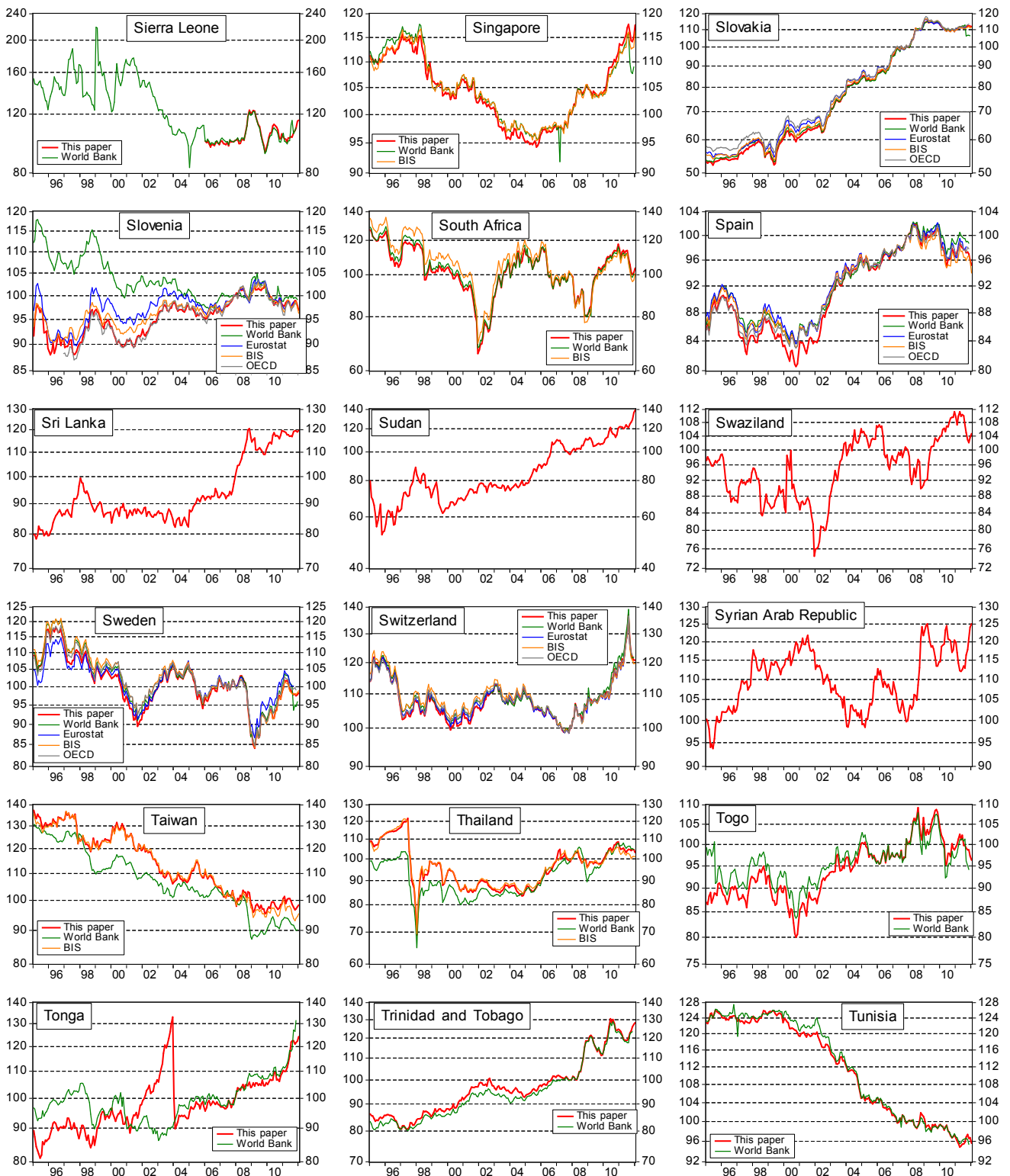
Figure 1.i: Monthly CPI-based real effective exchange rates, January 1995 – January 2012 (December 2007 = 100)

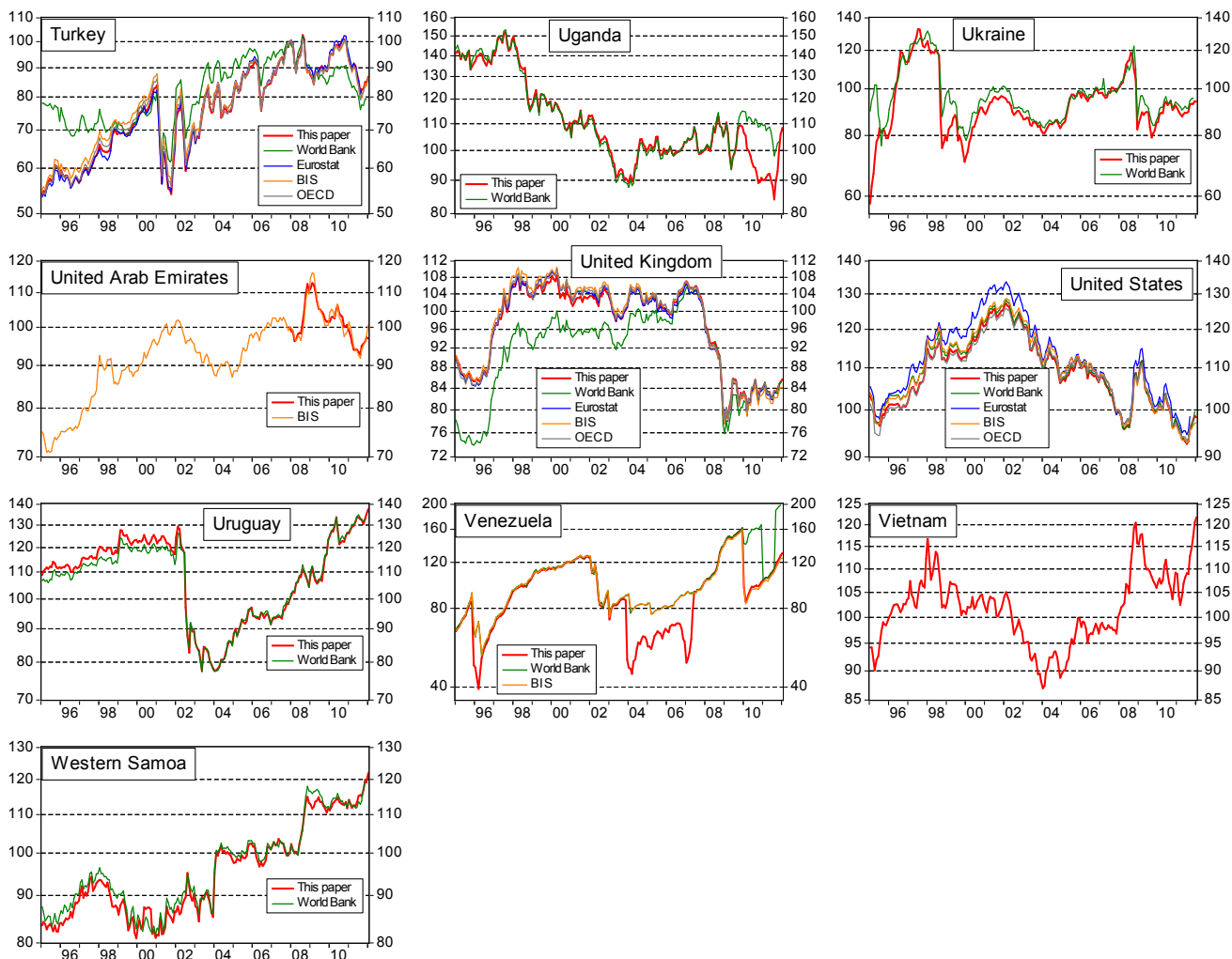# Figure 2.a: Annual CPI-based real effective exchange rates, 1960-2011 (2007=100)
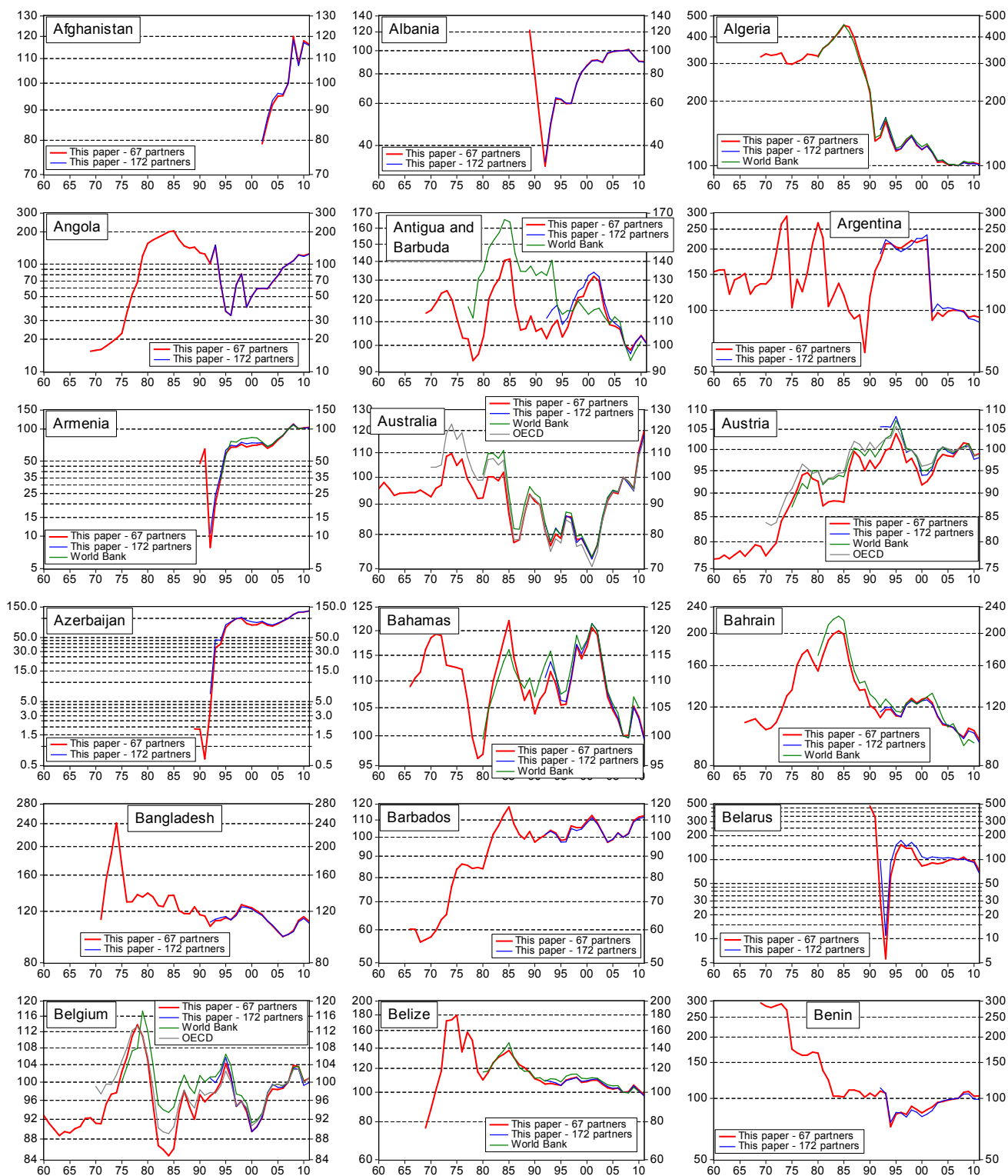
Figure 2.b: Annual CPI-based real effective exchange rates, 1960-2011 (2007=100)

Figure 2.c: Annual CPI-based real effective exchange rates, 1960-2011 (2007=100)

Figure 2.d: Annual CPI-based real effective exchange rates, 1960-2011 (2007=100)

Figure 2.e: Annual CPI-based real effective exchange rates, 1960-2011 (2007=100)

Figure 2.f: Annual CPI-based real effective exchange rates, 1960-2011 (2007=100)

Figure 2.g: Annual CPI-based real effective exchange rates, 1960-2011 (2007=100)

Figure 2.h: Annual CPI-based real effective exchange rates, 1960-2011 (2007=100)
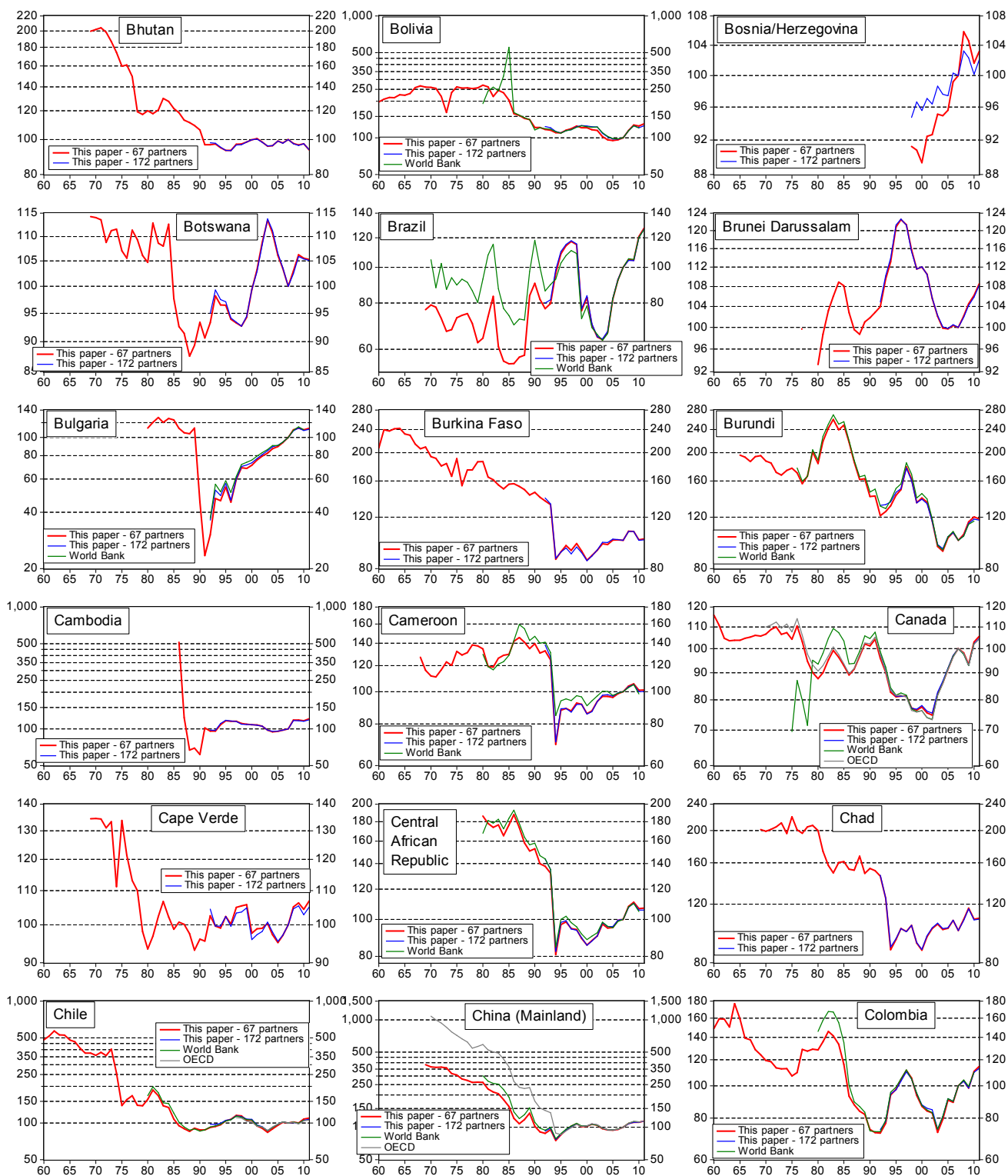
Figure 2.i: Annual CPI-based real effective exchange rates, 1960-2011 (2007=100)

Figure 2.j: Annual CPI-based real effective exchange rates, 1960-2011 (2007=100)
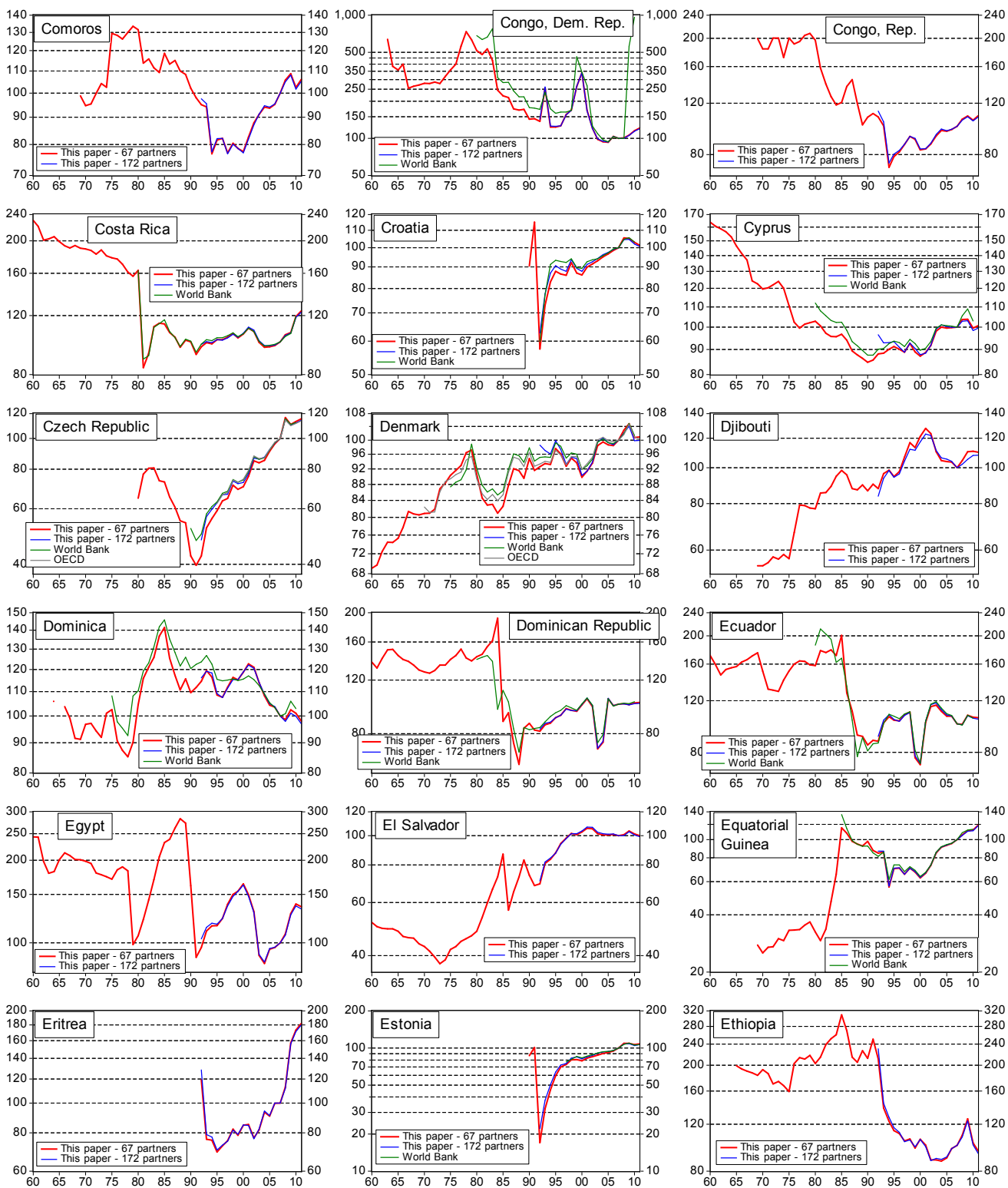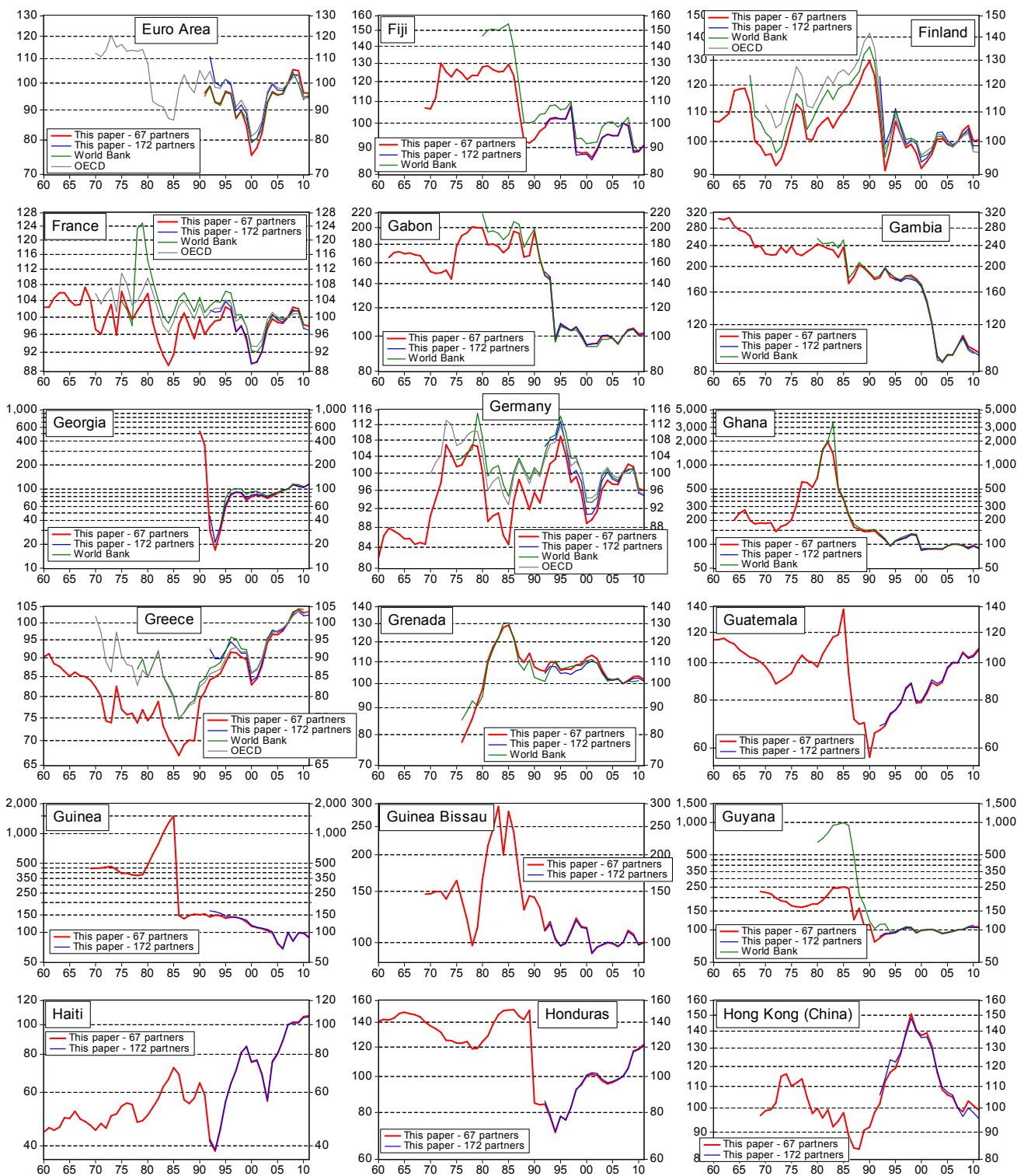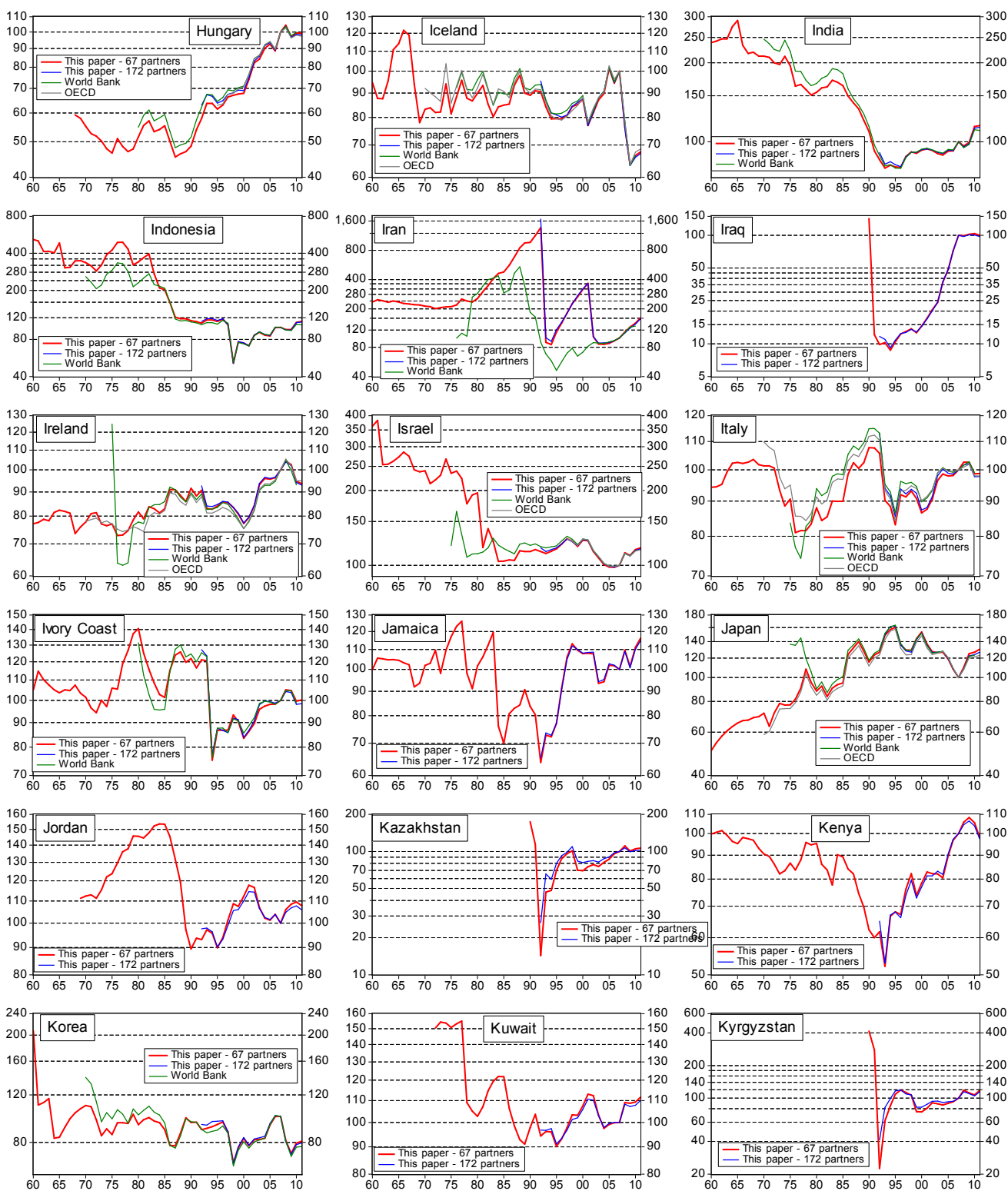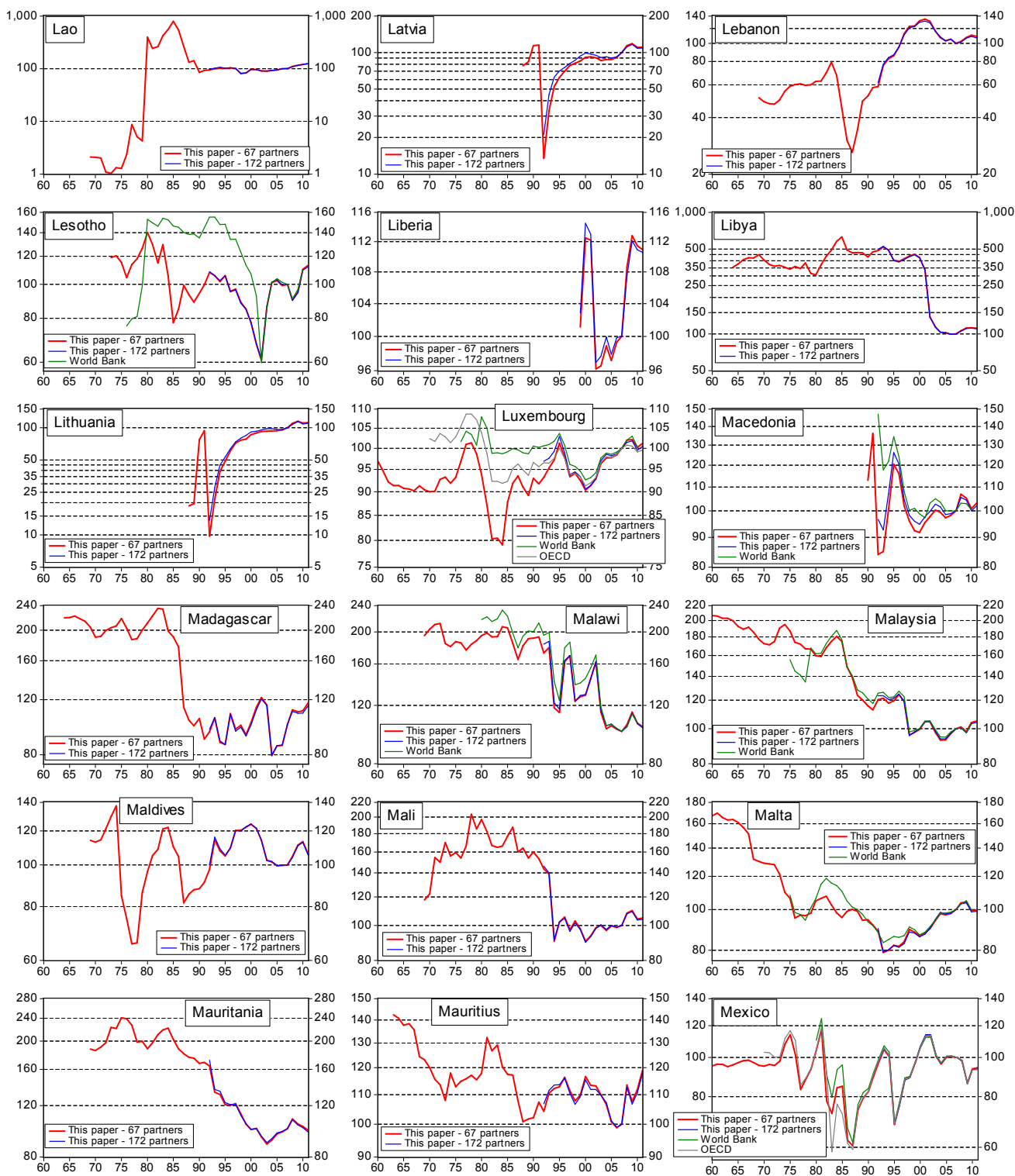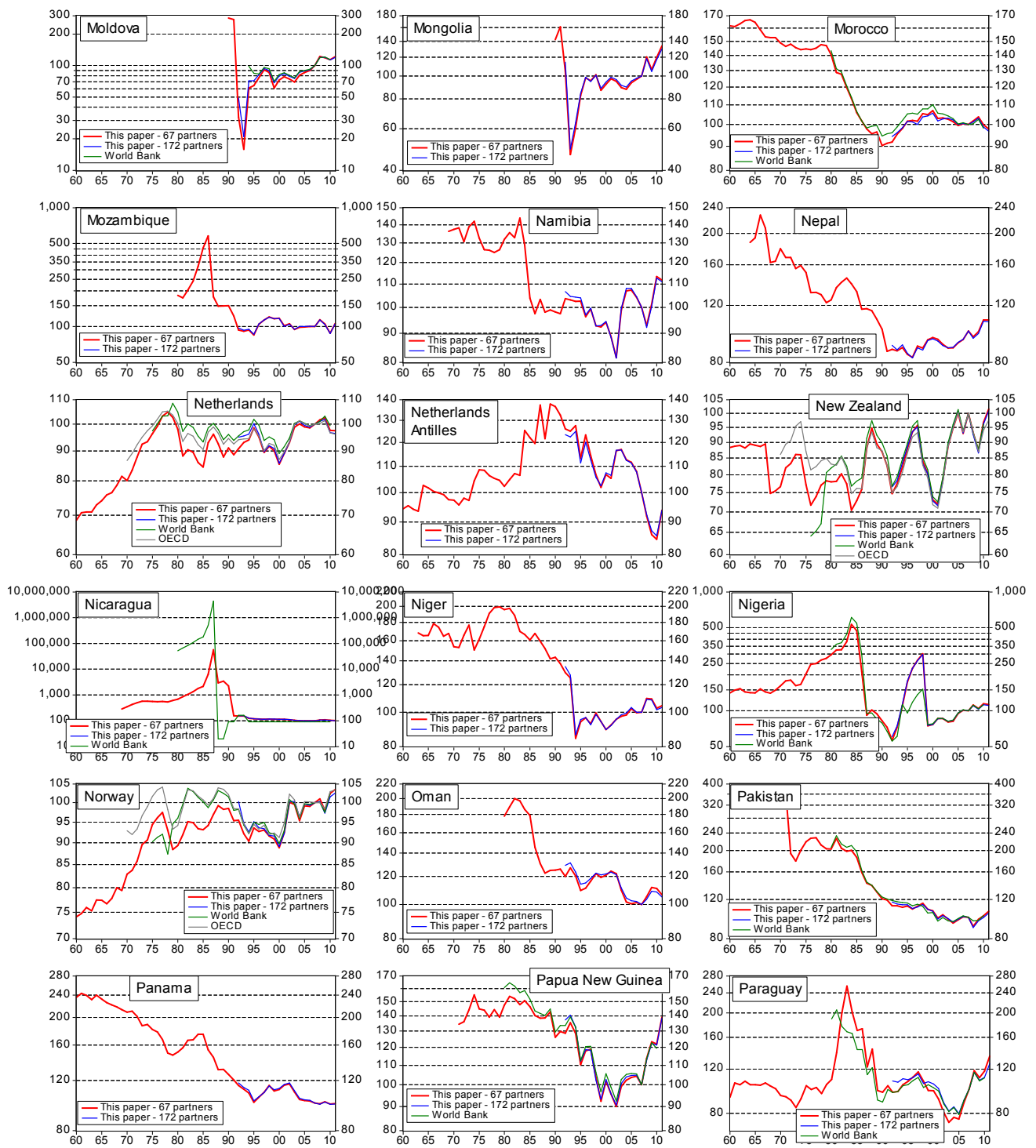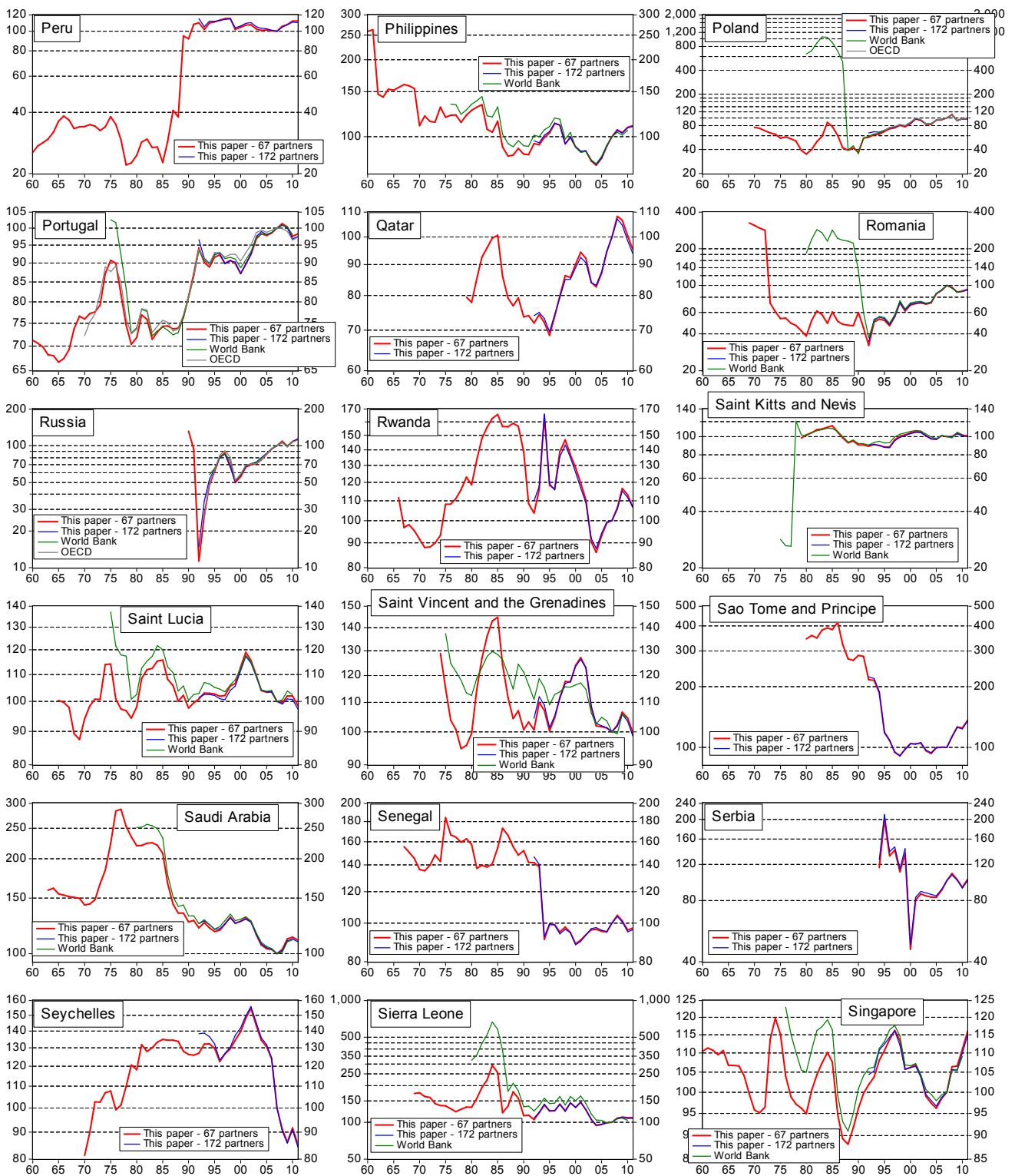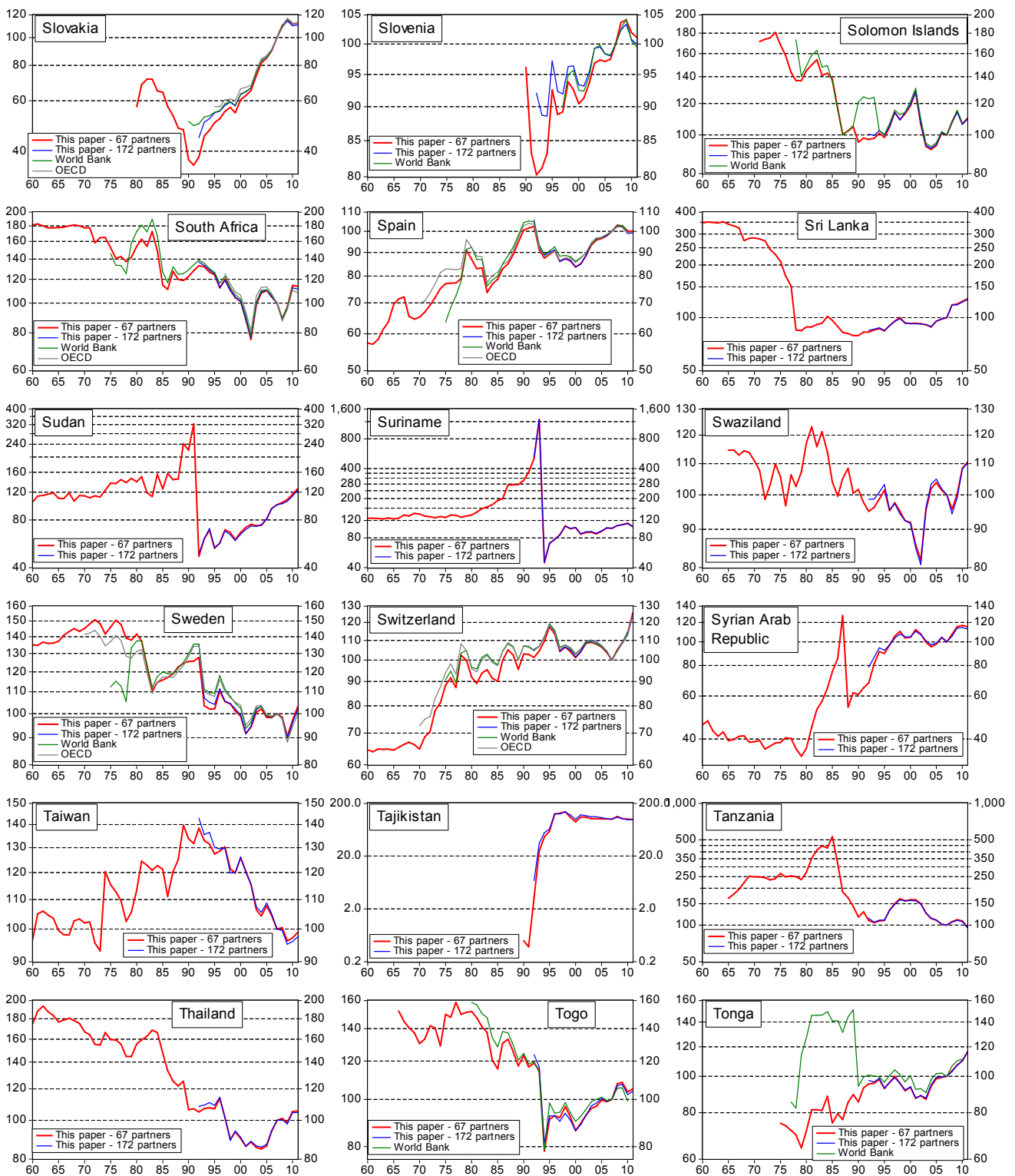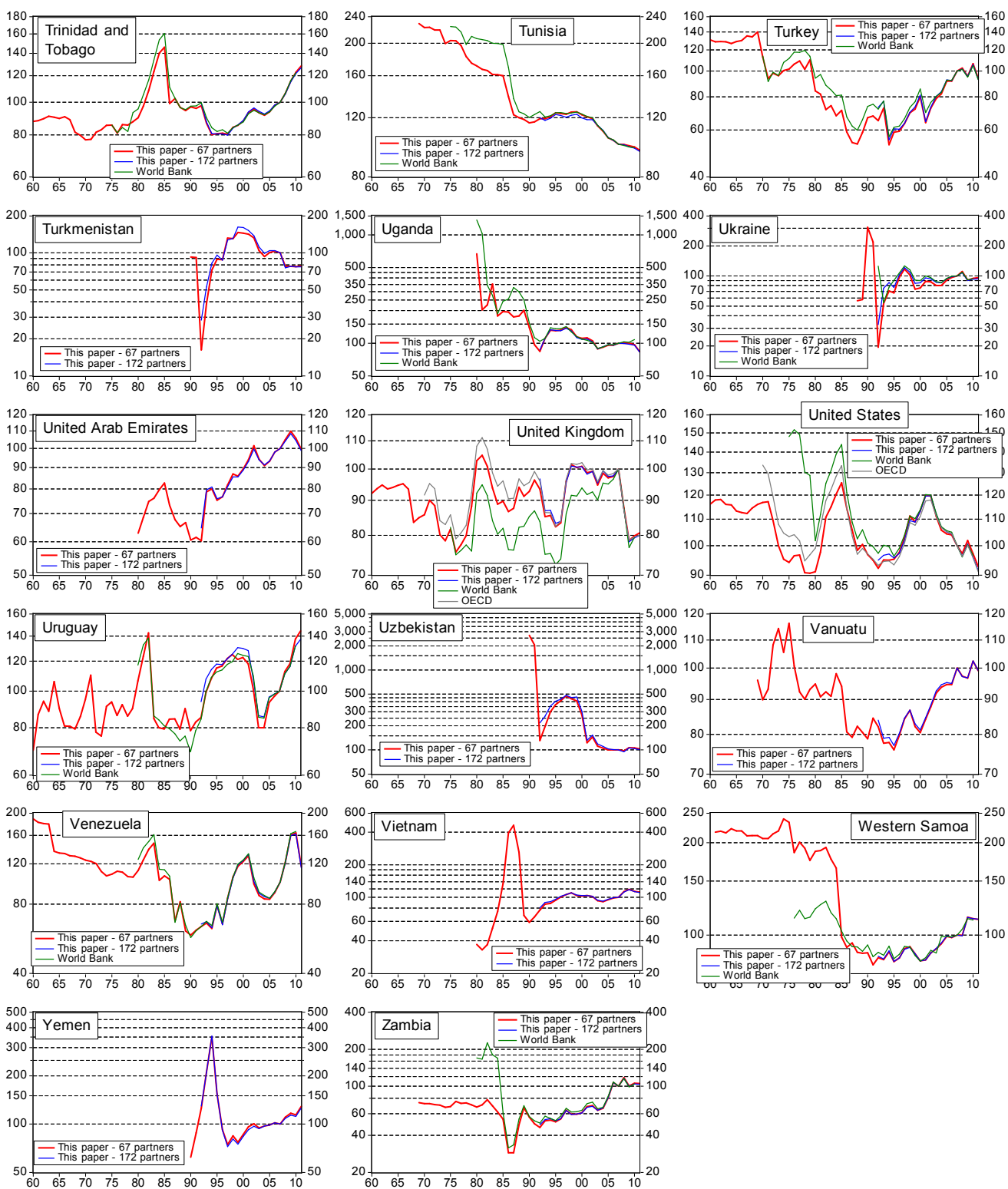
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