External Financial Position and International Reserve Level - International Comparisons

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Abstract:

The paper focuses on the relationship between international reserves and external financial position. It aims to determine whether the more or less significant level of a country's reserves necessarily implies its external financial position as a net lender (creditor) or a net borrower (debtor). Firstly, the paper gives a theoretical lecture to the problem and deduces that the stock of reserves does not imply a particular external position (as measured by Net International Investment Position –NIIP), and that there are four possible combinations between the two variables. Finally, an empirical study analyzes the case of four countries at different stages of economic development and corresponding to the four theoretical combinations, namely: Spain, India, Belgium, and Algeria.

Key-Words: International reserves; External financial position; Net international investment position; Net lender; Net borrower; Financial account.
JEL Classification: F34; F36; F38; F41

1. Introduction

The level of "*international reserves*" is often perceived as an important indicator for the macro-financial stability of countries, especially in emerging and developing economies (EMDEs). The international reserves variable, even if it is considered as an external variable (*i.e.* changes recorded in the balance of payments), is, however, in interaction with other internal and external variables, balances and parameters, such as: inflation, interest rates, current and financial accounts, domestic (private and public) net savings, exchange rates, the exchange rate regime category, etc. This perception of international reserve importance has led, since the 2000s, to a surge in the phenomenon of reserve accumulation, particularly in emerging economies and oil-exporter countries.

This phenomenon was explained by several factors. First, the increased financial liberalization in emerging market economies (EMEs) and the financial crises of the 1990s and early 2000s has led these economies to build up "shields" of reserves in order to have a self-protection against financial shocks (speculative attacks, insolvency, sudden stop, etc.) and real shocks (effects on income and domestic demand). This is a "precautionary motive" as evidenced by several studies: Flood and Marion (2001), Wijnholds and Kapteyn (2001), Aizenman and Marion (2003), Mendoza (2004), Jeanne and Rancière (2006), Aizenman and Lee (2007), Bastourre et al. (2009), etc.

Secondly, reserve accumulation, particularly in the Asian EMEs, was also explained by the role of export-led growth strategies, often based on undervalued national currencies to boost trade competitiveness. In order to undervalue their currencies, central banks must counter upward pressures through foreign exchange market interventions through foreign currencies' purchases, which naturally lead to an increase in accumulated reserves. These policies explain the so-called "monetary mercantilism motive" of reserve accumulation, as documented in several studies: Aizenman and Marion (2003), Aizenman and Lee (2007), Bar-Ilan and Marion (2009), Dordu et al. (2009), Delatte and Fouquau (2012), etc[*].

However, the only reserve level indicator does not give a precise assessment of a country's external financial position. The latter allow to assess whether the country is a "net lender" or a "net borrower" *vis-à-vis* the rest of the world (RoW). These terms do not mean the country's indebtedness position *stricto sensu*, but take into account all the country's assets on- and its liabilities to the RoW. In that way, the International Monetary Fund (IMF) proposes a distinct concept, somewhat related to international

[*] Beyond the two main motives, other explanations of reserve accumulation are given. For example, the rise in oil prices, from 2003, has benefited many developing oil-exporters, which generally have a low capacity to absorb large flows of foreign exchange revenue, due to their financial systems' underdevelopment or a lack of industrial policies (Artus, 2007; Talahite and Beji, 2013; Hadj Nacer, 2009).

reserves, and which makes it possible to assess a country's external financial position, namely the "*Net International Investment Position*", given as the difference between, financial assets of a country that are claims on the RoW in addition to physical gold reserves, on the one hand, and liabilities to the RoW, on the other hand (IMF, 2009).

Thus, the two concepts, namely international reserves and external financial position (given by *Net International Investment Position*), can be confusing as it could be intuitively accepted that a country with relatively large reserve stocks should be in a situation of external surpluses and therefore have a creditor position *vis-à-vis* the RoW, *i.e.* a net creditor country. And conversely, a country with a debtor position *vis-à-vis* the RoW, *i.e.* a net borrower country, should necessarily suffer from a low reserve level.

Our paper is concerned with this issue and tries to analyze the perception regarding the positive relationship between a country's level of reserves and its external financial position. The question which could be asked to summarize our research problem is the following: ***does the more or less significant level of a country's reserves necessarily imply its financial position vis-à-vis the ROW as a net creditor or a net borrower?*** This question could be also formulated according to other forms: *is a country with large reserve stocks necessarily a net creditor?* and conversely, *is a limited level of reserve holdings synonymous with a net borrower position?*

To answer these questions, we adopt the following plan. Sections 2 and 3 give a detailed presentation of the theoretical concepts of international reserves and (net) international investment position. Section 4 proposes international comparisons about the two mains concepts separately, presenting on the one hand the largest reserves accumulators, and on the other hand the external financial position of the three largest economies in the world (United States, China and Japan). Section 5 presents case studies of several countries and shows different combinations of the two variables (reserves and external position). Analyzes of the structural or cyclical context specific to the country under study or the global dimension are also given. Section 6 concludes

2. International Reserves

2.1. Definition and criteria

The "international reserves" also called "official reserves" or "(official) reserve assets" are often defined by their objectives, their composition and the conditional characteristics of their components. According to the "Balance of Payments and International Investment Position Manual – 6th Edition" (BPM6), published by the IMF, "*Reserve assets are those external assets that are readily available to and controlled by monetary authorities for meeting balance of payments financing needs, for intervention*

in exchange markets to affect the currency exchange rate, and for other related purposes …" (IMF, 2009).

International reserves are given in balance sheet logic (gross assets not including external liabilities even if they constitute reserves for other countries) and they represent external claims (in convertible currencies) on nonresidents, except monetary gold in its physical form. Two additional fundamental conditions are: the immediate availability for use by the monetary authorities, in that they can exchange assets into cash currency at the lowest cost and fastest turnaround time, as well as the direct control by monetary authorities through direct possession or conditional delegation for asset management.

2.2. Components of international reserves

The composition of reserve assets is also provided by the IMF (in BPM6), who divides them into four major categories monetary gold, special drawing rights, reserve position at the IMF, and other reserve assets.

2.2.1. Monetary gold

According to the BPM6, "*Monetary gold is gold to which the monetary authorities (or others who are subject to the effective control of the monetary authorities) have title and is held as reserve assets.*" (IMF, 2009). Monetary gold is held in the form of physical gold (coins, bullions, bars and gold held in allocated gold accounts) and unallocated gold accounts held with nonresident institutions and which give title to claim the delivery of gold. Allocated or unallocated gold accounts must be immediately available and on demand by monetary authorities in order to qualify as reserve assets.

2.2.2. Special drawing rights

As defined by the IMF also, special drawing rights (SDRs) "*are international reserve assets created by the IMF and allocated to members to supplement existing official reserves. SDR holdings represent unconditional rights to obtain foreign exchange or other reserve assets from other IMF members*" (IMF, 2009). When introduced in 1969 (during the Bretton Woods era), one SDR was equal to one dollar (or 0.888671 grams of fine gold), but since Bretton Woods' collapse and the major currencies' adoption of floating exchange rates, the SDR value is set in relation to a weighted basket that at present includes five currencies: the US dollar, the euro, the Japanese yen, the British pound, and the Chinese renminbi.

However, despite Bretton Woods' collapse and the adoption of floating regimes have reduced the importance of SDR position as a reserve asset, SDR allocations are still used to provide liquidity to member countries, alongside other reserve assets, during financial and balance of payment crises.

2.2.3. Reserve position at the IMF

The reserve position at the IMF (or unconditional drawing rights) is the "*sum of the reserve tranche … and any indebtedness of the IMF (under a loan agreement) that is readily available to the member country*". The reserve tranche corresponds to the amounts in foreign currency and SDRs that the country can draw on the IMF at a short notice without conditions, and which result from its quota subscriptions and the IMF's sale of the country's currency (if it is a country with a strong external position) to meet the demand of other countries for balance of payment needs (IMF, 2009).

2.2.4. Other reserve assets

The category of "Other reserve assets", also known as "foreign exchange reserves", or "convertible currency reserves", represents the largest share of official reserve assets in most countries actually. It includes different kinds of assets:

- currency and deposits held in foreign central banks, the Bank for International Settlements (BIS), other nonresident deposit-taking corporations, etc.;
- securities, which includes liquid and marketable equities and short- and long-term debt securities issued by nonresidents such as treasury bonds or other governmental securities;
- financial derivatives used for the management of reserve assets; and
- other claims (loans to nonresident corporations other than deposit-taking corporations and other financial instruments).

3. International Investment Position

3.1. Definition

The concept of "International Investment Position – IIP", introduced by the IMF, is also related to that of international reserves. International Investment Position allows assessing the country's external financial position. The IMF presents IIP as a complement to balance of payments data. According to the BPM6, IIP is "*a statistical statement that shows at a point in time the value of: financial assets of residents of an economy that are claims on nonresidents or are gold bullion held as reserve assets; and the liabilities of residents of an economy to nonresidents*" (IMF, 2009). Financial assets held by residents on nonresidents include:

- foreign direct investment (controlling interests in subsidiaries abroad, *i.e*. owning capital share that gives 10% or more of the voting power);
- portfolio investments (holdings by residents of equities or bonds issued by nonresidents);

- other investments (including loans or deposits with nonresidents, trade loans, etc.);
- financial derivatives; and
- reserve assets.

In parallel, external financial liabilities are defined and classified in the same way (except for foreign exchange reserves, which are excluded). However, unlike assets, liabilities are claims by non-residents on country's residents. The balance of payments is also a flow concept. Its data measure capital flows (both inward and outward) during the period under consideration. IIP is a stock concept. Its data measure end-of-period stocks of external assets and liabilities (Lane and Milesi-Ferretti, 2007).

3.2. Net International Investment Position

The country's external financial position, *i.e.* net lending or borrowing position, can be calculated in net terms (Net IIP or NIIP). It is the difference between, the financial assets of a country that are claims on the RoW in addition to reserve physical gold, on the one hand, and liabilities to the RoW, on the other hand, and has therefore a positive or negative value, and allows classifying the country as "net creditor (lender)" or "net debtor (borrower)".

NIIP = [Financial assets of residents that are claims on nonresidents + Physical gold held as reserve assets] – [Liabilities of residents to nonresidents] **(1)**

At country level, NIIP value is also an important indicator of the external debt sustainability. At the global level, we can use IIP and NIIP data to assess trends of two global phenomena, namely: financial globalization and global imbalances (Lane and Milesi-Ferretti, 2018).

3.3. Net foreign assets

In addition to NIIP, economic literature and statistical datasets also use the concept of "Net Foreign Assets – NFA" to assess a country's external financial position, but assume calculations based on financial account items, which are stock concepts:

NFA = [IR + FDIA + EQA + DEBTA] – [FDIL + EQL + DEBTL] **(2)**

with:

- IR: international reserve assets,
- FDI: stock of foreign direct investments,
- EQ: stock of portfolio investments,
- DEBT: debt stock (or claims),
- A: assets,
- L: liabilities,

and in terms of flows:

$$\Delta \mathbf{NFA} = \Delta IR + [\Delta FDIA - \Delta FDIL] + [\Delta EQA - \Delta EQL] + [\Delta DEBTA - \Delta DEBTL] \quad \mathbf{(3)}$$

$$= \Delta IR + KA \quad \mathbf{(4)}$$

with:

- Δ IR: changes in reserves, and
- KA: net capital flows (or financial account balance, excluding reserves).

Thus, residents' claims on nonresidents are given by the sum of: SDRs, the position at the IMF, foreign exchange reserves and FDI, portfolio investment and debt assets. Gold holdings are excluded when calculating NFAs because they do not constitute a claim on nonresidents. Similarly, if gold is excluded from NIIP calculation – as usually done in many databases (and empirical studies) focusing on external financial position – both concepts will have the same meaning:

$$\mathbf{NFA} = NIIP - GLD \quad \mathbf{(5)}$$

with GLD : physical gold held as reserve assets.

From the above and especially Formula **(2)**, used to calculate NFAs (or NIIP excl. gold), we can deduce that, theoretically, the country's level of reserves does not necessarily imply a particular external financial position. In other words: a country's external position as a net creditor or debtor is not determined only by the greater or lesser stock of reserves it holds. Indeed, a country accumulating relatively large reserve stocks (in value or GDP share) **should not** necessarily have external surpluses and a creditor position *vis-à-vis* the RoW, *i.e.* a net creditor country (positive NIIP). Symmetrically, a country who suffers a low reserve level **should not** necessarily have external deficits and a debtor position, *i.e.* a net borrower country (negative NIIP).

Thus, four logical combinations could be deduced if we associate (low and high) reserve levels to (negative and positive) NIIP:

- A net borrower country with low reserve accumulation level
- A net borrower country with high reserve accumulation level
- A net lender country with low reserve accumulation level
- A net lender country with high reserve accumulation level

4. International Comparisons

Before presenting case studies of countries in different situations combining the two variables (reserve level and external financial position) as described above, this

(first empirical) section considers the two variables separately. First, we describe the evolution of the largest international reserve accumulators' ranking, during 2000-20. Secondly, we analyze the external financial position of the world three largest economies, namely the United States, China and Japan, during 1995-2020.

4.1. The largest reserve accumulators

Table (1) gives the ranking and reserve stocks of the 20 largest reserve holder economies in 2000, 2010 and 2020. China's reserve stock increased from 8.3% to 24.7% of world reserves from 2000 to 2020, respectively. Also, note that in the early 2000s (or until to-), advanced economies (AEs) accounted for over half of the countries on the list. That proportion dropped to 30% by the end of the next two decades. Five AEs came out from the ranking (Germany, France, Canada, Spain and Norway). At the same time, the proportion of EMEs in the global list continued to grow (45, 50, then 55%), and the proportion of oil exporters increased from 0 to 20% between 2000 and 2010, then declined to 15% a ten years after.

Table (1): Top 20 largest reserve holders (excl. gold) - in bln. USD*

Rank in 2000	Country	Reserves in 2000	Rank in 2010	Country	Reserves in 2010	Rank in 2020	Country	Reserves in 2020
1	Japan	354.90	1	China	2,866.08	1	China	3,238.78
2	China	168.28	2	Japan	1,069.99	2	Japan	1,344.28
3	Hong Kong	107.54	3	Saudi A.	444.72	3	Switzerland	1,020.17
4	Korea, Rep.	96.13	4	Russia	443.59	4	India	549.09
5	Singapore	79.96	5	Korea. Rep.	291.49	5	Hong Kong	491.65
6	Germany	56.89	6	Brazil	287.06	6	Russia	457.02
7	US	56.60	7	India	275.28	7	Saudi A.	453.21
8	UK	46.64	8	Hong Kong	268.65	8	Korea. Rep.	437.11
9	India	37.90	9	Singapore	225.50	9	Singapore	362.09
10	France	37.04	10	Switzerland	223.48	10	Brazil	351.52
11	Mexico	35.51	11	Thailand	167.53	11	Thailand	248.74
12	Brazil	32.43	12	Algeria	162.61	12	Mexico	191.77
13	Switzerland	32.27	13	US	121.39	13	Israel	173.29
14	Canada	32.10	14	Mexico	120.26	14	Czech Rep.	165.54
15	Thailand	32.02	15	Malaysia	104.88	15	UK	161.19
16	Spain	30.99	16	Libya	99.65	16	Poland	140.32
17	Indonesia	28.50	17	Indonesia	92.91	17	US	133.85
18	Malaysia	28.33	18	Poland	88.82	18	Indonesia	131.14
19	Norway	27.60	19	UK	84.01	19	Malaysia	105.28
20	Poland	26.56	20	Turkey	80.71	20	U.A.E.	103.20

* AEs are: Canada, France, Germany, Hong Kong, Japan, Norway, UK, US, Singapore, Switzerland, and Spain; EMEs are Brazil, China, India, Indonesia, Israel, Rep. Korea, Malaysia, Mexico, Poland, Czech Rep. Thailand, and Turkey ; and Oil-exporters are: Algeria, Libya, Russia, Saudi Arabia, and United Arab Emirates.

Source: By the author; based on IFS database (IMF, 2022)

It is also worth noting that data for the entire euro area (the Eurosystem, including the ECB and the euro area national central banks) are not taken into account in Table (1) to avoid double registration, especially for the year 2000, where several euro area countries are listed. If the entire euro area data are included in the ranking, the following results would be obtained: (USD 242.33 bln – 2nd); 2010 (USD 300.24 bln – 5th); 2020 (USD 422.90 bln – 9th). In addition, data for Taiwan are not reported because it is not a member of the IMF, so the data are not included in the IFS database. However, data for Taiwan can be obtained from the official website of the Central Bank of the Republic of China (Taiwan). If these data are included in the ranking (while euro area data ignored), the output would be the following: 2000 (USD 106.74 bln – 4th); 2010 (USD 382.01 bln – 5th); 2020 (USD 529.91 bln – 5th).

4.2. Some examples of large net lenders and borrowers

In what follows we will analyze some examples of countries with different external financial positions. Table (2) provides an overview of the largest net creditors (lenders) and debtors (borrowers) by the end of 2020 in terms of value and GDP share.

Table (2): Largest net debtors and creditors - End of 2020*

Largest net debtors		Largest net creditors	
(Billions of USD)			
United States	- 14,505	Japan	3,397
Spain	- 1,194	Germany	2,344
France	- 1,002	Hong Kong	2,153
India	- 823	China	2,026
Ireland	- 798	Taiwan	1,366
(% of GDP)**			
Ireland	- 208 %	Hong Kong	616 %
Greece	- 191 %	U.A.E.	321 %
Portugal	- 123 %	Norway	317 %
Spain	- 93 %	Singapore	308 %
United States	- 69 %	Taiwan	204 %

* The table considers countries with GDP above USD 150 bln in 2020.
** GDP measured in USD and not in local currency as presented in data source.

Source: By the author; based on EWN database by Lane and Milesi-Ferretti (Dec. 2021 update)

On the net borrowers' side, the United States is the most indebted economy in the world. Economies with negative her NIIP, in terms of absolute value or GDP share, can be grouped by region besides the US as follows:

- European AEs (Spain, France, Ireland, Portugal, and Greece),
- Asian EMEs (India), and

- other European and Latin American EMEs (if list expanded to higher than 5 ranks).

On the other hand, the largest net lenders are mainly:

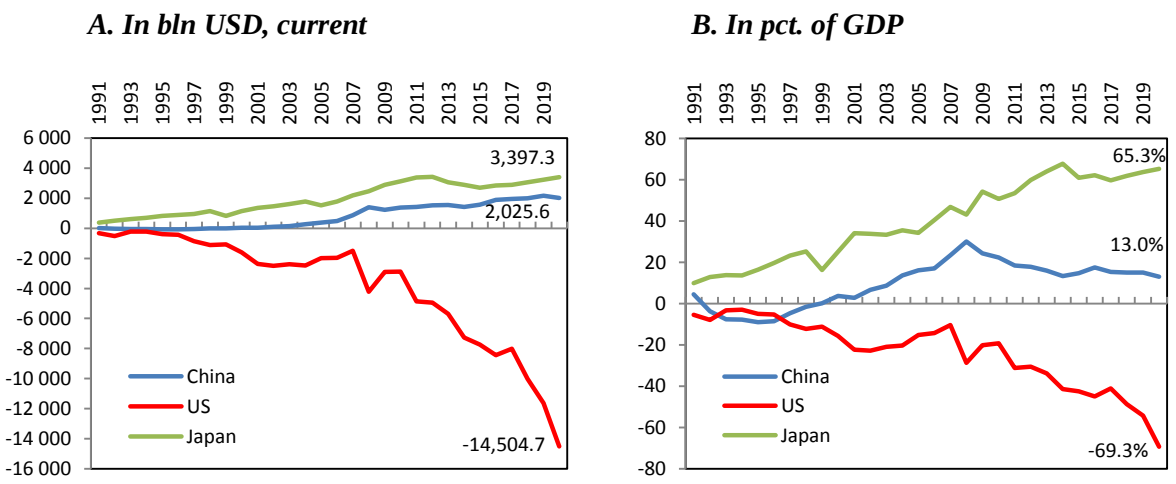
- Asian AEs (Japan, Hong Kong, and Singapore)
- European AEs (Germany, Norway),
- Asian EMEs (China, Taiwan) and
- Oil exporters (UAE, Norway, Saudi Arabia)

This "map" outlines the configuration of global imbalances' phenomenon characterizing the global economy since the 1990s.

When ranking countries' NIIP as GDP share, only four countries (Ireland, Greece, Portugal, and Spain) surpass the United States. Note that all of these four countries were severely affected in the aftermath of the global financial crisis of 2008-9, and more particularly during the European debt crisis from 2010-2.

Figure (1) shows the financial position *vis-à-vis* the RoW of the world three largest economies, namely: the United States, China, and Japan.

Figure (1): Net International Investment Position (excl. gold) of United States, China, and Japan, 1991-2020



Source: By the author; based on EWN database by Lane and Milesi-Ferretti (Dec. 2021 update)

4.2.1. Japan

During several decades, Japan's external position has been improving structurally. Japan's NIIP trend is in fact characterized by a nearly linear growth and reached about USD 3,400 bln by the end of 2020. Thus, J Japan is the largest net lender in the world. This trend can be explained by several factors that impact, directly or indirectly, the structure and the composition of Japan's external assets and liabilities. Japan is

experiencing persistent deflation since the 1990s (in the aftermath of real-estate and financial crises), which has encouraged considerable domestic net savings, with growth in its corporate component. The amount of international reserves –which are also a kind of savings, has consistently increased. Japan is the second-largest reserve accumulator after being the leader until 2005, before being surpassed by China.

The observation of the income balance leads to another possible interpretation. A positive return differential between investments made abroad and investments received, particularly FDIs, was found by Colacelli et al. (2021). This is reflected in a positive rising income balance trend since the mid-1990s. The same is true for portfolio investment returns, whose liabilities (on investments received) are often lower than those on assets (investments abroad) due to Japan's highly accommodating monetary policy (zero or negative real interest rate policy, quantitative and qualitative easing), as well as the country's low credit risk, according to Colacelli et al (2021).

4.2.2. China

The China situation is quite interesting. In 1999, China switched from being a net borrower to a net lender. This turning point coincides with the time following the Asian crisis, when many EMEs, especially in South-East Asia but also elsewhere. Theses countries, whose growth is driven by exports, have adopted reserve accumulation policies, mainly with a precautionary motive against external shocks and financial crises, and also, for some of them, like China, with a mercantilist motive, which means accumulating reserves in order to safeguard the trade competitiveness, by undervaluing local currencies.

The boom of commodity prices from 2003 and the magnitude of global growth (except during the Great Recession of 2009-10) have strengthened the growth of reserve assets holdings by the EMDEs, including China, and therefore their overall financial assets. Chart (A) in Figure (1) shows that the positive trend in China’s financial position was sustained until reaching an all-time high in 2019 with nearly USD 2,170 bln. In terms of GDP share, China’s financial surplus *vis-à-vis* the RoW has decreased since 2008 from 30% into an average of 15% in the 2010s. That is most likely due to the relative decline in emerging yields relative to those of US residents, and more particularly, due to the slowdown in Chinese growth seemingly caused by its gradual shift from an export-led growth strategy towards a growth model based on internal demand stimulation.

4.2.3. United States

The US position has been structurally negative since the 1990s, in contrast to Japan and China. It is a net borrower. However, according to Atkeson et al. (2022), three distinct periods can be emphasized. The US suffered a widening current account

deficit in a first phase (from 1990 to 2002). This phase was marked by a worsening of its NIIP, which decreased from USD (-338.9) bln to (-2,501) bln, or, in terms of GDP share, from (-5.5%) to (-22.9%)[†].

The second phase, from 2002 to 2010, showed a relative stability with an average of nearly USD (-2,500) bln, notwithstanding further widening of the current account deficit. This phase is described as a period of "special privilege" for the US economy where the financing of the deepening deficit was facilitated by the attractiveness of high returns on foreign assets, in particular investments in EMEs which have experienced strong growth during this period (Atkeson et al., 2022).

After the Great Recession (2010), the third phase begins. The position of the US as net borrower worsens further, from more than USD (-4,850) bln to more than USD (-14,500) bln by the end of 2020, or almost (-70%) of GDP. This attests "the end of the special privilege", and can be explained, according to Atkeson et al. (2022), by the fact that when the US economy experienced a strong growth rates (and thus an increase in financial returns for nonresidents investing in US assets), many creditor countries, such as EMEs, experienced a slower growth of economic activity and asset returns including those held by US residents (Atkeson et al, 2022).

5. Reserve level and external financial position: Case studies

Based on EWN database used in Figures (2 to 5), we analyze four cases of combination between the levels of reserve holdings and the external financial positions of four economies at various stages of development: two advanced economies (Spain and Belgium), one emerging economy (India), and one developing oil-exporter (Algeria). Throughout the period of study (1995-2020), both Spain and India are net borrowers. However, Spain has historically held only low reserve stocks as GDP share, while India is a large reserve accumulator. On the other hand, Belgium and Algeria are both net lenders (over most of the period under study). Belgium has historically had low reserves as GDP share, whereas Algeria is (was) viewed as a relatively important accumulator (over most of the period under study).

5.1. A net borrower country with low reserve level: The case of Spain

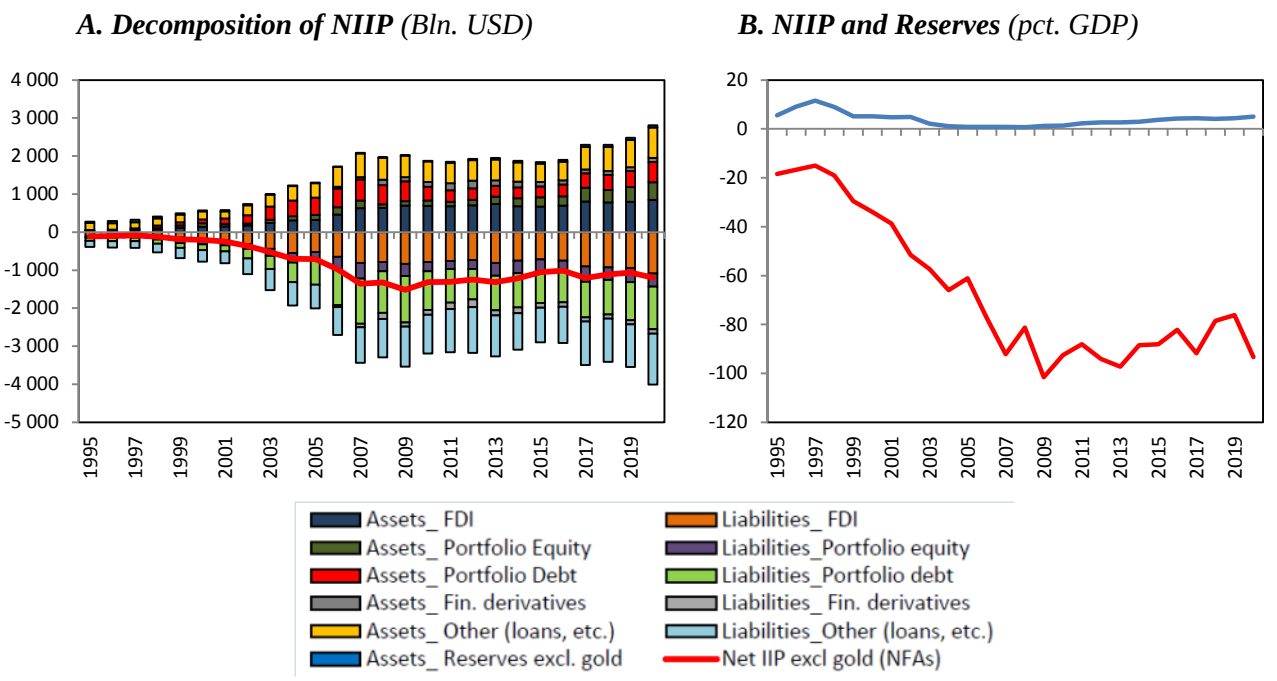
The case of Spain is an example of a net debtor (borrower) country with a low level of reserves. From Figure (2), we can see that the NIIP (excl. gold) is largely negative over the period of study, with an average of over (-65%) relative to GDP, and a

[†] Data are obtained from *External Wealth of Nations* (EWN) database by Lane and Milesi-Ferretti (2001,2007) - December 2021 update, and are slightly, but not significantly different from those used by Atkeson et al. (2022) obtained from the *US Bureau of Economic Analysis* (BEA) database. The EWN database, which is regularly updated, is the richest and most reliable source on IIP data, unlike the IMF database, which is based on member countries' statements and does not cover a long period for all countries. For example, Algeria started reporting its IIP data to IMF just in 2011.

historical record of (-101.6%) in 2009, knowing that Spain GDP has been seriously affected during the Global financial crisis of 2008-9 and has also suffered the financial turmoil due to the European crisis debt in 2010-12. Figure (2) shows also that there is two distinct phases characterizing the negative NIIP of Spain: in a first phase (between 1997 and 2009), NIIP is sharply worsening and moving from (-15.1%) to (-101.6%) relative to GDP; then, after (2010-20), a second phase is marked by a relative stabilization around an average of (-88%).

The debtor position (negative NIIP excl. gold) of Spain is explained by a total of (diversified) liabilities increasingly higher than a total of (diversified) assets. On the other side, the level of reserves (excl. gold) in value and as share of GDP is relatively low and stable: almost USD 36.2 bln and 3.9% on average, respectively. This is the case of an advanced economy with a highly opened financial account allowing the country to finance its deficits without a need to do it by using international reserves.

Figure (2): External financial position and reserve level – Spain, 1995-2020



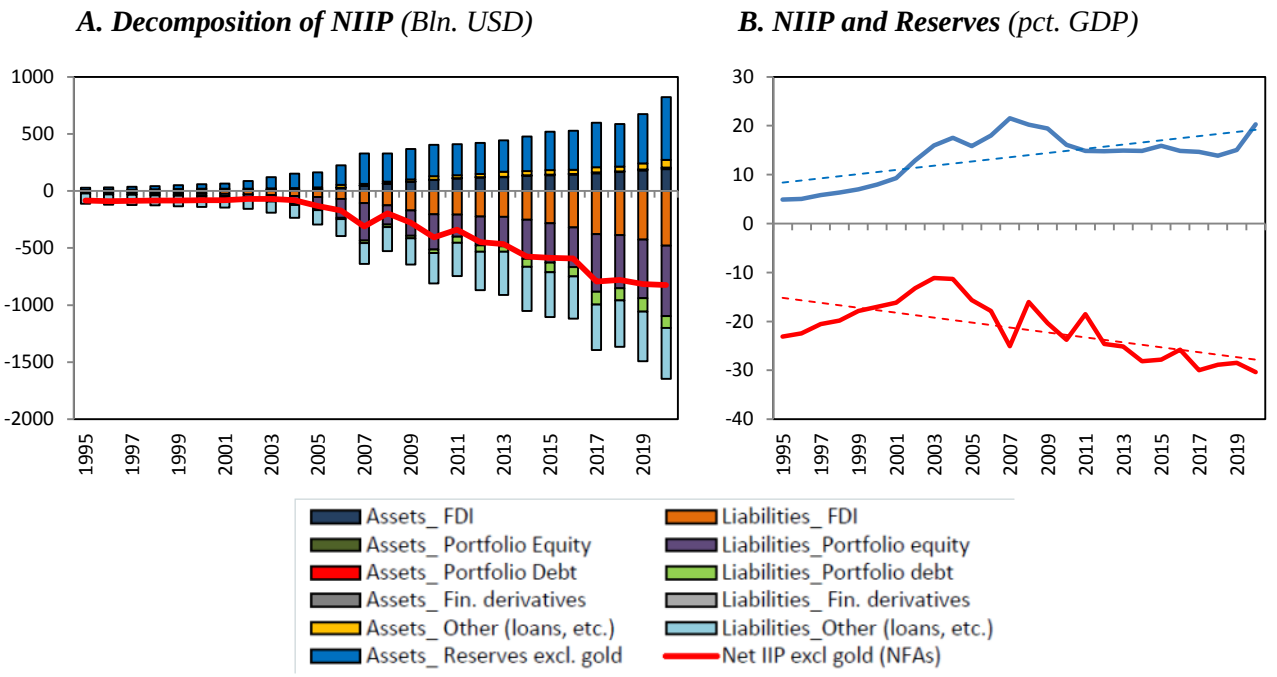
Source: By the author; based on EWN database by Lane & Milesi-Ferretti (Dec. 2021 update)

5.2. A net borrower country with high reserve level: The case of India

India has been one of the most dynamic EMEs in the last decade and is actually one of the largest international reserve accumulators. Reserve holdings rose from almost USD 38 bln in 2000 to over 275 bln in 2010, and almost 550 bln in 2020 – which means 10th, 8th and 4th ranks, respectively. Thus, the reserve level doubled over the last decade. Figure (3 – Chart B) shows an upward trend of reserves also in terms of GDP share over the period covered by the study (1995-2020). However, despite the substantial and

continuous accumulation of reserves, the external financial position is structurally negative and characterized by a continuous deterioration (Charts A and B). Although the high level of accumulated reserves, it never covered (even with other foreign assets such as FDI assets) all liabilities, in which the FDIs received, portfolio investments and external debt account for the majority. So this is an example where even a large reserve accumulator can be a net debtor *vis-à-vis* the RoW.

Figure (3): External financial position and reserve level – India, 1995-2020



Source: By the author; based on EWN database by Lane & Milesi-Ferretti (Dec. 2021 update)

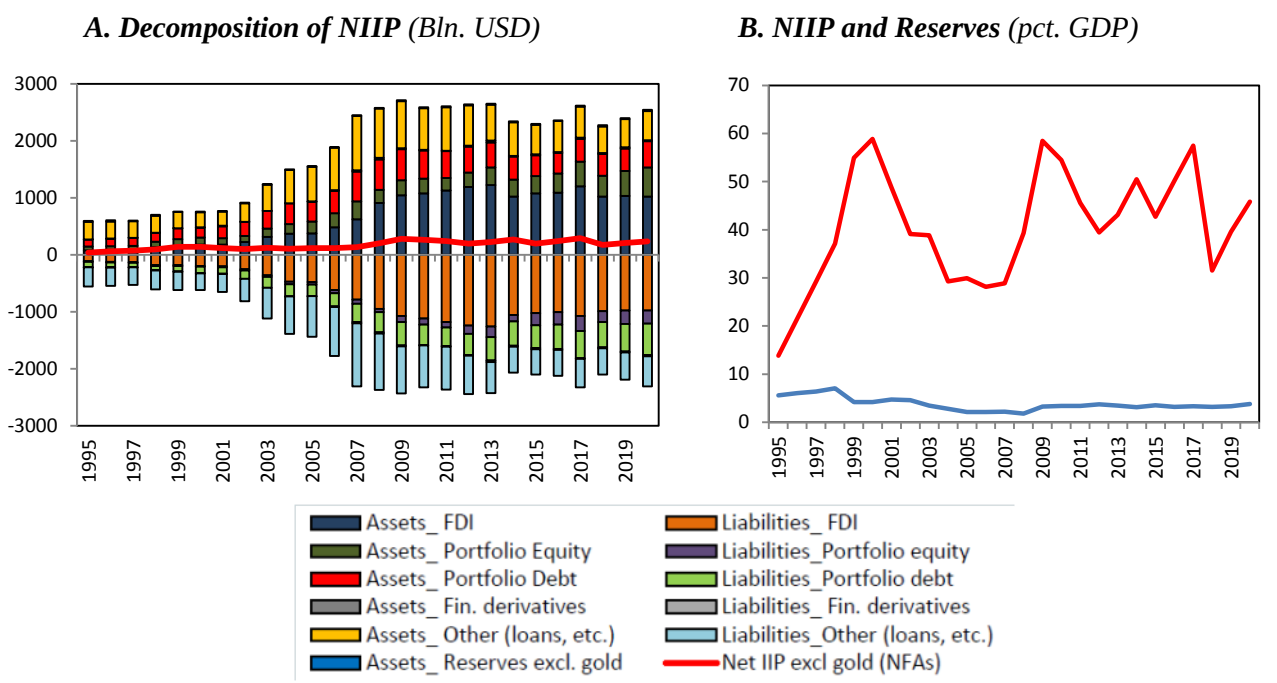
5.3. A net lender country with low reserve level: The case of Belgium

Figure (4) shows the case of Belgium as a net creditor country despite a relatively low level of reserves. Chart (B) shows that the NIIP (excl. gold) is largely positive over the period with an average of over 40% of GDP, and a record of 58.5% in 2009, while reserve levels in value and GDP share are relatively stable and low: almost USD 14.5 bln and 3.8% on average, respectively.

Like Spain, Belgium is an example of an advanced economy with a highly opened financial account and developed financial markets. The positive external financial position is explained by the fact that global assets that are permanently higher than global liabilities, as shown in Chart (A). In fact, one of the characteristics of AEs (whether they are net creditors or net debtors) is the broad (qualitative and quantitative) composition of assets and liabilities items in the financial account. In other words, the (quasi-) perfect financial openness, as well as the low country-risk of AEs, among other

factors, explain the fact that these economies do not have structural needs for holding large levels of reserves, unlike EMDEs, which are more fragile.

Figure (4): External financial position and reserve level – Belgium, 1995-2020



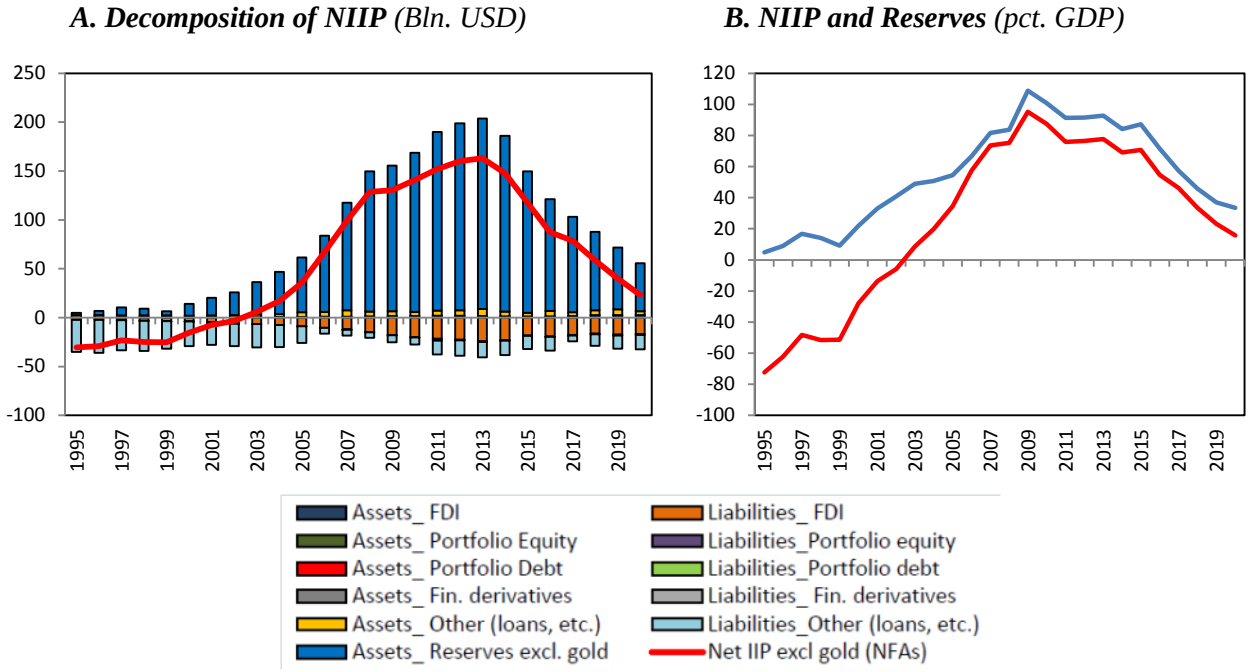
Source: By the author; based on EWN database by Lane & Milesi-Ferretti (Dec. 2021 update)

5.4. A net lender country with high reserve level: The case of Algeria

The last point noted above (EMDEs' higher vulnerability to external real and/or financial shocks) is very clear in the case of Algeria, where, since 2003, the move from a net debtor to a net creditor status is almost exclusively explained by the evolution of accumulated reserve stock strongly affected by hydrocarbon revenues during the period between the beginning of the commodity prices' boom and the oil counter-shock between 2014 and 2020. Figure (5 – Chart B) shows a near-juxtaposition of NIIP and reserve curves, particularly from 2006 onwards. This is due to the external debt refund, which constituted the bulk of external liabilities, with the FDI low level.

On the asset side, and with the exception of a very small share of the item "Other investment assets" (which are mainly: loans, commercial credits or deposits on nonresident entities), reserves represent almost all external assets (Chart A). This is the case of a developing economy dependent on oil and gas export earnings and with one of the lowest levels of international financial openness in the world. Thus, Algeria is an example of a country's external financial position is closely dependant on its reserve level. Indeed, an important drop of the latter implies serious negative effects on the country's external and also internal macroeconomic equilibria.

Figure (5): External financial position and reserve level – Algeria, 1995-2020



Source: By the author; based on EWN database by Lane & Milesi-Ferretti (Dec. 2021 update)

6. Conclusion

In this paper, we studied the relationship between a country's level of international reserves and its external financial position. The investigation aimed to determine whether the more or less significant level of a country's reserves necessarily implies its financial position *vis-à-vis* the RoW as a net creditor or a net borrower. To elucidate this problem, we followed a theoretical and empirical approach. Thus, at the end of the first two sections devoted to the study of the two central concepts, namely international reserves and the external financial position (measured by the net international investment position –NIIP), we have deduced that, at least on the theoretical level, the country's of reserves, whether high or low, does not determine the its status as a net creditor or borrower. The financial account components (measured in stocks as stipulated in the balance of payments accountability or in flows as established in the logic of the IIP) also help us to determine a country's external status.

Theoretically, we have been able to deduce that there are four possible combinations which could be deduced by associating the (low or high) reserve levels with the (negative or positive) levels of NIIP: net borrower countries with low reserves; net borrower countries with high reserves; net lender countries with low reserves; and net lender countries with high reserves.

The empirical investigation was presented in the last two sections of the paper. First, we presented international comparisons of the two central concepts of our study

(separately), by describing the top 20 largest reserve accumulators since 2000, and the external position evolution of the world three largest economies (United States, China and Japan). In a second phase, we gave empirical case studies of four countries whose situation in terms of reserve level and external financial position corresponds to the four theoretical combinations described above. The countries studied belong to different levels of economic development: two advanced economies (Spain and Belgium), one emerging economy (India), and one developing oil-exporter (Algeria).

Throughout the period of study (1995-2020), both Spain and India are net borrowers. However, Spain has historically held only low reserve stocks as GDP share, while India is a large reserve accumulator. On the other hand, Belgium and Algeria are both net lenders (over most of the period under study). Belgium has historically had low reserves as GDP share, whereas Algeria is (was) viewed as a relatively important accumulator (over most of the period under study).

Thus, we can deduce, ultimately, that the level of international accumulated reserves by a country is not necessarily synonymous of a particular financial position *vis-à-vis* the RoW. On the other hand, although the number of cases studied in this paper remains limited, and given just as examples, we can still draw some additional lessons from it. Indeed, as we have seen in the case of Spain and Belgium, advanced economies are less dependent on reserves for their external position. Whether net creditors or debtors, these economies are characterized by a quasi-perfect level financial openness, a highly diversified mix of external assets and liabilities, and often low country-risk (except for periods of major crises).

At the same time, developing economies, and particularly those dependent on global economic conditions that they do not control, as in the case of Algeria, we have noted that changes in reserve stocks determine considerably the external position and the country's status as lender or borrower. This situation is accentuated by the strict controls on capital flows. Thus, with lack of real activity diversification, deep and diversified financial markets, and a acceptable capital mobility level (despite the risks involved), the equilibrium of the Algerian economy will remain dependent on the level of reserves, which itself depends on exogenous variables, such as hydrocarbon prices, or variables hard to control, such as production and export capacity.

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