Brazilian Journal of Political Economy, vol. 42, nº 3, pp. 738-760, July-September/2022

The role of capital movements in Latin American balance of payments in 1990-2019

O papel dos movimentos de capitais no balanço de pagamentos da América Latina em 1990-2019

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RESUMO: Estudamos os dados do balanço de pagamentos de um conjunto de países latino-americanos entre 1990 e 2019. Pretendíamos quantificar os principais itens de receita e despesa em moeda estrangeira. Estávamos particularmente interessados em estudar a magnitude e o papel dos fluxos financeiros, seja como fonte de recursos externos, seja como despesa. A análise foi realizada em duas dimensões: seção transversal (para uma amostra de 11 nações) para todo o período e ao longo do tempo para as três décadas cobertas pelos dados. Este estudo oferece uma base empírica para reavaliar a visão tradicional que impõe uma "restrição externa" ao crescimento do comércio exterior. Em contrapartida, os dados aqui analisados sugerem que os itens relacionados aos fluxos financeiros são os principais responsáveis pela vulnerabilidade externa desses países.
PALAVRAS-CHAVE: Balanço de pagamentos; Lei de Thirlwall; crises econômicas; economias latino-americanas; movimentos internacionais de capitais.

ABSTRACT: We studied the balance of payments data for a set of Latin American countries between 1990 and 2019. We intended to quantify the main items of foreign exchange income and expenditure. We were particularly interested in studying the magnitude and role of financial flows, either as a source of external resources or as an item of expenditure. The analysis was carried out in two dimensions: cross section (for a sample of 11 nations) for the entire period and over time for the three decades covered by the data. This study offers an empirical basis to reassess the traditional view that places an "external constraint" on growth in the foreign trade. In contrast, the data analyzed here suggest that items related to financial flows are the main responsible for external vulnerability of these countries.
KEYWORDS: Balance of payments; Thirlwall's Law; economic crises; Latin American economies; international capital movements.
JEL Classification: G01; H12; F32.

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** The author thanks Valentina Viego, Rodrigo Pérez Artica, and Francisco Cantamutto for their thoughtful corrections and comments. Submitted: 8/June/2021; Approved: 12/August/2021.

 http://dx.doi.org/10.1590/0101-31572022-3355

INTRODUCTION

In this paper, we study the balance of payments of a group of Latin American countries for the period 1990-2019. The region actively participates in the international capital market, essentially as a recipient of flows of debt and direct investment. These foreign capital inflows are accompanied by a reverse flow of foreign exchange in the form of rent payments and capital flight. Our first objective is to quantify the gross financial inflows and outflows and the net contribution of external resources by foreign capital, as well as to analyze their role in the provision and expenditure of foreign currency in the region.

As a second objective, we empirically assess the structuralist thesis that asserts that the growth of Latin American countries is bounded by insufficient access to external resources. Economic analysis based on this argument usually combines two elements: a diagnosis of the cause of the "external restraint" to growth and policy recommendations for correcting it. Although there is a wide diversity of formulations of this line of thought, three postulates seem to be present at large[1].

The first is that the so-called "external restraint" rests in the technologically backward nature of the productive structure and can be overcome through industrial and technological policies that induce private capital to venture into complex branches. Second, those foreign exchange expenditures for financial reasons (rent payments for foreign capital and capital exit) exacerbate balance of payments difficulties originated by the backward productive structure, but are not part of the structural problem to be solved through economic policies. As a third characteristic element, it is usually asserted that the external restraint relaxes or even ceases to operate in periods of slack of foreign exchange caused by systematic trade surpluses.

The balance of payments data analyzed here allow us to review critically these ideas[2]. Our main result in this respect can be briefly exposed. Contrary to the "external restraint" thesis, the drainage of foreign currency through financial channels is the structural and permanent fact, while foreign trade disequilibrium operates only episodically, as an aggravating factor and in a quantitatively modest measure.

This empirical study consists of two parts. In the first one, we carry out a cross-sectional analysis aiming at establishing differences among countries or groups of countries in terms of their foreign exchange sources and expense structures. In the second part, we analyze the time series of balance of payments variables throughout the period 1990-2019. A methodological section precedes these two central parts of the investigation. Lastly, we present our conclusions.

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[1] See for example Cepal (2020) and Infante and Gerstenfeld (2013).

[2] In another essay (Burachik, 2019), we presented a critical review of the works of some of the main authors of the external restraint thesis in Argentina.

METHODOLOGY

To carry out this work, we have compiled the balance of payments data published by the IMF for several Latin American countries for the years 1990 to 2019. The sample selection criteria will be explained in the second section.

In the last decade, a new stream of empirical studies has emerged driven by methodological improvements in the balance of payments classification of international activities[3]. Particularly stimulating of academic work is the identification of gross capital inflows and outflows by instrument (direct investment, portfolio, other investment) and institutional sectors (financial sector, other sectors, general government, and central bank).

The conventional analysis of the balance of payments contrasts two variables. The current account balance (adjusted for the contribution of the capital account) determines the net external financing need or capacity. The counterpart of this financing (capacity) need are changes in the ownership of external assets, liabilities with non-residents, and variations in reserves assets recorded in the financial account[4].

$$CA = FA - KA - EO = 0 \qquad (1)$$

FA refers to changes in financial assets and liabilities and the capital account of those non-produced non-financial assets (land, brands, licenses, sale, and purchase of athletes, etc.) and capital transfers. EO are errors and omissions. CA has the following components:

$$CA = Trade\ balance + Primary\ income + Secondary\ income$$

Primary income reflects income payments for external liabilities (interest on debt, profits from foreign investment) and income receipts from foreign assets held by residents. Secondary income refers to current transfers between residents and non-residents (essentially, remittances by emigrants). Thus Equation (1) can be reformulated as (omitting EO):

$$CA = Net\ acquisition\ of\ assets - Net\ issuance\ of\ liabilities - KA + R$$
$$CA = Capital\ outflow - Capital\ inflow - KA + R$$

In the next section, we will consider the weight of all these components of the current and financial account as foreign exchange sources or expenses. The capital account result is computed as part of the inflows. Financial derivatives, a negligible item in the FA, are included in the outflows[5].

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[3] See Broner et al. (2013), IMF (2009), Avdjiev et al. (2017), and Kohler (2020). On Latin America, see Cepal (2019).

[4] CA is the current account, KA is the capital account, FA is the financial account, and EO is errors and omissions.

[5] Only two countries show transactions with financial derivatives in the period: Argentina for 0.1% and Chile for 0.3% of GDP. Liabilities of the FA explain 97% of capital inflows. Foreign capital inflows

The reader should keep in mind the following basic definitions. ***Gross capital Inflows*** consist of foreign direct investment (FDI) and the net incurrence of portfolio and "other investment" liabilities. Capital ***outflows*** refer to direct investment abroad by residents and the net acquisition of foreign portfolio or other investment assets by residents. The institutional sectors considered are ***private*** (banks and other sectors, which include corporates) and ***public*** (general government and central bank).

The starting point of the analysis is data at the country level, but our objective is to find general characteristics and trends valid for the region or groups of countries. The author constructed all the tables and figures based on information from the IMF. Gross domestic product data are from the World Bank.

CROSS-SECTIONAL ANALYSIS

Overview of Balance of Payments

Table 1 shows the structure of the balance of payments of a group of selected developed countries, of a sample of 16 Latin American economies (95% of the region's GDP in 2019) and of a subset of 11 Latin American nations defined according to a criterion that will be explained in the next section. Figures are accumulated values for the entire period 1990-2019 in percentage of GDP. The left panel shows the net capital export or import position, which equates to the current account result (last column). The right panel shows, respectively, the sources of the exported funds or the use of the imported resources. Five issues are of interest for our investigation.

Table 1: Balance of Payments of Developed Countries and Latin America. Accumulated Values 1990-2019 (% of GDP)

	Export or Import of capital				Sources/Uses				
						Primary income			
	Inflow	Outflow	Reserves	Net Exp/ Imp = CA + EO (a)	Trade balance	Total	Credit	Debit	Secondary income
Germany	7.7	11.0	0.0	3.3	3.7	1.0	6.0	4.9	-1.4
Austria (b)	6.4	8.7	0.1	2.4	3.4	0.0	8.6	8.7	-0.9
Netherlands	28.0	33.8	0.0	5.9	6.9	0.4	22.5	22.2	-1.4
Belgium (b)	15.9	17.1	0.0	1.1	1.1	1.5	15.9	14.4	-1.5
Denmark	7.3	10.4	0.9	3.1	5.5	-0.2	9.2	9.4	-1.4
Finland	12.9	14.5	0.1	1.5	3.6	-1.1	5.7	6.8	-0.8

registered in the KA (due to debt forgiveness operations) are significant only for Honduras and Nicaragua in certain years.

France	10.5	10.6	0.1	0.1	0.3	1.4	6.6	5.3	-1.5
Italy	6.1	6.2	0.0	0.2	1.4	-0.4	3.8	4.2	-0.8
Norway	9.1	17.3	0.6	8.2	9.7	0.4	6.7	6.3	-1.2
Japan (b)	3.2	5.1	0.9	1.9	0.5	2.6	3.7	1.2	-0.2
UK	17.1	14.3	0.2	-2.8	-1.5	-0.2	11.3	11.5	-0.9
USA	6.5	3.7	0.0	-2.8	-2.9	0.6	3.9	3.3	-0.5
Average	10.9	12.7	0.2	1.8	2.7	0.5	8.7	8.2	-1.1
Latin America (16) (c)	5.1	2.3	0.8	-1.8	-0.2	-2.7	0.9	3.6	1.2
Latin America (11) (d)	6.1	3.1	0.9	-2.0	0.8	-3.4	1.1	4.6	0.7

(a) Capital exporters are positive and capital importers are negative. (b) Data for Austria available only from 2005; for Belgium, from 2002; and for Japan, from 1996. (c) Countries in Table 2. (d) Countries with cyclical trade balances in Table 2

Source: All data processed by the author, based on IMF statistics.

(i) The developed nations listed in the table are net capital exporters, except the UK and the USA. Latin America is a net importer of capital.

(ii) All countries in the table are gross capital importers and, therefore, face rent payments registered in the primary income account. The weight of these capital inflows and rent payments reach very high figures in the Netherlands, the UK, and in nations of Northern Europe. Compared with these figures, Latin America's primary income debits seem moderate.

(iii) The table shows, however, a clear asymmetry in the international movement of capital. While all countries are gross capital importers, only developed economies carry out rent-generating capital exports that result in a positive balance of the primary income account. In Latin America, on the other hand, rent receipts from capital exports are very low and, as a consequence, the primary income balance is largely negative.

(iv) Not surprisingly, net remittances by emigrants flow out from the developed nations and flow in to Latin American countries.

(v) The export of capital of developed economies amounts to 12% of GDP per year (average), of which 10 percentage points enter these economies as foreign liabilities; only 2 percentage points comes from trade and primary income surpluses. The picture in Latin America is different. The exit of capital takes place at the same time as these countries strive for attracting foreign capital to compensate for a current account imbalance originated in the negative result of primary income. This configuration reflects both a structural issue (the systematic imbalance of primary income) and a policy issue (an external sector management which strives for keeping foreign exchange convertibility regardless of the current account balance).

Role of Foreign Trade in the Balance of Payments

To advance in the empirical analysis of Latin American economies, it is convenient to cluster individual cases according to some basic features of their external

sector. We consider foreign trade as the starting point of the foreign exchange balance faced by countries. A trade balance can be (if positive) a source of currency available for due payments in other accounts or, alternatively, (if negative) an outlay that must be covered with external resources obtained through other channels.

Table 2 shows trade data for the 16 largest Latin American countries. There are three well-defined cases. The largest group (72% of the sample's GDP) gathers the commodity exporters and one Central American country: Costa Rica. The trade balance of these countries fluctuates cyclically, with periods of continuous surpluses that last several years followed by deficit periods. Some economies in this group are more prone to surpluses (Paraguay, Chile, Uruguay); others are more susceptible to deficits (Colombia, Costa Rica, Ecuador), but the cyclical pattern of the trade balance is a common trait. The other four Central American economies in our sample (2% of the sample's GDP) form the second group. Their foreign trade is systematically in disequilibrium. We call "cyclical trade balance" (CTB) to the economies in the first group and "deficit trade balance" (DTB) to those in the second group.

Table 2: Foreign Trade Profile. Percentage of Years with Trade Surplus in 1990-2019

	Goods	Services	Total
Countries with cyclical trade balances			
Argentina	70	0	53
Bolivia	40	0	37
Brazil	77	0	57
Chile	87	7	73
Colombia	57	3	20
Costa Rica	0	100	27
Ecuador	67	0	33
Paraguay	97	7	90
Peru	60	0	43
Uruguay	47	93	63
Venezuela	90	0	80
Countries with systematic trade deficit			
El Salvador	0	93	0
Guatemala	0	67	0
Honduras	0	90	0
Nicaragua	0	50	0
Mexico	10	27	7

Source: All data processed by the author, based on IMF statistics.

According to its trade profile, Mexico (26% of the sample's GDP) is comparable to the second group. However, given the huge differences in scale and level of development between the first group and the smallest Central American economies included in the second one, México should be considered as a group of its own.

The cyclical pattern of the trade balance is not a singularity of the Latin American nations. Truely, some advanced economies are clear structural exporters (Germany, Austria, the Netherlands, Denmark, Norway), with trade balances never or

rarely falling into negative territory. However, others show a fluctuating trade result, with a surplus propensity similar to, and sometimes lower than, that of many Latin American countries. The negative primary income balance mentioned above is highlighted as the distinctive structural feature of the balance of payments of the region.

Foreign Currency Supply and Demand Structure in the Long Run

The analysis from this point will be focused on the first group of 11 economies with cyclical trade balance[6]. Table 3 shows the sources and uses of foreign exchange. Figures are accumulated values for the entire period 1990-2019 in percentage of GDP. The trade balance is presented as a "source" or "application" depending on the sign of the accumulated value for the entire period. "Reserves and public assets" are the accumulated variation in reserve assets and includes small amounts of other assets acquired or liquidated by central banks and governments. This variable functions as a source of foreign currency (sale of reserves) when negative and as an application (accumulation of reserves) when positive. "Capital flight" refers exclusively to private sector transactions. Four facts can be established for this group of economies.

(i) Foreign trade is, in general, a source of international currency and, when this is not the case, its weight in the total expenditure of external resources is small. In a few cases, the accumulated balance (Venezuela and Paraguay) is quite large.

Table 3: Sources of Foreign Exchange and their Applications.
Accumulated Values for 1990-2019 (% of GDP)

	Income				Expenses					
	Total (a)	Remittances	Capital inflows	Trade surplus	**Total (a)**	Trade deficit	Primary income	Capital flight (b)	Reserves (c)	Remittances
Argentina	**5.9**	0.2	4.8	0.9	**5.6**		2.6	2.7	0.4	
Bolivia	**10.7**	4.4	6.4		**8.4**	1.3	3.5	2.1	1.4	
Brazil	**5.0**	0.2	4.7	0.1	**5.0**		2.4	1.7	0.9	
Chile	**14.1**	0.9	10.4	2.7	**14.0**		5.4	7.3	1.3	
Colombia	**8.0**	1.9	6.1		**8.1**	1.8	3.1	2.2	1.0	
Costa Rica	**8.5**	1.0	7.6		**8.4**	0.9	4.0	2.3	1.1	
Ecuador	**7.7**	3.3	4.4		**7.6**	1.0	2.8	0, 4	3.3	
Paraguay	**7.3**	1.9	1.7	3.7	**6.2**		4.9	0.0	1.3	
Peru	**8.9**	1.9	6.2	0.8	**9.2**		5.5	1, 5	2.2	
Uruguay	**8.2**	0.4	5.8	2.0	**8.5**		3.7	3.2	1.6	
Venezuela (d)	**9.0**		2.7	6.4	**7.8**		2.1	4, 9	0.6	0.2
Total	**6.4**	**0.6**	**5.2**	**0.7**	**6.3**		**2.9**	**2.4**	**1.0**	

(a) Errors and omissions explain the difference between the total income and the total expenses. (b) Only the private sector; hence, the difference with data in Table 1. (c) It includes small amounts of public assets other than reserves. (d) Data available up to 2016.

Source: All data processed by the author, based on IMF statistics.

[6] The original research report includes similar estimates and analysis for the group of trade deficit economies and Mexico, excluded here for space reasons (available at request).

(ii) Rent payments (for foreign capital lending and investment) and capital flight (due to dollarization of domestic savings by the private sector) are the main foreign exchange expenditures. For the sample as a whole, 84% of the foreign currency demand corresponds to these two items.

Some cases are really striking. Capital flight by the private sector has absorbed two thirds of the foreign exchange availability in the period in Venezuela. In Argentina and Chile, this percentage is close to 50%. Peru and Paraguay, on their part, allocate about two thirds of their foreign exchange receipts to rent payments.

Higher levels of capital flight are associated with greater access to external resources as can be seen in the cases of Chile, Venezuela, and Uruguay at one pole, and Brazil at the other. Interestingly, however, there is no similar relationship between the total inflow of foreign exchange and the accumulation of reserve assets. We will return to this question later.

(iii) Most nations depend on foreign capital inflows to cover their international currency expenses. On average, 81% of the region's foreign exchange receipts come from external lending and investments. Interestingly, this dependence is observed even among economies with relatively frequent trade surpluses. For instance, a high proportion (74%) of Chile's foreign exchange income relies on attracting investments and credits from abroad, although its trade balance is usually (73% of the time) in surplus. Similarly, Brazil, whose foreign currency provision depends almost entirely on foreign capital, obtains trade surpluses in almost 6 years out of 10. Uruguay presents a similar situation.

In sum, economies with higher propensity towards trade surpluses do not seem to experience a milder dependence on foreign capital flows to access the needed amounts of foreign currency. In fact, in only 2 of the 7 countries that obtained accumulated trade surplus for the entire period (Venezuela and Paraguay), this item represents a relatively high proportion of the foreign exchange provision. As a result, in short, attraction of new investments and credits from abroad is the main mechanism for gaining access to foreign exchange, even for those economies that benefit from external resource receipts by other channels (trade surplus and/or remittances).

(iv) Almost all the reserve asset accumulation implemented in periods of currency slack is drained abroad in lapses of scarcity. The successive cycles of capital movements and international prices that the region went through since the 1990s have left a positive, but really small balance of accumulated reserves. Only in Peru, the accumulation of reserves throughout the entire period has exceeded 2% of GDP[7].

Net Transfer of Resources as a Source or Application of Foreign Currency

The financial deregulation since the 1970s restored the free international movement of capital interrupted in the 1930s, inaugurating a new historical wave of capital globalization.

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[7] The high percentage assumed by this item in Ecuador is linked to changes in the registration methodology caused by the dollarization in 2000.

The basic economic argument of the liberalization policy is that it allows "a more efficient allocation of capital on a world scale, from capital-rich industrial countries to capital-scarce developing countries. Access to capital markets should allow countries to 'insure' to some extent against fluctuations in national income, such that levels of domestic consumption are relatively less volatile" (Kose and Prasad, 2004, p. 50).

The validity of this thesis, however, depends in the first place on whether the net balance of capital movements induced by liberalization is a positive magnitude; only then, it implies a greater availability to savings (real resources) for the recipient economies. This is the question we will assess now.

To quantify the contribution of capital movements in terms of foreign currency, we employ the ECLAC concept of net transfer of resources (NTR), where

NTR = Gross inflow of capital – outflow of capital – primary income

Capital inflows generate rent payments and a certain capital outflow from the recipient economy, which "is a natural consequence of (financial) openness, to the extent that external investors recover their investments and domestic investors expand and diversify their operations abroad" (IMF, 2012, p. 25). For Latin America, a positive association between capital inflows and outflows over time since the early 1990s has already been documented (ECLAC, 2019). Here we will search for a cross-country positive relationship for a given period.

The reader should keep this definition in mind. A positive NTR implies that the capital movement is a source of foreign currency that can be applied to cover for trade imbalances or build reserves. A negative NTR, on the other hand, implies that gross capital inflows are less than the sum of rent payments and capital flight, so that foreign currency generated by other channels (trade surplus, remittances by emigrants) will be used to cover for the difference.

Table 4 replicates the information presented in Table 3, but replacing capital inflows, capital flight, and rent payment (primary income) with the NTR indicator. NTRs are placed in the left panel (as a source) if they are positive for the entire period and in the right panel (as an expense) if they are negative.

The positive cross-country association between capital inflows, on one hand, and rent payments and capital flight, on the other, implies that capital inflows and outflows tend to offset each other. In several countries, the accumulated NTRs throughout the period are positive, but in a magnitude that is only a fraction of the gross capital inflows received. Thus, for instance, rent payments and capital flight amounts to 91% of the gross capital inflows in Bolivia and 84% in Costa Rica.

In addition, in the countries that received positive cumulative NTRs during the period, these do not always represent a substantial portion of their foreign exchange availability.

Table 4: Sources of Foreign Exchange and their Applications.
Accumulated Values for 1990-2019 (% of GDP)

	Income				Expenses				
	Total (a)	Remittances	NTR	Trade surplus	Total (a)	Trade deficit	NTR	Reserves (c)	Remittances
Argentina	1.1	0.2		0.9	0.9		0.5	0.4	
Bolivia	5.0	4.4	0.6		2.7	1.3		1.4	
Brazil	0.9	0.2	0.6	0.1	0.9			0.9	
Chile	3.7	0.9		2.7	3.6		2.3	1.3	
Colombia	2.7	1, 9	0.8		2.8	1.8		1.0	
Costa Rica	2.2	1.0	1.2		2.0	0.9		1.1	
Ecuador	4.4	3.3	1.1		4.3	1.0		3.3	
Paraguay	5.6	1.9		3.7	4.5		3.2	1.3	
Peru	2, 7	1.9		0.8	3.0		0.8	2.2	
Uruguay	2.4	0.4		2.0	2.7		1.1	1.6	
Venezuela (d)	6.4			6.4	5.0		4, 4	0.6	0.2
Total	**1.2**	**0.6**		**0.7**	**1.1**		**0.1**	**1.0**	

(a) (c) (d) See notes in Table 3.

Source: All data processed by the author, based on IMF statistics.

Furthermore, a considerable portion of the countries in the table carried out a negative NTR throughout the period, fed by remittance receipts and/or trade surpluses. Argentina's supply of dollars, for example, depends crucially on foreign debt and investment; but, when rent payments and capital flight are considered, the net contribution of capital movements in terms of foreign currency availability is negative.

The information in Table 4 allows for a reformulation of comments inspired by Table 3. Although Latin American economies depend on foreign capital inflows to cover their foreign currency needs, capital movements are not a significant net source that could be employed to cover other expenditures (trade imbalances or reserve accumulation). Countries need foreign lending and investment basically to face currency outflows generated by capital movements itself (rent payments and capital flight).

It should be noted that the use of the NTR concept leads to the following reformulation of the accounting identity of the balance of payments:

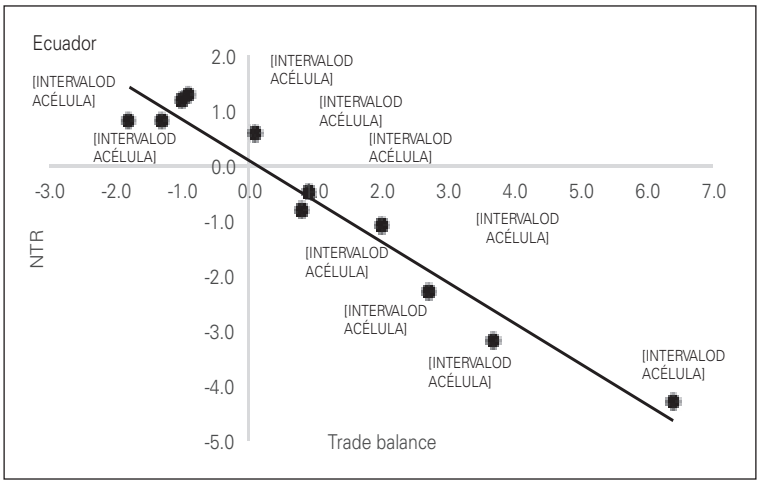
$$NTR = -(\textit{Trade balance} + \textit{Secondary income} - R)^{8} \qquad (2)$$

Positive NTRs as a source of foreign currency can contribute to offset a trade imbalance and/or to accumulate international reserves. Likewise, countries can cover negative NTRs with their trade surpluses, remittances by emigrants, and reserve disaccumulation. In short, negative NTRs must be compensated by a surplus of non-financial foreign exchange earnings and stocks and vice versa.

It is evident from Table 4 that, at a cross-section level, NTR shows a close negative association with the trade balance (Figure 1).

[8] The identity is not exactly fulfilled in Table 4, due to the inclusion of asset purchase and sale by the public sector as part of international reserve movements.

Figure 1
Trade Balance and Net Transfer of Resources (% of GDP)



Source: All data processed by the author, based on IMF statistics.

Note the nearly linear sequence followed by all the countries in the southeast quadrant. Interestingly, however, countries with stronger (net) export capacity supporting larger negative NTRs do not show a clear tendency to accumulate more international reserves.

These facts reveal an important policy issue. Greater trade surpluses, when available, tend to be absorbed by the excess of rent payments and capital flight with respect to the entry of foreign capital, rather than applied to reserve accumulation in order to gain space for fiscal and monetary policy.

TIME SERIES ANALYSIS

Basic Correlations

We begin the intertemporal study by analyzing the relationship between capital movement and the other variables of the balance of payments, for each country throughout the period 1990-2019. There are two sets of interesting correlations to focus on.

First, the relationship between NTRs, on the one hand, and, on the other, the sources from which they are fed (when they are negative) or the uses to which they are applied (when they are positive). Table 5 shows the simple correlation between NTR and the other three variables of the balance of payments. Coefficients that are statistically significant and reach a value of 0.60 or higher are highlighted with a gray shading.

The negative correlation between NTR and the trade balance over time is clear in most economies; periods of trade surplus come with net transfers of resources

abroad, while periods of trade deficit are accompanied by net capital inflows in excess of rent payment and capital flight.

Table 5: Simple Correlation between NTR and Other Variables of the Balance of Payments

	Trade balance	Remittances	Trade balance + remittances	Variation in reserves
Argentina	-0.83 ***	-0.02	-0.83 ***	0.74 ***
Bolivia	-0.19	-0.58 ***	-0.38 **	0.17
Brazil	-0.63 ***	0.30	-0.61 ***	0.64 ***
Chile	-0.93 ***	-0.59 ***	-0.92 ** *	-0.14
Colombia	-0.90 ***	0.34 *	-0.89 ***	0.26
Costa Rica	-0.83 ***	0.06	-0.81 ***	0.50 * **
Ecuador	-0.36 **	-0.54 ***	-0.76 ***	0.13
Paraguay	-0.72 ***	-0.61 ***	-0.79 ***	0, 01
Peru	-0.46 ***	-0.40 **	-0.51 ***	0.46 **
Uruguay	-0.72 ***	-0.44 **	-0.72 ***	0, 76 ***
Venezuela	-0.88 ***	0.48 ***	-0.87 ***	-0.33 *

*** Statistically significant at 1%, ** at 5%, * at 10%.

Source: All data processed by the author, based on IMF statistics.

Over time, the relationship between NTR and the trade balance is at the same time one of possibility and causality. On the one hand, as shown in Equation (2), a trade surplus makes possible a negative NTR, and a positive NTR makes possible a trade deficit. On the other hand, an incoming NTR from abroad or its interruption causes an internal adjustment process that changes the sign of the trade balance. A sustained inflow of positive NTR generates a real exchange rate appreciation that induces a deterioration of the trade balance. Whereas in periods in which the supply of foreign exchange depends critically on NTRs, its reversal induces economic processes (currency devaluation, slower economic growth) that favor an improvement of the trade balance.

The absence of a generalized time series correlation between NTR and the variation in reserves can be easily explained. Most countries accumulated significant amounts of reserve assets in the 2000s, due to a strong international demand for their commodity exports, and channeled a high proportion of their trade surpluses abroad in the form of negative NTRs.

The second relationship relevant for our research is the link between the aggregate availability of foreign currency and capital flight. Table 6 shows the statistical correlation between capital flight, on the one hand, and two measures of foreign exchange availability, on the other. In many countries, capital flight is positively correlated with total foreign exchange income over time and, even more

frequently, with gross capital inflows. Periods of greater access to foreign currency are also periods of higher capital flight.

Table 6: Simple Correlation between Outflows and Two Indicators for Access to Foreign Currency

	Total income	Gross capital inflows
Argentina	0.69 ***	0.61 ***
Bolivia	0.78 ***	0.78 ***
Brazil	0.92 ***	0.91 ***
Chile	0.88 ***	0.85 ***
Colombia	0.85 ***	0.87 ***
Costa Rica	0.83 ***	0.89 ***
Ecuador	-0.19	0.31 *
Paraguay	0.39 **	0.59 ***
Peru	0.59 ***	0.48 ***
Uruguay	0.58 ***	0.62 ***
Venezuela	0.83 ***	0.71 ***

*** Statistically significant at 1%, ** at 5%, * at 10%

Source: All data processed by the author, based on IMF statistics.

Fluctuations in Foreign Currency Supply

Our research here revolves around three issues:

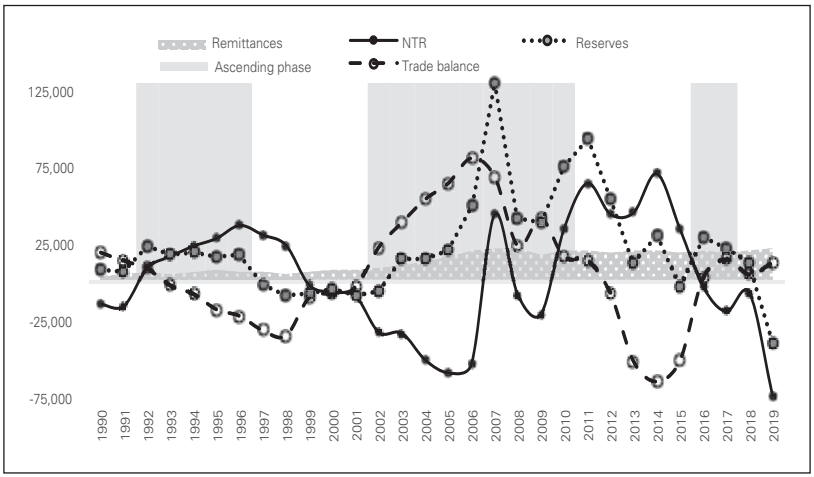
- The behavior of the main variables in phases of slack and phases of shortage of foreign currency;
- The behavior of the main variables in the transition process from slack to shortage phases;
- What can the evolution of the main variables tell us about policies in phases of foreign currency scarcity?

We establish phases of slack and shortage of total foreign exchange income, which is equal to the sum of all sources (NTR, trade balance, and remittances), with a positive sign in each year. Turning points are determined as follows: the maximum (minimum) point of an ascending (descending) phase corresponds to the year in which earnings are the highest (lowest) in a three-year time span. The ascending phase (A) is considered to begin the year after the minimum and culminate in the maximum year. among rising phases, the economy goes through periods in which total foreign exchange income declines or remains stagnant (D). In the analysis that follows, we use aggregate nominal dollar values to analyze the evolution of the variables and percentages of GDP to assess their economic significance.

- Behavior of the Main Variables in the Currency Slack and Shortage Phases

Figure 2 shows the variables in Equation (2) for the 11 economies[9].

Figure 2: Balance of Payments.
Main Variables (Millions of Dollars)



Source: All data processed by the author, based on IMF statistics.

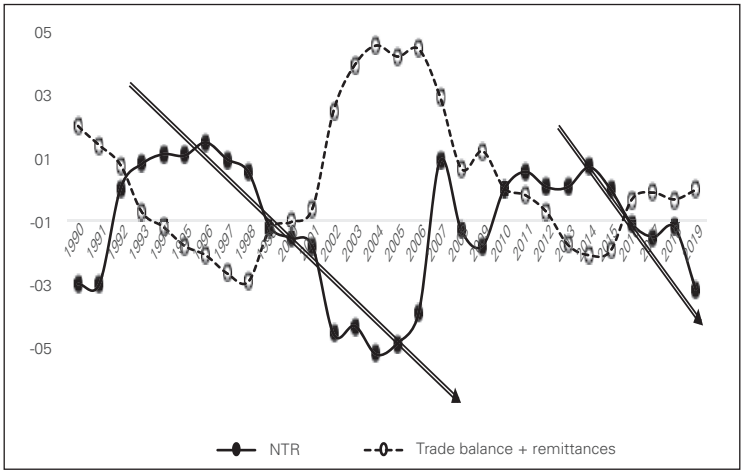
Phases A (gray bars) are those in which the main channel through which foreign exchange enters the economy maintains an upward trend. In the period 1990-2019, three of such phases occurred. That of the 1990s was based on a positive NTR from abroad, which compensated for the imbalance in the trade balance. The second A phase in 2002-10 started under the boost of trade surpluses in the years of high commodity prices. Beginning with the international crisis of 2008 and the consequent interruption of the price boom, this A phase was sustained thanks to the reactivation of positive NTRs in the years 2010-11. The most recent A phase, in 2016-17, was based on remittances and trade surplus. Remittances have grown in volume to become a relevant source of resources in the last decade.

Among these A lapses, phases of relative scarcity of foreign exchange developed, during which the variable that functioned as the mainstay of income lost momentum. The central feature of these D phases is the decreasing or negative contribution of capital movements compared to the positive or increasing contribution of remittances, foreign trade, and the variation in reserves.

As can be seen, the inverted fluctuations of capital movements and foreign trade determine these currency availability cycles. Figure 3 shows, on the one hand, the sum of trade balance and remittances and, on the other, NTR as percentages of GDP.

[9] All calculations in this section exclude Venezuela, with no data from 2017.

Figure 3: Net Transfer of Resources, Trade Balance, and Remittances (% of GDP)



Source: All data processed by the author, based on IMF statistics.

During the A phase of the 1990s, these economies received almost 2% of GDP per year in NTR from abroad, which contributed to face a growing trade imbalance. From 2000 to 2001, the foreign trade surplus was reestablished and, thus, a period of strong negative NTR abroad began. NTRs reached -3.8% between 2002 and 2006, the years of highest international commodity prices. This amount was equivalent to almost the entire trade surplus and remittances received. These high negative NTRs were not the result of a net reduction of liabilities (the stock of the total foreign debt barely changed), but the outcome of high rent payments (4%) and capital flight (2.4%) in the context of very low gross capital inflows (2.8%) in historical terms.

It should be noted that most of the foreign currency that enters the economy by way of a positive NTR is spent in the various currency demands in the same year. Therefore, inversely, when NTR turns negative, economies must face the currency drain caused by the capital movement (the excess of rent payments and capital flight with respect to gross capital inflows) with external resources obtained from foreign trade, remittances by emigrants, and sale of reserve assets. The resuscitation of capital flows that followed the international crisis of 2007 eventually reestablished a positive flow of NTR to the region that lasted until 2016.

We turn now to the contribution of capital movements in terms of foreign currency in the phases of foreign exchange slack. Table 7 shows NTRs and their components in these phases.

Table 7: Net Transfers of Resources and their Components in Phases of Foreign Currency Slack (% of GDP)

	1992-6	2002-10	2017-8
Gross capital inflow	5.0	5.3	5.0
Rent payments	-1.9	-3.5	-3.1
Capital flight	-1.2	-2.8	-2.2
NTR	1.9	-1.0	-0.3
NTR/gross capital inflow (%)	38		

Source: All data processed by the author, based on IMF statistics.

Rent payments and capital flight absorb most of the gross capital inflow. In other words, capital inflows are important because they provide the foreign exchange needed to keep interest payments on external debt up to date, to dispatch profits from multinational affiliates to their headquarters, and to feed the dollarization of domestic savings. The relevance of capital inflows is not due to the fact that they represent a significant source of external resources available for other uses such as trade imbalances or accumulation of reserves.

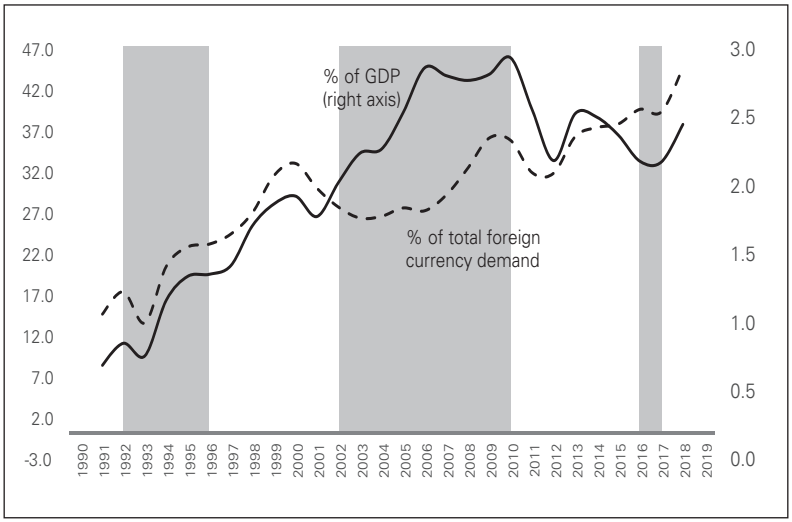
The last row of Table 7 indicates the percentage of external resources contributed by gross capital inflows that exceeds rent payments and capital flight and, therefore, can be applied to other uses. In the 1990s, when the wave of foreign direct investment and lending boomed, only 38% of the gross capital inflows was used (in combination with remittances) to cover the trade imbalance. In the next two phases of increasing foreign currency availability, NTRs were negative; it was necessary to use reserves, remittances, and trade surplus to close the gap between gross capital inflows and payments for rents and capital flight.

Latin American economies bear a permanent burden of rent payments and capital flight, hidden in periods of high trade surplus or high capital inflows (low international interest rates), and overtly manifested in periods of poor international commodity prices and high-risk aversion (high international interest rates).

Figure 4 shows capital flight as a percentage of GDP and as a proportion of the total availability of foreign exchange. The return of Latin America to the international capital market in the 1990s gave rise to an increase in the weight of capital flight in terms of GDP. The trend continued during the currency shortage period of the late 1990s and early 2000s, and, in 2010, it peaked at 3%.

The weight of capital flight in the total foreign exchange demand also grew. At the turn of the century, this percentage stabilized in a range of 25% to 35%, but, in the last years of the period analyzed, capital flight came to absorb almost half of the available foreign currency.

Figure 4: Capital Flight. Three-Year Centered Moving Average



Source: All data processed by the author, based on IMF statistics.

- Behavior of the Main Variables in the Transition from Slack to Scarcity

Figure 5 shows the components of NTR. Combined with Figure 3, it allows us to analyze the transitions from periods of slack to others of shortage of foreign exchange. In these transitions, three phenomena are present.

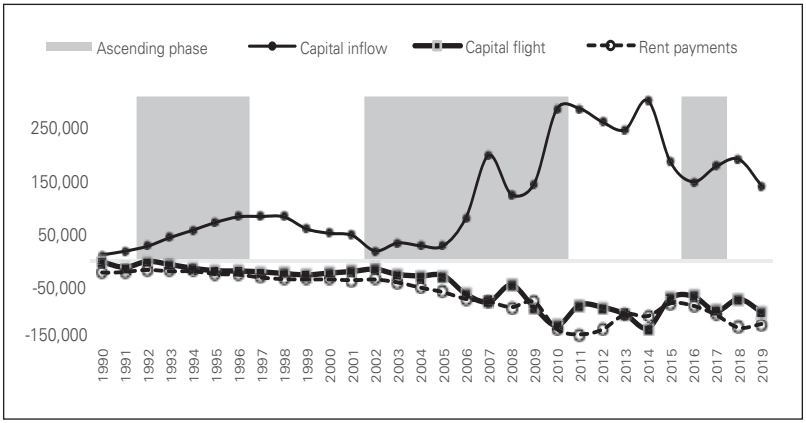
One is the slowing down of private capital inflows. The second is the increase or downward rigidity of rent payments and capital flight. The third is the tendency of the trade imbalance to worsen at the beginning of the transition and then, to correct itself as a result of a sharp decline in imports[10]. The growing shortage of foreign exchange endogenously generates contractionary economic conditions that induce this correction[11]. The typically pro-cyclical economic policy in emerging countries (Kaminsky et al., 2004) reinforces this trend.

Financial and non-trade factors play the leading role in these balance of payments crises. Imports is the only flexible item among foreign exchange expenses. In addition, their weight in the total foreign exchange demand in critical years is widely exceeded by rent payments and capital flight, with the biennium 1997-98 as the only exception in the last three decades.

[10] Not shown in the figure. The shift from the 1998 trade deficit to the 2002 surplus resulted from 24% contraction in imports and 6% increase in exports. The reversal of the trade deficit between 2014 and 2016 rested entirely on the reduction of imports, as sales abroad decreased.

[11] The business cycles of the peripheral countries are governed by the balance of payments (Ocampo, 2016).

Figure 5: Components of the Net Transfer of Resources (Millions of Dollars)



Source: All data processed by the author, based on IMF statistics.

- Indications on State Management of the External Sector in Times of Scarcity

The data analyzed in the previous section reveal the orientation of the State economic management and its adherence to the IMF criteria for managing capital flows (IMF, 2012, pp. 25-26). The general principle of this policy is to preserve the free movement of capital (except when crisis is imminent and only temporarily) and to proceed with internal policies for adjustment of the external sector (contractionary fiscal and monetary policies and monetary depreciation). Clearly, in a scenario of foreign exchange shortage (and depreciation expectations), the continued access of private agents to the foreign currency market[12] reinforces the tendency to the depreciation of the local currency and shifts all the weight of the adjustment to the domestic economic activity and the demand of imports.

Besides this policy approach, two resources are mobilized by the State in support of this general orientation. The first is the sacrifice of reserves or the drastic reduction in the rate at which the central bank accumulates them. In 1997-2002, years of acute crisis in several of the Latin American countries, sales of official reserves provided 8% of the total demand of external resources, a third of which corresponded to capital flight. In 2019, sales of reserves supplied almost 20% of the total requirements.

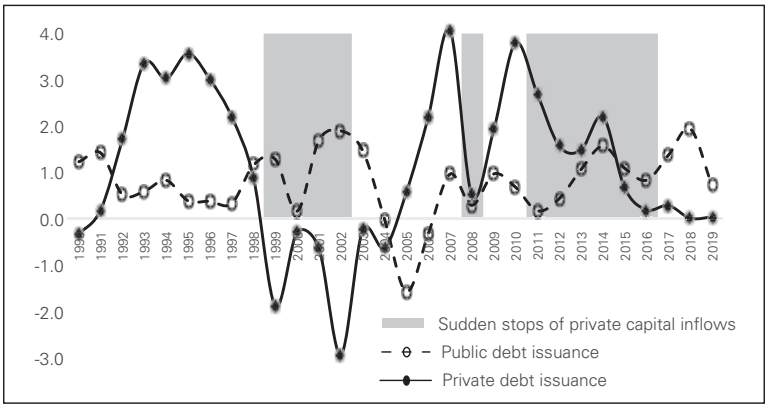
The second resource mobilized by the State is the increase of public debt. In a recent work, Avdjiev et al. (2017) argued that the issue of public debt in international markets by the governments of emerging countries operates as a compensation for declining private flows. During periods of crisis, when investors flee these assets (and residents amortize the net debt and become dollarized), it is the States and central banks that seek to increase their attraction of external credit.

Figure 6 presented below reveals three episodes of sudden stop of private

[12] For anticipating payments of imports and debt services, acquisition of foreign assets, etc.

capital inflows in 1999-2002, 2008, and 2011-16[13]. The graph shows issues of private and public debt, signaling the three sudden stop events with gray columns.

Figure 6: Net Issuance of Private and Public Debt (% of GDP)



Source: All data processed by the author, based on IMF statistics.

The figure seems to confirm the thesis of Avdjiev et al. (2017). The two long phases of decline in private liability issues that began in 1996 and in 2011 were accompanied by upward jumps in public debt issues. The decline in private flows in 2008 was followed by an increase in public debt issues in 2009-10.

This relationship also holds at the level of individual countries. The years in which the issuance of public debt reached relatively high levels (in terms of GDP) generally coincide with those in which the issuance of private debt was at negative, low, or decreasing levels. Notorious peaks of public indebtedness are observed in the years 1999-2003 in several countries; a period characterized by the closure of international capital markets for already highly indebted private banks and corporations. Sometimes, compensation results from an apparently more passive State behavior, with issuance of foreign public debt at a steady level, while the private sector is actively reducing its net external debt (Argentina between 1999 and 2001). In many cases, the historical maximums of foreign public debt issues were reached in the last four years of the period considered here, in parallel with the decrease of private issues.

CONCLUSIONS AND DISCUSSION

(a) The Function of Capital Movement in the Balance of Payments of Latin America. The data analyzed here suggest a pattern of Latin America external sector

[13] There is also a sharp decrease in capital inflows in 2019 but it was caused entirely by a decline in the placement of public debt.

cycles and crises, which differs in key aspects of the structuralist thesis of the external restraint.

The balance of payments of the economies in our sample has two structural features. The first arises from its historical position as recipients of foreign lending and investments since the 19th century. The empirical manifestation of this feature is a continued foreign exchange demand for interest payments and profits dispatched to headquarters from foreign affiliates. The "external restraint" argument emphasizes the peripheral or dependent role of these countries in the international division of labor and their technologically backward structure but understates the clear-cut distinction between creditor and debtor economies, as Prebisch used to call them.

The second feature consists of a "sterile" export of money-capital, that is, an export of external resources that does not generate a flow of rent collection in foreign currency by residents. The result of these two facts is a structural deficit in the primary income account.

The use of currency obtained by foreign lending and investment for acquisition of foreign assets by residents is a general phenomenon of capitalist economies, at least in recent decades. What could be considered a distinctive feature of a Latin American policy approach to the balance of payments management is the authorities' indulgence with respect to capital flight in the context of current account deficit, a situation in which foreign currency required for short-run interest payments and so forth are not assured.

The double permanent drain of rent payments and capital flight is covered with new capital inflows, trade surpluses, remittances by emigrants, and de-accumulation of reserves in combinations that vary according to the international conditions. Contrary to the external restraint thesis, the systematic deficit caused by rent payments and capital flight is the dominant structural fact; foreign trade acts as an aggravating factor in certain periods, and as a source of foreign exchange to cover it in others.

An implicit assumption of the external restraint approach is that it originates in economic factors and processes: the productive specialization resulting from capital allocation within the framework of an international division of labor. Adherents to this approach propose policy measures to induce a structural change, which is supposed to take place in the institutional framework of a market economy integrated into the world market. However, the key structural disequilibrium in the balance of payments lay not in the trade balance, but, as we have seen, in private international transactions of lending and investing that develops in free market conditions for supply and demand for foreign currency. Is in free market conditions that flourish the international indebtedness by local corporations and banks (which generates no external resources for repayment), production assembly schemes that involve high imports (and royalties payments) and no exports, wasteful profit dispatching policies by affiliates which at the same time operates without any mandatory framework relating to the use of local credit, new investments, technology transfer and external resources contribution, currency demand for pure

financial edging and investment purposes, *carry trade* international investment which generates much short term currency demand at the exit than at the entry, etc.

Therefore, the balance of payments cycles and crises are a reflection of structural and historical factors as well as of the free market approach towards the international economic relations developed by private capital, an approach which no emerging capitalist State seeks to avoid. Clearly, strategies mentioned in the above paragraph cannot be eradicated by the type of light and transitory regulations tolerated by the WTO and the IMF on capital flows. They belong to the realm of sovereign private capital decisions; to overrule them implies a denial of private property over the means of production.

(b) The difference between capital inflows and rent payments and capital flight gives rise to a net transfer of resources whose sign and magnitude vary over time according to fluctuations in capital exports from developed nations. Although Latin American economies depend on the inflow of foreign capital to cover the two negative items, the net contribution of NTR available to compensate for other expenditures, such as trade imbalance or the accumulation of reserves, is relatively low and, in many cases, negative.

Rent payments and capital flight themselves absorb most of the external resources in times of active foreign investment and lending. And, when these inflows lose momentum, external resources obtained through foreign trade, remittances by emigrants, or reserves are employed in sustaining NTR abroad.

(c) Foreign trade is not a systematic and significant burden of foreign exchange spending. Most countries present a cyclical pattern of trade balance and show different propensities to obtain surpluses.

The data show that, far from constituting a systematic channel for draining foreign exchange, the region's trade balance is capable of sustaining substantial net transfers of resources abroad caused by foreign investments and financing transactions. In fact, we have found that export capacity translates into greater transfers abroad.

(d) The drainage of resources through financial channels is a permanent phenomenon; it is the main determinant of periods of shortage of foreign exchange and also acts in the slack phases, absorbing a significant part of the income from external resources.

Consider the shortage of foreign exchange that settled in the region as of 2010-11 and that many economists explained as a "return" of the external restraint[14]. The data analyzed here show that the beginning of a new phase of currency shortage did not originate in the structural inability of these countries to obtain foreign currency, but in the way the financial resources that entered in historically high amounts in previous years were used, with the active participation or consent of the national authorities.

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[14] On Latin America, see Converti and Wahren (2018). On Argentina, Ferrer (2015) and Chena et al. (2018).

Given the systematically negative balance of the primary income account of the countries of the region and the free exchange conditions that the authorities grant to the private sector, an increase in the export capacity translates into a greater short-term emigration of external resources, with relatively small preemptive reserve accumulation for future negative international developments.

(e) The fluctuation of the international capital markets has played a determining role in the cyclical movements of foreign currency availability of the economies studied here. In the periods of acceleration of foreign investment and credit, the gross inflow of capital covered the payments for rents and capital flight and produced a small remainder to sustain, together with the remittances by emigrants, an unbalanced foreign trade and the accumulation of reserves. When gross capital inflows decelerated, on the other hand, there has been a net emigration of resources fueled by the trade surplus, accumulated reserves, and income from remittances by emigrants. The large trade surpluses generated in this group of countries as a result of the international price boom in the 2000s until the 2007 crisis (plus remittances) were almost entirely transferred abroad through this negative net movement of capitals of the period.

Financial factors, not trade, play a leading role in balance of payment crises in the countries of the region. Certainly, the trade imbalance is present in the transitions from slack situations to others of shortage of foreign exchange. However, its role in the crisis process is secondary. The central factors are the decrease in the rate of private capital inflows, the downward rigid or even increasing burden of rent payments and capital flight, and the continuous free market conditions granted by the State. The trade imbalance is the only spending item that tends to ease into a source of foreign exchange during periods of crisis. In addition, its weight in the total outlays of external resources in critical years is widely exceeded by that of rent payments and capital flight.

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