An institutional interpretation of the first historical wave of financial globalisation

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ABSTRACT: Economic historians have published an extensive literature discussing the reasons for the emergence of global financial markets from the late nineteenth century until the beginning of the First World War. They have presented different interpretations and methods to deal with the complexity of this of financial globalization period, however, many of them does not take into account two related aspects to the formation of global financial markets that are crucial for this article: 1) the role of institutions by institutional furniture to the international financial integration; and 2) the importance of the institutional framework evolution from a historical perspective for the emergence of the Gold Standard. The article examines the role played by the institutions in the process of global markets integration in the 1870-1914 period. Therefore, it deals with the economic policy implemented by core countries of the time, and with technological innovations that have driven financial integration, such as mechanical minting coinage, the telegraph and the telephone. The main conclusion is that the evolution of a dense network of historically specific institutions lies on the foundations of the classical gold regime.
Key words: Gold Standard, financial globalisation, institutional evolution

1. Introduction

Globalisation and financial globalisation, its most contentious aspect, have increasingly stimulated the interest of scholars from within and outside economics. Over the past two decades, a large literature has developed in different and more and more specialised strands to deal with the causes, controversies and repercussions related to the increased global commercial and financial activity. More specifically, a number of prominent economists and economic historians have produced a voluminous literature seeking to find reliable evidence of the dramatic increase in world financial integration, and to scrutinise the issues that have emerged from it since the last hundred years or so.

Contrary to what one might think, financial globalisation is not a recent phenomenon, both in historical terms and within academia. Scholars such as Michel Bordo, Barry Eichengreen, Maurice Obstfeld, Alan Taylor, Kenneth O'Rourke, Jeffrey Williamson, Dani Rodrik, P. O'Brien, Deepak Nayyar, Phillip Lane, M. Milesi-Ferretti, Paul Hirst, Graham Thompson, Nicholas Crafts, Michael Twomey, among others, have examined historical literature and data related to global capital mobility from the classical Gold Standard era (1870-1914) until the early twenty-first

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century, and have identified that the degree of financial integration has oscillated in long waves since then.[2]

Aforementioned authors have developed different interpretations and methods to deal with the complexity of the long waves of financial globalisation since it has been carried out based on various theoretical approaches. Many of them overlook two connected features of the phenomenon that are crucial to this article: 1) the role played by the institutional furniture (in Veblenian terms, see VEBLEN 1899, 1919) of global financial market integration; and 2) the importance of the institutional framework evolution from a historical perspective for the emergence of the Gold Standard. It is beyond the scope of this article to deal with the institutional fabric of the second financial globalisation era (whose unfolding still meets in course), so this paper aims to examine a variety of issues regarding the institutional evolution of the classical Gold Standard period. More particularly, the essay is focused on addresses these key questions: What was the importance of the historically specific institutional structure for the emergence of the classical Gold Standard regime? Which were the key institutions underlying the Gold Standard and how they evolved through time?

The article is organised in four sections, besides this introduction. Section two is devoted to discuss some key theoretical arguments related with the topic proposed. The third examines the characteristics of the first financial globalisation through the development of two key institutions: money and markets. The fourth looks at the formation of global financial markets through the evolution of international communication and policy procedures. Section 5 concludes the essay.

2. Key arguments for a historical and institutional examination of the first era of financial globalisation

In this paper I will scrutinize the historical features of the Gold Standard based on a method developed by the institutionalist scholar Geoff Hodgson (2001, 2002, 2007), which takes into account the role played by the evolution of institutions and its historical specificities to describe the nature of any particular economic phenomenon. He called it the "problem of historical

[2] Some authors from this set of scholars have called the U-shaped pattern the financial globalisation historical swings. That means, financial markets presented high levels of integration during the forty years prior to WWI. This integration declined sharply in the years between the wars, recovering gradually after the end of Bretton Woods agreements until it reached again, in the 1990s, the comparably high levels of financial integration attained before 1914.

specificity". In doing so, I am assuming the Original Institutional Economics (OIE)[3] as the key theoretical perspective to grasp the issues surrounding the historical institutional evolution of the first financial globalization phenomenon.

The constitution of an "economic theory with institutions" derived from the theoretical effort to understand the human agency through the examination of its cultural context, focusing on the role played by evolving institutions over time. In doing so, institutions and the evolutionary nature of the economic process would define different types of economic systems (Hodgson, 1998, p. 168), thus a "general institutionalist theory" should indicate how to develop specific or varied analyses related to particular phenomena. The problem of historical specificity is considered even in one of Hodgson's (1998, p.168) definitions of institutionalism: "Institutionalists do not attempt to build a single, general model on the basis of those ideas. Instead, these ideas facilitate a strong impetus toward specific and historically located approaches to analysis".

According to Hodgson's approach, history matters to investigate the causes of the unfolding sequence of economic events, then the interpretation of the first wave of financial globalisation "must explore the particularities of the past" (Hodgson, 2007, p. 112). Hence, the analysis proposed to examine it is focused on the specific characteristics and underlying institutions of that era. In other words, I will look for stylized facts of the system aiming to disclose the structural basic features and specific groups of embedded institutions that can explain the nature and the evolutionary process of cross-border capital movement throughout the historical period. This analysis does not linger merely on statistics, but aims to explain the institutional scope and the causal processes of the financial integration in that era. The historical context and the particular institutional, social, cultural and technological conditions of that age will be the standpoint to describe the dynamics of that financial globalisation episode. Surrounded and spurred by institutional changes, it is considered here to be an evolutionary process of financial market transformations.

Globalisation and financial globalisation are not simply an amalgamation of markets, but a process of ongoing intercontinental integration of people and nations, which involves necessarily changes in key institutions such as money, market structure, governments, agent's and firm

[3] Institutionalism, in its Old American School branch, is a multidisciplinary research programme whose basic notional element lays on the concept of institutions understood as habits of thought ("habitual methods of procedure" [VEBLEN 1898a, p. 391]; "prevalent habits of thought" [VEBLEN, 1899, p. 125 and 1919, p. 314]; "habitual methods of carrying on the life process of the community in contact with the material environment in which it lives" [VEBLEN, 1899, p. 127]; "settled habits of thought common to the generality of men" [VEBLEN, 1909, p. 626]), rules, norms, and its evolution (HODGSON, 1998).

behaviour, law, social rules, culture, language, habits and traditions. In doing so, it affects the world economy in many aspects, such as: urban and international migration, ([un]expected) geopolitical changes, natural environment issues, military and political disputes, legal systems, multilateral international (or local) institutions, technological developments, and the list goes on endlessly. This way, globalisation and financial globalisation is an institutionalized concept subject to evolution. They are "a set of processes" (PERRATON, 2003, p. 38) in continuous transformation running across the spheres of human collective action, which interact with institutions in ongoing evolution, subject to contradictions, advances and retreats. In this article, its historical dynamic progress is focused on the role played by the network of institutions (and its evolution)[4] underlying the occurrence of the first wave of financial globalisation.

Financial transactions are also a highly institutionalized economic activity. They are formal and/or informal contracts undertaken in the present but ended in the future, hence subject to some degree of payoff uncertainty. As a result, contracts and the large number of financial instruments involved should be carefully organised, ruled and managed in order to help the system to operate in ordinary conditions. That is why financial activities depend on a framework of institutional arrangements, such as: markets, money (including international monetary standards and monetary instruments), habits, traditions, rules and regulations (both *de jure* and *de facto* regulations), legal proceedings and policy schemes. It goes without saying that credible and stable institutions do not provide a shield against international and/or systemic crises, but they are an important institutional macroeconomic foundation to help alleviate the harmful effects caused by sudden changes of market mood.

Global financial flows have fluctuated throughout history by the development, adaptation and interaction of that institutional fabric. On the other hand, financial crises and crashes have occurred in certain situations where, broadly speaking, domestic and international institutional framework collapsed[5]. Institutions progressed and regressed throughout time, so their historical changes provide important insights into understanding why financial globalisation framework has been capable of dealing with a huge volume of capital in certain periods in history, and why this capacity sometimes breakdown. Then, the following analysis is focused on the institutional

[4] This way of interpreting the institutional changes is strongly influenced by Hodgson (1998, p. 168) mentioned in footnote 2, who asserts that: "The core ideas of institutionalism concern institutions, habits, rules, and their evolution."
[5] One might remember two key historical episodes to illustrate this statement: the demise of the Bretton Woods arrangements in 1971 that led to the end of the "Thirty Glorious Years", and the dismantling of prudential regulation rules of American financial system after the 1990s, which eventually resulted in the subprime crisis in 2008.

evolution of the Gold Standard, aiming to grasp a deeper learning of the underlying historical specificities of period.

Institutional characteristics are specific in different moments of history and confer idiosyncrasies to each international financial system. So then the 1870-1014 period had its specific institutional characteristics related to the historical period in which it took place. Examining this historical experience, it is clear that there had been a "dense network of financial institutions" (BALDWIN and MARTIN 1999, p. 8) underlying its development. From a different standpoint, Hodgson (1998, 2002) brings to attention for the importance of placing the economic analysis on the grounds of historically specific economic institutions. His purpose is to encourage the analyst to take into account the historical specificity of institutions in order to establish their conclusions about the subject in debate. Considering these two scholarly suggestions, the analysis proposed in this article is focused on an examination of what I call the "dense network of historically specific financial institutions" to examine the evolutionary process of financial institutions during the first episode of financial globalisation ever, aiming to provide then a depiction of its salient aspects.

In summary, the theoretical and methodological elements presented in this section will be the basic premises for the interpretation of the historical institutional evolution of financial globalisation during the period in question. The evolution of institutions designates the time, catching hold of public and private sentiment, leading us to understand the mind of the era, revealing key aspects of the phenomenon that have been neglected in several historical investigations. Therefore, scrutinizing the globalisation of finance through the lens of the role played by them in the process of global financial integration, implies that the article offers a different angle of examining the phenomenon that may complement one of the sides that the subject has been examined so far.

3. Building financial globalisation through key institutions: money and markets

Institutional and political factors deeply marked the first wave of financial globalisation. The most important was the exuberance of the British economy and the outstanding pace of international capital flows from the late nineteenth century to the beginning of the WWI. It is not controversial among scholars the fact that the UK political, economic, military, technological and financial power was a chief reason that increased the degree of global commercial and financial integration spreading its monetary system based on gold (ALDCROFT and RICHARDSON, 1970;

CAIRNCROSS, 1953; EDELSTEIN, 1982; EICHENGREEN 1992, 1996; GALLAROTTI, 1995; IMLAH, 1958; PLATT, 1968; POLLARD, 1985; NORTH, 1962).

The classical Gold Standard was a monetary global system in which the value of national currencies was fixed at a specific weight of gold, so its chief feature was the commitment assumed by governments to maintain fixed exchange rates with gold. That means, Central Banks were supposed to freely convert the currency of each participating country into gold at any time at the legal rate, so that monetary stability was the economic policy priority for the system's countries members. By creating a stable monetary parity to gold, this arrangement stabilised the exchange rate of many countries within narrow limits of variation. As a consequence, most of international debts were settled in gold.

In fact, the mechanisms of balance-of-payment adjustment managed by central banks and (to a minor extent) by commercial banks to guarantee the defence of gold convertibility were not always obeyed. Scholars such as Bloomfield (1959), Eichengreen (1996), Gallarotti (1995), McCloskey and Zecher (1976), Nurske (1944), among others, maintain that central banks developed many ways of violating the "rules of the game", putting at risk the stability of the system. Central banks usually tried to avoid an outflow of gold in order to preserve the stability of their currency, so their decisions were focused mainly on maintaining gold reserves compatible with the golden points and internal price stability. In doing so, they applied the discount rate to constrain the erosion of gold reserves up to the point in which international markets decided to increase their exports. In other words, they increased interest rates at least during the time needed while other countries increased their imports from the country where prices went down due to the central bank's restrictive policy.

The results attained by the operation of the discount rate were usually successful. This policy procedure involved the management of loans and interest rates which in turn aimed at controlling the country's gold reserves and consequently the supply of money. For instance, if there was the expectation of a gold outflow, the central bank increased the discount rate withdrawing money from the market, making exports more competitive. Then, the trade deficit would be eliminated and the gold reserves avoiding preserved. Similarly, interest rates could be increased also to reduce credit (and then increasing the cost of investment), keeping the entrepreneurs under strict market discipline.

Alternatively, there were other two ways to reduce the money supply in order to avoid an outflow of gold. Open market operations were sometimes employed in Britain and (by the end of

the 19th century) in Germany but not regularly because it required a developed financial market to be able to negotiate a number of bonds efficiently. Foreign exchange market operations with the same purpose occurred between London and New York but were also not so significant at that time. Both of them occurred simultaneously, but these two alternative ways did not reflect the reality of the European and American financial structures during the Gold Standard. As a result of such improvements, gold flows to settle balance of payments disequilibria were actually scarce, especially due to central banks cooperation, and the risk, transportation fees, and insurance costs of gold displacements.

Up to this point, one can imagine that the international transactions under the Gold Standard were a consequence of the operation of an agreement to a set of rules, and/or regulations formally written in some forms of codes. As a matter of fact, such statement is not true, despite the occurrence of four major attempts to construct an international monetary regime among developed nations in 1867, 1878, 1881, and 1892 (GALLAROTTI, 1995, p. 61). A couple of reasons could be pointed out for that. First, apart from the legal provision committing central banks in maintaining the convertibility of their currencies into gold, there was not a statute to prescribe laws or codes to be followed. Then, over time there were many deviations from the mechanisms of adjustment described above. The two quotations below could enlighten this point. McCloskey and Zecher (1976, p. 362) reasoned that:

> Central banks often did not play the rules: the Bank of France and the National Bank of Belgium, for example, kept their discount rates low regardless of gold flows. An alternative indicator of the extent to which central bankers played the rules is the extent to which the relationship between inflows of gold and increases in domestic credit was positive. Once again, the indicators are that in the late nineteenth century the monetary authorities, in the case American and British, cheated: the correlation between gold flows and annual changes in domestic credit was -0.07 in the United States and -0.74 in the United Kingdom.

As can be seen, the "rules of the game" were not fully respected at all, so they cannot be considered a central pillar for the maintenance of the Gold Standard, at least in the short run. Nonetheless, they also cannot be discarded as unimportant. The violation of these rules in the short term was tolerated as long as agents believed that inconsistent policies relating to the monetary stability would not happen indefinitely. That is to say, in the long run those rules should be maintained, otherwise the system would not survive. Considering this, its institutional maintenance in the short run were, actually, weak, therefore should be found in other more robust and credible foundations.

Interestingly, despite the rules were defied many times, the system continued in operation up to the occurrence of a world war.[6] Then, how did the Gold Standard regime operate for so long without a formal code, and without having its informal commitments strictly obeyed? Modern historiography on this subject has answered this puzzle suggesting that two key elements contributed to the maintenance of the system: the long term commitment to gold convertibility, and international cooperation among the great central banks (SAYERS, 1976; SCAMMEL, 1985; EICHENGREEN, 1992, 1996).

One can imagine that these two pillars worked well in all or most member countries, but that is not truth, even so the two statements make sense. The scholar literature recognises that the system pivoted around the core European countries, namely the UK, France, Germany, and in minor extent, the US. Hence, the management of the game by these players strongly influenced the others at the periphery of the Gold Standard world, especially in other Latin Monetary Union countries such as Belgium, Italy, and Switzerland, and the Nordic countries. It means that not all central banks and governments cooperating with each other, however, the commercial and financial interests of the developed countries was so relevant that influenced the behaviour of other nations. The point is if one assesses the extent and effectiveness of cooperation and the commitment to gold convertibility among national governments and central banks in each country, the result is not auspicious (GALLAROTTI, 1995). However, the conclusion is different looking at the most advanced monetary powers, especially when they were in case of need. This key stance deserves prompt justification. Eichengreen (1992, p. 30) stated that:

> The key to the success of the classical gold standard lay rather in two entirely different areas: credibility and cooperation. In the countries at the center of the system – Britain, France, and Germany – the credibility of the official commitment to the gold standard was beyond reproof. Hence, market participants relieved central bankers of much of the burden of management. If sterling weakened, funds would flow toward Britain in anticipation of the capital gains that would arise once the Bank of England intervened to strengthen the rate. Because the central bank's commitment to the existing parity was beyond question, capital flows responded quickly and in considerable volume. Sterling strengthened of its own accord, usually without any need for government intervention. Speculation had the same stabilizing influence in France, Germany, and other European countries at the center of the gold standard system.

Following, Eichengreen (1992, p. 31) presents some examples of international cooperation between central banks held at the time:

> The Bank of England stood ready to let gold go when it was needed in the United States. The Bank of France stood ready to lend gold to the Bank of England or to purchase sterling bills when the British gold parity was

[6] McCloskey & Zecher (1976:363) affirm: "Yet, the gold standard, it is said, worked quickly and well. The exchange rate between sterling and dollars, among many other rates, remained virtually unchanged from January 1879, when the United States put itself back on gold, to August 1914, when the war put the United Kingdom effectively off it".

endangered. The Reichsbank and the Russian Government came to the aid of the Bank of England in periods of exceptional stringency. On other occasions the favour was returned: in 1898 it was the turn of the German banks and the Reichsbank to obtain assistance from the Bank of England and Bank of France. The smaller gold standard countries of Europe – Belgium, Norway, and Sweden among them – repeatedly borrowed reserves from foreign banks and governments. Once central banks and governments, by extending loans, signalled that they stood ready to support the country in distress, the way was opened for additional loans by private bankers both domestic and foreign.

In sum, the long term commitment to gold convertibility, and international cooperation among the great central banks is another piece of evidence to show the importance played by institutional aspects in the development of the regime.[7] Furthermore, inspired by Keynes's (1930, p. 258) assertiveness regarding the choice of gold as a standard of value to establish a monetary standard, I consider that the long term commitment was motivated by tradition, which can be consider as an institution based on the definitions presented in the section above.

Governments (especially in the core countries) were committed to maintaining the long term convertibility into gold, overcoming the problems caused by short term deviations. This commitment was measured as a priority policy objective of each country member. Economic policy instruments were fully dedicated to maintaining the gold parities to get the "good housekeeping seal of approval" (BORDO and ROGOFF, 1996), and then investments in social security were virtually non-existent. There was great concern with price stability and little concern with output level and its distribution. Political complaints in opposition to the side effects of high interest rates were still embryonic at that time: the right to vote was not universal, labour parties and labour unions were not yet structured, and wages and prices were relatively flexible. Besides, private agents noticed that governments would not hesitate to take unpopular measures to maintain domestic monetary stability.

This commitment was not enough to maintain the stability of the Gold Standard system without international solidarity amongst the central banks. An increase (reduction) in one country's discount rate attracted (repelled) financial capital and gold reserves, damaging the

[7] It is worthy mention that there are divergences in the literature on this aspect. Gallarotti asserted that the relations between central banks in the period of the classical Gold Standard painted an "unimpressive" picture of cooperation. According to him, the most fundamental cooperation occurred between private and central banks, and between foreign governments on another. That is to say, central banks in liquidity crises and/or having convertibility problems asked to foreign commercial banks, foreign governments and other central banks for help. In his words (1995, p. 80): "This help usually took the form of advances, swaps, discounting bills, or credit arrangements. During the Baring crisis, for example, the Governor of the Bank of England asked if Russian government would refrain from liquidating its portfolio of British securities in order to abate possibilities of a potential gold outflow. Furthermore, there was a long train of instances when the Bank of France provided liquidity to the Bank of England (1826, '32, '36, '39, '47, '90, '96, 1906, '07, '09, '10)."

balance-of-payments of the other countries. These disturbances might ignite cumulative imbalances in international accounts for many economies. Despite the influence of the Bank of England as the coordinator of the system, there were turbulent periods in which its reactions were not enough to prevent financial crises. For instance, if a country lost a great part of its gold reserves, it would have to increase its discount rate to attract overseas gold and capital. As usual, all economies wanted to increase their reserves, and without international cooperation the system would be ruined. Then, if the other economies wanted to preserve their proper financial stability, they would have that to act cooperatively helping the one in distress to increase its gold reserves in order to guarantee the continuity of the system. I mean, in order to preserve its own interests the system had to be preserved and could not allow countries in crisis to influence the policy decisions of all others because it would eventually lead to the failure of the system.

Although the steadfast long term government commitment to monetary stability, the Gold Standard could not prevail for more than forty years without international cooperation between central banks since as discussed above the discount rate was raised whenever there was risk of gold outflows. This decision attracted international capital and gold to certain countries, promoting an opposite reaction in others. Similarly, central banks decreased the discount rate when the gold stock was in excess. Unilateral decisions similar to that provoked unexpected outflows or inflows of gold to some other countries, then problems to their balance-of-payments and domestic prices. The opposite reaction was instantaneous and the final result had a harmful effect to all. Policy responses rebound over and over again creating an inconsistent policy scenario, ruining the credibility of the system.

International liquidity varied for many reasons, therefore central banks' decisions were too harmful for the maintenance of monetary stability, damaging the credibility of the system as a whole. For example, when the international liquidity was reduced, there was a need to increase the interest rate or vice-versa, and without an institution to coordinate this adjustment, central banks might have made inconsistent decisions. For this reason, an effective leadership was important to coordinate these decisions. As the most powerful monetary authority, the Bank of England assumed this position in the 1870s, leading the global market since its discount rate was the target for all other central banks. The role played by the Bank of England and the other central banks likewise represents another key institutional aspect of the Gold Standard.

Besides the aforementioned episodes of international cooperation, the Baring crisis in 1890 became well-known due to the unprecedented amount of money negotiated between central banks.

It is an outstanding example showing the importance of international cooperation during the Gold Standard. The British bank Baring Brothers lent money to the government of Argentina but did not receive any payment in due time. This fact provoked an expectation that the Bank of England would not have enough gold to maintain the parity of the pound sterling. The Bank of England bailed out the Baring Brothers to prevent a larger depression, and Lombard Street ended up receiving a loan of £3 million in gold from the Bank of France, and £1.5 million in gold coins from the Russian State Bank (EICHENGREEN, 1996, p. 34). In the end, the Bank of England managed to recompose their reserves and the currency crisis was eventually solved, but this experience almost ruined the Gold Standard.

Since then, a new "rule" (a truly institution) was introduced in the system. Countries noticed that the commitment of sustaining the gold parity could not be accomplished without international cooperation amongst central banks. Consequently, by the end of the 19th century and the beginning of the 20th century, several similar crises were thwarted through the coordinated action of the monetary authorities from distinct countries. One more procedure was established as a rule of the game, making international solidarity an institution to the gold regime.

At this point, it is worthy to ask a couple of questions: what does this discussion mean in terms of global capital integration? In what aspect it is related to the role played by institutions? What does it mean with "the dense network of historically specific financial institutions"?

Being played like this, the rules of the game created a favourable policy environment able to trade goods and capital, connecting all country-members through the common language of an international monetary standard. As mentioned above, the adherence to the Gold Standard implied some basic commitments which were mutually related: governments should be prepared to take any policy measures to defend convertibility; they would be coordinated by a leader; and they would expect cooperation from the central banks. This does not mean a perfectly coordinated world[8] but one that encouraged the adherence of a variety of countries distant from the north Atlantic economy.

All of these commitments and rules imply that foreign securities issued in countries off gold were considered riskier. On the other hand, countries on gold were integrated into an extensive market and then had much more opportunities to buy or sell their assets. The "good housekeeping

[8] Despite playing a central role to the global market institutionalisation, this regime could not be considered perfectly integrated. In fact, there were many crises and backlashes in various countries, especially in peripheral economies, due to inconsistencies in their economic policy (BORDO, EICHENGREEN and IRWIN 1999; see also EICHENGREEN and BORDO 2002, p. 40).

seal of approval" allowed the inclusion of peripheral countries to the European markets and favoured global economic integration since the adherence to the rules allowed access to a wide market free from capital controls. Accordingly, the establishment of the classical Gold Standard played a crucial role in global capital integration. Protectionism to agricultural and industrial products was a common trend in developed countries (especially from the end of the 19th century to 1913) as noted by Bairoch and Kozul-Right (1996) and Chang (2002), but capital controls were scarce at that time.

Before 1870, cross-border trade and financial flows were less connected, less structured and financial markets were roughly institutionalised. An international network of asset trade was not put into operation due to unsolved problems in managing and expanding the bimetallist standard (REDISH, 1990; EICHENGREEN, 1996). It was confined to few areas of Europe, the US and a few Asian countries. As time passed, it did not have enough credibility to integrate countries from all continents in "the dense network of historically specific financial institutions."

During the period prior to the Gold Standard, international transactions were atomised due to the monetary chaos that prevailed within the richest countries. Therefore, there was not a global market, since the institutional instruments discussed above were absent in the international scenario. British 18th century gold practices spread all around the world and re-emerged as the international (classical) Gold Standard. Over time, the classical Gold Standard regime was institutionally established. A truly universal market was "built" based on these commitments, institutionalised by a historical convergence of economic, political and specific social circumstances. The gold parity, the rules that oriented the relationship amongst central banks and the international coordination through cooperation represent the basic aspects of "the dense network of historically specific financial institutions" which made the operation of the system possible.

Eichengreen (1996, p. 30) noted that "it [the Gold Standard] was a socially constructed institution whose viability hinged on the context in which it operated". On this account, the key message to be emphasised in this section is the role played by the institutional arrangements in order to make possible the operation of a global capital market for almost half a century. Despite the crises and retreats that occurred throughout the 1870-1914 period, the expressive volume of capital traded and its wide geopolitical width marked the trade and financial international economic history. The specialised literature has labelled this era as a benchmark in terms of

global capital mobility and integration, thus this period is considered as the first wave of financial globalisation.

In summary, the rules of the Gold Standard game shaped the institutional arrangements that were developed to sustain money stability. The Bank of England was the coordinator of the system and the message it preached was the Gospel of currency stability to allow the redemption of capital flows, and the Gospel of international cooperation amongst central banks to avoid the hell of severe problems in the balance-of-payments of member countries. This means, institutional arrangements were made to adapt the system to achieve these policy objectives, so that financial flow disturbances would be discouraged. Helped by central banks worldwide, Lombard Street managed discount rates in order to prevent outflows of gold, which would have caused more and more disruptive banking crises. In so doing, the institutional framework built allowed (and encouraged) that an unprecedented volume of capital flows and cross-border transactions emerged worldwide.

4. Building global markets through technological improvements in communication and monetary policy

The expansion of cross-border financial flows from 1870 to 1914 was heavily influenced by the development of technological breakthroughs which sharply improved the monetary policy efficiency and dramatically reduced the costs of long distance communication. They both allowed then the system to deal with a higher volume of financial transactions, and with a more complex and larger number of contracts. On this account, there were major innovations in two distinct areas, namely mechanical minting coinage and communication technology. With regard to the former, the most important breakthrough was the creation of steam-powered engines to mint uniform coins in large quantities. The introduction of stream-driven stamping presses by the British government in the early 19th century brought lower money transactional costs, contributing to the organisation of a national monetary system in that country and in others. Accordingly, it helped then indirectly to the advent of the classical Gold Standard.

On the ground of communication technology, there were three key innovations: the telegraph, the trans-Atlantic cable, and the telephone. These breakthroughs were very important as institutional features of the system since they dramatically reduced the cost of long distance communication, providing direct and instant interconnection amongst a diversity of geographically

distant financial centres. These innovations do not mean that it eliminated the information asymmetry, but it kept the financial markets around the world in closer contact, which encouraged the brokers to increase their exposure to financial risk. Accordingly, financial centres became more integrated than they were during the first half of the 19th century.

These technological developments played an important role by encouraging increasing levels of capital integration and promoting round-the-world financial affairs. Needless to say, the global market was not truly (thoroughly) universal, but indeed, by the beginning of the 20th century, key countries in all continents were connected through technological devices. Problems remained in terms of global coordination of financial operations since corporations and governments did not have the appropriate management skills, the legal procedures neither the multilateral institutions needed to deal with the new issues raised by a global financial market. Nevertheless those major technical improvements were important pieces in the Gold Standard puzzle since they equipped governments, central banks, investors, and private banks with tools to play the financial game across national borders. With this in mind, the present section aims at exploring how dispersed and geographically distant financial markets became part of a global marketplace through the aforementioned technological innovations.[9]

At first, it is worth to say that the importance of the mechanical coinage to the advent Gold Standard was, in fact, indirect. That is, in terms of the process of global financial integration *per se*, it should be recognised that the invention and the spread of those intercontinental communication breakthroughs were more significant and direct to the system's operation. Nevertheless, the mechanical coinage was important enough to be discussed here. One might remember that the bimetallism system in Western Europe caused policy difficulties to those nations and hindered them to expand their economies (GALLAROTTI, 1995; EICHENGREEN, 1996; HELLEINER, 2003). Moreover, it helped the establishment of national monetary coherence and identity in local economies, a key element for the success of a gold based monetary system. All in all, such advancements facilitated the countries' adherence to an international regime whose central aspect was the conversion of national currencies into fixed weight of gold.

Technological improvements regarding the manufacture of token coinage in the early 19th century were important in organising domestic monetary systems in major European countries.

[9] Scholarly literature regarding the contribution of those new technologies to financial market integration during the Gold Standard has been relatively modest in comparison with other topics discussed about the globalisation of markets in this period. For this reason, this section draws heavily on data collected by Garbade & Silber (1977) and Michie (1987).

Yet, the Bank of England was the pioneer of minting coins mechanically through these machines, soon after Britain abandoned the bimetallism in 1816 (REDISH, 1990). It was one key historical event which contributed to the emergence of the Gold Standard in England and, by contagion, to the other countries worldwide. Before that, coins were minted employing manual labour. This had several disadvantages since coins were easily counterfeited, it was more difficult to mint small denomination coins, and their weight and size could hardly be constant and homogeneous. As a result, local (national and international) transactions were much more costly.

Helleiner (2003, p. 63) put in historical context the problems caused by the inconvenience of conducting business and building a stable and coherent monetary regime without a uniform national currency. According to him, the expansion of commerce in major countries during the second half of the 19th century was severely hindered by this problem. He quoted part of a speech delivered by Canada's Minister of Finance in 1869, which describe quite well the shortcomings of counterfeited money and the difficulties to do business provoked by the absence of a uniform national monetary standard:

> Those who were engaged in business – from the largest merchant to the keeper of a corner grocery – had to keep on his desk a Bank Note Detector almost as large as a Family Bible, and had to be constantly getting new editions of it, in order to know what notes were counterfeit, what genuine, and as regarded even the genuine, to know what were worth par, and what rates of discount the others might be taken.

The problems caused by the absence of mechanical coinage and a national common currency in many major countries hindered domestic development and obstructed the cross-national transactions. Even simple transactions became very risky and financially unsafe as seen in the quotation above. Before unification in the early 19th century, important European countries such as Germany and Italy used several different coins. This significantly increased costs for investors and merchants since whenever they wished to buy or sell their commodities or assets through countries they had to exchange money, even when moved to a certain province within the same country.[10] The "technological obstacle" to minting coins was overcome by the use of the steam-powered mint machine.

Instead of production being done by hand, steam-powered engines were used to mint coinage mechanically. They produced coinage with economy (of time and labour) and high

[10] Italy was a typical example of the inconveniences created by provincial coins. Helleiner (2003, p. 65) extracted a quotation from a Report ordered by the government of Italy in 1868 about the unification of its monetary system. The author stated: "On the line from Milan to Ancona, you pass across four monetary zones; those, namely, of Lombardy, Parma, Modena, and Romagna; each of which has its coinage, its numerations, unknown on the other side of the frontier, which for any other purpose is already forgotten."

precision. This resulted in many advantages: (i) coins were produced in large scale and at low cost; (ii) nation-states could get the earnings of seigniorage and brassage; (iii) coins could not be easily imitated since it became simpler to detect false money; (iv) the counterfeiting became more costly; (v) coins became perfectly uniform; and (vi) it allowed the minting of both lower and higher-denomination coins. All things considered and taking into account the nation-states currency institutional enforcement, the new technology significantly eased the financial management by monetary authorities, and hence the maintenance of currency stability.[11] As a result, the use of the legal tender became more practical and acceptable, allowing and encouraging a much wider range of daily transactions. This institutional change allowed a substantial increase in a successful contract underwriting engagement since it became safer and more reliable in monetary unified economies. Currency credibility avoided the additional cost of paying twice for the same transaction if forged money was used for the first time.

In summary, mechanical coinage allowed the creation of uniform currency and the unification of the national markets, discouraging the counterfeiting and favouring the development of unified national monetary markets. Hence, it contributed to the advent of the Gold Standard regime. On this account, Redish (1990, p. 805) asserted: "The Gold Standard succeeded because the new technology employed by the Mint was able to make coins that counterfeiters could not copy cheaply and because the Mint accepted the responsibility of guaranteeing the convertibility of the tokens". Helleiner (2003, p. 71) reached the same conclusion when he asserted that "concerns for the transaction costs faced by the poor and those who transacted with them were important not just in prompting reforms of copper coinage and private tokens. They were also central in encouraging countries to introduce the gold standard with the fiduciary silver coinage system."

Without a uniform currency, agents faced high exchange rate costs and so markets were reduced to their provinces. In a country with different regional coins, daily transactions would certainly be more expensive because agents are forced to continuously exchange money, so variations in the exchange rates meant that purchases and sales would become more expensive.

[11] It is worth emphasising that technological development was not a panacea for domestic monetary stability. Mint machines made possible homogeneous coinage but it was not enough to guarantee the stability of its value throughout time. It was not enough in terms of money stability and general acceptance without the institutional guarantee given by nation-states. Redish (1990, p. 799) correctly asserted that "the success of the tokens was due both to changes in minting technology that made counterfeiting more costly and the Mint's willingness to guarantee the convertibility of the tokens".

After all, monetary unification was as important institutional aspect for the international affairs at that time as a territorial or linguistic unification. As a matter of fact, money eventually became the common language amongst agents at least in its domestic frontiers. That strengthened the nation-state's key position as the institution that enforced the domestic currency and officially maintained the control of emission within national territory.

Despite the benefits brought by the minting of coinage played a key role in the development of national and international monetary markets, it was not enough to integrate financial markets which were geographically distant. Intercontinental financial transactions were made with a large time delay due to the existent state-of-the-art communication system, and improvements in steamship travel did not eliminate significantly the time of transoceanic transport as well as developments in regional means of transportation such as railways or ferryboats. Certainly, they were not enough to communicate the daily change of prices among markets spread around the world since those prices could change many times a day.

By the mid-19th century, transport time was not sufficiently short to allow an exchange of securities priced information within the same day, even between Britain and France, thus a wider and more active international financial market slowly evolved (MICHIE, 1987, p. 39). Transport of information through physical means was a bottleneck for the progression of global finance. Assuming that geographical distance could not be overcome through the existent means of transportation, it had to happen through technological development of new means of long distance communication. The foundations for large-scale electronic communications were laid during the 19th century through the invention of the telegraph, the trans-Atlantic cable and the telephone.

Taking London as the world's core financial centre at the time, one can realise that before the telegraph and the telephone, investors outside London had to keep in touch with the "City" by establishing contracts through correspondence enforced by attorneys (country clients), or through appointed specialised agents to act on their behalf (e.g. large investors, normally foreign banks). This means, investors outside The City had to keep in contact through the dispatch of letters, so decisions had to be taken with a lack of knowledge, despite improvements in the railway system and in other modes of transport used by the Royal Mail (MICHIE, 1987).

Developments in scientific knowledge that gave birth to the telegraph, the trans-Atlantic cable and the telephone during the second half of the 19th century significantly improved the speed of long distance information transfer. The growing integration amongst national security markets can be followed by examining the role played by these key breakthroughs in intercontinental

market connection. Their operation and development had dramatic impacts on the process of financial globalisation (read: global market integration) since the large fall in the cost of communications enhanced the efficiency of financial dealings for both national and foreign transactions. As a result, spatial and temporal barriers were reduced, or "virtually removed" (MICHIE, 1987, p. 47), connecting many markets that were formerly separated. This transformation can be evaluated through the volume of telegraphic messages (and real time communication) between distant financial centres.

The introduction of the telegraph and the telephone transformed the security market worldwide. By the late 1840s public telegraph lines linked London and the major British cities, reducing the number of letters dispatched by the Royal Mail and shortening the communication time from days to minutes. These instruments were not confined to Britain, but spread worldwide firstly to Europe and North America, then to the countries in Australasia and Latin America. In 1851, a submarine cable was laid between Dover and Calais, establishing fast and direct communication between The London Stock Exchange (LSE) and The Paris Bourse. In addition, this allowed London to be linked not just to Paris but to the main European Bourses that were already interlinked by telegraph. From 1851 to the early 20th century, more submarine cables were laid connecting other parts of Britain to continental Europe, particularly to France, the Netherlands, Belgium and Germany. The figures illustrating this flow of information are quite impressive. According to Michie (1987, p. 42):

> Altogether, of the 17,372 telegrams sent to and received from continental centres by the members of the London Stock Exchange between 12 and 17 July 1909, 43.1 per cent were German, 19.7 per cent French, 17.8 per cent Dutch and 8.2 per cent Belgian, leaving only 11.1 per cent for the rest of Europe. This volume of business represented an equivalent of one telegram being received or dispatched every second for an eight-hour working day during a six-day week.

The data shows how well integrated in terms of communications the major European stock exchanges were in the early 20th century. Investors were now able to conduct business much more quickly than they had been able to before. The good results encouraged further development of data transmission technologies promoting an even higher dramatic fall in the costs, allowing financial transactions to be accomplished more efficiently. As Michie (1987, p. 44) observed "in 1851 it cost £1.4 (£1 8s) to send the minimum message between London and Paris, while by 1906 the charge had fallen to only £0.04 (10d) or a decline of 97 per cent." In sum, in fifty five years, the cost of sending messages became negligible, reducing the problem of asymmetric information

was sharply deflated, spurring denser integration between the key financial centres in Western Europe.

On 27th July 1866, the trans-Atlantic telegraph cable was put into operation connecting London and New York (GARBADE and SILBER, 1977, p. 826), and then to Melbourne in 1872, Buenos Aires in 1874 (MICHIE 1987:45), and Tokyo in 1900 (BORDO, EICHENGREEN and IRWIN, 1999, p. 32). Thereby, at the turn of the 20th century, the world's major financial centres were integrated with each other through telegraphic communications. Britain was linked to North America, to key countries in continental Europe, to South America, Asia, and Oceania. Despite the limitations of the technology available, these five continents were interlinked as never before, and then the world's major national financial markets became globalised for the first time in history.

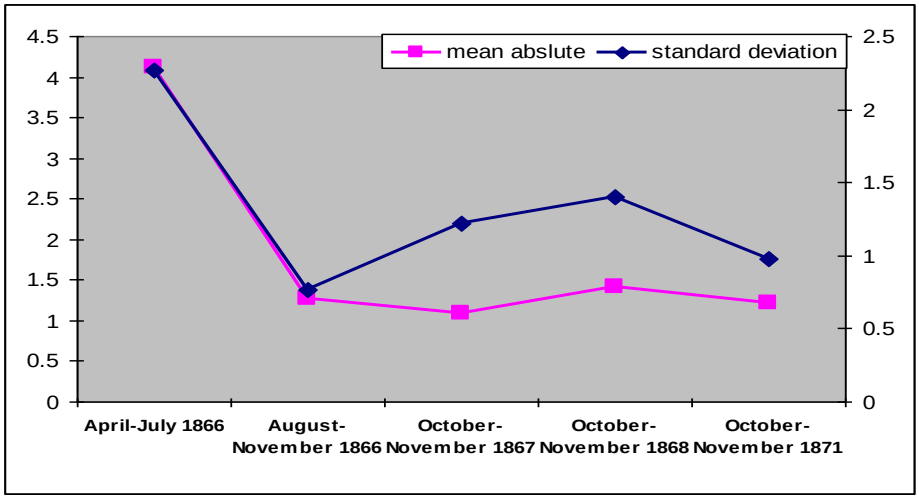
Contemporary scholars have emphasised the key role played by the trans-Atlantic cable as a historical step towards global financial integration, but it is worth noting that the press at the time also highlighted the importance of this fact. The American local press underlined the importance of this historical event for the US economy, especially and to solve the problems related to the low level of integration and high uncertainty in financial and commercial activities since agents could take decisions with much more knowledge and confidence. Garbade and Silber (1977, p. 827) extracted this historical record from a New Yorker newspaper:

> The contemporary press immediately recognized the importance for enhancing the integration of American and European markets. On July 30, 1866 the *New York Evening Post* wrote 'The Atlantic Cable will tend to equalize prices and will eliminate from the transactions in bonds, in merchandise and in commodities, an element of uncertainty which has had the effect of … seriously damaging the commercial relations between this country and Europe.' As if to foster these ends, the *Post* began to publish price quotations from the London market the next day.

Before the transatlantic cable, financial integration was advancing amongst Western European countries, encouraged by telegraphic technological devices, geographical proximity and cultural affinity. However, the US economy was too strong to remain disconnected and the long distance between America and Europe hindered the development of a larger volume of financial transactions. Prior to the cable, investors in London or New York received price information with three weeks delay on average (GARBADE and SILBER, 1977, p. 820). Agents continuously faced a dilemma: they had to decide if they would invest based on knowledge or based on their estimations and expectations. After the cable the delay dropped to a day, thus their estimations became much more precise and price differentials reduced significantly. Market participants were more sensitive to price changes on identical assets, so they were able to execute business faster than in the past, and arbitrage operations became more attractive.

Garbade and Silber (1977) tested the impact of the submarine cable between London and New York focusing on the differentials in the prices of the same asset traded in these two centres. They calculated the inter-market price differentials through the mean price - there was an absolute difference of prices in these two markets - and the standard deviation of these differences during the period of pre-cable and post-cable. Their results are presented in these figures below.

Figure 1. Effects of domestic telegraph and trans-Atlantic cable: Mean absolute and standard deviation of the absolute difference of the United States 5-20 Bonds in New York and London



Source: Garbade and Silber (1977, p. 825)

During the four months before the launch of the cable, the mean absolute difference of security prices between London and New York was $4.118 but this difference fell by half four months later. As can be seen in figure 8, this fall was fast and consistent during the time interval analysed. On average, prices became closer and continued this way in the following years. Similarly, the standard deviation of the absolute difference series had the same sharp fall after four months, which meant that the dispersion of prices reduced by more than fifty per cent. These results indicate that these markets became more integrated. The price convergence between them is a piece of evidence of the positive impacts on the trans-Atlantic financial integration provided by the telegraph.

These figures become more significant if they are compared to the results obtained between European and Anglo-American Stock Exchange telegraph traffic, which provides important evidence related to the relevant impact of trans-oceanic communication over these key centres.

Table 1 displays the results of intercontinental communications between the most important world financial centres, i.e. the LSE, key European countries and the US.[12]

Table 1. European and Anglo-American Stock Exchange telegraph traffic: 1908-09

	Anglo-Continental Telegraph Service, 5-7 July 1909						Anglo-American Telegraph Co. 22-24 September 1908		
	France			**Germany**					
Time	**London out**	**London in**	**Total**	**London out**	**London in**	**Total**	**London out**	**London in**	**Total**
Entire day	1,317	787	2,104	2,821	1,573	4,394	2,005	4,111	6,116

Source: Post Office Memorandum, Anglo-Continental Telegraph Service, 11 August 1909; M. Carson, Manager, Anglo-American Telegraph Co., to F. J. Brown, General Post Office, London, 22 October 1908, quoted in Michie (1987, p. 44).

As can be seen, there was a marked difference of communication between London and the main European countries and London and the US. London sent more messages to France and Germany than were received by them, conversely, the opposite happened between US and London. It is explained by the continental size of the American economy. Overall, the table shows an intense exchange of information circulating amongst the stock exchange markets of these core countries.

Based on the table above nothing can be concluded regarding the evolution of the volume of messages exchanged between Britain and America before 1908. Michie (1987, p. 45) compared to the number of messages sent per minute between London and the US in the initial period of the transatlantic cable and 1908. Thus, it became possible to evaluate both the increased intensity of this communication and the large fall in its cost. He pointed out that:

> In 1908 an average of thirty-two telegrams a minute were being send and received over the Anglo-American Company's wires, during the busy period between 3 p.m. and 4 p.m., compared to a maximum of seven when the cable opened in 1866. At the same time, the cost of a one-word telegram fell from £20 in 1866 to £1 in 1902, or by 95 per cent; the cost continued to fall as competition grew, to £0.1 (2s) by 1906, or by a further 90 per cent. … The volume of telegrams between London and New York using the Anglo-American cables can be estimated to have risen from about 42,000 a year in 1871 to 570,000 in 1908, or by 1,257 per cent.

These dramatic cost reductions also happened within European economies. Hence, lower cost communications at that time were as fast as possible, allowing investors to operate more accurately in different countries. Their security markets no longer played a local role but influenced, and were influenced by quotations obtained in different centres. This increased communication developed until the verge of the WWI.

[12] Garbade and Silber made similar calculations between New York, New Orleans and Philadelphia using different asset prices before the telegraph and after the telegraph. Their results were not much less significant.

In 1891, the telephone allowed two-way instantaneous communication turning the telegraph into an outdated device, providing the technological support for the simultaneous operation of a wide range of markets. This was important not just in allowing a very quick exchange of information, but also changed the way financial cross-border transactions were conducted. Initially this invention was confined to subscribers in London, but by the turn of the century it had spread throughout Britain, the major countries in continental Europe and to the US, so that from the end of the 19th century onwards, the telephone hastened the process of financial integration even more.

The advantages of communication via telephone encouraged the development of its technology. As one can realise, in 1891 London was linked to Paris by telephone, then six years later, these interconnections increased considerably since two more cables were laid between these two cities. Phone communication was more expensive than telegraphic messages at that time but its vastly increased speed outweighed this concern and telephonic communication was therefore preferable. The benefit of instantaneous communication overcame its high costs, which is why in the early 20th century the use of the device spread quickly amongst stock markets in developed countries. According to Michie (1987, p. 45):

> A three-minute call from London to Paris cost £0.4 (8s) or ten times more than a telegram, but it did provide voice-to-voice contact. As a result, there was a general switch away from the telegraph for those centres possessing direct London telephone connections, namely, Paris and Brussels, while the telegraph continued to be central for business with other continental centres, such as Berlin, Frankfurt and Amsterdam. Thus, in European communications the arrival of the telephone represented the final stage on the removal of all communications barriers, which had been begun by the telegraph.

All these devices considered so far played a key role in global integration during the 1870-1914 era since investors could readily respond to deals in centres connected to each other, allowing countries and companies could issue securities to deal internationally, and so these assets became more marketable than before. In fact, Goodhart maintained that the transatlantic cable in 1866 marked the beginning of the first financial globalisation era (EICHENGREEN & BORDO, 2002, p. 3) instead of the emergence of the Gold Standard. Without mentioning the expression "financial globalisation", Michie (1987) also took into account the importance of the telephone and arrived at the same conclusion.[13] Nevertheless, it is worth mention that a perfect and complete

[13] Focusing on London as the core financial centre of that time, Michie (1987, p. 47) pointed out: "The spatial and temporal barriers that had divided London from other securities markets had been virtually removed through the introduction of the telegraph and telephone and their progressive refinement. 'Communications between London, Paris, Shanghai, Johannesburg and other great cities is undertaken to-day with greater ease and rapidity than formerly

integration was not achieved but at least the main countries in each continent were able to establish instant contact with each other, and this obviously included not only developed countries but key developing ones. Table 2 gives an example of this global integration.

Table 2. London Stock Exchange: Government Securities Quoted, 31 December 1910 (In pounds)

Category	*Paid-up value*	*Average size of individual issue*	*% Total paid-up value*
UK total	1,050,929,844	4,342,685	19
Colonial total	824,695,955	2,561,168	15
Foreign total	3,702,452,964	15,236,431	66
World total	5,578,078,763	6,912,117	100.00

Sources: London Stock Exchange Official List, 31 December 1910; Stock Exchange Official Intelligence (London, 1910 and 1911); extracted from Michie (1987, p. 51)

Table 2 displays the paid-up capital from the UK government securities traded at the LSE in 1910, which provides evidence of the high degree of LSE internationalisation since there were investments made and paid for by Britain to countries located in all continents.[14] In fact, during the 19th century the LSE overcame the Amsterdam Bourse, its stronger competitor at the time, and until WWI it became the world's largest and most international stock market. LSE activities were internationally oriented due to the historical context of British imperialism, thus a high proportion of British securities were held abroad. This did not mean that only Britain was able to trade securities overseas. There were open channels of two way flow of communication, accordingly more visible opportunities for savers and borrowers to negotiate abroad in a wide diversity of countries. Essential information about financial assets such as their risk, maturity, and rate of return could be changed much more quickly in comparison to the period without intercontinental communiqués.

The underwater communication interconnected central banks, commercial banks, public and private financial institutions in general. Therefore a great variety of financial transactions that were too risky and of little potential profit in the past became negotiable. This also promoted the development of a variety of financial instruments that made possible short and long-term

attended the transmission of a message from London to Bath'" was one observer's conclusion in 1908, echoed by many others. **The conditions for an international market in securities now existed**" (emphasis added).

[14] In 1903 Pratt, quoted in Michie (1987, p. 34), asserted: "The bonds of every Government, the stocks of every country, are traded in London [while] Wall Street confines itself to the securities of the United States". Comparing the biggest Stock Exchange market in Europe with the biggest of the Americas, Michie (1986, p. 184) confirmed the point established by Pratt: "there was a growing divergence between the London and New York exchanges in the matter of the securities quoted. Increasingly London provided a market for securities from the whole world, while New York traded almost exclusively in American stocks and bonds."

transactions. That means, financial transactions could be done between wide numbers of countries spread worldwide, which is a core characteristic of financial globalisation in this article.

This does not mean that the process of integration and/or financial development was free from irregularity or unevenness. The development of national financial markets depends on numerous historical circumstances and institutional arrangements that are far beyond being solved only through the establishment of advanced technological communication devices.

Domestic institutional arrangements in finance are subjected to the historical peculiarities of each country, i.e. some economies are more or less vulnerable than others. As with any other market, financial markets evolve idiosyncratically, and the total paid-up value in percentage showed in table 2 presents these differences. In Europe, only three countries (France, Germany and Italy), received a third of the value paid for by LSE in 1910. All Latin American countries, China, Greece and Turkey received altogether little more than 8 percent.

Financial globalisation did not imply financial homogenisation. Instead it involved a system which was able to (unevenly) connect different financial markets that spread worldwide, and that were able to play the financial game. The technological breakthroughs discussed in this section drastically reduced delays in exchange of information, allowing then national markets to attain a global scope, but did not result in perfect symmetry of economic and financial development. Despite the enormous progress obtained in transoceanic communication, Bordo, Eichengreen and Irwin (1999) pointed out that geographical ignorance created serious problems for investors to oversee their investment. According to them, the disproportionate share of railway bonds in foreign investment portfolios is evidence of this difficulty because it was relatively easier to monitor the actions of a railway company than other economic activities.

In addition, according to those authors, the limitations of communication technology in acquiring reliable information from distant markets can explain the limited importance of FDI prior to 1914 explaining then the importance of the free standing company as the vehicle for foreign direct investment. A great majority of foreign investment prior to 1914 took the form of portfolio investment. FDI was undertaken mainly by free-standing companies that had limited scope to operate abroad and that were poorly assessed quantitatively[15]. Free standing companies

[15] According to Wilkins (1998, p.13) free-standing companies "were structured to solve the problem posed earlier; business abroad was risky; it was hard to obtain adequate and reliable information about firms in distant lands; returns were unpredictable; but there were clearly opportunities abroad; a company organized within the source-of-capital country, with a responsible board of directors, under source-of-capital country law, to mobilize capital (and other

became increasingly important as British investors gradually diversified his/her investments in railroads and government bonds into farming, ranching, mining and brewing because they were trying to avoid agency problems.

In summary, several obstacles that hindered a worldwide flow of information were removed by the key 19th century technological breakthroughs in communications. As a result, the falling costs were an important element in explaining global financial integration and the high level of cross-border capital mobility during the 1870-1914 era. This process began in Britain, spread to continental Europe and, after the transatlantic cable, moved to the rest of the world, allowing capital markets to be more efficient, visible, and global.

5. Concluding remarks

This article intended to scrutinise the institutional aspects of financial globalisation underlying the 1870-1914 period. It identified its main institutions and evaluated the role of the institutional changes in the development of that experience. It also discussed the key transformations for the development of capital mobility during the first financial globalisation era in a variety of institutions such as markets, central banks, banking and non-banking institutions, and legal regulations. It was verified that pre-existent and new institutions both adapted themselves according to economic and political changes in the historical context. The main institutions that led to the first upsurge of financial globalisation emerged in the UK and in the core Western European countries. These countries were motivated to carry out great capital transactions due to their advanced industrial and technological development, and due to colonialist expansion. In other words, economic conditions, political organisation, technical progress and reliable institutions made possible the emergence and maintenance of markets, rules and international solidarity for close to forty years.

The historical importance of domestic policies to adjust internal financial markets into a global shape has been remarkable. Over time, national economies have adjusted their fiscal and monetary policies in order to become part of a "global discipline". In this globalisation era, this policy adaptation (whether voluntary or not) played an important role in the process of the gradual international interconnectedness of a number of nations. The reasons for this varied greatly

assets) and to conduct the business in foreign countries could take advantage of the opportunities, while reducing the transaction costs by providing a familiar conduit."

according to the historical moment and the historical specificities of that time. On this account, the article aimed to highlight the institutional main features of that moment.

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