ARTICLE

DOI 10.52781/cmm.a053

The Two Dimensions of Financial Warfare

Las dos dimensiones de la guerra financiera

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Abstract: The 20th and 21st centuries saw many cases of coercion by financial means both in war and peace. Throughout history, these financial sanctions have been weaponized by States to coerce countries that hurt their international interests. The deployment of these financial sanctions in a process structured for political purposes will be referred to in this text as financial warfare. There are several strategies that states can use in financial warfare. These different strategies can be used alone or together. The possibility of using such strategies is related to the capacities of each country. Therefore, it is relevant to classify and order the strategies of financial warfare. Thus, this article proposes an organization of these different coercion strategies of the use of money and the financial system in a typology that separates the practice of financial warfare in two different dimensions, bilateral and systemic. Such typology will be presented through several historic examples of the use of financial warfare.

Keywords: Financial Warfare. Financial Sanctions. Monetary Coercion. Dollar Bomb.

Resumen: Los siglos XX y XXI reservaron para la humanidad numerosos casos históricos de coerción por medios financieros, tanto en períodos de guerra como en períodos de paz. A lo largo de la historia, estas sanciones financieras han sido instrumentos utilizados por los Estados para imponer coerción contra países que perjudican sus intereses en el escenario mundial. La instrumentalización de estas sanciones financieras en procesos estructurados con objetivos políticos se denominará en este texto como guerra financiera. Hay varias estrategias que los Estados pueden utilizar en la práctica de la guerra financiera. Estas diferentes estrategias se pueden usar solas o juntas. La posibilidad de utilizar esas estrategias está relacionada con las capacidades de cada país. Luego, es relevante clasificar y ordenar estrategias de guerra financiera. Por lo tanto, este artículo propone una organización de estas diferentes estrategias de coerción con el uso de la moneda y el sistema financiero en una tipología que separa la práctica de la guerra financiera en dos dimensiones distintas, bilateral y sistémica. Esta tipología se presentará a través de varios ejemplos históricos donde se utilizó la práctica de la guerra financiera.

Palabras-clave: Guerra financiera. Sanciones Económicas. Coerción Monetaria. Bomba dólar.

Received: Dec. 19, 2020
Approved: April 08, 2021

COLEÇÃO MEIRA MATTOS
ISSN on-line 2316-4891 / ISSN print 2316-4833
http://ebrevistas.eb.mil.br/index.php/RMM/index

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1 Introduction

In capitalist system, money[1] plays a fundamental role in human relations, despite the fact that the financial system is an “invisible” structure for the vast majority of human beings. It is an essential social technology for life in modern society. History has shown that shocks in the monetary system tend to cause strong shocks in society as a whole. Currency is much more than just a commodity created for trade. It has a fundamental role in social relations.

This important function is most evident in extreme situations, such as a significant economic or financial crisis, situations of social disruption or in times of war. Even in the latter case, the currency plays an essential role in the process of making the conflict itself viable. In other words, a war cannot be fought without funding. And, in the modern capitalist world, this funding is ensured using currency. Therefore, the monetary sector is indispensable for production and mobilization of resources. There is no war effort carried out without the use of money.

However, money in war has a greater function than simply providing funding. It can be a powerful tool for direct or indirect coercion between societies. In addition, due to its importance for social relations, currency can also be a target and suffer from attacks by an enemy. In Brazil, the coercive capacity of money is a topic that is still not very explored in social sciences. In Strategic Studies and International Relations, this issue is practically ignored. On the other hand, Economics offers important contributions on currency, power, coercion and international relations as mentioned by Tavares (1997), Metri (2015, 2020) and Torres Filho (2018, 2019).

The non-neutral nature of the money and the power relationship represented by it are at the basis of the financial coercion capacity (AZEVEDO, 2020). Not coincidentally, together with the ability to impose taxes, issue currency and define the unit of account are acts of sovereignty of a given authority. In this sense, an attack against a nation's monetary structure is an attack on its authority. Thus, we can claim that, regardless of the form, the financial warfare is an attack on the sovereignty of a country (FENAROLI, 2016).

Not coincidentally, in 1999, Qiao Liang and Wang Xiangsui, two Chinese Army colonels wrote the book *Unrestricted Warfare* arguing that modern warfare is the employment of all possible means and, therefore, the battlefield is everywhere. In this paper, economics, commerce and finance are treated as dimensions of modern war, which has become unrestricted. In the words of Xiangsui and Liang (1999, p. 7):

> The new principles of war no longer prescribe “the use of armed force to compel an enemy to submit to our will”, but, “the use of all means, military and non-military, lethal and non-lethal, to compel an enemy to submit to our interests”.

1 Terms money and currency are used as synonyms in this paper.

The financial sector is identified as a weak point that can be exploited by an opponent. Xiangsui and Liang (1999) write that "the battlefield is an omnipresent entity, that is, it is possible to start a war, which will destroy an enemy, from a data processing center, or from the premises of a stock exchange"(p. 49).

Despite being drafted before the 2001 attacks and the respective financial counterattack undertaken by the US Treasury Department, the book addresses the damage done by predatory financial speculation activities against Asian countries in the 90s. For the purpose of this paper, the work of Qiao Liang and Wang Xiangsui addresses the possibility of a war taking place via economic or financial means. For the authors, financial warfare is defined as a "[...] form of non-military war, as destructive as a bloody combat, without the actual bloodshed" (XIANGSUI; LIANG, 1999, p. 51).

Despite the idea of Xiangsui and Liang (1999) that modern war has become unrestricted, the 20th century has presented several examples of financial warfare. This paper will present some of them. Under no circumstances this paper intends to advocate the idea that financial warfare is a perfect substitute for conventional warfare. Financial warfare offers a possibility of coercion and not of revolutionary conflict that replaces traditional military deployment.

From our part, financial warfare is a form of non-military warfare that uses financial and monetary tools to attack a society with political objectives, foreign to the logic of the market. It has the potential to disorganize social relations ranging from production to consumption in a society, generating a significant degree of political and social destruction. Financial warfare is an "invisible" war, an event distant from the population, but with an impact on it. Under this form of war there is no media effect on the population due to the return of the bodies of soldiers killed in combat. In addition, the operation is cheap, since there is no need to mobilize large contingents of soldiers and equipment.

The purpose of this paper is to explore the possibility of coercion of an enemy society by financial and monetary means. A typology of the financial warfare will be presented. Therefore, this paper intends to contribute to the debate on monetary coercion, financial warfare and sanctions, especially financial ones, and to present to the public two dimensions of financial warfare, one bilateral and the other systemic. To this end, this paper will be divided into three parts in addition to this introduction. The bilateral dimension will be presented in the first part. The second part will address the possibility of systemic financial warfare and its main weapon, the dollar bomb. The third part of the text will be reserved for final considerations.

2 Bilateral financial warfare

The first dimension of the financial warfare to be analyzed will be bilateral. Bilateral financial warfare consists of a strategy of coercion that uses money in a direct relationship between the agent who exercises coercion and the agent who is the target of it. Coercion does not occur through third parties. In this dimension, there are four forms of coercion as follows: freezing the enemy's assets under local jurisdiction, currency manipulation, disrup-

tion of the monetary regime and, finally, denial of direct credit. These four forms are direct attacks and are represented in the table below:

Table 1 - Bilateral financial warfare

Bilateral financial warfare
Freezing enemy assets under local jurisdiction
Currency manipulation
Disruption of monetary regime
Denial of direct credit

Source: Author (2021).

In all four forms, the State that exerts financial violence uses its direct relationship with the target to stifle it financially and / or destabilize its productive, financial, commercial, social and political structures. These actions have political and geopolitical objectives rather than profits or market competition. Such attacks can cause significant social damage, change the behavior of the target or even make conventional warfare unviable.

2.1 Freezing of assets

The asset freezing always happens when the aggressor State seeks to pressure the adversary by denying its access to its financial assets that are under the aggressor's jurisdiction. Therefore, everything that the target State has that is under the legal and financial aegis of the aggressor State may fall victim to this freezing process. Therefore, if the target State has international reserves held in custody abroad, in precious metals or in sovereign bond, it may have such assets frozen by the custodian State, if the latter is also the aggressor. In addition, assets belonging to nationals of the target State, their families and companies, may also suffer from the same type of coercion.

However, such an act is neither simple nor disconnected from the political context of the aggressor State. Often, the freezing of assets has negative consequences within the State that practices such coercion. In many cases, when this type of process occurs, interests within the aggressor State are hurt as well. Therefore, the aggressor State must carry out a mapping of the negative consequences in order to mitigate any internal problems generated by this coercive action.

A well-known example of this form of financial warfare occurred between the United States of America (US) and Iran. In 1979, as the Iranian revolution unfolded, the US applied a series of sanctions, including banning all Iranian oil imports. In November 1979, through Executive Order (OE) 12170, the US froze all Iranian government properties within its territory (KATZMAN, 2019). At

the time, the value of frozen Iranian assets in the U.S. reached 12 billion dollars (RIVLIN, 2018; ZARATE, 2013).

Asset freezing is not limited to financial assets. Properties of other nature, such as real estate, can also be the target of this type of coercion. However, to be operational, this type of action requires a financial dimension, since modern capitalism is, as Keynes (1937) indicated, a monetary economy, where money plays a central role in social relations.

2.2 Direct currency manipulation[2]

Currency manipulation is perhaps the most direct and simple way to practice monetary coercion at the international level. This form of financial warfare seeks to affect the stability of the target State's currency through different mechanisms and strategies as money is extremely important in human relations which makes money both a weapon and a target for financial warfare.

Currency is one of the most fundamental elements of national sovereignty. We can say that the currency is a socially constructed element, a true command and control mechanism, both internally and internationally. It is essential to understand that "[...] currency has a disciplinary characteristic over all economic agents" (TORRES FILHO, 2019, p. 23). In the contemporary world, there is no production and resource mobilization, whether in war or in peace, without monetary and financial dimensions. Hostile currency manipulation that aims to destabilize the target State's currency can have powerful consequences on it.

Jonathan Kirshner (1995) argues that monetary coercion can be carried out in two ways in relation to those who suffer it, one positive and the other negative. From the author's point of view, positive monetary coercion is related to defensive actions. Similarly, negative monetary coercion is associated with offensive actions. The author presents several historical cases where such actions were used by the States with the clear intention of carrying out monetary coercion.

"Positive" manipulation is a protective strategy and is used when currency manipulation is employed to protect a country's currency. Such a strategy is an action undertaken by the coercing State. It acts deliberately to protect another country's currency. This strategy is often used in times of open hostility or near war situations. The coercing State may also abstain from carrying out certain actions beneficial to its interests, but which, if carried out, would be detrimental to the target country. Therefore, the coercing State protects the currency and the economy of the latter (KIRSHNER, 1995).

"Negative" manipulation is just the opposite from the "positive" one and includes two strategies, the predatory and the passive ones. Predatory currency manipulation aims to undermine the stability of the target country's currency and, therefore, its value

2 This nomenclature was inspired by the typology proposed by Jonathan Kirshner in Currency and Coercion (1995).

and position in the international monetary system. Predatory strategy is diametrically opposite to the protective strategy and, they are often deployed by the opposing sides of the same historical case. Finally, passive currency manipulation is essentially the withdrawal of some previously existing protection from the currency of the target country by the issuer. This strategy can lead to the financial and, consequently, social, political and economic collapse of countries highly dependent on the strongest and wealthiest nations.

There are many examples of currency manipulation. Currency battle that ocurred during the Sino-Japanese war[3] is an example of currency manipulation during bilateral financial war. The Japanese action to destabilize the Chinese currency was part of the predatory strategy while the American attempt to support an ally was part of the protective strategy. This paper will address in more detail two cases of predatory manipulation, the monetary offensive that occurred during the civil war in Nigeria and the American attack on the pound sterling during the Suez Canal crisis.

Between 1967 and 1970, Nigeria was split in two due to the attempt at independence by Biafra province. Part of the financing mechanism of the war for Biafra was meant to use the Nigerian national currency reserves to gradually acquire hard currency, essential for the acquisition of war supplies in the international market (KIRSHNER, 1995).

However, as seen, Biafra's monetary reserves were in bills of Nigerian national currency, that is, money issued by its enemy, the central government. To smother a source of funding from its enemy, in January of 1968, Nigeria's central government simply exchanged its currency in an operation that lasted less than a month. With the success of the process of introducing the new currency, the Nigerian government caused the money in the hands of its enemy (Biafra) to lose its value, which significantly affected Biafra's ability to finance the conflict (KIRSHNER, 1995).

In practice, what the government of Nigeria did was to change the unit of account that paid off tax debts with the government. This forced the private agents who held the old currency to change it immediately. However, for obvious reasons, Biafra's leadership could not exchange its reserves directly with the central government and, as the operation was carried out in a matter of a few days, there was no time for a "black market" to be efficiently formed that would allow Biafra to circumvent this restriction.

In this manner, almost overnight, Biafra's government came to hold a huge pile of worthless painted paper. As a result, an important source of war funding for Biafra suddenly ceased to exist. This movement made it difficult for Biafra secessionists to acquire international currency (KIRSHNER, 1995), a fundamental element in any war. Therefore, the change in the unit of account significantly affected Biafra's ability to continue the conflict and helped accelerate its defeat (KIRSHNER, 1995).

The second case analyzed is the financial attack that England suffered during the conflict over the control of the Suez Canal in 1956. After the nationalization of the Suez Canal by then Egyptian President Gamal Abdel Nasser, a coalition formed by troops from England, France and Israel invaded the territory of the African country to retake possession of the chan-

3 For more information see: Azevedo (2020) and Kirshner (1995).

nel. However, the American reaction to the event was not positive and Washington condemned the attitude of its traditional allies, including taking the issue for discussion at the United Nations (UN). The US demanded a withdrawal of troops from the canal.

Less explicitly than the action at the UN, the US Treasury Department ordered the US monetary authority (Fed) to begin systematically selling sterling on international financial markets (KIRSHNER, 1995). This move was intended to weaken the English currency by lowering its market value. Such an attack affected English monetary reserve levels, which fell by 15% in the month of November alone. In turn, such a fall helped to further weaken the pound, amplifying the effects of the American attack. In addition to this direct attack on the English currency, the United States threatened to carry out a financial blockade against England, preventing this country from accessing the resources of the International Monetary Fund (IMF). This combination of strategies put pressure on England to retreat from its actions in Suez (KIRSHNER, 1995).

This attack was of a bilateral nature, since Washington sought to attack the English currency in international financial markets directly through sales operations. In this case the predatory threat of financial blockade at the IMF had systemic characteristics, even though it was not the main tactic. The case of Suez reveals an interesting feature of financial warfare: because it is "invisible", it can be used against a traditional ally at any given time.

2.3 Disruption of a monetary regime[4]

The third form of bilateral financial warfare is coercion by breaking down the monetary system. This form seeks to affect the institutional, financial, productive, commercial and political structures that maintain a given regional or global monetary regime. It is the form of monetary power that seeks to change a previously established status quo. Such a disruption has the objective of obtaining benefits and not necessarily a complete destruction of the monetary regime (KIRSHNER, 1995). The attack on the structure of a monetary system is considered bilateral, since the State that promotes it uses its own tools in a direct attack on the monetary arrangement in question.

France's Bretton Woods challenge is an example of this strategy. At the time, Paris complained that the monetary structure in force at Bretton Woods attributed an "exorbitant privilege" to the United States. The French went as far as to request that part of their reserves, denominated in dollars, be exchanged for gold, including transporting part of that gold to Paris (TORRES FILHO, 2018; WHEATLEY, 2013).

The French attempt to challenge the Bretton Woods regime was possible due to the characteristics of the monetary regime itself, under which the dollar held a fixed parity with gold. Unlike Bretton Woods, in the current flexible system, the international currency is entirely fiduciary. This means that the issuer does not have an external gold restriction.

4 This nomenclature was inspired by the typology described by Jonathan Kirshner in Currency and Coercion (1995).

This means that a dollar is worth as much as a dollar (SERRANO; MEDEIROS, 1999). This change was not a mere detail, the difference between the regimes is significant. Identifying whether or not this type of strategy can be used in the flexible regime is outside of the scope of this paper. However, it is essential to explain the difference between these two regimes.

The State that exercises this form of bilateral financial warfare must have sufficient strength within the monetary arrangement in question to threaten its structure. Likewise, that State must be in a position to take advantage of such a change. Therefore, small State that are deeply dependent on a given monetary regime do not have the necessary conditions to engage in this type of financial warfare. The State that is most likely to suffer from this strategy is the main State of a given regime as it is at the heart of the regime and has the most to lose from a change in the status quo.

However, as history itself has already demonstrated with the end of Bretton Woods, the main State can also be the source of the system's rupture, if it is in its interest. In opposition to the Hegemonic Stability Theory defended by Kindleberg (1973), Fiori (2004) argues that the hegemon may be the source of the system's destabilization. It is the hegemonic nation that builds and destroys the system itself in order to continue the process of accumulating power and wealth. For the author, the decline of the Bretton Woods regime is an example of this aspect of hegemonic power, since it was the USA that obliterated the system that they themselves built decades before.

2.4 Denial of direct credit

The last form of bilateral financial warfare is the denial of direct credit. The country that applies this type of coercion cuts the credit lines to the target State that is within its monetary system. A country that is indebted in foreign currency and that needs foreign capital to finance itself or to develop, is a potential target for this type of coercion. Therefore, if country A uses loans from country's B banking system, the latter can use this tactic.

In the 1920s, as a consequence of the end of the First World War occurred the case of financial warfare using the denial of credit. During the Genoa Conference in 1922, which dealt with the reconstruction of the international monetary order, Germany, when feeling strongly under pressure due to the obligations related to the reparations of the First World War, accepted a proposal to establish closer relations with the Soviet Union (METRI, 2015). The winning powers, mainly England, retaliated by blocking Berlin from accessing external financing channels. Arbitrarily, the British claimed that German credit was not sufficient to justify the borrowing (KINDLEBERGER, 1984). In practice, external financing channels were blocked, which in turn strangled German investment capacity and efficient participation in the international trade environment. In fact, as Metri (2015) argues, this episode disorganized the markets and monetary structures in such way that it contributed to the hyperinflation process observed in Germany in the following years.

3 Systemic financial warfare

The country that employs systemic financial warfare does not act unilaterally and directly against the target State, as in the case of the bilateral one. Whether they wish or not , other countries, their private markets and international institutions are involved in the process of coercion. As this process uses the asymmetries of power within a given system, whether local or global, the involvement of third parties is inevitable, since it is through them that coercion is exercised. Systemic financial warfare utilizes the following strategies: regional currency dependency, freezing assets in the global financial system, denial of access to international currency and denial of credit in the global system.

Table 2 – Systemic financial warfare

Systemic financial warfare
Regional currency dependency
Freezing enemy assets within the system
Denial of access to international currency
Denial of credit in the global system

Source: Author (2021).

3.1 Regional currency dependency[5]

Monetary dependency was a form of monetary coercion that Kirshner (1995) described in his book. This form of monetary power is related to the high asymmetry of power and wealth among the States. Such asymmetry is present in the monetary zones, where the currency of the dominant State is used both in exchange and in the composition of the international reserves of the other members. Within such monetary zones, there is an evident vulnerability of the member States in relation to the dominant State, which is the issuer of the currency used.

Coercion using this form of monetary power can be applied by manipulating the existing monetary arrangement. The leading State, which issues the currency, can manage the monetary and trade arrangement that exists within a region in a manner favorable to its political and/ or economic interests. This means that, within this microsystem, coercion is exercised through the exploitation of existing asymmetries. However, despite a systemic logic, the scale in this case is restricted and does not affect the international monetary system as a whole.

A State has at its disposal four strategies for coercion in terms of monetary dependency, namely: enforcement, expulsion, extraction and entrapment. Such strategies can be used individually or in association with others (KIRSHNER, 1995). The first strategy, enforcement, is charac-

5 The nomenclature was inspired by the typology described by Jonathan Kirshner in Currency and Coercion (1995).

terized by the manipulation of the rules of the monetary zone to coerce a specific target State to act in accordance with the interests of the dominant State. This concept comes close to the concept of structural power elaborated by Susan Strange (1998), since the rules of the monetary arrangement of a bloc are established by the most powerful State. Such rules naturally benefit the State issuing the bloc's currency as they generate a currency dependency that can be exploited by the dominant State.

Expulsion is when the main State removes the target state from the monetary zone by imposing a significant economic and political cost on it. This practice is directly related to the asymmetries in the productive, financial and political capacity of the States in a bloc. The cost of leaving a bloc can be too high for the most dependent units and for their economic elites who, in general, have deep ties to the current order. Furthermore, only the threat of withdrawal alone can have real effects on the economies of the most fragile States.

The third strategy is extraction. This occurs when the dominant State of the monetary zone extracts wealth from a specific target. The leading State uses the existing asymmetries to create excellent mechanisms for extracting wealth from the most fragile units, either through formal agreements or through market operations.

Finally, entrapment is when interests in the society of the target State are co-opted. Such interests can be private or related to state institutions. They are related to the functioning of the entire monetary structure of a bloc, which in turn is centered on the currency of the main country. The specific arrangements of the monetary zone force part of the society of the target to align its interests with those of the dominant State (STRANGE, 1998).

For our part, the same systemic logic can be used on a global scale by the country issuing the international currency in spite of significant differences. In the case of North American hegemony, systemic financial warfare was deployed at several points in recent history. Washington was able to instrumentalize the dollar, the international currency, as a vital national security instrument (AZEVEDO, 2020, p. 88). The following three strategies are systemic and global. They can only be employed by the hegemonic currency-issuing power of the global system and under particular circumstances.

3.2 Freezing of assets in the global financial system

As we saw in the first part of this paper, asset freezing occurs when the State that is the target of the financial warfare has its financial and non-financial assets frozen by the aggressor country. This freezing means that the target State will not be able to move or sell such assets. In the previous case, the assets should be under the jurisdiction of the offending country. In the case of systemic financial warfare, the aggressor country has the power to carry out a freeze regardless of the jurisdiction. This occurs through a process of pressure against all agents of the international system.

Asset freezing at a planetary scale was used by Washington as a financial counterattack strategy against the terrorists shortly after the 2001 attacks[6]. Using all the tools that the Department of

6 US investigations indicated that al-Qaeda's actions in Washington and New York were financed from within the U.S. financial system and using dollars (ROTH, GREENBURG, WILLE, 2004).

Treasury was granted under the PATRIOT ACT[7] and the access to the SWIFT[8] system data, the US was able to fight its enemies using an 'invisible' weapon (ZARATE, 2013). Section 311 of the PATRIOT ACT could be applied to any bank. Financial institutions around the globe started to use a Specially Designated Nationals list (SDN list) prepared by the Department of the Treasury where it indicated which institutions and individuals might have links with illegal activities, such as the financing of terrorism (NEPHEW, 2018). International banks that have relationships or do business with people, institutions or countries that are on the SDN list should immediately cease them, freezing assets and banning transactions. If they didn't, they could face sanctions from the US Treasury, such as being banned from accessing the US financial system.

These sanctions also had a "radioactive" effect on these banks. Once identified as potential targets of the Department of Treasury for not complying with the rules established by Washington, other banks in the global financial system, seeking self-protection, would isolate this bank by avoiding operations with it.

3.3 Denial of access to international currency (external restriction)

Under this strategy, the aggressor country seeks to completely prevent the target country's access to the international banking system and, thus, hinder or impede the enemy's ability to pay for imports and receive payments for exports (CARTER; FARHA, 2013). This imposes extraordinary monetary discipline on external constraints of the target country.

All countries in the international system, with the exception of the USA, have an external constraint that is denominated in dollars. In order to be able to operate in the international financial system, any country needs to access the North American financial system. Failing to access this system places the countries outside the dollar system and globalized commercial and financial structures. The losses for the target country caused by this strategy are significant, since the process of financial asphyxiation of the international currency affects its internal conditions. The impacts include exchange rates, inflation and the level of economic activity.

As was the case of the previous strategy, the denial of access to international currency can only be used by the country that issues the currency of the system, that is, the country that issues and controls the dollar. The dominance of the dollar in the international system is almost absolute. The American national currency is of paramount importance in the position of the USA in both the commercial and financial sectors (GOLDMAN; ROSENBERG, 2015). The centrality of the dollar is such that 87% of foreign exchange transactions have the dollar on one side of the operation, with no viable alternative to it in the short term (CAYTAS, 2017).

7 *USA PATRIOT ACT* was a law designed by the US Congress that, in addition to dealing with various issues related to terrorism, has a specific section on money laundering. Section 311 grants the Deprtment of Treasury the power to identify a country or a financial institution as responsible for a money laundering act or as a sponsor of terrorism.

8 Society for Worldwide Interbank Financial Telecommunication (SWIFT) is a company that provides an interbank messaging system that connects more than 11,000 financial institutions in more than 200 countries. With a financial volume that exceeds 6 trillion dollars daily, SWIFT is the heart of the financial architecture of a globalized world (DUBOWITZ; FIXLER, 2015).

In spite of this centrality of the American financial system due to the power of the dollar in the international system, until the attacks of September 11, 2001 the American government operated under some level of political limit because of the resistance of the international financial system to fulfill the role of "military regiment" of Washington's national security interests (AZEVEDO, 2020). Using finance as an element of coercion requires banks to provide confidential information about their customers, which has historically been seen as a "heretical" act for the banking system. This barrier of business secrecy could only be broken by the "War on Terror".

Soon after the shock caused by the attacks, President George W. Bush ordered all levels of US national power to be directed towards combating the terrorists (ZARATE, 2013). The power and centrality of the dollar in the global financial system are examples of this national power. The then American president announced Executive Order (EO) 13224 that sought to hold banks responsible for financing terrorists that might have used them.

Subsequently, the same logic was used in EO 13382, which deals with financing the weapons of mass destruction programs. Both executive orders were deployed against Iran in an offensive that took place in two stages. The first occurred between 2006 and 2012 ending with the *Joint Comprehensive Plan of Action* (JCPOA)[9] nuclear deal. The second began with the unilateral withdrawal of the US from the JCPOA under the Trump's administration.

The coercion campaign against the Islamic Republic of Iran was the most dramatic case of denial of access to the international currency to be analyzed. In this offensive, the US sought to prevent access to strategic assets that were fundamental to the progress of the nuclear technology development program (UNITED STATES, 2007; ZARATE, 2013).

Iran, like any other country, has a banking system that, in one way or another, is connected to the structure of the international financial system (AZEVEDO, 2020). As demonstrated by Zarate (2013), Iranian banks, such as Banco Sederat, Banco Sepah and Banco Mellat, had ties with major international financial centers like, London, Frankfurt, Tokyo and Dubai.

In January 2007, the US Treasury's offensive against the Iranian banking system began. Banco Sepah had been designated by the Treasury Department as a supporter and financier of the nuclear development program. The Treasury resumed the financial offensive in October 2007, when eleven banking institutions were charged under the EO 13224, on terrorist financing, and under the EO 13382, on financing of weapons of mass destruction program. One of these institutions was Banco Sederat, which was classified under the auspices of the EO 13224, as a financier and sponsor of terrorism (DUBOWITZ, FIXLER, 2015; KATZENSTEIN, 2015).

According to the Treasury Department, Banco Sederat was a facilitator of the financial structure of the Hezbollah group (ZARATE, 2013). The EO had an effect on the behavior of other agents in the international financial system due to the reputational risk. Through this type of risk, the global banking structure would amplify the effects on Iran through the mass

9 Joint Comprehensive Plan of Action (JCPOA) is an agreement on the development of nuclear technology by Iran. The agreement was signed in 2015 among the US, European Union, China, Russia and Iran.

behavior of banks that sought to distance themselves from these institutions. Such a move would block the Iranian banking system's access to the global banking system, thereby preventing the use of the dollar in its transactions.

Even if the governments of other countries were not comfortable with the fact that the US authorities were coercively co-opting their respective private banking sectors to isolate Iran without prior authorization, there was nothing they could do. Such banks should follow the guidelines of the Treasury Department if they wish to continue carrying out operations in New York (ZARATE, 2013).

The final step, and perhaps the most important, of this offensive against the Persian state, was the attack on the Central Bank of Iran. In 2012, the escalation of coercion into systemic financial warfare reached its peak. The US Congress, through the National Defense Authorization Act (NDAA), prohibited US banks from transacting with any banking agent that had ties to the Central Bank of Iran (KATZENSTEIN, 2015).

By automatically isolating a state's central bank from the international financial system, the entire banking sector is automatically isolated, since the central bank is the heart of a nation's banking system (ZARATE, 2013). An attack on a sovereign nation's central bank is a financial stranglehold on the entire nation.

The productive, financial and commercial impacts that financial sanctions produced in the Persian country were significant. It impacted GDP, exchange rate, inflation and production. During the gradual process of using the monetary weapon over Tehran, the GDP of the Persian country was about 15% to 20% lower than its potential (KATZMAN, 2019). According to the International Monetary Fund (IMF) data, between 2012 and 2013, Iran's GDP retracted by 6% and the fiscal situation of the government deteriorated. In addition, inflation accelerated from 12% in 2010 to 45% in July 2013 (INTERNATIONAL MONETARY FUND, 2014). The exchange rate was also impacted. The Iranian currency, the rial, depreciated 60% in the parallel market between 2012 and 2013. Iran's productive sector was also affected, deeply dependent on imports, vehicle production dropped 60% between 2011 and 2013 (KATZMAN, 2019).

Monetary discipline applied to Iran was strong enough to bring the country to the negotiating table on issues related to the development of its nuclear program. The JCPOA, celebrated in 2015, was directly influenced by the financial sanctions.

3.4 Denial of credit in the global system

The denial of credit within the global financial system is a direct consequence of the denial of access to the international currency. If an international bank cannot operate with agents in a particular country, it cannot carry out credit operations with this agent either. This is even more dramatic in the case of the dollar system. Credit operations are an important mechanism in easing the external restriction of a country and its economic agents.

Furthermore, the blocking of credit channels offered by international institutions such as the IMF and the World Bank is also part of this strategy. Within the IMF, only the United States

has veto power. However, even if there was no veto capacity within the institution, Washington can act by blocking credit by threatening to ban the use of international currency by the institution in question.

From our point of view, the denial of the use of the international currency is a separate strategy, different from the previous one. This systemic power was used in the financial warfare employed by the US against England in the case of the Suez Crisis. Washington put pressure on the pound at that time by merely threatening to block IMF credit lines.

3.5 The Dollar Bomb

The monetary power of the USA is not a new element in the international arena. An example of this was what Tavares (1997) called "strong dollar diplomacy". The USA, through the Fed, has regained control of the International Financial System with an abrupt increase in its domestic interest rates[10]. In addition to the declaration that the dollar would remain an international standard, the hegemony of the American currency was restored (TAVARES, 1997). According to Metri (2020), Tavares argues that such a strategy had two objectives, namely: to defend the monetary hierarchy favorable to Washington, with the dollar at the top, and to encourage the countries in the center to implement a global liberalization and financial deregulation agenda.

The "strong dollar diplomacy" is an example of the systemic power of the American currency to bring different players into the international arena. However, in our view, this American action helps to highlight the power of the international currency, but is insufficient to classify it as a weapon. In the case of "strong dollar diplomacy" there was no specific target. Nor does it make sense to argue that the United States sought to engage in a financial warfare, by raising interest rates, against all central countries in order to achieve its geopolitical and geoeconomic objectives. In addition, since then, the dollar has undergone a warlike instrumentalization process that culminated in the construction of the dollar bomb, a more sophisticated tool than all those discussed so far.

According to Torres Filho (2019), the dollar bomb is the denial by the USA of the use of its currency, the dollar, to carry out financial transactions with any entity directly or indirectly linked to a specific country. The dollar bomb is a weapon with high destructive power, which does not directly generate physical damage or loss of human life to the enemy. This weapon has the capacity to disorganize the affected country's internal markets and society and its mobilization and operation costs are minimal for the aggressor.

From our perspective, the dollar bomb was a combination of three strategies: denying the use of international currency, blocking assets and denying credit. These three strategies are used jointly and inseparably in the application of the dollar bomb. The dollar bomb, when "exploding", constrained Iran to the maximum monetary discipline within the international financial regime. Its systemic character is evident, since the impositions that defined the dollar-bomb pro-

10 The increase in interest rates became known as the "Volcker Shock".

cess were unilateral and applied by the country at the top of the international monetary hierarchy. The US national financial system is the international financial system, both of which operate along the same lines. US domestic laws governing its financial system have global effects. No other country in the world could use the power of its national currency to direct the private sector to practice coercion over a sovereign state in line with its plans (ZARATE, 2013).

A central element in the dollar bomb was the use of the SWIFT's database. In modern capitalism, in a world with a high degree of globalization, banks are fundamental to any activity between societies, whether it is it legal or illegal. Every business transaction needs to be settled using the banking system. The functioning of human activities in the modern world needs, to some extent, banks. In the complex global financial network, a key component for international banking transactions is SWIFT.

Even though SWIFT played a central role in the international system, it was not directly under American law. The company is established in Belgium and falls under the European Union legislation (TORRES FILHO, 2019). There was a need for coercive co-optation of the SWIFT system. SWIFT's coercive co-optation process was essential for the Department of Treasury to develop the necessary tools for the use of the dollar bomb. In this way, Washington was able to practice an exclusive and powerful modality of financial warfare.

It is worth mentioning that this artifact is of unilateral use by the USA. In the Iranian case, the actions taken by the UN Security Council and its European allies conferred greater legitimacy (KITTRIE, 2009), but it is not a fundamental element in the operation of this form of financial warfare.

The dollar bomb is related to two important concepts: the concept of structural power, elaborated by Susan Strange (1998) and the concept of armed interdependence (weaponized interdependence) in international relations present in the works of Farrell and Newman (2019), McDowell (2020) and Drezner (2021).

The first concept, structural power, is the ability to shape the structures of the global political economy (STRANGE, 1987). In other words, the idea is that the functioning of the global economic-financial structure can limit the scope of action of States that do not have structural power as well as that of other private agents. The US has structural power in the International Financial System, since that structure is anchored in the dollar.

In turn, the second concept, armed interdependence, focuses on an actor exploring his privileged position in a structure to obtain a bargain advantage over others (DREZNER, 2021, p. 1). For Farrell and Newman (2019, our translation) "asymmetric network structures create the potential for armed interdependence, in which some states are able to leverage interdependent relationships to coerce others". The difference between these two concepts is that armed interdependence admits the possibility that its abuse can undermine the ability to implement it. According to Drezner (2021), the actor who abuses his centrality as a weapon may end up losing this ability. That is, a careless use could undermine the strength of this tool. Such erratic use can be the trigger for other countries in the system to seek alternatives to the dollar (DREZNER, 2015). According to McDowell (2020), this limitation is linked to the understanding within the

field of International Political Economics that the attractiveness of the dollar as a currency of the system is based on economic and political factors. However, it is beyond the scope of this paper to analyze the possible limits of an abusive use of the dollar bomb tool. The most important thing is to understand the dollar as an exclusive tool of coercion that has been used by Washington to constrain specific targets for geopolitical and geoeconomic purposes.

4 Final considerations

Money is an element of command and control in the international arena. Both the monetary coercion present in the bilateral financial warfare, and the dollar bomb of the systemic financial warfare are examples of the power that this object has in relations between States. Both are activities with little visibility to the public, but with real potential for destruction. Disorganizing production and distribution chains for goods and services, destroying jobs and reducing a society's income and wealth levels is as destructive as a bloody battle. These consequences can generate social disruptions that are even more damaging to the target country.

We demonstrated that bilateral financial warfare has several strategies that can be explored by States in general. This form of financial warfare is not exclusive to any specific country. Any state, according to its capabilities, can use financial warfare against certain targets. In addition, the freezing of assets under local jurisdiction, direct currency manipulation, regime breakdown and denial of direct credit can be combined in a process of direct monetary coercion, whether in times of war or peace.

On the other hand, the practice of systemic financial warfare is exclusive to a select group of countries, in the case of Regional Currency Dependency, and exclusive to the USA, in the case of global asset freezes, the denial of access to the international currency and the denial of credit in the international system. The combination of these last three strategies comprises the dollar bomb, an even more exclusive tool.

The Dollar Bomb exploits the structural asymmetry of the international monetary system to attack agents to be enemies by Washington. The US, as the issuer of the system's currency, has the capacity of monetary control over all other countries. As everyone uses the US national currency as an international currency, Washington was able to use an exclusive weapon that could be surpassed or matched by a technological race, as in the case of nuclear weapons. The dollar bomb is a weapon linked to the functioning of the modern international financial system itself. The loss or replacement of the exclusivity of this weapon is associated with long-term structural changes.

In the short term, there is no viable alternative to the dollar. The process of financial globalization was built on the structure of the dollar. Derivatives markets contracts (swaps, options, futures), which are essential for risk mitigation by international public and private agents, as well as strategic commodities (iron ore, steel, copper, gold and oil) are mostly traded in dollars.

The use of the dollar bomb has made several countries realize that the international currency is not a common good for humanity, but rather, a tool for command of the hegemonic coun-

try. However, time is the master of reason. There is no set context that cannot be changed. Even though still timid, there are attempts to create alternative arrangements to the dollar. However, given the complexity of the financial and productive structures of the current phase of capitalism, the world that allowed the creation of the dollar bomb tends to exist for some time.

The establishment of bilateral financial warfare, systemic financial warfare and the use of the dollar bomb show an inseparable relationship between money and power. In war, where the clash of wills between nations is constant, the projection of national power occurs through different means, including currency. The hegemon, issuer of the international currency, will use this monetary hierarchy to seek the maintenance of its power if necessary.

We have seen that the use of financial warfare is a more common activity than the field of international relations usually admits. Attacking the stability of a currency or disconnecting the banking system of the target country from the global financial system has the potential to dismantle its entire social structure. If this occurs at a time when a State needs its national capabilities the most, such as in times of war, the consequences can be disastrous for the State that suffers such an attack. Therefore, neglecting the financial dimension of war can be very costly for a given society.

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