

## FINANCIAL GLOBALIZATION AND PRICES TRANSMISSION: HOW SHOULD ALGERIA'S EXCHANGE RATE RISK BE ASSESSED?

"An accounting and financial approach"

## MONDIALISATION FINANCIÈRE ET TRANSMISSION DES PRIX : COMMENT ÉVALUER LE RISQUE DE TAUX DE CHANGE EN ALGÉRIE ?

"Une approche comptable et financière"

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**Abstract:** This study aims to highlight the impact of financial globalization on developing economies by focusing on price transmission via foreign exchange rate risk.

To do so, we use an accounting and financial approach, focusing on the way foreign exchange risk is managed in Algeria. Given the limited access to hedging techniques in the absence of an active financial market, this suggests a negative impact on corporate finance, particularly for companies whose activities are closely linked to those of foreign partners.

The obtained results reveal a certain carelessness and insouciance on the part of Algerian companies regarding the effect of exchange rate fluctuations, which inflict enormous exchange losses on them. These losses are often incorporated into the product's cost price, resulting in the Algerian product's competitiveness plummeting, particularly in the context of increased financialization and financial globalization.

**Keywords:** Financial globalization, Pass-through, exchange rate risk, Algerian companies, competitiveness.

**JEL Codes :** D23, E31, F44, F6

**Résumé :** Cette étude vise à mettre en lumière l'impact de la mondialisation financière sur les économies en développement, en se concentrant sur la transmission des prix via le risque de change.

Pour ce faire, nous adoptons une approche comptable et financière, en examinant la gestion du risque de change en Algérie. Compte tenu de l'accès limité aux techniques de couverture en l'absence d'un marché financier actif, cela suggère un impact négatif sur la finance des entreprises, en particulier celles dont les activités sont étroitement liées à celles de partenaires étrangers.

Les résultats obtenus révèlent une certaine négligence et insouciance de la part des entreprises algériennes vis-à-vis de l'effet des fluctuations des taux de change, ce qui leur inflige d'importantes pertes de change. Ces pertes sont souvent intégrées dans le prix de revient des produits, entraînant une chute de la compétitivité des produits algériens, notamment dans un contexte de financiarisation accrue et de mondialisation financière.

**Mots-clés :** Mondialisation financière, transmission des prix, risque de change, entreprises algériennes, compétitivité.

**Codes JEL :** D23, E31, F44, F6

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## **1. Introduction**

In recent years, Algerian market has been hearing about unjustified price increases for various basic products. However, the justifications often put forward by economic operators are : the depreciation of the Dinar, inflation, prices that are tending to rise on the world market due to the COVID-19 crisis, etc. However, what is the real cause of these price fluctuations? Have economic operators not devised mechanisms to reduce the transmission of these fluctuations? How do Algerian companies protect themselves from these potential fluctuations?

We will return to this recurring question, which actually annoys both the consumer and the Algerian producer, by focusing on the risk of contagion linked to fluctuations in the exchange rate of the Algerian Dinar.

Numerous empirical studies have demonstrated that, in an open economy, changes in the exchange rate are typically conveyed to domestic prices in a partial and delayed way, depending on the response of economic actors and the prevailing economic policy (Dornbusch, 1987). The idea of incomplete transmission has been given much thought in monetary policy and economic literature.

From a global standpoint, transmission—whether complete or partial—can be summed up as a loss of trust brought about by speculative attacks that spread from one nation to another that are economically and/or commercially connected (Bekkers et al., 2017). Fundamentally speaking, contagion is related to the underlying principles of the economies in question, which are likewise impacted by the kind of trade and financial policies that are implemented (Thibault Lemaire, 2023). Different economic systems have different degrees of vertical and/or horizontal price transmission, which may be seen in the volatility of domestic producer and consumer prices of the same imported goods as well as in the pricing of other complementary or replacement goods. If the influence of this transmission is considered globally, then macroeconomic indicators may also be affected (Pascal Kerebel, 2009). Thus, it would appear that monetary policy, trade policy, exchange rates, and the strength of the local market all have a significant impact on how susceptible or resistant an economic system is to a significant change in exchange rates.

Conversely, in the event that the degree of transmission demonstrates a connection between changes in import prices and changes in domestic pricing, this speaks to businesses' capacity to adjust their prices in response to changes in import prices (Michel Jura, 2003). At the macroeconomic level, the state relies on a consumer price support policy when the sector is large and sensitive, and the local market is unable to meet overall domestic demand. As a result, the impact may be less or more intense depending on the national economic situation (Y.Simon, 2002). In a less open economy, where price controls and exchange rate controls are imposed as a policy to regulate foreign trade operations, the effect may not be visible in the very short term.

In view of the above, and bearing in mind that in recent years the Algerian economy has relied much more heavily on supplies from the international market in most sectors, the transmission of volatility observed on the international market may affect the structure of the Algerian economy more than that of any other developed economy. Bearing in mind that, from a global perspective, it can be said in summary that the degree of pass-through is influenced by factors that determine a country's economic activity.

In this paper, we will focus on the exchange rate risk, which is inherent in foreign trade activity and is also considered to be one of the factors explaining the surge in prices in Algeria in recent years. It can be said that in a monopoly position, and in the absence of mechanisms

for managing this risk, companies often opt to incorporate the additional cost resulting from a loss of exchange into the cost price of the product in question. In this way, the ultimate buyer will bear the additional cost resulting from the exchange rate loss. However, continuing to ignore this risk can result in losses in terms of competitiveness, particularly with the presence of other competitors with the capacity to manage the exchange rate risk, and the risk becomes considerable for the company.

The observation made in Algeria is that most, if not all, Algerian companies do not take this risk into consideration. In other words, they are content to simply record exchange rate losses/gains in their accounts, or to use insurance to cover part of this risk\*, which is proving harmful in the context of financial globalization and opening up to the world market.

## **2. Overview of price trends and transmission to developing countries:**

Since the end of 2019, there has been an increase in food inflation, which persisted throughout the spring confinement and the months that followed. According to Jonckheere and Zimmer (2020), there are two possible causes for this increasing trend: variables associated to COVID-19 and factors unrelated to the health issue. Policymakers have given this subject more attention recently due to the global significant increase in commodity prices that began in 2020 and continued into 2022, particularly in those nations that rely heavily on traded commodities (Jonckheere, & Zimmer, H., 2020). Nonetheless, a significant heterogeneity across commodities has been noted, going beyond the overall trend of commodity prices. As per the World Bank and FAO, for example, While food costs grew by almost 50% between the first semesters of 2020 and 2022, energy and fertilizer prices increased by approximately 200%. There was also a significant amount of price heterogeneity within commodity categories. In the energy sector, the price of oil increased by two times during the same period, while the price of natural gas increased by six times. Cereal prices climbed by over 60% inside the food commodity space, while vegetable oil prices increased by over 100%. Among the cereals, rice saw a 10% price decline whereas wheat saw a price spike of about 100% (Thibault Lemaire, 2023).

This increase in the price of commodities globally is anticipated to have a significant and varied impact on the African continent. First, according to estimates, Africa consumes between 35 and 50% of the world's food, making it the continent with the largest percentage of food imports (13% compared to 8% globally) (Goldfajn, I. & Werlang, S.R., 2000).

In recent times, several empirical studies have been conducted to analyze the mechanism via which the prices of commodities on international markets are transferred to emerging nations. The objective of the study by F. Lerin, S. Lemeilleur and M. Petit for the period 1980–2009, was to examine how the instability of agricultural prices affected the economies of North African nations—Algeria, Morocco, Tunisia, and Egypt—after these nations liberalized their economies in accordance with the IMF's recommended structural adjustment plans. The authors discovered that these nations have previously had net exporting economies, even agro-exporting ones, based on a number of macroeconomic characteristics. The "scissors" effect of population-income transitions on domestic output and demand reversed in the 1970s,

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\* In the absence of an insurance policy covering foreign exchange risk, CAGEX Company offers insurance policies covering all other risks in a single product (customer risk, damage to goods, etc.) in addition to foreign exchange risk.

changing the situation(Lerin et al., 2009). After then, the four nations started importing staple foods, namely grains, oilseeds, sugar, and milk. The analysis showed that, in comparison to other nations, Algeria's economy was only marginally impacted, especially when it came to consumer pricing. This meant that, because of the nation's ability to export hydrocarbons, the government would need to continue making drastic efforts\*.

In a study involving 71 nations, Choudhri and Hakura discovered a positive correlation between pass-through and the inflation rate. According to Choudhri and Hakura's (2006) analysis, pass-through is complete for the majority of the sample countries, spanning the years 1979 to 2000(Choudhri & Hakura, 2006). Likewise, pass-through is positively correlated with the inflation rate, according to Devereux and Yetman (2003), but this link is nonlinear as long as pass-through declines in degree over time(Devereux & Yetman, 2010). Nonetheless, Goldfajn and Werlang discovered that the pass-through coefficient increased with the length of the reference time horizon. Without examining how businesses responded to changes in exchange rates, all of these studies were able to provide explanations by accounting for economic factors (Goldfajn.1 - & Werlang.S.R, 2000). To this end, we will explain below how prices can be modified during an import operation.

### **3. Assessing foreign exchange risk within the company**

We can provide a more detailed answer to this problem by looking at a specific example and the details and procedures to be followed when an Algerian company imports a given product: Let's take the case of an import contract signed on 07/08/2021 with a European partner. Financing will be provided by CREDOC (documentary credit), bearing in mind that REMDOC (documentary remittance) is rarely used. It was cancelled in 2009 by the Supplementary Finance Act and reintroduced in 2017 with new conditions, with the aim of combating over-invoicing and capital flight abroad following the El Khalifa Bank affair and the bankruptcy of the Algerian Banking Company (CAB).

The clauses of a standard contract determine the exact amount of the transaction in foreign currency (Euro) and the Incoterm (FOB, CAF, etc.). We would point out that certain Incoterms containing insurance are prohibited in Algeria under the Finance Act 2021.

- Bank transfer (handled by the importing company's bank in Algeria) can pay part of the transaction amount. This amount, which generally does not exceed 15% of the transaction, will constitute an advance in foreign currency to guarantee the loading and shipment of the goods by sea. The European exporter will be asked to dispatch the goods as soon as he receives the letter of credit, accompanying the goods with the necessary documents (sea bill of lading, 4 copies of the invoice, a copy of the export authorization, etc.), and the accounting records will appear as follows:

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\* Algerian government imported 300,000 tons of barley, which was sold to livestock farmers at a price of DA15,000/ton, i.e. with support of DA25,000/ton. In 2008, DA55 billion, i.e. 0.5% of GDP (compared with DA28 billion in 2007, i.e. 0.3% of GDP) was injected into the Algerian Inter-professional Office of Cereals (OAIC) to ensure stable flour prices. This organization also has a storage strategy that enables it to minimize price increases on the international market.

**Table 1: Accounting entry for a foreign currency advance on an import transaction**

*GRANTING OF*

A 15%

*ADVANCE*

<i>ACCOUNTS</i>	Description	Assets	Liabilities
409124	Advances and deposits paid on 'foreign companies' services	×	
512100	BANK ADVANCE PAYMENT 15% IN NOVEMBER 2021		×

**Source: Realized by the Authors.**

- The goods must be shipped by 05/04/2022 at the latest, depending on the terms of the contract.

Exchange rate risk arises throughout this process and the stages to be followed, from the signing of the contract to the due date, which can be spread over several months (six months or even more).

If, at best, the buyer's bank pays the advance (of 15%) around November 2021, in the second stage, the exporter's bank will register the transaction around March 2022, then open a documentary credit for the benefit of the importing company in Algeria. In the third stage, payment of the letter of credit (85% of the transaction amount) can be made in return for the complete file on the goods in question, which is required for final delivery and receipt of the goods at the port.

The other step is debiting the advance amount from the importing company's account.

**Table 2: Recognition of purchases**

*CONSTATION*

*ACHAT*

<i>ACCOUNTS</i>	Description	Assets	Liabilities
3801	STOCK IMPORTED MARCHENDISE	×	
409124	Advances and deposits paid on 'foreign companies' services		×
401140	Suppliers of "Foreign companies' stocks"		×

**Source: Realized by the Authors**

The next step for the company is to record the entry of the imported goods into inventory as follows:

**Table 3: Recognition of the entry of goods into inventory**

*RECORD OF  
ENTRY INTO  
STOCK*

<i>ACCOUNTS</i>	Description	Assets	Liabilities
30	Stock entry	×	
3801	Stock entry		×

**Source: Realized by the Authors**

*In fine*, the contract will be unwound towards the end of April 2022, with settlement being recorded. The importing company will then make the necessary accounting entries in account 666 'as a financial expense or exchange loss', as follows:

**Table 4: Recognition of foreign exchange gains/losses**

*SETTLEMENT  
IN THE EVENT  
OF A  
CURRENCY  
LOSS*

<i>ACCOUNTS</i>	Description	Assets	Liabilities
401140	Suppliers of 'Foreign companies' stocks	×	
666000	Foreign exchange loss	×	
512100	bank payment 85%		×

*PAYMENT  
INSTRUCTIONS  
IN THE EVENT  
OF A FOREIGN  
EXCHANGE  
GAIN*

<i>ACCOUNTS</i>	Description	Assets	Liabilities
401140	Suppliers of 'Foreign companies' stocks	×	
766000	Foreign exchange Gain		×
512100	bank payment 85%		×

**Source: Realized by the Authors**

The accounting entry for the transaction in Algerian Dinar will reveal a significant exchange difference, taking into account the exchange rate (EUR/DZD) at the time the contract was signed (07/08/2021) and the exchange rate (EUR/DZD) at maturity (April 2022).

These stages are all important and essential in any import or export operation, taking into account the clauses of the contract and the performance guarantees linked to the interests of the contracting parties, hence the time lag that gives rise, on its part, to the emergence of exchange rate risk (Jacqueline Ducret, 2002).

The question now is whether Algerian companies can determine their exchange rate position in relation to all the invoicing currencies at any given time, and whether they have the necessary exchange rate forecasting techniques. What about exchange risk management techniques?

We will briefly outline the management techniques available to international companies and examine the possibility of adopting them in Algeria.

- Negotiating a cash payment: this is a difficult option, given the guarantees of delivery of the goods, their characteristics, the due date, etc.

- Choosing the invoicing currency: for an Algerian company whose national currency is not a foreign currency, it is difficult, if not impossible, to choose the DA as the invoicing currency in an international transaction.

- Opening a foreign currency account: this option should only be considered if the Algerian company is exporting to the same market. It can therefore finance its imports locally with the same currency and offset exchange losses using the netting technique.

There are also other external techniques available to the company:

- The use of derivatives (the various types of forward contracts, options and currency swaps). Unfortunately, these techniques are provided by the various segments of the financial market, which is lacking in Algeria.

Foreign banks in particular, such as HSBC, Bnp paris-bas, Société Générale, etc., which are present in Algeria and which adopt these techniques to manage exchange rate risk on their own account, do not provide this service to Algerian companies, or do not guide our companies towards better management of exchange rate risk in order to reduce, at the very least, exchange rate losses.

- Insurance cover is the preferred option in Algeria. However, CAGEX, which was set up for this purpose, does not provide an insurance product specifically dedicated to foreign exchange risk cover, with well-defined guarantees and insurance contract terms. Instead, it offers a comprehensive service that includes foreign exchange loss insurance as an additional guarantee in an insurance policy covering an import or export transaction.

Unlike the French company COFACE, which offers two foreign exchange risk insurance policies: a foreign exchange negotiation insurance policy and an import-export foreign exchange policy (CIME).

#### **4. Results and discussion**

Following the example given above, it would appear that the price of the imported product is recorded at the price at which it actually entered the country, even though the purchase contract was signed well before this date. As a result, a significant proportion of exchange rate fluctuations will be ignored or not accounted for. As a result, although the effect of exchange rate fluctuations is obvious, it is only partially reflected in the accounting records.

Within a private company or organisation, the theory of 'market power' stipulates that pass-through is only partial (TEBACHE Djamel, 2021). In the event where local demand is extremely elastic, foreign companies must absorb changes in the price of imported inputs and hence tolerate low marginal returns in order to maintain their market share, even while these changes raise the cost of intermediate imported items. Non-competitive businesses may decide to absorb all or part of the increase in production costs, lowering the amount of pass-through to consumer prices (Patrice Fontaine, 2008). According to a Cournot oligopoly model (Dornbusch, 1987), the percentage of foreign companies compared to local companies operating in the market determines the amount of pass-through. Taking the reasoning a step further and keeping in mind this observation, Algerian consumers must pay the extra costs brought on by exchange rate fluctuations while also risking the competitiveness of local producers due to the ignored (or poorly managed) effect of exchange rate risk.

In a market structure that lacks competition and is typified by monopolies and inelastic aggregate demand, like Algeria's trade in cereal products, the public authorities regulate prices to absorb the extra cost of imports and manage the fluctuation margin (Samia Oulounis, 2005). But over time, this effect spreads to other economic factors, like GDP, monetary policy, and public spending, which makes matters more difficult.

Entrepreneurs find it simpler to raise their pricing during times of high activity, when the market is expanding and costs are rising due to fluctuations in global prices (TEBACHE Djamel & CHAKOUR Said Chawki, 2018). The opposite is also true. There are situations where a significant increase in pricing on the global market does not always translate into an increase in prices at home (Bedor, n.d.). This is a result of businesses not raising their prices proportionately to cost increases while the economy is in a recession. The example of insurance companies that kept insurance premiums during the 2008 European financial crisis despite the severe recession and the rising rate of compensation is given in passing. If they don't, they will also suffer a deeper impact in terms of competitiveness and loss of market share. This was done out of fear of making matters worse and losing market share.

## **Conclusion**

The developing countries, which have been less open to the world market, have recently become more attached to the world economic situation with the trend towards economic liberalization and financial globalization, brought about by structural adjustment programs under the aegis of international organizations (the IMF and the WTO).

In fact, the attachment of developing economies to the world market can be summed up in their dependence on imports, particularly of basic products.

As a result, Algerian companies embarking on an import or export business find themselves exposed to a global environment that is not suited to their situation in terms of managing the risks associated with importing or exporting, particularly in the absence of a dynamic financial market. As a result, the support of foreign banks will be much appreciated in managing foreign exchange risk effectively, given their experience, the forecasting techniques at their disposal, and their vast network of operations.

The offer of a new insurance product by CAGEX, following the example of COFACE, will also be an opportunity to be seized, whether by local insurers or by Algerian companies. With the same objective in mind, this service could be offered as a Bank-insurance product, providing financing for foreign trade operations and foreign exchange risk cover in a single product, while at the same time seizing the opportunity to develop this new activity and put an end to the problem of foreign exchange losses suffered by Algerian companies.

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