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Developing the market for foreign exchange derivates in Ukraine: Sequencing the reform steps

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Executive Summary

In April 2008 the National Bank of Ukraine abandoned its policy of a (de facto) fixed exchange rate to the US dollar. The change towards a flexible exchange rate was the right move for fighting inflation back in April 2008 and has since November 2008 become an indispensable and effective instrument for combating the negative effects of the global financial crisis in Ukraine. Thus, the move to a flexible exchange rate has been a crucial and necessary measure of macroeconomic policy.

At the same time, a flexible exchange rate implies by definition higher exchange rate volatility and thus higher currency risks for economic agents, such as exporters, importers and investors. Consequently, the need and the demand for instruments to hedge against currency risks have increased dramatically in recent months. Despite this strong demand, economic agents have practically no possibility to hedge against currency risks in Ukraine as of today. The reason for this is quite clear: The existence of highly restrictive state regulations, which in fact makes the development of this market impossible. In turn, these restrictive regulations can be explained by the fear of regulators that foreign exchange derivatives can be used by speculators in a manner that could destabilise the currency market.

In this paper we conclude that despite the fears cited above, there are ways to develop the market for foreign exchange derivatives which would be highly beneficial for the country. In particular, it is necessary to properly regulate and supervise banks with respect to such instruments to achieve maximum transparency with respect to such off-balance sheet titles. Besides, it should be kept in mind that if the instruments do no develop in Ukraine, than off-shore markets will continue to develop, most notably in London.

Once the current turmoil on the currency market is settled, we recommend the implementation of the following measures. First, it is crucial to abolish the foreign currency pension tax, since this tax is an obstacle for the spot foreign exchange market, which is tightly linked to a potential market for foreign exchange derivatives. Second, debt managers at the Ministry of Finance should secure the existence of a yield curve through the issuance of state securities, since such a curve is a precondition for an effective pricing of derivatives. Third, a gradual approach ("sequencing") is needed for the introduction of derivatives. In the first phase, only over-the-counter (OTC) instruments should be allowed. Futures should only be introduced at a later stage. This also applies to the participation of non-resident at the derivates market.

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1. Introduction

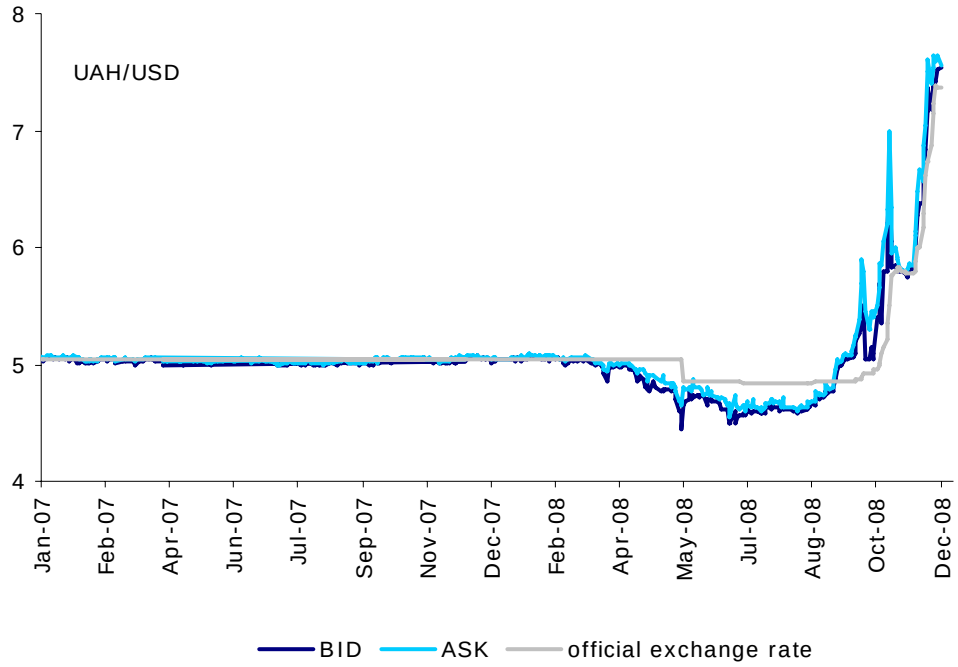
Flexible exchange rates expose economic agents to exchange rate risk. This is in general true for a wide range of international transactions, be they in the sphere of trade or capital flows. In dollarised economies like Ukraine, also domestic transactions may involve the use of foreign currencies, which further exposes economic agents to such risk. Since such agents are usually characterised as being risk-averse, the need for them to hedge against such risk arises. Foreign exchange (FX) derivatives are a standard instrument around the globe used to manage the uncertainties of volatile exchange rates.

In Ukraine, until April 2008, due to the tight peg of the hryvnia to the US-dollar, such need was not very strong. In effect, the National Bank of Ukraine (NBU) assumed the foreign exchange risk by guaranteeing (implicitly) a fixed rate. At the same time, the FX derivatives market was not developed due to tight regulation.

Starting with April 2008, the NBU gradually allowed more exchange rate flexibility, which can be seen in Figure 1:

Figure 1

Daily market exchange rate and official exchange rate (1.1.2007-01.12.2008)



Source: Reuters Finance

These developments, which accelerated with the advent of the international financial crisis in Ukraine in September 2008, have changed the picture completely. Now, with the observed increase in exchange rate flexibility and volatility, the need for effective hedging instruments to deal with the associated uncertainty has clearly arisen. Thus, there is increased rationale for the development of adequate hedging instruments, a topic that this paper will focus on.

The paper is structured as follows. Part 2 gives a short analysis of the economic benefits of FX derivatives, taking into account that the introduction of derivative markets also imposes several challenges. Specifically, the role of derivatives during periods of financial stress and crisis needs to be analysed very carefully, since the current financial situation is rather fragile in Ukraine. Part 3 gives an overview of different FX derivative instruments and the basic (pricing-) relationships between them. Specifically, hedging takes place on the derivatives market, which is "derived" from the underlying spot market. Both market segments need to be, therefore, analysed (and developed) in tandem.

Part 4 describes the current status of FX derivatives in Ukraine, specifically dealing with the legal and other barriers that currently prevent the FX market from development. The following

Part 5 identifies the reform steps that should be taken in order to create an effective and liquid market of hedging instruments against currency risk. In Part 6 we conclude.

2. Economic rationale of foreign exchange derivatives

The economic advantages of hedging FX risk by derivatives can be demonstrated by a simple example based on international trade. The starting point is a domestic enterprise, which engages in export activities. Assuming that the company is exporting steel pipes abroad, let's suppose that it receives an export order of USD 20,000 for the delivery of steel pipes in 3 months. In the context of a floating exchange rate, the company is exposed to exchange rate risk, i.e. its future revenue in local currency terms is subject to swings in the exchange rate. In order to eliminate this risk, and achieve income certainty in local currency terms, the company might engage in hedging activities using FX derivatives. In our simple example, the company might want to conclude a forward contract[1] with a counterparty (e.g. a bank) to sell the foreign currency to be received in 3 months at a price already agreed now. By doing so, the forward contract allows the exporter to "lock in" the exchange rate written in the contract (the "forward rate") that will apply to its export earnings in 3 months, i.e. the exporter achieves certainty regarding possible future exchange rate movements.

A similar case can be constructed for import activities. Assuming that an import contract for the delivery of a machine in 6 months is agreed upon (cost: USD 10,000 payable at delivery), the company could achieve cost certainty by buying a forward contract for this amount. Again, by doing so, the company knows already now how much the costs will be in local currency terms. The key result derived from above examples is that the risk-transfer that takes place via the use of FX derivatives is welfare-enhancing; companies can concentrate on their core activities and transfer FX risk to counterparties which are willing to carry it. Such hedging activities are therefore an important element in flexible FX rate systems.

However, derivative instruments can be also used for other purposes. Financial theory distinguishes three main types of motives of agents involved in such transactions:

Hedging:

As explained above, end-users in hedging activities are normally related to trade and investment, i.e. real sector enterprises and longer-term investors/borrowers. The opportunity to hedge FX risk is especially important for the attraction of foreign investors (i.e. foreign capital) in local currency financial markets. By doing so, derivatives can complement a strategy of developing local capital markets, thereby reducing the dependence on cross-border capital flows denominated in foreign currency and potential “sudden stops” in them.

Arbitrage:

Economic agents can use derivatives in transactions that try to exploit existing price differences for identical goods (assets). Such arbitrage is, in an ideal case, risk-free and leads in effect to higher market efficiency where the law of one price applies.

Speculation:

Derivatives can also be used as instruments to speculate on future exchange rate changes. However, it has to be stressed that speculation is not necessarily bad in economic terms, as it is frequently stated in public opinion. Under normal conditions it should be expected to be stabilizing, since speculants normally smooth prices by buying low and selling high (thereby generating their profit)[2]. It can further provide much needed liquidity in markets, enhancing market efficiency. Speculators often take the opposing positions to hedging companies, enabling the latter to transfer their FX risk to the former.

In reality, derivative instruments can and will be used for all three motives described above. Therefore, a cost-benefit analysis needs to be done, taking all this into account.

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1 See section 3.1. for a more detailed overview of different forms of FX derivatives.

2 While a number of theoretical models show that speculation can also be destabilizing under certain conditions, regarding the FX market there is some empirical evidence that FX derivatives do not increase the volatility of the underlying spot markets. See Jadresic/Selaive (2005) and the literature cited there for more on this.

Benefits

A risk-transfer through FX derivatives is welfare-enhancing for economic agents from different spheres of the economy, and thus contributes to a more efficient capital allocation. This is essential for the development and completeness of efficient capital markets.

Costs

When not appropriately regulated and supervised, FX derivatives can do potential harm to financial and economic stability. Indeed, it has been argued that derivatives have played a problematic role in several emerging market crises. In these countries, which feature generally less liquid, smaller and underdeveloped financial markets, the misuse of such derivatives is potentially dangerous, as they can spark or amplify the effects of financial crises. This behaviour has magnified volatility and threatened financial stability due to excessive risk-taking (typically off-balance sheet and, therefore, undetected by supervisors) and leverage. The academic mainstream view[3], which we support, is that derivatives may have indeed magnified the extent of a crisis (if poorly regulated and supervised) at certain times, but was not the cause/trigger of such a crisis.

Comparing costs and benefits:

The benefits mentioned above will likely outweigh the costs, i.e. contribute to higher economic efficiency and stability, if the gradual process of introducing FX derivatives is properly managed. The important financial stability goal of the NBU is thus justified and needs to be addressed by prudential supervision. This means, first of all, that market participants need a sound risk-management and adequate internal risk controls in place, mirroring their knowledge and deep understanding of the instruments and their associated risks. Transparency and information disclosure need to be addressed in this process.

An additional argument for introducing FX derivatives in Ukraine is the following: if the on-shore market is further suppressed, the existing off-shore markets for trading hryvnia FX derivatives will develop further. These are outside the reach of the Ukrainian regulator and at the same time imply lost business opportunities for domestic agents. Overall, this might represent a lost chance as such flows prove often difficult to reverse. Ukraine is a very open economy with respect to trade, but increasingly also to capital movements (e.g. foreign loans and, to a lesser extent, portfolio flows). Therefore, a high potential demand for such products from end-users (trade-related companies in the real sector, but also investors) can be expected. This in turn implies that there is a big business case also for intermediaries (banks) to provide their clients (end-users) with such products.

3. Foreign exchange derivatives: Overview of instruments and key relationships

3.1. Instruments

The following section covers only basic derivative instruments (so-called "plain vanilla" instruments), and not structured (so-called “exotic”) ones. The former will define the first stage in market development, while the latter can develop along with market demand for more sophisticated products:

Spot FX

A spot transaction on the interbank market involves the exchange of two currencies (usually the home currency and a foreign one) at a rate agreed on the date of the contract and for settlement within two business days. The resulting spot exchange rate is the “reference price" in the FX market, upon which all other instruments are derived.

Forwards

This instrument involves the exchange of two currencies at a forward rate agreed on the date of the contract and settled at some time in the future (e.g. in 1 month, 3 months, or 12 months, even though other dates are also possible and flexibly negotiable between

3 See IMF (2002) for selected case studies of the relationship between derivatives and emerging market crisis.

counterparties). Usually, these contracts are deliverable, i.e. the notional amounts will be actually exchanged at the date specified in the contract. Forwards are traded over-the-counter (OTC) between interested counterparties (often involving a bank and its client) and can thus be tailored to the specific needs of the client.

For currencies of countries with convertibility restrictions, there is often active off-shore derivative trading in the form of non-deliverable forwards (NDF). Non-resident investors often prefer this form, as they have restricted access to on-shore currency in case of not fully liberalized capital accounts. The domestic currency in such forwards is not physically delivered, but there is a cash-settlement (usually in USD) at maturity against a spot reference rate. For Ukraine, this is the case with trading in USD/UAH-NDFs taking place in London. Here, the tenors quoted by market makers (big international banks) are up to 3 years, even though the market is liquid only up to around 3 months maturity.

Futures

Futures are like forwards derivatives contracts on foreign exchange. However, since they are exchange-traded contracts, they are highly standardised, transparent and thus more liquid instruments. The counterparty credit risk mitigation is normally done through a clearinghouse.

By comparing forwards and futures, it is important to stress the general differences between over-the-counter (OTC) and exchange-traded contracts, which also extends to other instruments (like options). Both classes of instruments are distinct in their features and usually complement each other by offering respective benefits. While forwards are very flexible and can be tailored to the specific situation of a potential user, they can be relatively illiquid and exhibit exposure to counterparty risk (in case the other party fails to honour its contractual obligations). Futures solve this counterparty risk by putting a clearinghouse[4] between the two counterparties, which guarantees the trade to both sides by charging margin payments. The high standardisation of futures implies lower transaction costs.

Options

An option gives its holder the right but not the obligation to buy or sell a currency at a previously agreed rate at a specified date against paying a certain premium (price) up-front. This makes the option a contingent claim with a non-linear pay-off profile, contrary to forwards or futures, where the obligations of both counterparties are non-contingent and the pay-off is linearly related to the spot rate.

FX Swaps[5]

In a FX swap, both counterparties exchange two currencies on a specific date at an agreed rate (this is called “the short leg”) and conduct a reverse exchange of the same currencies on a future date at a rate agreed at the conclusion of the contract (this rate is normally different from the rate agreed in the short leg). The latter is called the “long leg” of the transaction. FX swaps can be thought of as a combination of a spot and a forward transaction, or a combination of two forwards.

The following Table 1 gives a global overview of both OTC and exchange-traded derivatives on foreign exchange. It can be clearly seen that tailor-made OTC contracts make up the bulk of such transactions, and that the growth of trading in these products has progressed rapidly.

4 Over the last couple of years, clearinghouses have increasingly started to offer their services also to participants in the OTC market, so that a certain convergence of the different instruments can be observed.

5 There are also further forms of swaps involving foreign exchange like cross-currency swaps (CCS) which will, however, not be covered in the remainder.

Table 1

Amounts of outstanding over-the-counter (OTC) and exchange-traded FX derivatives (USD bn, world-wide)

	Dec 01	Dec 04	Dec 07	Jun 08
Over-the-counter (OTC) derivatives				
Currency forwards and forex swaps	10335.7	14951.2	29143.7	31965.7
Currency options	2470.1	6115.0	12747.9	14710.0
Exchange-traded derivatives				
Currency futures	65.6	103.5	158.5	175.9
Currency options	27.4	60.7	132.7	190.6

Source: Bank of International Settlements, 2008

While global trends tend to be determined by the developments in industrialized economies, emerging markets are now also active in trading such derivatives. The relative smaller size of derivatives markets there may be explained by the smaller size of the underlying spot markets, as well as the tight regulation of these markets. Table 2 below (and Figure 2 in the Annex) give an overview of the existence of different instruments as well as trading volumes/amounts outstanding in different countries.

Table 2

Emerging Europe: Availability of Local Exchange-Traded and OTC Derivatives Instruments

	Exchange-traded		OTC			
	Currency Futures	Currency Options	FX Swaps	FX Forwards	Currency Swaps	FX Options
Bosnia and Herzegovina						
Bulgaria			+	+	+	+
Croatia						
Czech Republic			+	+	+	+
Estonia			+	+		+
Hungary	+	+	+	+		+
Latvia			+	+		
Lithuania			+	+		
Macedonia						
Roland	+		+	+	+	+
Romania	+	+	+	+		+
Russia	+		+	+		+
Serbia						
Slovak Republic			+	+		+
Slovenia			+	+		+
Turkey	+		+	+	+	+
Ukraine						

Source: Iorgova/Ong (2008)

While the instruments are not yet universally spread among markets, at least the OTC-segment is by now relatively common.

3.2. Relationships among instruments

Different segments of the FX market are not isolated, but rather dependent on each other. Specifically, a "derivative" is something whose price is "derived" from an underlying asset. A crucial relationship that connects forwards[6] to the spot market by arbitrage arguments is called "Covered Interest Parity (CIP)". Expressed shortly, the CIP postulates a non-arbitrage condition between the spot rate, the forward rate (at the relevant time horizon, e.g. 12 months) and the respective risk-free interest rates in the local and the foreign currency, respectively. In fact, this can be seen as a pricing relationship setting the forward exchange rate by relying on the spot rate, and the relevant domestic and foreign yield curves in the money markets and government bond markets. Since FX swaps are simply combined instruments consisting of two legs (spot/forward or forward/forward, as discussed above) similar arguments apply also here.

However, above said holds only under the assumption of free capital movements across borders, which ensure that arbitrage activities will be conducted. In case this assumption breaks down, i.e. capital movements are to some extent restricted (e.g. due to a not fully liberalized capital account), the arbitrage argument becomes also invalid to some extent, i.e. CIP is not strictly fulfilled[7]. This is usually the case in off-shore derivatives markets like above explained markets for NDFs[8]. Here, such forwards show (varying) deviations from their theoretical price derived from applying CIP. This deviation, which is sometimes also expressed as the gap between on-shore interest rates and NDF-derived off-shore rates, is usually a function of the underlying capital movement restrictions.

The last instrument described above, FX options, are instruments that are priced differently due to their contingent character. However, the basic dependence on the spot market and yield curves does not change. Besides the spot rate and the respective yield curves at the maturity date additional factors like the strike price and the expected volatility of the future spot rate also influence its price.

3.3. Conclusion

It became obvious that different FX market segments are mutually dependent on each other, and can be therefore considered as being of a complementary nature. Thus, the need to develop these segments in tandem arises. Specifically, the prices of forwards (futures) are derived from spot exchange rates by applying the corresponding term structures of interest rates at home and abroad. Similar arguments apply for other FX derivatives like options, even though there are additional factors. Therefore, the need to develop the FX market (both in the spot as well as in the derivatives segments) and the domestic money/bond market in tandem can be clearly seen.

4. The current foreign exchange market framework in Ukraine

Right now, the FX market in Ukraine is tightly regulated in all major segments (some currency control legislation dating back effectively to the early 90ies), with some further impediments in place. We first give an overview of the general market impediments, and move then to the impediments specific to FX derivatives.

4.1. General market impediments

The FX pension fund tax of currently 0.2%[9] (specified in the recently passed budget for 2009, down from 0.5% in 2008), which applies to purchases of foreign currency on the interbank market, hinders the operation of the FX market in general. Without repeating our arguments calling for an abolishment for economic reasons, which have been made in more detail in

6 Or futures, since their difference is not relevant in this context.

7 Of course, the reasons for CIP not to hold can also include transaction costs, taxes, etc.

8 The existence of off-shore markets like those for NDFs is at the same time often a function of the introduction of capital controls. After the Asian crisis 1998/99, when many countries in the region introduced such controls, such markets took off.

9 The cancellation of this transaction tax was foreseen in the Memorandum of Economic and Financial Policies (MEFP) between the IMF and the Ukrainian government as a structural benchmark for the second review (end-April 2009).

previous papers[10], it is clear that such a transaction tax lowers market liquidity and thus its capacity to transfer exchange-rate risks.

A further impediment for the smooth operation of the FX market was that until very recently, there existed basically three different exchange rates parallel with each other. This was the interbank rate (i.e. the market rate), the official rate used as benchmark for tax and accounting purposes and the rate at which interventions were conducted by the NBU. At times, these rates diverged considerably from each other, which was a major problem for the market operation and development, as communication and official guidance was very confusing. This likely added more volatility to the market. Further attempts to align these different indicators will lead to a more transparent and effective communication strategy and thus support FX market activity and give incentives to better risk management. The transition to official interventions conducted at rates close to market rates as well as better alignment of the official rate with the market rate in December was an important step in this direction.

The operating rules of the spot FX market changed recently considerably with the NBU Decree No. 153 ("Rules of work of the interbank currency market"), which came into force on 4 November 2008. This decree set new rules for the functioning of the spot interbank market, forcing in effect all client orders to the interbank market in order to increase liquidity in the market. Banks were not allowed to match client orders internally before entering the interbank market with the remaining excess balances. While more transparency and higher liquidity on the interbank market is in principal a good intention, as this leads to better price discovery and a more smooth adjustment, however, this decree had serious flaws. In its actual form, it rather led to problems with the matching of buyers and sellers and increased the amount of administrative hassle. Over-regulating the foreign exchange market is neither suitable for banks, nor for end-users of foreign exchange (i.e. business), as smaller orders might be disregarded due to higher transaction costs.

The NBU decided recently to change again the operating principles of the interbank FX market in its Decree No. 435. Since 22 December 2008, banks are again allowed to match client orders internally, before going to the interbank market with the remaining balance in a second step. This implies that the situation before the adoption of the Decree No. 153 has in effect been restored with respect to matching requirements, a step in the right direction, in our view.

4.2. Foreign exchange derivatives market impediments

Currently, in Ukraine only (deliverable) forwards can be traded among the broad range of possible FX derivatives. Also, the tenor allowed is only up to 1 year, and liquidity of the market is very low. Other derivatives are basically forbidden, and no uniform legislation on derivatives trading, including definitions etc. is in place. However, there is currently a legislative initiative to regulate the derivatives markets in general, which would be a major step forward. The State Commission for Securities and Stock Market of Ukraine has recently[11] submitted a "Draft Law on Derivatives" to the Cabinet of Ministers of Ukraine, which also includes provisions regarding FX derivatives. A previous version of this draft has been lately discussed with interested market participants.

In order to conduct hedging operations, resident enterprises need to prove the underlying real motive[12] for such transactions, similar to their activity on the spot market. There are relatively bureaucratic procedures in place in order to verify this, i.e. market participants need to provide evidence of every single underlying transaction which can be quite costly.

Also for banks as providers/counterparties in forward trading, a number of restrictions are in place: there is a forward open position limit of 10% of regulatory capital[13], while hedging by an underlying offsetting spot position is not recognised from a regulatory point of view.[14]

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10 See Giucci/Bigdai (2006).

11 A former version of this draft law "On derivatives" was submitted by the Cabinet of Ministers of Ukraine to the Verkhovna Rada and registered as draft law No. 4019 on 18 July 2007. However, it was subsequently recalled.

12 This so-called "real demand principle", which shall serve as a limit to speculative activity, is similar to the procedures in place in the past e.g. in Korea and South Africa. However, these were enforced only to different degrees and later completely abolished in Korea.

13 Other limits include a 30% limit for total open position, a 15% limit for long position in hard currency and 10% limit for short position.

To sum up, a number of general and regulatory impediments hinder currently the development of a deep and liquid FX market in Ukraine. An overview on the current legislative and normative framework specifically with respect to FX derivatives is given in Table 4 in the annex.

5. Sequencing the next steps: Policy recommendations

It became clear over the last chapters that the NBU as the market regulator needs to strike a balance: through the introduction and the increased use of FX derivatives a better FX risk management is possible, but rapid and unregulated innovation can pose threats to financial stability. Therefore, while the liberalisation of the market for FX derivatives is necessary, the right sequencing of reform steps is important to mitigate potential misuse. End-users of these instruments need to have the right risk-management capabilities in place, while supervisors need a proper risk-assessment of any new instrument. For both sets of measures, a high degree of transparency and disclosure of all relevant information is a key requirement.

Policy recommendation 1: Introducing FX derivatives is in general a good idea, but cautious sequencing of the implementation steps is the key to success. The major reform steps, including lifting the general ban on FX derivatives, should only be taken once the current volatile situation on the FX spot market calms down, i.e. when the financial turmoil retraces and the hryvnia finds its (at least short-term) equilibrium.

The spot FX market serves as the underlying for any derivatives in this field. Therefore, a deep market with liquid trading is required for developing FX derivatives.

Policy recommendation 2: Abolish the FX pension tax in order to facilitate the development of a liquid spot market segment.

A market-determined term structure of interest rates, i.e. a yield curve is a further major building block for efficient and liquid FX derivatives markets. The key use of the yield curve is to serve as a benchmark for pricing such derivatives, among other things. Thus, the money/bond market serves as the base for developing efficient derivatives markets (forwards, futures, swaps and options) for managing financial risks[15].

Policy recommendation 3: The domestic money market and the government bond market need to be developed alongside the FX derivatives market, as a risk-free yield curve is a key complementary input for the development of FX derivatives.

FX derivatives can be traded both OTC as well as in organised exchanges. In fact, in most developed countries, this trading takes place parallel, since each class of instrument offers distinct advantages to its users, which can be broadly summarized as tailor-made (OTC) versus highly liquid and lower credit risk (exchange-traded). However, focusing on the development dynamics of derivatives markets, it can be seen that OTC-instruments are usually the first step, and exchanges offer such products only in a second step, when a certain degree of maturity has been reached (see Table 2). This can be explained, among other things, by the often relatively weak legal and technical market infrastructure for existing exchanges.

Policy recommendation 4: In a gradual strategy of developing and expanding FX derivatives in Ukraine, the focus in the near term should be on OTC instruments, like forwards, FX swaps and (later) options. Thus, the first step is to allow banks to develop their (OTC)-business further, while the meantime should be used to strengthen the legal and technical infrastructure of exchanges which might offer in a later stage standardised exchange-traded products.

The gradual strategy of introducing OTC FX derivatives proposed has been applied in other emerging markets. A point in case is China, which started to introduce on-shore FX derivatives in a step-by-step manner, starting from 2004. The market took then off in 2005 with the

14 In contrast to the regulatory treatment of hedged positions when calculating position limits, in 2007 the NBU adopted a resolution comprehensively spelling out derivatives accounting rules for all conventionally used instruments. This resolution allows for hedge accounting of FX and other forwards. However banks remain limited to the use of forwards.

15 The difficulties of developing a derivatives market without a properly functioning underlying money market are mentioned in IMF (2003).

gradual introduction of forwards, traded initially by a limited number of institutions. After 6 months of forward trading, market participants were further allowed to trade other products like FX swaps.

A further important long-term question deals with the access of non-resident investors to on-shore FX derivative markets. In general, a trend towards increasing participation of non-residents in local FX derivatives markets can be seen, as they increase the liquidity of the market and therefore contribute to its efficient functioning. The situation for Asia's emerging markets is given in Table 3:

Table 3

Overview of Foreign Exchange Risk Hedging Instruments in Asia

Country	On-shore FX forward	Non-resident access to on-shore FX forward	Off-shore market
China	Up to 12 months	No allowed	NDF liquid
Hong Kong	Liquid	No restriction	None
Indonesia	Liquid	Allowed to hedge principal and coupon	NDF liquid
Korea	Liquid	Allowed to hedge principal and coupon	NDF liquid
Malaysia	Up to 12 months	Allowed to hedge principal and coupon with onshore banks	None
Philippines	Liquid	Prior approval required	NDF liquid
Singapore	Liquid	Allowed to hedge principal and coupon	Deliverable forward illiquid
Thailand	Liquid	Allowed to hedge principal and coupon	Deliverable forward illiquid

Source: BIS (2006)

Apart from one case (China), non-residents can at least use the market for hedging purposes.

Policy recommendation 5: In the longer term, also non-residents should be allowed to the derivatives market in order to increase market liquidity and efficiency. However, sequencing this participation is in line with international practices, starting with hedging transactions.

6. Conclusions

When moving from fixed to floating exchange rates, FX derivatives are important instruments to manage the associated increase in exchange rate risk. In broader terms, they can be considered an integral part of the development of efficient domestic capital markets by allowing FX risk-transfer and contributing to a more efficient allocation of capital. Since in Ukraine the markets for such instruments are currently not developed, the introduction of such hedging instruments is thus a priority issue for policy makers.

However, since the unrestricted and unregulated (mis)use of such complex instruments can have potentially harmful consequences, the regulator needs to address these challenges in its strategy of introducing FX derivatives. Setting the right incentives for the appropriate use of FX derivatives through prudential regulations and strong risk management practices is indeed the key effort to be archived. In the current paper, we recommend a strategy of sequencing the reform steps in order to reap the benefits while controlling for such risks.

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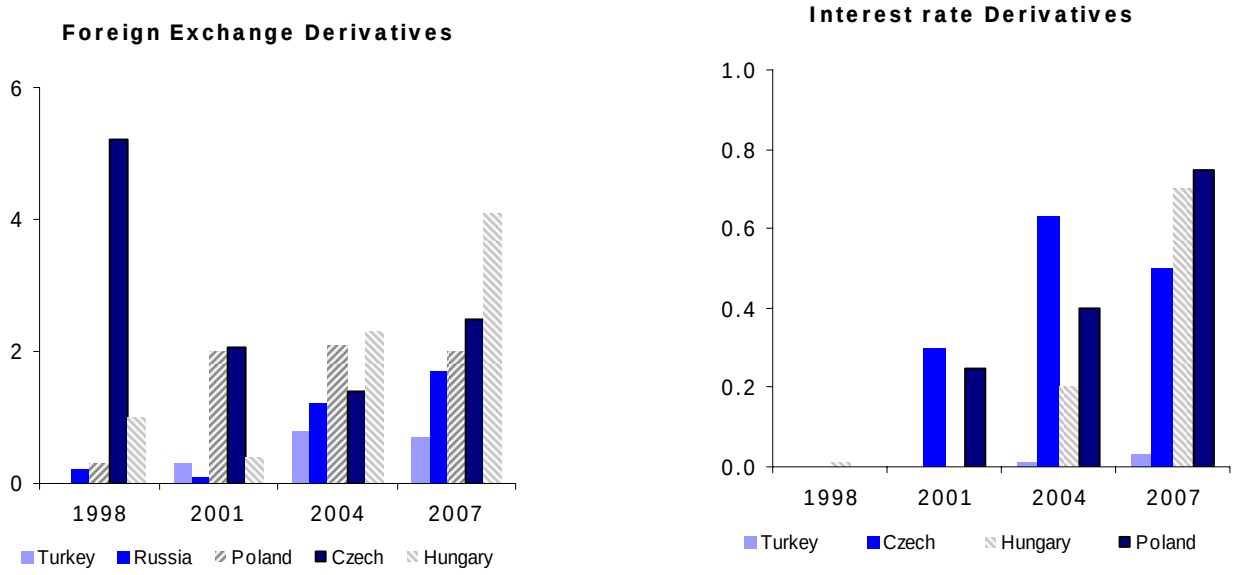
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Annex

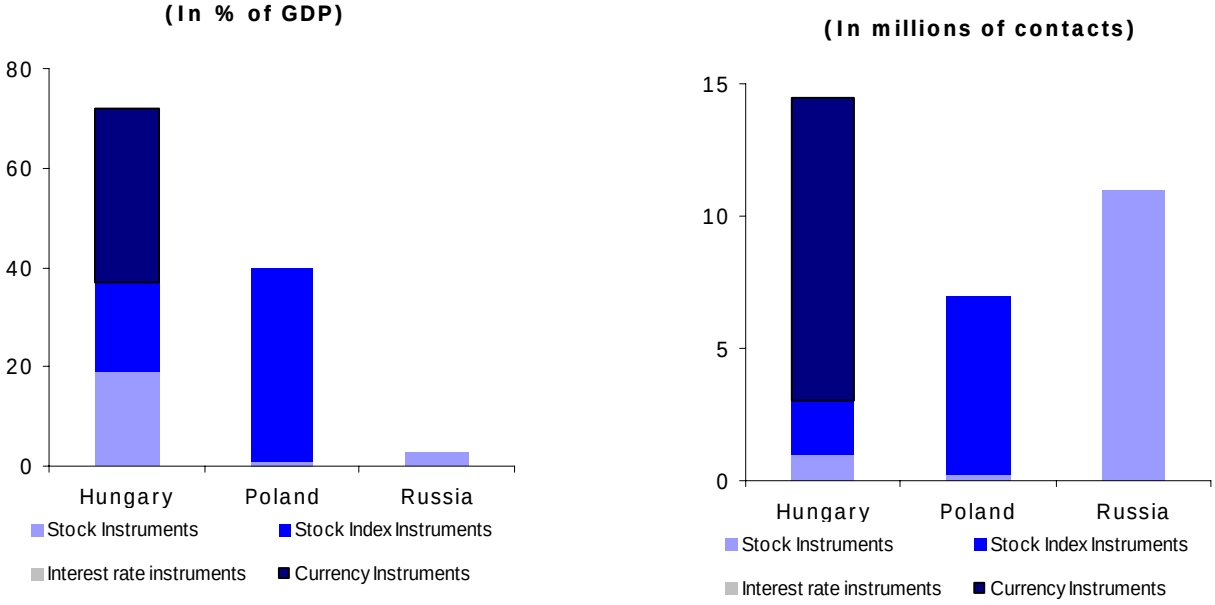
Figure 2

Emerging Europe: OTC and Exchange-Traded Derivatives in Selected Countries

Over-the-Counter Turnover
(Daily averages, in percent of GDP)



Exchange- Traded Derivatives Notional Values, End- 2006



Source: Iorgova/Ong (2008)

Table 4

Current legislative and normative base concerning the regulation of foreign exchange derivative operations in Ukraine

Civil law of Ukraine: Law of Ukraine #435-IV dated on 16.01.2003.
On taxation of enterprise profits: Law of Ukraine #334/94-VR dated on 28.12.1994.
On securities and stock market: Law of Ukraine #3480-IV dated on 23.06.2006.
On approval of Provision On requirements to standard (typical) form of derivatives: Decree of Cabinet of Ministers #632 dated on 19.04.1999.
On approval of Rules of conducting depositing activities for bank deposits and Rules of derivatives issuance and circulation: NBU Resolution #216 dated on 07.07.1997.
Direction on accounting of operations with securities in Ukrainian banks: NBU Resolution #358 dated on 03.10.2005.
Provision on procedures and terms of foreign exchange trade: NBU Resolution #281 dated on 10.08.2005.
Direction on accounting of operations with foreign exchange derivatives in Ukrainian banks: NBU Resolution #309 dated on 31.08.2005.
Rules of derivatives issuance and circulation: approved by State committee on securities and stock market decision #13 from 24.06.1997.
On regulation of derivatives issuance and circulation: Decision of State committee on securities and stock market #70 from 13.04.1999.
On approval of Provision (standard) of accounting “Financial instruments” #559 dated on 30.11.2001.

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