The role of a financial transaction tax in sustainable finance: the case of Korea

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of the European Commission.
1. The change in finance and the debate around a financial transaction tax

1.1 Transition to a market-centred financial system

Since the 1990s, the Korean financial sector has been going through major changes. Rapid movement towards trade liberalisation and the open market was made at the start of the new century. A massive inflow of foreign capital – and later a sudden outflow – caused Korea to become part of the Asian financial crisis, alongside other Southeast Asian countries. Immediately after this crisis there was pressure from the IMF on Korea to implement an Anglo-American financial model, and a new administration headed by Kim Dae-jung led the way in financial reform. Concentration and convergence across financial services increased: securities and derivative markets grew; foreign transactions rose. The growth of the securities market was the most notable change under the new reforms. The Korean securities market showed huge growth in visible areas such as stock prices, market capitalisation, transaction volume and the number of listed companies. There were also big changes in the composition of investors. The abolishment of the foreign investment cap raised the share of foreign investors in Korea’s stock market from 18% in 1999 to 40% in 2004. Recently, this number has decreased to 30%, however, domestic institutional investors have filled the void. Foreign investors are especially known to focus their investments in blue-chip companies, and to receive higher returns compared to domestic investors.

Despite the expansion and deregulation of the securities market, the role of Korean securities firms has not changed much. They simply act as proxies in corporate bond underwriting and IPO issuance operations, and are unable to play pivotal roles in areas such as merger and acquisition (M&A) consultation, due to the lack of expertise. This is why big foreign investment banks are monopolising both M&A consultations and large IPO operations for the foreign investor market, where added value is high. In response, in 2009 the government put in place the Financial Investment Services and Capital Markets Act, changing the enumerative regulation system to all-inclusive. In 2011, the administration suggested a blueprint to foster the top five domestic securities companies into investment banks by June 2013. More specifically, the plan would give the five selected firms prime broker status once they are designated as investment banks, to attract and secure over three trillion South Korean Won (KRW) in equity capital. Korean hedge funds were launched in this effort on December 2012.
In other words, the government’s financial strategy remains unchanged, even after the global financial crisis triggered by the US subprime mortgage crisis in 2008. The government recognises the greed of financial institutions as the main cause of the disaster, not the fundamental limitations of the Anglo-American financial model, and believes this can be controlled with stricter supervision. The prevailing opinion is that the Korean financial market is underdeveloped compared to the UK and the US, or even Hong Kong and Singapore, so it is less likely to experience a crisis similar to the one of 2008. The majority argue instead that a more aggressive approach should be taken toward planned reform. Investment banks, private equity funds and hedge funds have been underdeveloped in spite of the expansion of the securities market, which has kept Korea safe from any serious speculation or financial crisis like that of the UK or America; yet continuing to pursue the same financial system will create problems for Korea.

1.2 Recent financial transaction tax debate

The need to reexamine the tax system in relation to finance has been rising along with the financial sector’s quick growth and transition. The rapidly developing financial sector and securities market has brought about a great increase in financial income and capital gains, however, inadequate tax policies have meant that payments made as tax have not kept up. In Korea, the role of income tax is minor and the capital gains tax levied on financial instruments is restrictive, unlike most advanced markets that follow the principle of implementing capital gains tax on financial products. Instead, Korea opted for a securities transaction tax. Also, while the derivatives market has grown considerably, neither profit taxes nor transaction taxes are imposed on derivatives. This is why there has been continuous demand for strict taxation on financial income, capital gains (equivalent to transfer gains) and derivatives that include interest, dividends and other profits. When economic democratisation became a key agenda during the 2012 general and presidential elections, it resulted in the government strengthening taxation on financial income starting from 2013, but nothing else has changed.

Against this backdrop, Korea has begun to move toward a stricter tax system alongside the advanced countries that have been discussing the possibility of a financial transaction tax (FTT) since 2008. In August 2009 Lee Hye-hun, member of the ruling Grand National Party (GNP – although now known as the Saenuri Party), proposed legislation that would reduce the basic
tax rate on derivatives, to zero if necessary, to nurture the capital market given the dire circumstances. Derivatives specified by presidential decree (such as the stock index) would be exempt from this proposal and be levied at 0.01% transaction tax, which is the basic tax rate. The grounds for the proposal were to forestall tax evasion through derivatives trading, prevent excessive speculation in the market and secure a new source of tax revenue since there was no tax on derivatives, unlike domestic spot market transactions. Unfortunately, it faced strong opposition from other lawmakers and failed to be put to vote in the National Assembly.

Then in December 2011, before the general election, two bills were proposed that imposed transfer gains tax on listed stocks on principle. The GNP suggested taxing transfer gains over 40 million KRW, regardless of the major shareholders, while the Democratic Labor Party recommended levying not only listed securities but also derivatives. However, the National Assembly anticipated great resistance from the public, which led to a discussion about easing the heavy shareholder standard. In addition, assemblymen deliberated putting a transaction tax only on derivatives, since it was impossible to tax transfer gains while postponing a transfer income tax on small stockholders. Consequently, the Saenuri Party announced a 0.001% tax rate on derivatives transactions as their 2012 general election pledge. The opposing Democratic Party responded with 0.01% transaction tax (0.001% depending on the market situation), starting in 2014. On August 8, 2012, the government made a public notification of new tax rates for the futures and option markets listed in the Korea Composite Stock Price Index for the 200 biggest companies (KOSPI 200), 0.001% and 0.01% respectively, to be implemented from 2016. The three-year grace period was put in place to remove concerns of any ‘side effects’.

What is the purpose of introducing a transaction tax on derivatives? Korea’s main objective is to restrain speculative activities by raising transaction costs and collecting tax revenue from speculation. This differs from advanced markets where governments want to share the burden of public fund injection to financial institutions with them. Of course, the improbable reality of differentiating speculative capital from others creates the problem of having to tax all capital. If the derivatives market’s vulnerability seriously affects the economy, it is necessary to pursue the implementation of a FTT, even if there are some side effects. But will the derivatives
transaction tax successfully achieve this goal? We need to take a closer look at the current derivatives market to answer this question.

**Korean taxation on finance – financial income tax, capital gains tax, securities transaction tax**

Starting in 2013, the government strengthened the tax system and imposed a 14% withholding tax on individuals with an income of less than 20 million KRW. When income is over 20 million KRW, it is aggregated with other incomes and taxed progressively. The global taxation was first introduced in 1993 during the Kim Young-sam administration with the real-name financial transaction system; however, the implementation was put off till 1996. Then due to the Asian financial crisis, it was suspended for another three years, from 1998 to 2000. Global taxation came back into place in 2001, but only for married couples with a combined income exceeding 40 million KRW. In 2002, the Constitutional Court of Korea found this unconstitutional, which eased the taxation standard to 40 million KRW for an individual. The criteria for financial income became stricter yet again this year, taxing individuals globally for income over 20 million KRW. Although tightening the tax system is a welcoming move, the existing tax deductions and exemptions are still problematic.

In the case of capital gains tax, no tax is levied in principle, thus when an individual small-scale shareholder transfers stocks listed on KOSDAQ or the stock market, it is tax-free. Schedular taxation is applied to major stockholder shares as well as transfer of unlisted shares. Gains from the sale of unlisted shares are subject to a 20% tax (10% for shares of Small and Medium Enterprise (SME)). Heavy shareholders are taxed 30% for shares held for less than a year, 20% for more than a year, and 10% for SME shares, regardless of the holding period. Capital gains earned when major shareholders transfer more than 50% of their stock and when properties are sold are taxed at progressive rates from 8% to 35%. In the case of bonds, capital gains generated from market interest rate change are not taxed.

A securities transaction tax is imposed on all sales of stock. The taxpayer will be 1) the securities depository when stocks are traded through a central depository system in the stock market, the association brokerage market, or brokerage system (third market), 2) the securities firm when stocks are transferred through securities firms, and 3) the transferor when traded by individuals. The tax rate is 0.5%, and a flexible rate can be implemented by presidential decree depending on economic circumstances. As of January 2005, the rate applied is 0.15% for stocks traded on the stock market, and a flexible rate of 0.3% for the association brokerage market. But since a 0.15% special tax on rural development is added, a 0.3% tax rate is applied for stock market transactions.
2. Exchange-traded derivatives, market growth and uncertainties

2.1 Sharp growth

The derivatives market was developed to hedge the risk of price volatility, which increased with the expansion of the securities market and capital liberalisation. The derivatives market is generally divided into exchange-traded and over-the-counter (OTC) markets, and the Korean derivatives market has its own characteristics that distinguish it from that of other advanced markets.

Let’s first take a closer look at the exchange-traded market. With the 1995 Futures Trading Act enactment, the stock index futures market was established in May 1996, allowing for the trading of exchange-traded derivatives. The stock index options transaction, the largest portion of the exchange-traded derivatives market, began in July 1997. As of 2012, a total of 15 listed products are on the market, derived from underlying assets such as equity index, individual equities, interest rates, foreign currencies and commodities. More specifically, there are 12 futures and three options derivatives listed.

The daily average trading volume in 2011 is about 16.8 million contracts, equivalent to around 68 trillion KRW in trading value, showing active transaction (Table 1). There are great discrepancies in trading volumes between derivatives, with approximately 96% of volume
dominated by the stock index derivatives, especially KOSPI 200 options which represent 94% of the total. Only the individual equities futures, the three-year Korea Treasury Bond (KTB) futures, and the USD futures are actively traded from the equities, interest rate and currency derivatives, respectively. The KOSPI 200 options, where most transactions are happening, also has the highest number of outstanding contracts. However, the proportion is the smallest when trading volume is taken into account. Excluding options, KOSPI 200 futures had the highest trading volume from the futures.

KOSPI 200 futures and options, and equity index products among exchange–traded derivatives, show very high trading volumes compared to other countries (Table 2). The ratio of generated trading value to market capitalisation of the spot market for KOPI200 futures and options are 7.85 and 64 respectively, both the highest of the countries compared. Moreover, KOSPI 200 futures demonstrate the second highest trading value to GDP ratio after Hong Kong at 8.45 and KOSPI 200 options, by far the highest, with 68.9. Yet, market capitalisation to GDP ratio is 1.08, not high in comparison to other major countries.

Korea ranks second, after the United States, in terms of exchange–traded derivatives’ trading volume (Table 3). The United States’ substantial trading volume is at the top of the list, with all trading at the Chicago Mercantile Exchange Group (CME Group) (including the Chicago
Board of Trade (CBOT) and New York Mercantile Exchange (NYMEX) and Chicago Board Options Exchange (CBOE) combined. Based on exchange, Korea’s Exchange (KRX) has the largest transaction volume for exchange-traded derivatives, and it is the eighth in the world for trading value. This is because KOSPI 200 options compose the majority of Korean trading volume, whereas the actual value is lower than the trading value with out-of-the-money (OTM) options trading.

The active participation of domestic institutional, foreign and individual investors is the reason behind the extensive exchange-traded derivatives market. The largest participating entity is foreign investors. As of the end of December 2011, they account for 43.4% of the total proportion. Following this are Korean securities and futures companies. Individual investors’ participation rate is also high (Table 4). The proportion of individual investors’ trading volume is 27.2%, which has decreased from past levels. However, this number is still high considering that individual investor participation in advanced countries is low. Lastly, banks, insurance and pensions make up a small proportion of the total trading volume.

<table>
<thead>
<tr>
<th>Derivatives</th>
<th>Securities &amp; futures</th>
<th>Insurance</th>
<th>ITC</th>
<th>Bank</th>
<th>Merchant &amp; savings</th>
<th>Pension</th>
<th>Govt</th>
<th>Others</th>
<th>Individual</th>
<th>Foreigner</th>
</tr>
</thead>
<tbody>
<tr>
<td>KOSPI200 futures</td>
<td>regular hours</td>
<td>28.2</td>
<td>0.6</td>
<td>1.6</td>
<td>0.4</td>
<td>0.0</td>
<td>0.1</td>
<td>0.4</td>
<td>1.0</td>
<td>30.9</td>
</tr>
<tr>
<td></td>
<td>after hours</td>
<td>0.2</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.3</td>
<td>92.4</td>
</tr>
<tr>
<td>KOSPI200 options</td>
<td></td>
<td>27.2</td>
<td>0.1</td>
<td>0.1</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.6</td>
<td>26.9</td>
</tr>
<tr>
<td>3-year KTB futures</td>
<td></td>
<td>64.1</td>
<td>1.7</td>
<td>2.5</td>
<td>14.1</td>
<td>0.9</td>
<td>0.4</td>
<td>0.6</td>
<td>2.8</td>
<td>12.9</td>
</tr>
<tr>
<td>USD futures</td>
<td></td>
<td>38.6</td>
<td>0.7</td>
<td>5.1</td>
<td>16.0</td>
<td>3.9</td>
<td>0.1</td>
<td>3.5</td>
<td>14.5</td>
<td>17.5</td>
</tr>
<tr>
<td>Individual equity futures</td>
<td></td>
<td>9.3</td>
<td>0.1</td>
<td>0.5</td>
<td>0.0</td>
<td>0.0</td>
<td>0.2</td>
<td>0.3</td>
<td>62.7</td>
<td>18.9</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>27.5</td>
<td>0.2</td>
<td>0.3</td>
<td>0.6</td>
<td>0.1</td>
<td>0.0</td>
<td>0.8</td>
<td>27.2</td>
<td>43.4</td>
</tr>
</tbody>
</table>

*IIC = investment trust companies

2.2 Speculative trading tendency

The primary role of the derivatives market is to offer an efficient tool to hedge the risk of price volatility. By possessing an equal amount of futures positioned opposite to that of the spots, price volatility risk can be managed, regardless of the direction the spot price moves, since the loss of the futures or spots price in one position will profit the other in the opposite position. Through hedging, the risk can be transferred and distributed to the economic agents who actively prefer it from the ones who want to avert it.
The market needs to have high levels of liquidity to properly function as a risk-managing tool. In the case of KOSPI 200 futures and options, three-year KTB futures and USD futures have sufficient liquidity secured to provide efficient hedging. This high level of liquidity makes it easier to restructure stock portfolios and create new investment products. Other merits include the fostering of the spot market and the massive inflow of foreign investment due to the aforementioned positive traits.

Unfortunately, the risk management function of the Korean exchange-traded derivatives market does not work properly compared to the amount of liquidity. This is because most contracts trading are concentrated in the near-term month, making mid- to long-term hedging difficult. Long-term contracts, of one year or longer, are not listed and even listed current month contracts have low liquidity, requiring a rollover (reinvesting funds from a mature security into a new issue of the same or a similar security) near the final settlement date, which means additional cost. In short, unnecessary cost occurs to hold a long-term position because short-term contracts need to be rolled over.

What is more serious is the high probability of excessive speculative trading. Let’s take a look. The problem is that market participants need to be accurately divided into hedger, arbitrageur and speculator to determine the speculative trading proportion. But realistically, identifying the transaction purpose is almost impossible. To understand the amount of speculative trading, trading volume of the outstanding contracts and deep OTM options can be used as indirect indicators. However, the Korean stock index derivatives market ranked first out of 21 countries in terms of trading volume per outstanding contract, and the amount is more than twice that of India, ranked in second place.

Furthermore, over 90% of KOSPI 200 options, boasting the largest trading volume, is traded in OTM options when examined for the deep OTM option trading volume. The OTM option trade is an absolute part of the KOSPI 200 options trading volume and number of transactions, and especially the relatively high demand of deep OTM put options demonstrate an active speculative trade expecting a fall in market value. This trend can be seen in Korean and foreign institutional investors as well as individual investors. It means that the speculative trading proportion of the market is considerable, and a soaring increase of OTM put option purchase
by individuals (expecting extremely high profits) when the market is falling shows a strong speculative trading tendency during specific periods.

The concerning part of this phenomenon is that the individuals continuously experience loss. The most accurate method to confirm the gain and loss by investor groups is to analyse the selling and buying price of each account for all individual, institutional and foreign investors. However, the real-name financial transaction act makes this illegal. Instead, transaction information is used to estimate gain and loss. The accumulated amount of loss for individual investors in an earlier study reported 2.0845 trillion KRW for KOSPI 200 futures and options, while the securities firms and foreigners profited by 755.6 billion KRW and 1.3286 trillion KRW respectively. The gain and loss of derivatives investment is interlinked with that of spot investment, and since the numbers do not reflect the spot investment outcome, the figures are not entirely accurate. Yet, considering the strong inclination of speculative trading by individual investors, it is safe to assume their loss in the derivatives market is reflected in the final profit and loss statement.\textsuperscript{9}

2.3 Programme trading and the effect on the spot market

Another problem related to the exchange-traded derivatives market is the significant effect on the spot market. There have been arguments that the continuous rise of programme trading with the purpose of arbitrage is causing unnecessary volatility.\textsuperscript{10} In fact, previous studies reported that spot trading volume and price volatility increased as the derivatives maturity date neared, due to clear demands to take advantage of the price gap between spot portfolios and equity index futures and options.

A case in point is the ‘November 11, 2010 KOSPI 200 option shock incident. On November 11, 2010, the steady market plummeted because of a massive programme sell order 10 minutes before the deadline on the expiration date by the Deutsche Bank. In other words, a heavy selloff (2.4 trillion KRW, 25.6% of the day’s trading volume) by a foreign financial institution caused the shock by closing out its existing arbitrage position.

Of course capital market fluctuation is inevitable to some extent. However, the spread of sharp volatility affected by a small group in a short time period hinders investor protection and market confidence. This spot market disruption of derivatives first gained attention with 1987’s Black
Monday. Back then, the American Dow Jones Index recorded a market crash of 22.6% on Monday October 19. This is the largest one-day drop documented, including the 1929 great depression period. Three months later, Treasury Secretary Brady pointed to programme trading as the main cause of the crash in the Presidential Task Force on Market Mechanisms report. The ‘Brady Report’ at the time essentially created a ‘sidecar’ that stops all programme trades, and a ‘circuit breaker’ which halts all trade for a limited time.

These two safeguard measures have been implemented since 1996 in the Korean stock index futures market, yet they need to be improved because continuous rises in price fluctuation are still being observed on maturity date, even though the situations may not be as critical as that of 11 November 2010. Along with programme trading, another factor of market disruption is equity-linked securities (ELS) that automatically sell off its underlying asset (index or stock) when the market drops below a certain level.

3. OTC derivatives market growth and uncertainties

3.1 The slowed OTC derivatives market growth

Meanwhile, the OTC derivatives market trading volume steadily increased to reach 6,610 trillion KRW by the end of the first half of 2011. Conventionally, currency and interest rate derivatives make up almost the entire domestic OTC market. The trading volume of currency derivatives during the first half of 2011 was 4,762 trillion KRW, 72% of the market, while interest rate derivatives took up 26%, an amount equal to 1,689 trillion KRW, during the same period. Equity and credit derivatives, on the other hand, are not traded as much.

<table>
<thead>
<tr>
<th></th>
<th>1st half of 2007</th>
<th>1st half of 2008</th>
<th>1st half of 2009</th>
<th>1st half of 2010</th>
<th>1st half of 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity</td>
<td>39,495</td>
<td>82,430</td>
<td>34,344</td>
<td>112,581</td>
<td>147,774</td>
</tr>
<tr>
<td>Interest rate</td>
<td>855,175</td>
<td>1,481,226</td>
<td>1,295,363</td>
<td>1,876,082</td>
<td>1,688,894</td>
</tr>
<tr>
<td>Currency</td>
<td>2,655,201</td>
<td>4,463,320</td>
<td>4,855,241</td>
<td>4,555,779</td>
<td>4,761,718</td>
</tr>
<tr>
<td>Credit</td>
<td>1,732</td>
<td>3,304</td>
<td>4,036</td>
<td>1,087</td>
<td>4,073</td>
</tr>
<tr>
<td>Others</td>
<td>3,374</td>
<td>13,589</td>
<td>3,547</td>
<td>4,573</td>
<td>7,923</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>3,554,977</strong></td>
<td><strong>6,023,869</strong></td>
<td><strong>6,192,531</strong></td>
<td><strong>6,550,102</strong></td>
<td><strong>6,610,382</strong></td>
</tr>
</tbody>
</table>

Source: Financial Supervisory Service, ELW transactions excluded

The major investor of the OTC market is the bank, accounting for 93% of the total trading volume and 94% of the balance. Non-banking financial institutions are relatively non-active in this market, making the banks the dominant players.
According to the market balance, the Korean OTC market only comprises 0.91% of the world’s market, which demonstrates a big difference to the international OTC market total balance. Per underlying asset, only the currency derivatives, ranked second by balance standard, has a relatively high share of 2.98%. The rest account for simply ±1% of the international market. For instance, interest rate derivatives’ share is 0.79%, and credit derivatives a mere 0.03%. From the international perspective, the interest rate derivatives market is the largest, and the most common OTC derivative instrument is the interest rate swap (IRS).

**<Table 6> OTC derivatives trading volume and balance for first half of 2011**

<table>
<thead>
<tr>
<th></th>
<th>Banks</th>
<th>Securities</th>
<th>Insurance</th>
<th>Trust</th>
<th>Others</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Volume</strong></td>
<td>6,134,206 (92.8%)</td>
<td>287,681 (4.4%)</td>
<td>9,765 (0.1%)</td>
<td>169,984 (2.6%)</td>
<td>8,746 (0.1%)</td>
<td>6,610,382 (100%)</td>
</tr>
<tr>
<td><strong>Balance</strong></td>
<td>6,501,009 (93.9%)</td>
<td>358,356 (5.2%)</td>
<td>28,194 (0.4%)</td>
<td>29,220 (0.4%)</td>
<td>4,786 (0.1%)</td>
<td>6,921,565 (100%)</td>
</tr>
</tbody>
</table>

Source: Financial Supervisory Service, (¥) = share per financial institution

According to the market balance, the Korean OTC market only comprises 0.91% of the world’s market, which demonstrates a big difference to the international OTC market total balance. Per underlying asset, only the currency derivatives, ranked second by balance standard, has a relatively high share of 2.98%. The rest account for simply ±1% of the international market. For instance, interest rate derivatives’ share is 0.79%, and credit derivatives a mere 0.03%. From the international perspective, the interest rate derivatives market is the largest, and the most common OTC derivative instrument is the interest rate swap (IRS).

**<Table 7> Comparison of major domestic and international OTC derivatives**

<table>
<thead>
<tr>
<th></th>
<th>Domestic Market</th>
<th>International Market</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>end of 2009.6</td>
<td>end of 2010.6</td>
</tr>
<tr>
<td><strong>Equity</strong></td>
<td>39 (0.60%)</td>
<td>82 (1.31%)</td>
</tr>
<tr>
<td><strong>Interest rate</strong></td>
<td>2,632 (0.60%)</td>
<td>3,856 (0.85%)</td>
</tr>
<tr>
<td><strong>Currency</strong></td>
<td>1,803 (3.70%)</td>
<td>1,786 (3.36%)</td>
</tr>
<tr>
<td><strong>Credit</strong></td>
<td>7 (0.02%)</td>
<td>6 (0.02%)</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>4,485 (0.76%)</td>
<td>5,737 (0.98%)</td>
</tr>
</tbody>
</table>

(¥) = international market share
Source: BIS, Financial Supervisory Service

**3.2 Bank’s forward exchange purchase caused foreign debt increase**

In case of Korea, OTC derivatives are traded by banks, and the particularly high trading volume of currency and interest rate derivatives was because of forward exchange selling by exporting companies and consequently, the forward exchange buying of domestic banks. These Korean banks would borrow or swap foreign currency amongst themselves to hedge against risk. When the banks borrowed foreign currency directly, their foreign debt increased, and the KRW was pressured to be revalued since the banks sold the currency on the spot exchange market.
Korean banks would also secure a great amount of foreign currency through FX swaps, and foreign bank branches in Korea made this possible. In the process of providing funds through FX swaps, these foreign bank branches borrowed from abroad and saw an increase in foreign loans, while domestic banks sold the foreign currency on the spot exchange market. This, as mentioned before, led to the revaluation demand of the KRW.

As the banks’ net buying (or firms’ net selling) volume of forward exchange grew during 2006 and 2007, there was a steep increase in external debt in the banking sector. The debt of foreign bank branches escalated as well during the same period, to a level where the increased amount exceeded that of domestic banks. Moreover, because most of the KRW the foreign bank branches held were invested back into Korean bonds, the share of foreigners rose in the bond market. To recap, the banking sector’s debt suddenly soared in 2006 and 2007, and foreign bank branches had too much short-term debt. Short-term borrowing by foreign bank branches became a vulnerability factor after the 2008 crisis. Foreign bank branches could borrow up to 600% of their equity from their headquarters, so they increased the dollar cash flow. At the time, the surge in short-term debt, which can be characterised as temporary borrowing based on future profit, such as forward exchange, was considered sound compared to funding a current account deficit, but it was recognised as a risk externally.

The foreign debt increase, indirectly linked with Korean companies’ forward exchange selling, became a critical external vulnerability. During the global financial crisis, the credit default swap (CDS) premium on the foreign exchange stabilisation bond soared, staying considerably high in comparison to other emerging countries with similar credit risk. It exaggerated the sovereign credit risk. The foreign exchange stabilisation bond CDS premium was 316 base points by the end of 2008, higher than Greece (232), Mexico (292) and Thailand (256), countries with lower credit ratings. The fundamental reason for the surge was high external exposure of USD debt.

3.3 Lurking instability revealed by the KIKO incident

The possible sale of high-risk instruments like knock-in knock-out (KIKO) options is another instability factor related to OTC derivatives. In 2007, Korean banks thought the KRW would continue to appreciate. The banks recommended using KIKO options to exporting companies
to reduce their losses and many SMEs took their advice. A KIKO option is a derivatives product that allows the option holder to sell a specific currency at a fixed exchange rate against another currency, if the latter moves within a certain range agreed by the two counterparties. The purpose was to help SMEs hedge against exchange rate risks. Regrettably, SMEs did not benefit much when the exchange rate fell below the lower boundary of the range, but incurred an accumulating loss when the exchange rate moved the other way.

As the KRW continued to depreciate with the 2008 global financial crisis, SMEs’ loss grew exponentially. KIKO option holders claimed the banks did not properly explain the risk involved, in addition to aggressively targeting blue chip companies with large amounts of foreign currency. By August 2012, more than 50 companies were out of business, under legal management or in workout programmes. Most were SMEs with hundreds of billions of KRW in sales, and some with even over one trillion KRW in sales.

4. Expected effects and limitations of an exchange–traded derivatives transaction tax

4.1 Speculation control effect

Think about the assertion that the introduction of a derivatives transaction tax will restrain speculation. Korea could consider implementing the transaction tax in addition to the already existing capital gains tax, as European countries are doing. In Korea’s case, it would be wise to use the transaction tax as a mechanism to mitigate or control excessive speculation in the sizable derivatives market. What is currently being discussed, however, is an exchange–traded derivatives transaction tax that will only decrease the transaction of individuals in the market. It is doubtful whether it will effectively control speculation as intended.

According to Hong Bum–kyo (2008), it is necessary to suppress the effect excessive speculation in the derivatives market has on the spot market. Individual investors actively participate in derivatives trading and tend to make a significant contribution to the frequency of trade rather than the market’s trading volume. Since they show a clear tendency to speculate at times, the transaction tax can raise the cost of individual transactions to reduce speculation. The reason behind the continuous loss for individual investors is acknowledged as the intent
to speculate without much prior knowledge of the financial instrument. Thus, more people say it is essential to control these transactions.

Still, it is difficult to say that these speculative individuals in the exchange-traded derivatives market are the core reason for the financial instability caused by the derivatives. Programme trading option shock, the KIKO incident, unfair trading by ELW scalpers and ELS price manipulation are many of the problems related to derivatives. The first two are directly linked to the derivatives market, but the programme trading option shock was caused by institutional investors, and the KIKO incident involving OTC derivatives customers had no connection with the exchange-traded derivatives transaction tax. Furthermore, ELW and ELS are derivative-linked securities (DLS) with underlying derivatives, not actual derivatives products. ELS price manipulation was a problem associated with DLS insider hedging, and unfair trading by ELW scalpers dealt with listed DLS trading, which is a different market despite the product similarity of both being options.

Therefore, applying an exchange-traded derivatives transaction tax with the purpose of controlling speculation will only prevent individual investors from engaging in the exchange-traded derivatives market. Also, there is the possibility of speculative trading moving to the OTC derivatives market once the tax is implemented. This will only aggravate the situation in the OTC market, since it tends to be more speculative than the exchange-traded derivatives market.

In the European Union, eleven countries agreed to introduce the FTT recently, which will be implemented on every derivatives transaction by financial institutions. In fact, after the global financial crisis, the more problematic market was not the exchange-traded derivatives, but the unregulated OTC. That is why there are ongoing discussions about regulations to encourage more transaction in the exchange-traded market. Korea should also consider levying a tax on financial institutions for all exchange-traded and OTC derivatives transactions as European countries are doing, instead of applying a FTT to exchange-traded derivatives exclusively for tax authorities’ convenience.
4.2 Limitations of implementing equal taxation

The basis of the current exchange-traded derivatives transaction tax introduction is the difficulty of implementing a proper capital gains tax system that is much needed in the spot and derivatives markets in a short period of time. But a derivatives transaction tax is not fair while the spot market is exempt from taxation, and the imbalance created in the two markets will cripple the transaction between them. A derivatives transaction tax is gaining consensus because it is in balance with the already existing securities transaction tax, and it will contribute to tax revenue while controlling speculation.

But will the derivatives transaction tax truly contribute to raising fairness and controlling speculation? The assertion regarding tax equity is unreliable, since tax justice is distorted by not imposing capital gains tax. The very act of not levying tax on unearned income, such as securities trading, goes against taxation justice. This lack of taxation promotes speculative trading and justifies the low tax rate on unlisted or non-registered stock profits by major shareholders. Also, there can be side effects of irregular transactions because the tax rate is lower for capital gains, compared to business tax or gift tax.

Because capital gains tax is not fully collected in the spot market, taxation on new financial instruments introduced after the Capital Markets Act is being distorted. With the capital market development after the Asian financial crisis, financial products diversified and new financial tax policies were established. New financial instruments include not only derivatives, but also collective investment schemes (beneficiary certificates of fund) and derivatives-linked products. There are three ways to levy tax on them. The first method would be to apply transparent taxation after analysing the actual income components of the traded product. In this case, the tax regulation principle related to the involved securities will be applied. The second method would acknowledge and categorise complicated instruments as a separate income source for taxation. The last method would be an intermediary approach that combines the first two methods.

Profits from collective investment schemes are generally taxed as dividend income in Korea. Gains from listed shares, foreign shares trading and exchange-traded derivatives transactions are exempt from taxation, so the intermediary method would be implemented. Profits from DLS
or structured notes are regarded as dividend income,\textsuperscript{13} which means the income tax law recognises the products as taxable. This DLS dividend income tax system is problematic in the sense that DLS products combined with securities is taxed for dividend income while the component of the product, derivatives, is free of tax.\textsuperscript{14} In conclusion, the current tax system, which discriminates the investment income depending on how the hybrid investment product is categorised, needs to be improved.

To solve the fundamental problem, all capital gains should be recognised equally and the gains and losses of financial instruments must be identified as capital gain and loss, not dividend income. They should not fall under the exception of the capital gains tax principle. By prioritising proper taxation of the spot and derivatives market, capital market distortion will decrease and all financial products will receive equal treatment. What is more, the justice of taxation will be upheld.

Of course, it is politically difficult to implement capital gains tax, and that is why a derivatives transaction tax should be the alternative solution. But the moment a derivatives transaction tax is introduced, strong tax resistance from the market will make it impossible to apply capital gains tax. If the exchange-traded derivatives transaction tax is not implemented under a detailed roadmap to establish a desirable financial tax system, the market atmosphere will only become more challenging.

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\textsuperscript{2} Korean securities firms can be categorised as investment banks since they deal with securities acquisition and sales, securities trading, securities brokerage, OTC derivatives trading, corporate M&A and asset management. Insurance, asset management, credit-specialised companies and other non-banking financial institutions in the finance sector are allowed to deal with very limited investment bank operations.

\textsuperscript{3} There have been arguments for lowering or scrapping the current securities transaction tax entirely once capital gains tax is imposed. The basis for this is that most countries taxing capital gains do not have a transaction tax in place, thus only one or the other should exist. Offseting the profit and loss generated by a transaction is also another issue. It is necessary to review in detail the possibility of taxing the gains minus the loss since an investor can gain or lose by trading.

\textsuperscript{4} The United States ranks first with 49.4\% individual equities options and 27\% EFT options for the 2010 exchanged-traded derivatives trading contracts. It is different from Korea where the market is mainly composed of equity index futures and options trading.

\textsuperscript{5} New financial products linked to equity and stock index, such as securities firm’s ELS and DLS as well as bank’s ELD, are developed and sold with other funds. The issuance of these new financial instruments is possible due to the development of the exchange-traded derivatives market, in other words, the exchange market. ELS, DLS and ELD balance (as of the end of March 2011) are 19.2 trillion, 4.3 trillion, and 5.8 trillion KRW, respectively, which is considerably high.
Hedging, arbitrage and speculation create liquidity in the derivatives market and the role of speculation is very important. It is a necessary evil because it plays a positive role by supplying liquidity hedgers need to transfer risk.

Trade volume per outstanding contract can be used as an indirect indicator for speculation. This indicator can figure out the daily transaction without holding a position, which means there is more speculative trading when the indicator’s number is high. The transaction of deep OTM options is more likely done by speculators expecting a sudden swift in the market rather than for hedging purposes. According to KOSPI 200 options strike price setting (regulation 17), upon admission of the options at least 13 strike prices (six are in-the-money, one is at-the-money and six are out-of-the-money) shall be set at intervals of 2.5 points for three consecutive near-term month contracts. Upon the admission of the options, at least seven strike prices (three are in-the-money, one is at-the-money and three are out-of-the-money) shall be set at intervals of 5.0 points for the next quarterly month contract.

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There is insufficient regulatory mechanism to protect individual investors in the Korean derivatives market despite their continuous losses. Currently, a sub-section in the Capital Markets Act prohibits soliciting investment from non-professional investors over their preferred risk level in the exchange-traded derivatives market. Financial investment firms must follow the Suitability Principle (Article 46) of the Capital Markets Act for investor suitability when soliciting. Regardless, inadequate measures are taken to enhance understanding of derivatives products and to limit access for individual investors.

To gain from arbitrage trading, spots and futures need to be positioned opposite one another. A large amount is bid and asked at a different price from the market price to increase the possibility of this settlement. This causes the spot market price to fluctuate greatly, regardless of the corporate intrinsic value. For example, when arbitrage trading (buying spots-selling futures) is settled on the last trading day, futures short position will automatically purchase spots at its closing price. The purchased spots will be sold at the lowest price possible to increase the settlement feasibility (gain arbitrage regardless of spots selling price), which will cause the spots closing price to drop and recover the next day without any regard to the corporate intrinsic value.

Of course, Korean banks used foreign currency funds not only to hedge against forward swaps hedging, but also for foreign currency loans as well as export bills purchasing.

Europe’s FTT debate has three important characteristics. Firstly, most countries already have capital gains tax in place. Secondly, the FTT is about financial institutions taking responsibility for the financial crisis and burdening the financial cost. So, the EU will collect money from the financial institutions in the form of tax. The intriguing part is they use Korea as an example in their report to explain that the FTT will not contract the trade volume. Lastly, they do not have Tobin tax. This is probably because the sudden inflow and outflow of foreign capital is not the reason the EU is facing a crisis.

This financial instrument that combines securities and derivatives distributes profits according to a predetermined manner depending on the linked value fluctuation of underlying assets. Financial institutions competitively develop hybrid securities like equity-linked warrants, securities, funds, and deposits to sell to non-professional investors.

When new exchange traded funds (ETFs) are repurchased, dividend income tax is applied according to the 2009 tax law revision. However, the new ETFs are not much different from investing in single commodities or derivatives products. In this case, it would be more reasonable to implement the capital gains tax, rather than the dividend income tax that takes the holding period of bonds into account when repurchased.