ASIFMA Virtual Event:

Korean Capital Market Analysis: OVERVIEW & INVESTMENT OPPORTUNITIES (in collaboration with KOFIA)

THURSDAY, 22 OCTOBER 2020
3:00PM – 4:45PM HKT/
4:00PM – 5:45PM KST
<table>
<thead>
<tr>
<th>Time (HKT)</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:00-3:05pm</td>
<td>Welcome Remarks</td>
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<tr>
<td></td>
<td>• J. C. Na, Chairman &amp; CEO, KOFIA</td>
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<td>• Lyndon Chao, Managing Director, Head of Equities and Post Trade, ASIFMA</td>
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<tr>
<td>3:05-3:20pm</td>
<td>Macro outlook for Korean Economies</td>
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<tr>
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<td>• Jaechul Chang, Managing Director, Chief Economist, KB Securities, KB Financial Group</td>
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<td>3:20-3:35pm</td>
<td>Korean Securities Market</td>
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<td>• Woochang Chung, Head of Global Equity Research Team, Mirae Asset Daewoo</td>
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<td>3:35-3:50pm</td>
<td>Korean Bond Market</td>
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<td>• Myoungsil Kim, Head of Fixed Income Team, Research Center, Shinhan Investment Corp</td>
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<td>3:50-4:35pm</td>
<td>Panel Discussion: Overseas Investors’ View on the Korean Market</td>
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<td></td>
<td>• Simon Williams, Managing Director, APAC Head of Equity Trading, BlackRock</td>
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<td>• Ross Whittaker, Managing Director, Co-Head of APAC Advanced Execution Services (AES) Electronic Trading, Credit Suisse</td>
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<td>• Nicholas Peach, Managing Director, Head of Electronic Trading, Goldman Sachs</td>
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<td></td>
<td>• Lyndon Chao, Managing Director, Head of Equities and Post Trade, ASIFMA (moderator)</td>
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<tr>
<td>4:35-4:45pm</td>
<td>Q&amp;A Session</td>
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</table>
Welcome Remarks:

J. C. Na  
Chairman & CEO  
KOFIA
Welcome Remarks:

Lyndon Chao
Managing Director, Head of Equities and Post Trade
ASIFMA
Macro Outlook for Korean Economies:

Jaechul Chang  
Managing Director, Chief Economist  
KB Securities, KB Financial Group
2021 Korea Macro
Post-Corona Recovery, Returning to Potential
2020 corona crisis and 1H recession

- The global economy fell into recession in the 1st half of 2020, followed by a better-than-expected recovery in 3Q 2020
  - The recovery in 3Q was mostly driven by China and the U.S.
- The Korean economy also fell into recession in the 1st half, but the recovery may not be as strong as in China and the U.S.
  - Korea is expected to record its third period of negative growth (-1.3%) since the BoK reported GDP data
- The BoK lowered its base rate to 0.5% and the government implemented four supplementary budgets (KRW61.7tn or ~3% of GDP)
  - The BoK adopted an unlimited liquidity support facility and increased loans via CBBLF, BILSF, etc.

Source(s): CEIC, BoK, KB Securities forecasts

Corona crisis led global economy to recession in 1H

Korean to record third period of negative growth since 1953

Source(s): BoK, KB Securities estimates
Recovery seems tepid with subdued inflation

Rapid recovery of industrial production recently slowed

Headline CPI picked up (at 1%) while Core CPI remains subdued

No. of employed remains below level before Covid-19

Consumer and business sentiment remain weak

Source(s): KOSIS, KB Securities

Source(s): Bank of Korea, KB Securities
Leading indicators hint at further recovery

**Trade recovery on the way**

Source(s): KITA, KB Securities

**Leading indicators hint at further recovery**

Source(s): KOSIS, KITA, KB Securities

**Investment indicators show resiliency despite base effect**

Source(s): KOSIS, KITA, KB Securities

**Leading indicators of global economy also on uptrend**

Source(s): OECD, KB Securities

Note: Six NMEs are China, Brazil, India, Indonesia, Russia Federation, South Africa
2021: Post corona recovery, economic growth at 2.7%

- Key assumptions:
  - The U.S.-China conflict will not escalate to become a meaningful shock to global trade and financial markets
  - The vaccine for Covid-19 will be distributed widely in 1H 2021 with no serious “knockdowns”

- The economic growth rate will rebound to 2.7% from negative growth (-1.3%) in 2020
- Consumption and exports will likely lead the economic recovery
  - The recovery will continue in 2H but at a slower pace, alongside improvements in economic sentiments and global trade

Economic growth continues but at slower pace in 2H 2021

Time to recovery back to pre Covid-19 level

Source(s): BoK, KB Securities forecasts

Source(s): BoK, KB Securities estimate
Gradual recovery amid low inflation, BoK will stay put

- Private consumption will increase by 3.5% along with steady job growth despite less supports from government income transfers
- Customs-based exports and imports to grow 7.3% and 7.0%, respectively, from -72% and -8.8% in 2020
  - Sectors with good prospects: semiconductor, auto, and machinery, as well as those related to Covid-19 bio and medical products
- Facilities investment is expected to grow by 6.3%, continuing two consecutive years of expansion along with a recovery in exports
  - The semiconductor sector seems to lead investments; the government’s digital and green “New Deal” will be another driver
- Construction investment is likely to contract by 0.3% YoY because of sluggish commercial/industrial building construction
  - However, there is some upside potential coming from increased SOC budgets and expansion of New Deal-related business
- Job growth of 220,000 (vs. -217,000 in 2020) due to economic recovery and government’s safety net policy and New Deal
  - Job growth will be driven by manufacturing as exports rebound
- CPI inflation to rebound 1.0% (vs. 0.6% in 2020), below BoK target (2%)
  - Deflationary factors: Free education (high school), strong KRW, cuts to special consumption tax, public utility fees, etc.
  - Inflationary factors: Increase in oil price (WTI USD50.00/bbl; 27.3% YoY), higher rents and base effects
- All of the above indicate that the economy will be in recovery mode, approaching potential levels gradually amid low inflation
- Therefore, the BoK is expected to hold the base rate at the current 0.5% level until the end of 2021
Recovery still needs boost from government spending

- Government spending for stimulus measures is likely to shift to public investments from various transfer payments
  - Contribution of government spending to economic growth will remain at ~1.5%p
- Fiscal multiplier may rise as government spending of resources may create large spillover effects
  - The government allocated KRW21.3tn in digital and green investments in 2021 out of total KRW160tn of 2020-25 "Korean New Deal Project"
- However, the 2021 budget is almost the same as in 2020 if four supplementary budgets are considered
  - Expect a supplementary budget in 2021 to add growth momentum if domestic demand remains weak

Government contribution to growth will remain at ~1.5%p in 2021

Government investment growth to be in double digits in 2021

Source(s): BoK, KB Securities estimates

![Government contribution to growth chart](chart1.png)

![Government investment growth chart](chart2.png)
Household debt stabilizes while public debt expands

- Fiscal burden increases due to large fiscal demands: Covid-19 issues, "New Deals", aging population, etc.
  - Fiscal deficit of ~5% of GDP is expected to continue until 2024; and government debt to rise to 58% of GDP
- Household debt (163% of GDP) is increasing, but at slower pace in 2Q 2020 (5.2% YoY) than 2010-19 average (7.7% YoY)
  - Housing market regulations in July slowed debt growth, esp. mortgage loan growth, which slowed to 5.4% YoY in Aug (vs. 6.4% in 2Q)
  ...however, other loans to households in Aug increased by 11% YoY via balloon effect
  - As the government is likely to hold its current policy stance on the housing market, household debt growth likely slow going forward

Government growth contribution should remain at ~1.5%p in 2021

Household debt growth rebounding but likely to slow

Source(s): Ministry of Economy and Finance, KB Securities
Source(s): BoK, KB Securities estimate
# Korea economic forecasts (2019-2022)

<table>
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<tbody>
<tr>
<td></td>
<td>% QoQ</td>
<td>% YoY</td>
<td>% YoY</td>
<td>% YoY</td>
<td>% YoY</td>
<td>% YoY</td>
</tr>
<tr>
<td>GDP</td>
<td>-1.3</td>
<td>-3.2</td>
<td>1.4</td>
<td>1.4</td>
<td>0.9</td>
<td>0.8</td>
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<tr>
<td>Private Consumption</td>
<td>2.0</td>
<td>-1.3</td>
<td>2.7</td>
<td>2.4</td>
<td>1.4</td>
<td>2.7</td>
</tr>
<tr>
<td>Construction</td>
<td>-2.5</td>
<td>0.7</td>
<td>-0.3</td>
<td>0.5</td>
<td>4.2</td>
<td>-0.1</td>
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<tr>
<td>Facilities</td>
<td>-7.5</td>
<td>2.6</td>
<td>6.3</td>
<td>5.1</td>
<td>7.3</td>
<td>4.1</td>
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<tr>
<td>Exports G &amp; S</td>
<td>0.5</td>
<td>-4.8</td>
<td>5.0</td>
<td>3.0</td>
<td>6.3</td>
<td>-11.5</td>
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<tr>
<td>Imports G &amp; S</td>
<td>-0.8</td>
<td>-1.8</td>
<td>4.6</td>
<td>3.1</td>
<td>3.1</td>
<td>-4.8</td>
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<tr>
<td>Exports (Fob)</td>
<td>-10.4</td>
<td>-7.2</td>
<td>7.3</td>
<td>5.8</td>
<td>-1.8</td>
<td>-20.3</td>
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<tr>
<td>Imports (CIF)</td>
<td>-6.0</td>
<td>-8.8</td>
<td>7.0</td>
<td>5.3</td>
<td>-1.8</td>
<td>-16.1</td>
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<tr>
<td>CPI</td>
<td>0.4</td>
<td>0.6</td>
<td>1.0</td>
<td>1.3</td>
<td>1.2</td>
<td>-0.1</td>
</tr>
<tr>
<td>Policy Rate (BoK Base Rate) % EoP</td>
<td>1.25</td>
<td>0.50</td>
<td>0.50</td>
<td>0.50</td>
<td>0.75</td>
<td>0.50</td>
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<tr>
<td>Unemployment (SA)</td>
<td>3.8</td>
<td>3.9</td>
<td>3.9</td>
<td>3.8</td>
<td>3.7</td>
<td>4.2</td>
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<tr>
<td>USD /KRW</td>
<td>1156</td>
<td>1165</td>
<td>1130</td>
<td>1150</td>
<td>1217</td>
<td>1203</td>
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<tr>
<td>Avg</td>
<td>1165</td>
<td>1191</td>
<td>1158</td>
<td>1140</td>
<td>1194</td>
<td>1220</td>
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Source(s): BoK, KB Securities Forecast (10/21/2020)
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Korean Securities Market:

Woochang Chung
Head of Global Equity Research Team
Mirae Asset Daewoo
Korean Equity Market

Issues and Strategy

Woochang Chung  wcchung@miraeasset.com
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## Korea Equity Market Overview

### Korea represents 1.5% of MSCI AC World

- Korea ranks eleventh in MSCI AC World Index, representing 1.5% of Index value (as of Oct20)
- In MSCI EM Index, Korea ranks third, with a 12.1% stake

### Korea has 1.5% weight in MSCI AC World Index

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<table>
<thead>
<tr>
<th>Country</th>
<th>Weight (%)</th>
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</thead>
<tbody>
<tr>
<td>United States</td>
<td>58.5%</td>
</tr>
<tr>
<td>China</td>
<td>5.3%</td>
</tr>
<tr>
<td>Japan</td>
<td>6.7%</td>
</tr>
<tr>
<td>Others</td>
<td>28.0%</td>
</tr>
<tr>
<td>S. Korea</td>
<td>1.5%</td>
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</tbody>
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Source: Factset, Mirae Asset Daewoo Research

### Korea has 12.1% weight in MSCI EM Index

```
<table>
<thead>
<tr>
<th>Country</th>
<th>Weight (%)</th>
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<tbody>
<tr>
<td>China</td>
<td>42.2%</td>
</tr>
<tr>
<td>Taiwan</td>
<td>12.8%</td>
</tr>
<tr>
<td>Brazil</td>
<td>4.6%</td>
</tr>
<tr>
<td>India</td>
<td>8.3%</td>
</tr>
<tr>
<td>Korea</td>
<td>12.1%</td>
</tr>
<tr>
<td>Others</td>
<td>20.0%</td>
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</tbody>
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Source: Factset, Mirae Asset Daewoo Research
Due to slowing corporate earnings growth prospect, tighter regulations and aging demographics, Korea has lost its share in MSCI World Index to 1.5% from its historical peak of 2.1%
Korea Equity Market Overview: KOSPI sector allocations

Semicon: 27.6% of total Index

- Semicon represents the largest portion at 27.6% of total Index
- Followed by healthcare (9.3%) and Software/Internet (8.6%) and Auto/Auto parts (6.9%)
- Non-manufacturing has growing faster than manufacturing

KOSPI Sector weight by market cap.

<table>
<thead>
<tr>
<th>Sector</th>
<th>Market Cap. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semicon</td>
<td>27.6</td>
</tr>
<tr>
<td>Healthcare</td>
<td>9.3</td>
</tr>
<tr>
<td>Software</td>
<td>8.6</td>
</tr>
<tr>
<td>Auto</td>
<td>6.9</td>
</tr>
<tr>
<td>Chemicals</td>
<td>6.2</td>
</tr>
<tr>
<td>Cosmetics/Apparel</td>
<td>4.3</td>
</tr>
<tr>
<td>Consumer Goods</td>
<td>4.2</td>
</tr>
<tr>
<td>Financials</td>
<td>3.9</td>
</tr>
<tr>
<td>Others</td>
<td>28.8</td>
</tr>
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KOSPI Market cap. Top 10

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company</th>
<th>Market Cap. (KRW tril.)</th>
<th>Sector</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Samsung Electronics</td>
<td>363.6</td>
<td>Semiconductors</td>
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<tr>
<td>2</td>
<td>SK Hynix</td>
<td>64.2</td>
<td>Semiconductors</td>
</tr>
<tr>
<td>3</td>
<td>NAVER</td>
<td>48.5</td>
<td>Software</td>
</tr>
<tr>
<td>4</td>
<td>Samsung Biologics</td>
<td>47.8</td>
<td>Health Care</td>
</tr>
<tr>
<td>5</td>
<td>LG CHEM.</td>
<td>45.5</td>
<td>Chemicals</td>
</tr>
<tr>
<td>6</td>
<td>Hyundai Motors</td>
<td>38.2</td>
<td>Automobiles</td>
</tr>
<tr>
<td>7</td>
<td>Celltrion</td>
<td>36.5</td>
<td>Health Care</td>
</tr>
<tr>
<td>8</td>
<td>Kakao</td>
<td>32.8</td>
<td>Software</td>
</tr>
<tr>
<td>9</td>
<td>Samsung SDI</td>
<td>30.6</td>
<td>IT Appliances</td>
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<tr>
<td>10</td>
<td>LG H&amp;H</td>
<td>24.2</td>
<td>Cosmetics/Apparel/Toys</td>
</tr>
</tbody>
</table>

Note: 10/13 last price
Source: Quantiwise, Mirae Asset Daewoo Research
Korea Equity Market Overview: investor breakdown

- Foreign investors own 34.5% holdings in KOSPI (as of 14 October)

KOSPI: Foreign investor holdings down to 34.5%

Accumulated net purchase amount by type of investors

Source: Quantiwise, Mirae Asset Daewoo Research
Korea Equity Market Overview: investor breakdown

Retail buying: the main drivers of KOSPI rerating since early this year

- Since beginning this year, retail buying has been one of main drivers of KOSPI re-rating
- Retail flow now accounts for over 80% of market turnover

![Domestic stock trading share by Retail investors](source)

![Domestic stock trading share by Institutions & Foreign investors](source)
Korea Equity Market issues: 1. Changes in majority shareholder rule

Lower threshold for capital gains taxes

- Investors, including family members, which owns KRW300m+ in shares of any company, are liable for up to 33% of capital gains taxes from 2021
- The threshold of KRW300m is significantly lower than what it is now at KRW1bn
- High net-worth retail investors’ possible efforts to lower their holdings below the threshold could aggravate market volatility

<p>| Major Shareholder standard modification might trigger sell-off in Korean stock market |
|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|</p>
<table>
<thead>
<tr>
<th>Before</th>
<th>After</th>
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<tbody>
<tr>
<td><strong>Major Shareholder Date of Record</strong></td>
<td>End of 2019</td>
</tr>
<tr>
<td><strong>Transfer Tax Applied Date</strong></td>
<td>2020.4.1~</td>
</tr>
<tr>
<td><strong>Major Shareholder Standard (KOSPI)</strong></td>
<td>Over 1 Bn KRW / 1% per stock</td>
</tr>
<tr>
<td><strong>Major Shareholder Standard (KOSDAQ)</strong></td>
<td>Over 1 Bn KRW / 2% per stock</td>
</tr>
</tbody>
</table>

Source: dongA.com, Mirae Asset Daewoo Research
The Financial Services Commission (FSC)'s temporary ban on short-selling activities of all listed Korean shares will be extended to March 2021, immediately after the current six-month restriction expires in September.

After the initial temporary ban on short-selling, KOSPI has been up 37.7%.

**Remaining short-selling balance after banning short-selling**

![Graph showing remaining short-selling balance]
Korea Equity Market issues: 3. New BBIG Index launch

KRW launch of BBIG indices and ETFs

- The Korean government announced plan to launch of ‘new deal’ investment funds and indices, which will be financed with KRW4tn from state-owned banks like KDB, KRW3tn from the government, and KRW13tn from the private sector.
- The KRX also launched five indices in BBIG (Battery, Bio, Internet, and Game), promoting these ‘new deal’ beneficiaries.

K-New Deal Indexes outperformed KOSPI

Source: KRX, Mirae Asset Daewoo Research
Korea Equity Market issues: 4. Liquidity

Rise in credit loan and margin debt: pressuring on retail buying?

- KOSPI rally has been partly driven by retail buying, which is supported by credit loans
- Credit loans (excluding house loan credits) have increased sharply for the past few months
- Accordingly, the regulator has recently ordered banks to tighten credit loans
- Brokerage firms have already started to tighten margin debts, which peaked in September at KRW17.9tn

![Market cap turnover and margin debt as % of market cap](image)

Source: KRX, Mirae Asset Daewoo Research
Korea Equity Market Strategy: 2H20 Earnings recovery

Our Quant’s key update for 3Q/4Q20 earnings

- 3Q/4Q operating profit consensus +18.7%/+52%YoY, 1st turnaround after 7 quarters of decline
- Earnings turnaround led by Semi, 1M consensus revised up +2.5% in last 1M as Semi +6.8% revised up
- We have already started to see strong 3Q so far, kicked off by better earnings from SEC, LGE and LG CHEM

Aggregated revenue growth in 2H20

Aggregated operating profit growth in 2H20

Source: Quantiwise, Mirae Asset Daewoo Research
Korea Equity Market Strategy : 2H20 Upward earnings revision

Upward earnings revision on the way

- Aggregated 3Q20 OP consensus has been up 3.6% for past one month
- Semicon has highest upward revisions at 7% vs non-semicon’s 2%
- Among non-semicon, display, brokerage, steels and healthcare see decent upward revisions

3Q20 OP consensus revision trend

Source: KRX, Mirae Asset Daewoo Research
Korea Equity Market Strategy: 21F Earnings recovery

- For investors looking at next year, there will be a low base effect that's favorable in 1H. Along with a low base, eyes on recovery of Semi sector
- Consensus currently looks for 4Q to be bottom while seeing recovery from 1Q21. Semi export have been somewhat indicative of this as Aug/Sept Semi export have showing strong YoY growth albeit some of that from Huawei’s pull-in demand

21F operating profit growth +38.6%YoY

Aggregated revenue growth in FY21

Aggregated operating profit growth in FY21

Source: Quantiwise, Mirae Asset Daewoo Research
Korea Equity Market Strategy : 21F Upward earnings revisions

Upward earnings revision on the way

- Aggregated FY21 OP consensus has risen 2.0% for one month (Semicon: 3.3%, non-semicon: 1%)
- We expect accelerating momentum in upward earnings revisions in chemicals, healthcare, auto, semicon sectors

FY21 OP consensus revision trend

Source: Quantiwise, Mirae Asset Daewoo Research
Korea Equity Market Strategy: Valuation

Valuation: still not as demanding as it looks

- 12M forward P/E for KOSPI has reached 12x (vs historical average of 10x since 2010), trading at above +2 STD
- However, adjusting for historical risk free rate, current 12M forward P/E would still trade at a discount to its historical average of 13.7x
Korea Equity Market Strategy: KOSPI valuation

**KOSPI ERP interest rate trend**

- KOSPI Equity Risk Premium (3-stage DDM)
- Korea Government Bonds 10YR yield

Source: Quantwise, Mirae Asset Daewoo Research
Korea Equity Market Strategy: S&P valuation

- Growing concerns over S&P500’s demanding valuation. 12MF P/E is trading at 20x (vs. historical average of 17x)
- But, reflecting recent lower interest rates, 12MF P/E would trade still slightly below historical average
Korea Equity Market Strategy : S&P valuation

S&P500 ERP interest rate trend

- S&P500 Equity Risk Premium (3-stage DDM)
- US 10-yr treasury rate

S&P500 (L) \[\text{12MF PER (R)} \]
- Risk-free rate adjusted PER (R)

Source: Quantiwise, Mirae Asset Daewoo Research
Korean Bond Market:

Myoungsil Kim
Head of Fixed Income Team, Research Center
Shinhan Investment Corp
Domestic bond market outlook

Suspicious numbers

[ Research Center ] MyoungSil Kim
☎ 02-3772-2193
✉ msbond@shinhan.com

Shinhan Investment Corp.
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I. Intro
History-making moments of 2020
I. Intro: Domestic bond market trend 2020 (1)

Bond market hit by COVID-19-sparked economic shock but stabilized on policy response

- With COVID-19 spreading globally from February, the Korean government and Bank of Korea (BOK) have taken all-out measures to protect the real economy and stabilize the financial markets.
- Monetary easing drove down market rates to record-low levels at end-July, but bond market volatility rose again from September due to increased supply and weak US Treasuries.
- 3Y and 10Y KTB yields have fallen by 45.8bp and 16bp YTD, respectively, leading to a roughly 30bp rise in 3Y/10Y spread to 62bp.
I. Intro: Domestic bond market trend 2020 (2)

YoY drop in annual bond return on greater volatility

- Domestic bonds should continue to post a positive annual return at 2.2% for 2020, though down 1.4%p vs. 2019's 3.6%.
- Bond returns are buoyed by: 1) base rate cuts; 2) BOK's outright purchase of KTBs; and 3) rising concerns over economic slump.
- But the upside should be limited due to unfavorable supply/demand conditions (largest-ever KTB issuance in 2020, etc.).
II. Monetary policy & demand

Time to take supplementary measures
II. Monetary policy: Rate freeze in 2021

Base rate likely to be kept low under the Korean New Deal initiative

- The 2020-2024 fiscal management plan points towards fiscal expansion to provide a potent stimulus for the economy.
- Government expenditure is projected to grow at a CAGR of 5.7% in 2020-2024, while revenue should increase only 3.5% per annum. → Need to secure a stable flow of fiscal funds
- The BOK faces growing calls to play a supportive role in fiscal expansion. → Base rate likely to be kept low for a long time

Korean New Deal: Project costs by focus area

Korean New Deal: 2021 budget allocation by focus area
II. Monetary policy: Gov’t-BOK cooperation

Close cooperation between government and BOK required for fiscal expansion

- A stable flow of fiscal funds is needed, but additional issuance of debt is a burden for both the government and the bond market.
- The BOK needs to build trust in financial markets to reduce the burden from any additional debt issuance (hints at mid-term KTB market intervention, etc.).
- It may pledge to supplement its existing asset purchase plan and provide forward guidance of low rates for the long term.

Shift in monetary easing paradigm

Policy mix

- Zero rate
- Negative rate
- QE + QQE (rate control policy)
⇒ Mixed use of monetary and fiscal policies in early stage

Bailout

- Purchase of junk corporate bonds
- Purchase of Treasury bonds in primary market
⇒ Central bank and govt help to protect private assets against possible losses
⇒ Central bank directly provides funds to govt

Helicopter money

- Unlimited fiscal expansion
- Direct liquidity injection into private sector
- Permanent bailout, nationalization of banking system
⇒ Gov’t and central bank acting as one

Modern Monetary Theory (MMT)

- Yield curve control (YCC): Limited possibility
- Purchase of KTBs in primary market: Limited possibility

BOK: Conventional/unconventional monetary measures expected in 2021

Step 1
- Additional base rate cut (from current 0.50%)
  : Only if the US Fed adopts negative interest rate policy

Step 2
- Expansion of monetary easing
  : BOK purchased KRW8tr worth of KTBs YTD. It has hinted at additional purchase in case of increase in market volatility, but more details (scale/timing of purchase, etc.) need to be released.

Step 3
- Yield curve control (YCC): Limited possibility
- Purchase of KTBs in primary market: Limited possibility

Source: Shinhan Investment Corp.
II. Monetary policy: Review on outright purchase

Review on BOK’s outright purchase program in 2020

- The BOK has mostly purchased non-benchmark 10Y KTBs under its outright purchase program, with benchmark KTBs accounting for a mere 2.1%. → Limited impact on the market
- The BOK’s market intervention seems insufficient with KRW8tr worth of KTBs purchased YTD, given that actual KTB issuance in 2020 will likely exceed the originally planned amount by KRW44.6tr due to massive supplementary budgets.

**BOK’s YTD outright purchase of KTBs by maturity**

<table>
<thead>
<tr>
<th>Maturity</th>
<th>Amount (100mn KRW)</th>
<th>Share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3Y</td>
<td>5,200</td>
<td>6.5</td>
</tr>
<tr>
<td>5Y</td>
<td>8,800</td>
<td>11.0</td>
</tr>
<tr>
<td>10Y</td>
<td>52,300</td>
<td>65.4</td>
</tr>
<tr>
<td>20Y</td>
<td>12,000</td>
<td>15.0</td>
</tr>
<tr>
<td>Benchmark</td>
<td>5Y</td>
<td>1,700</td>
</tr>
</tbody>
</table>

**2020 KTB issuance: Original plan vs. actual issuance (estimate)**

- BOK outright purchase YTD: 8.0 tr KRW
- KTB issuance target in 2020 budget: 130.2 tr KRW
- Actual issuance estimated for 2020 (incl. 4 supplementary budgets): 174.8 tr KRW

Source: Yonhap Infomax, Shinhan Investment Corp. Source: Bank of Korea, Shinhan Investment Corp.
II. Monetary policy: Supplementary measures

BOK to supplement outright purchase program in 2021

- The portion of benchmark KTBs needs to be raised to make a bigger impact on the market.
- The BOK needs to expand the share of long-term/ultra-long-term KTB purchases to make up for the void in demand from long-term/ultra-long-term institutional investors.
- More details (purchase criteria, scale, timing) should be released through communication channels such as Monetary Policy Board meetings. → Forward guidance in a broad sense

![BOK's KTB holdings and share in outstanding balance](chart1)

![2019-2020 KTB issue share by maturity (target/actual)](chart2)

<table>
<thead>
<tr>
<th>Year</th>
<th>Target (actual)</th>
<th>Short-term (3-5Y)</th>
<th>Mid-term (10Y)</th>
<th>Long-term (20-30-50Y)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>40±5 (38.4)</td>
<td>25±5 (25.7)</td>
<td>35±5 (35.9)</td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>40±5</td>
<td>25±5</td>
<td>35+5</td>
<td></td>
</tr>
</tbody>
</table>

* Long-term KTB target is set at or above the middle of the target band (35%) considering excess demand.

Source: Ministry of Economy and Finance, Shinhan Investment Corp.
II. Demand: Foreign investors

Foreign demand to remain solid on favorable market conditions

- The balance of KRW-denominated bonds held by foreigners hit an all-time high of KRW150.9tr in August, in contrast to what we witnessed during the global financial crisis in 2008.
- We note that foreign investors expanded purchase of long-term KTBs, with cumulative net buying of 10Y KTBs reaching KRW8.3tr vs. KRW5.9tr for 5Y and KRW3.7tr for 3Y.
- Foreign demand for KRW-denominated bonds should remain solid, given: 1) attractive absolute yield; 2) positive foreign exchange hedging premium; 3) low credit default swap (CDS) risk premium and stable foreign exchange rates.

Source: Yonhap Infomax, Shinhan Investment Corp.
II. Demand: Insurers

Demand from insurers remaining steady, but...

- Demand from insurers has been steadier than expected in 2020, with the monthly average net buying of KTBs by insurers up by KRW1.3tr YoY at KRW3.2tr for the year.
- Regulatory changes will raise the cap on foreign currency assets for insurers from late 2020, but impact will likely be limited due to the unfavorable climate for overseas investment such as the rise in hedging costs.
- Asset growth at insurers has been on a steady downtrend with the growth rate dropping to 3% levels for life insurers and to 4% levels for non-life insurers in 2020.

Sources:
- Net buying of KTBs by insurers: Yonhap Infomax, Shinhan Investment Corp.
- Asset growth at life vs. non-life insurers: Korea Life Insurance Association, General Insurance Association of Korea, Shinhan Investment Corp.
III. 2021 issue checklist

FX trend/inflation/spread/long-term KTB issuance
III. 2021 issue checklist

① Weaker USD/stronger KRW trend to continue

- Weaker USD/stronger KRW trend will likely continue, with the USD/KRW rate expected to average around KRW1,100 in 2021.
- FX trends favorable for foreign investment in KRW-denominated bonds, but unfavorable for domestic insurer investment in overseas bonds.
- Likely to offset impact of slower asset growth at insurers and increased cap on foreign currency assets → Positive for bond supply and demand conditions

![Graph showing foreign investment in KRW-denominated bonds and 1Y FX swap rate]

<table>
<thead>
<tr>
<th>Key points of the revised Insurance Business Act</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Progress</strong></td>
</tr>
<tr>
<td><strong>Key changes</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Implementation</strong></td>
</tr>
</tbody>
</table>

Source: Yonhap Infomax, Shinhan Investment Corp.
III. 2021 issue checklist

② Inflation/deflation

- Global central banks turning increasingly tolerant to higher inflation over the longer run (e.g., US Fed’s Average Inflation Targeting, ECB’s consideration of inflation overshooting)
- In Korea, inflation expectations are low with prices temporarily rebounding on seasonality but long-term factors (prices of oil/transportation/education and policy factors) pointing to a downtrend → price indexes linked to policy support expected to fall
- Steadier food prices to limit additional upturn → Need time for CPI to point toward recovery in consumption and investment

**Average MoM changes in CPI since 2012**

<table>
<thead>
<tr>
<th>Month</th>
<th>% MoM</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>0.6</td>
</tr>
<tr>
<td>February</td>
<td>0.3</td>
</tr>
<tr>
<td>March</td>
<td>0.0</td>
</tr>
<tr>
<td>April</td>
<td>0.0</td>
</tr>
<tr>
<td>May</td>
<td>0.0</td>
</tr>
<tr>
<td>June</td>
<td>0.0</td>
</tr>
<tr>
<td>July</td>
<td>0.3</td>
</tr>
<tr>
<td>August</td>
<td>0.6</td>
</tr>
<tr>
<td>September</td>
<td>0.0</td>
</tr>
<tr>
<td>October</td>
<td>0.0</td>
</tr>
<tr>
<td>November</td>
<td>0.0</td>
</tr>
<tr>
<td>December</td>
<td>0.0</td>
</tr>
</tbody>
</table>

**3-month average changes in CPI by expenditure category**

<table>
<thead>
<tr>
<th>Expenditure Category</th>
<th>% YoY</th>
<th>% MoM</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Items</td>
<td>9.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Food, non-alcoholic beverages</td>
<td>3.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Alcohol beverages</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Tobacco</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Clothing</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Personal care goods</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Health care products/services</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Healthcare</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Transportation</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Electricity</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Housing</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Education</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Miscellaneous goods and services</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Others</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Source: Bank of Korea, Shinhan Investment Corp.
III. 2021 issue checklist

③ 2021F 3Y/10Y KTB spread

- 3Y/10Y KTB spreads are closely related to economic conditions, which rapidly transitioned from a late expansion phase in 2019 to an early recovery phase in 2020 due to the COVID-19 pandemic.
- Short/long-term spreads will recover to reasonable levels upon the return to the economic trajectory of 2018-2019, between a late expansion phase and recession.

Base rate and 3Y/10Y KTB spread by quarter

Economic trajectory based on short/long-term and credit spreads

Source: Yonhap Infomax, Shinhan Investment Corp.

Source: Shinhan Investment Corp.
III. 2021 issue checklist

④ KTB issuance scenario based on 2020-2024 fiscal plans

- KTB issuance notably increased in 2020 after remaining under KRW100tr per year through 2018-2019.
- Expansionary fiscal efforts such as the Korean New Deal are expected to be funded mainly by the issuance of deficit-financing KTBs.
- KTB issuance in 2020-2025 will likely exceed KRW160tr per year. Primary market shock is expected to lead to long-term impact on the bond market as a whole.

KTB issuance assuming government spending is 100% funded by deficit-financing KTBs

KTB issuance assuming government spending is 50% funded by deficit-financing KTBs

Source: Ministry of Economy and Finance, Shinhan Investment Corp.
IV. Investment strategy

Another open ending for monetary policies in 2021
IV. Investment strategy

① Fiscal expansion, ② KTB issuance risks followed by ③ BOK’s KTB purchases, ④ debt fatigue

- Long-term default risks presented by expansionary fiscal policies and increased issuance of KTBs expected to be priced into yields to a certain extent.
- After a time gap, Bank of Korea’s KTB purchases should help to offset the supply burden in the market. Debt fatigue will likely set in, slowing down the pace of economic recovery as a result.
- Risk exposure seen inevitable through late-2020 to 1Q21 with base effect to add to the burden. However, yields should stabilize downward on closer cooperation between the government and central bank.

Medium-term fiscal spending plan

Fiscal balance and national debt since 2020

Source: Ministry of Economy and Finance, Shinhan Investment Corp.
Note: Based on 3rd supplementary budget; 4th supplementary budget to push up 2020 total to KRW554.7tr
IV. Investment strategy

2021 bond market outlook – basic factors

<table>
<thead>
<tr>
<th>Basic factors</th>
<th>Impact on yields</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic growth</td>
<td>1.20%</td>
<td>1.75</td>
<td>1.75</td>
<td>1.50</td>
</tr>
<tr>
<td>Inflation</td>
<td>0.00%</td>
<td>1.5%</td>
<td>QoQ growth compared with 2019</td>
<td>1.5%</td>
</tr>
<tr>
<td>Monetary policy</td>
<td>0.50%</td>
<td>Base rate to remain unchanged</td>
<td>0.50%</td>
<td>KTB purchases to continue</td>
</tr>
</tbody>
</table>

2021 bond market outlook – additional factors

<table>
<thead>
<tr>
<th>Additional factors</th>
<th>Impact on yields</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiscal policy</td>
<td>Neutral</td>
<td>1.20%</td>
<td>Expansionary fiscal policy</td>
<td>1.20%</td>
</tr>
<tr>
<td>Bond issuance</td>
<td>Increase</td>
<td>0.00%</td>
<td>KTB issuance: KRW172.9tr</td>
<td>Increase</td>
</tr>
<tr>
<td>Bond demand</td>
<td>Decrease</td>
<td>0.50%</td>
<td>Increase in BOK’s KTB purchases</td>
<td>Decrease</td>
</tr>
<tr>
<td>FX trend</td>
<td>Decrease</td>
<td>0.50%</td>
<td>Weaker USD/stronger KRW</td>
<td>Decrease</td>
</tr>
</tbody>
</table>

Source: Shinhan Investment Corp.
Panel Discussion: Overseas Investors’ View on the Korean Market

Simon Williams
Managing Director, APAC Head of Equity Trading
BlackRock

Ross Whittaker
Managing Director, Co-Head of APAC Advanced Execution Services (AES) Electronic Trading
Credit Suisse

Nicholas Peach
Managing Director, Head of Electronic Trading
Goldman Sachs

Lyndon Chao
Managing Director, Head of Equities and Post Trade
ASIFMA (moderator)
Thank you for attending!
We hope to see you at our next event:

**ASIFMA Virtual Event:**
**ESG and Sustainable Finance in Asia: the Fintech and Data Challenge**
*(in collaboration with the Future of Sustainable Data Alliance)*

Wednesday, 28 October 2020
4:00PM – 5:30PM (HKT/SIN)
Speakers:

Ramesh Subramaniam
Asian Development Bank

Gabriel Wilson-Otto
BNP Paribas Asset Management

Kamran Khan
Deutsche Bank

Eugène Goyne
EY

Helena Fung
FTSE Russell

Helene Li
Fintech Association of Hong Kong; GoImpact

Julia Walker
Refinitiv

Matthew Chan
ASIFMA