CHXX: China Infrastructure

Benefiting from Organic Urban Growth in China
ETF Overview
What is an ETF?

- A security that tracks an index, a commodity, or a basket of assets like an index fund, but trades like a stock on an exchange
- By owning an ETF, you get the diversification of an index fund as well as the ability to sell short, buy on margin and purchase as little as one share. Another advantage is that the expense ratios for most ETFs are lower than those of the average mutual fund. When buying and selling ETFs, you have to pay the same commission to your broker that you'd pay on any regular order – *Investopedia*
- E.g. SPDR S&P 500 Index (SPY)
The EGShares China Infrastructure Exchange-Traded Fund (CHXX) seeks investment results that generally correspond to the performance of the INDXX China Infrastructure Index.

The index includes, among other industries, metal miners, energy and power producers, transportation, utility and water companies.

Current Price: $18.28

<table>
<thead>
<tr>
<th>Industry Breakdown</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrials</td>
<td>46.8%</td>
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<td>7.8%</td>
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<table>
<thead>
<tr>
<th>Key Statistics</th>
<th>CHXX</th>
</tr>
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<tbody>
<tr>
<td>ETF Ticker (NYSE)</td>
<td>CHXX</td>
</tr>
<tr>
<td>Bloomberg Index Ticker</td>
<td>ICHXXXT</td>
</tr>
<tr>
<td>Inception Date</td>
<td>2/17/10</td>
</tr>
<tr>
<td>Expense Ratio*</td>
<td>0.85%</td>
</tr>
<tr>
<td>Holdings</td>
<td>30</td>
</tr>
<tr>
<td>Average Market Cap</td>
<td>$11.22B</td>
</tr>
<tr>
<td>Median Market Cap</td>
<td>$ 9.25B</td>
</tr>
<tr>
<td>Trailing P/E Ratio</td>
<td>13.55x</td>
</tr>
<tr>
<td>Price/Book Ratio</td>
<td>1.15x</td>
</tr>
<tr>
<td>Index Dividend Yield</td>
<td>2.11%</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Top Sector Breakdown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction &amp; Materials</td>
</tr>
<tr>
<td>Industrial Engineering</td>
</tr>
<tr>
<td>Electricity</td>
</tr>
<tr>
<td>Industrial Metals &amp; Mining</td>
</tr>
<tr>
<td>Real Estate Investment &amp; Serv.</td>
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</tbody>
</table>
Fees and Expenses

Annual Fund Operating Expenses (expenses that you pay each year as a percentage of the value of your investment)

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Management Fees</td>
<td>0.95%</td>
</tr>
<tr>
<td>Distribution and/or Service (12b-1) Fees</td>
<td>0.00%</td>
</tr>
<tr>
<td>Other Expenses</td>
<td>0.58%</td>
</tr>
<tr>
<td>Total Annual Fund Operating Expenses (1)</td>
<td>1.53%</td>
</tr>
<tr>
<td>Fee Waiver and/or Expense Reimbursement (2)</td>
<td>(0.68)%</td>
</tr>
<tr>
<td>Total Annual Fund Operating Expenses after Fee Waiver and/or Expense Reimbursement</td>
<td>0.85%</td>
</tr>
</tbody>
</table>

• E.g. invest $10,000 with a 5% annual return:

<table>
<thead>
<tr>
<th></th>
<th>1 Year</th>
<th>3 Years</th>
<th>5 Years</th>
<th>10 Years</th>
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<tbody>
<tr>
<td>1 Year</td>
<td>$87</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Years</td>
<td></td>
<td>$417</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Years</td>
<td></td>
<td></td>
<td>$770</td>
<td></td>
</tr>
<tr>
<td>10 Years</td>
<td></td>
<td></td>
<td></td>
<td>$1,766</td>
</tr>
</tbody>
</table>
Fund-Related Facts

- $6.14 per Chinese Yuan
- 20.6% Fixed Asset Investment Growth 2012
- 7.7% GDP Growth 2012
- $18.2 billion Trade Balance
- Chinese private-sector wages rose 14% in 2012 (12.3% in 2011)
  - 71% increase in manufacturing wages since 2008
  - 8.3% improvement in labor productivity per year – World Bank
  - 24.6% increase in jobs advertised in April
  - Motif of making consumer spending a more important part of growth (idea of organic growth)

- The Wall Street Journal
Historic Stock Performance

As of 3/31/2013

<table>
<thead>
<tr>
<th>Total Returns (Net Asset Value)</th>
<th>1-Month (%)</th>
<th>3-Month (%)</th>
<th>Year-to-Date (%)</th>
<th>1-Year (%)</th>
<th>Since Inception (%)**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Returns (Market Price)</td>
<td>-6.51</td>
<td>-8.84</td>
<td>-8.84</td>
<td>8.16</td>
<td>-2.93</td>
</tr>
<tr>
<td>Indxx China Infrastructure Index</td>
<td>-6.43</td>
<td>-8.65</td>
<td>-8.65</td>
<td>8.84</td>
<td>-0.96</td>
</tr>
</tbody>
</table>

Graph showing stock price movements with recent data points and moving averages.
## Fund Breakdowns by Industry

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Industrials

• 4 Subsectors
  • Construction: ~14.8%
  • Construction Materials: ~12%
  • Real Estate: ~10%
  • Manufacturing: ~4.5% (Construction equipment)

• Opportunity:
  • Li Keqiang’s ambitious urbanization plan
  • Increasing demand for housing and Infrastructure

• Risks:
  • Slowing down of China’s growth
  • Increasing cost for companies
Industrials: Construction

Growth in previous years

![Added Value and Growth on Construction Sector in China 2006-2011 (100 mln yuan)](chart)

- **Resource:** National Bureau of Statistics of China
Industrials: Construction

China’s Share of Global Construction Spending

![Graph showing China's share of global construction spending from 1990 to 2014. The graph indicates a steady increase for China, with a corresponding decrease for the U.S. and Japan. The source is IHS Global Insight Construction Service.]
Industrials: Construction

• Opportunity: New premier Li Keqiang has ambitious plan to turn rural areas into cities.

• Urban population accounted for 51.27% (2011) 52.57% (2012). Expected to rise to 53.37% in 2013.

• 0.8% increase means 10.8 million rural residents will move to urban areas, stimulating huge demand for houses and other infrastructures.
Industrials: Construction

- Fixed Asset Investment

- Estimated 18% for 2013; Actual 20.9% 1Q13
Industrials: Construction Materials

- Highly Correlated with Construction Sector
- Benefit from urbanization & fixed asset inv.
- Consumption growth is anticipated till 2015
- Risks: Overcapacity and profit cut, Competition btw portfolio companies
Urbanization is a driving force increasing home prices

Sources: Chinese National Bureau of Statistics, DataStream.
Industrials: Real Estate

- Commercial & residential properties continue to grow, though growth rate is declining.
- Price is high, government tries to curb the soaring price. But demand is huge.

**First 4 months 2013**
- RE Invest.: 20.2%+
- Construction: 7.9%+
- Revenue: 10.1%+

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**Upward Pressures**

China’s house prices continue to rise, supported by abundant credit.

- **Average change in prices for 70 Chinese cities**
  - Year to year
  - Month to month

- **Credit and home sales** in first-tier cities, annual change
  - Credit
  - Home sales

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*Existing home sales. Notes: First-tier cities are a small group of China’s largest and most modern cities, such as Beijing and Shanghai. Sources: National Bureau of Statistics; Credit Suisse; WSJ calculations*
Another sector: Government sponsored housing for low income families, called ‘Baozhang Apartment’

A way to provide affordable housing

Investment in Baozhang Apartment increases

4.3M apartments to be built in 2013

6.3M in 2014, >6.5M 2015-2017
Industrials: Real Estate

• Risks: If prices go up excessively, gov. will possibly take stricter actions to curb the increase (raise tax, decrease developers’ credit and liquidity)

• Bubble?
Possible but within control.
1/3 buyers pay cash, Min. 30% down payment
Exotic mortgage is not available in China
Industrials: Manufacturing

- Recovering with uncertainty

![HSBC China Purchasing Managers' Index (PMI) Chart]

- Orders  Labor & Material Price
- Uncertainty in export and Europe
- CHXX only covers heavy industry manufacturers
Utilities: Electricity

- **Huge Market Cap ➔ ”Too big to fail”** (Huaneng 17.35B, Datang 51.78B)
- **China is heavily investing in utilities**
  - Spending on infrastructure is 8.5% of GDP ➔ boost growth, regain positive investor sentiment
- **Majority of utility companies in the ETF are used in government investing activities**
  - Negates the risk of investing in state owned companies
- **Electricity consumption is on an exponential rise.**
- **Urbanization will yield higher energy consumption**
- **Increase in disposable income and access to internet will bolster demand for electricity**
Utilities: Electricity Demand

- Electricity consumption at an all time high - expected to rise from 5.5 to 6.5 in 2013
- China starting a nuclear investment plan, and Datang is part of that operation
- People have new disposable income--they're more likely to buy TVs, cell phones, electricity consumption
- Energy, Mining, and Utilities deals are the trend right now, with to date $21 billion in deals in these sectors, accounting for 24.3% of total M&A activity in the region (Asia Pacific).
- Increase in cheap coal imports will increase growth in electricity
Utilities: Sector Risk

- State owned companies subject to regulation
  - Production and demand of coal will be restricted to 3.9 billion metric tons a year by 2015, according to a five-year plan released by the National Energy

- Datang’s investments failed to generate revenue
  - Investment returns (2011-2012): -5.6M
  - Net cash flow from investment: -29M

- Higher levels of debt in comparison to related companies
  - Datang International Power Generation Co (total debt increase from 165M → 184M in one quarter)
    - New loans 78M
  - Huaneng Power International: total debt greater than market cap (18.76B > 17.35B)
    - Redeeming factors: ROAA, ROAE, Net profit margin, operating margin all increased this year
    - Quarterly earnings growth rate: 177.80%
Utilities: Projections

• China approves $157 billion infrastructure spending - Reuters

• Raja Mukherji [head of credit research] – “highest conviction in utility and energy sectors” - Bloomberg

• Bloomberg states that China will boost wind power 41% in 2013 from 2012 in order to meet 2015 target.
  – China LongYuan Power Group is the largest wind producer in China and Asia.

• China is investing 79.8B Yuan in nuclear energy therefore current growth rates will remain strong - export.gov
  – With this they will need dry cooling systems Shanghai Electric group received new orders for new power plants totaling $80M – Benzinga
Basic Materials: Opportunity

- Opportunity: National Plan for Promoting Healthy Urbanization
  - 20 city clusters, 180 cities above the prefecture level and more than 10,000 cities and towns

Source: CEIC, South China Research
Basic Materials: Cement

- Company in CHXX: Anhui Conch Cement Co Ltd
- Risk: overcapacity in production due to saturation of market, supply demand imbalances
- Confidence:
  1. New government set to shrink industry to three companies by 2015
  2. Urbanization bringing supply demand levels back to equilibrium

Content courtesy of WSJ.com
Basic Materials: Cement

China Cement Consumption

Metric Tons

Year:
- 1994
- 1995
- 1996
- 1997
- 1998
- 1999
- 2000
- 2001
- 2002
- 2003
- 2004
- 2005
- 2006
- 2007
- 2008
- 2009
- 2010
- 2011E
- 2012E
- 2013E
- 2014E
- 2015E

Amount (Metric Tons):
- 0
- 500
- 1000
- 1500
- 2000
- 2500
- 3000

Alumni Homecoming Reunion 2009
Basic Materials: Cement

- Takeaways for cement
Basic Materials: Steel

- Concern: current financials look weak
- Thesis: confidence in long-term growth prospects due to recent realization of the government that the industry needs adjustment

Source: Bloomberg
Basic Materials: Copper

- Opportunity: Asian consumption is forecasted to increase by approximately 4.5% to 5% in 2013

<table>
<thead>
<tr>
<th>'000 tonnes</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013E</th>
<th>2014E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global production</td>
<td>19039</td>
<td>19838</td>
<td>20481</td>
<td>21642</td>
<td>22750</td>
</tr>
<tr>
<td>Change YoY</td>
<td>4.0%</td>
<td>4.2%</td>
<td>3.2%</td>
<td>5.7%</td>
<td>5.1%</td>
</tr>
<tr>
<td>Global consumption</td>
<td>19268</td>
<td>20042</td>
<td>20697</td>
<td>21675</td>
<td>22412</td>
</tr>
<tr>
<td>Change YoY</td>
<td>11.3%</td>
<td>4.0%</td>
<td>3.3%</td>
<td>4.7%</td>
<td>3.4%</td>
</tr>
<tr>
<td>Balance</td>
<td>-229</td>
<td>-204</td>
<td>-216</td>
<td>-33</td>
<td>338</td>
</tr>
<tr>
<td>Market inventories</td>
<td>863</td>
<td>849</td>
<td>633</td>
<td>601</td>
<td>939</td>
</tr>
<tr>
<td>Weeks of world consumption</td>
<td>2.3</td>
<td>2.2</td>
<td>1.6</td>
<td>1.4</td>
<td>2.2</td>
</tr>
<tr>
<td>LME Cash ($/t)</td>
<td>7547</td>
<td>8846</td>
<td>7957</td>
<td>7971</td>
<td>7500</td>
</tr>
<tr>
<td>LME Cash (c/lb)</td>
<td>342</td>
<td>401</td>
<td>361</td>
<td>362</td>
<td>340</td>
</tr>
</tbody>
</table>

Source: BofA Merrill Lynch Commodity Research
Basic Materials: Copper

- Reasons for Confidence:
  - Chinese Auto Industry
  - City development focus in urbanization promotion plan

Figure 20: China’s copper demand breakdown (2010E)

Source: Company data, Credit Suisse estimates
Oil & Gas: Crude Oil

• Crude oil
  – Predicted to grow by 3.4% for the year 2013
    • Predicted by Deutsche Bank AG

• Growth rate of Crude Oil Production
  – 2.4% YTD
  – Domestic consumption is falling because of a lower price in oil imports
  – Infrastructure spending is planned on lowering prices of domestic oil
Figure 1: Growing dependence on crude oil

Source: Historical production up to 2007 and import and export data up to 2006 from the National Bureau of Statistics; 2007 import and export data from Xinhua; forecasted production taken as the difference between consumption and import data from Wood Mackenzie cited by Dow Jones News Wire, available at http://www.ucfaweb.ucalgary.ca/chinainstitute/nv03.cfm?n=03=48264&n=02=43884&n=01=43092

Courtesy Deutsche Bank AG
Oil & Gas: Crude Oil

![Crude Oil Chart]

**Daily Output (10,000 tons)**

**Growth Rate (%)**

**Courtesy National Bureau of Statistics of China**
One of the 10 largest component securities in CHXX is China Oilfield Services, Limited
- Last closing price: Y 16.39
- Revenues: Y 23.55 billion
- 5.7% of CHXX by weight

Annual Return and 5-Year Return are negative
- -9.45%, -36.67%

Last month, the security has shown a 7.69% return
Oil & Gas: Natural Gas

- Natural Gas
  - Grew by 21.5% in China
  - Predicted to continue to grow at a +20% rate in 2013 (BP)
Oil & Gas: Sector Risks

• Danger of a fall in prices of imported crude and natural gas
  – Depends heavily on trade with Russia (especially Gazprom) and on OPEC price fixing
  – Trade with Iran is based heavily on volatile political relations
  – A fall in domestic production will hurt companies represented in CHXX

• Increased reliance on nuclear energy and other alternative power sources could also curb demand for crude and natural gas, which is used primarily for electrical generation
Three significant corporations dominate the Chinese telecom market:
- China Telecom, China Unicom, China Mobile

They were all created with government support:
- They form a government protected oligopoly
The big three telecom companies, as well as the Chinese telecom sector, have been growing.
Telecom: Internet Usage

- Internet usage in China is growing quickly
- As more Chinese citizens can afford computers and smartphones data usage is increasing
Telecom: Smartphones Sales

- Smartphone sales are also growing
  - Bolstered by growing economy and new emergence of middle class
• The EU recently began an investigation into Chinese telecom companies as well as government aid to those companies
  – The EU has said it suspects unfair trade practices, including illegal subsidies and dumping
• The US is considering increased regulations on Chinese telecom companies – the US government feels they pose a national security risk
Telecom: Projections

• We project continued YoY revenue growth of roughly 20%, over the next 3 years
  – The big 3 Chinese telecom companies will have no new competition because of favorable government regulation
  – Data usage in China has been growing consistently, creating revenue for those companies
  – They have shown average revenue growth of more than 20% per year for the last 3 years
Technical Analysis

**RSI:**
- Above 50
- Upward trend a **bullish** signal

**Moving Averages:**
- 50-Day reverting trend and regaining positive slope
- 200-Day increasing
- Both **bullish** signals

**MACD:**
- Just broke through 0, indicating positive accumulating stock momentum. A **bullish** signal
Technical Analysis

- **Trough Corridor:**
  - Upward trend with extrapolated support level of approx. $16.5

- **Peak Corridor:**
  - Upward trend with extrapolated resistance level of $22.

- **RSI-Corridors:**
  - Upward trend; narrowing.

- **Ichimoku Clouds:**
  - Most recent green cloud indicating positive trend.
Conclusions

• Despite recent negative news associated with China’s economy, organic urban growth is set to be a long-term driving force.
• Infrastructure as a direct link to urban growth will benefit on all ends.
• **Stop-Loss** at 2-year support level: $16.5 (-9.8%)
• Potential to reach 2-year peak extrapolation of approx. $22 in the short-term (+20.3%)
• → Long-term urban growth transforming an export driven economy into a consumption driven one will pave the way for infrastructure-related securities to gain
  – **CHXX** a direct recipient of these positive consequences