

**BUY CHILEAN EQUITIES: IMPACT OF COPPER OVERSUPPLY IS OVERBLOWN**

Written by Vitaly Veksler, CFA

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**EXECUTIVE SUMMARY**

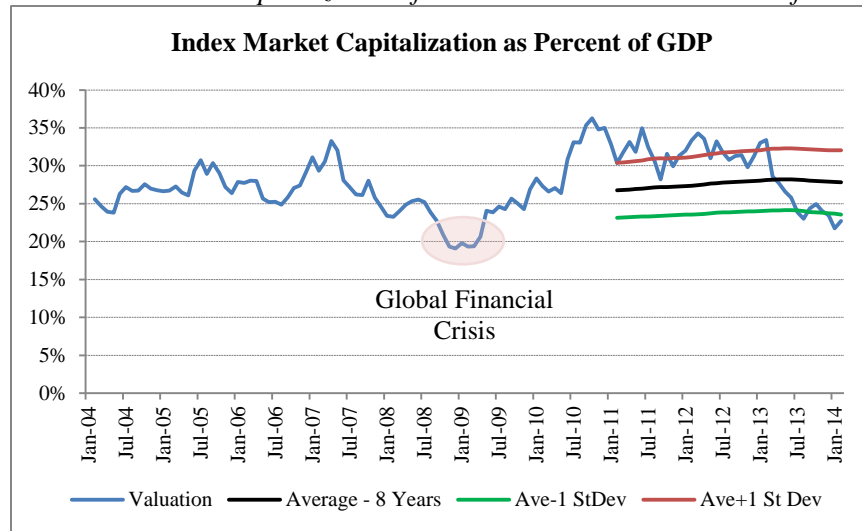
Beyond Borders Investment Strategies (BBIS) bought iShares MSCI Chile Capped ETF (Ticker: ECH) in January and February 2014. BBIS has found the expected returns for ECH to be 12% per year over the next 8 years. At the end of January 2014, the FTSE Chile Index traded at a 22% discount to its long-term historical average (based on the equity index market capitalization to Chile's GDP ratio). Valuations of Chilean equities have been negatively affected by the anticipated global oversupply of copper in 2014-2015. Since copper is the largest export of the Chilean economy, it is not surprising that the Chilean index's performance is highly correlated with the price of copper. The main reason behind the oversupply of copper is an expectation of slower growth of the Chinese economy, which drives much of the demand for copper. This report explains why the expected copper oversupply *might not* happen. Additionally, it explains why, even if it happens, the price of copper and the price of Chilean equity index are expected to start *increasing* in 2015.

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**ETF FOR EXPOSURE TO CHILEAN EQUITY MARKET**

In January, I ran my Exchange Traded Fund (ETF) screening system. It helped me identify that the **iShares MSCI Chile Capped ETF** (Ticker: **ECH**), which is designed to deliver performance of a broad-based equity index in Chile, was trading at a significant discount. For example, as of January 31, 2014, the ratio of the total market capitalization of the FTSE Chile Index to the Chilean GDP dropped to 21.8% (see **Exhibit 1** for valuation data). This valuation was just slightly higher than the ten-year low valuations that ECH traded at during the panic in the midst of the Global Financial Crisis of 2008-2009. Then the valuations ranged from 20.9% at the end of October 2008 to 20.7% at the end of April 2009, before bottoming out at 19.1% at the end of December 2008 (as highlighted in **Exhibit 1**).

The January 31, 2014 valuation of ECH was more than one standard deviation, or 22%, below the eight-year historical average value of 27.8% (see **Exhibit 1**. The eight-year historical average valuation line is in black, while the green line represents one standard deviation below the average valuation). When the ECH price dropped to below one standard deviation from the average it meant that 84% of the time Chilean markets have been trading at higher valuations. This definitely drew my attention to ECH. After all, how often does an investor find an ETF of an emerging market country with such strong macroeconomic and legal fundamentals at such a bargain price?

*Exhibit 1. Market Capitalization of FTSE Chile Index as Percent of Chilean GDP*

Source: Datastream, Beyond Borders Investment Strategies.

### WHY INVESTORS LOVE CHILE?

Since at least the early 1990s, Chile has been one of the most politically and economically stable as well as investor-friendly economies in the emerging market universe.

**Political Stability and Investment-Friendly Environment:** Unlike the governments in many other emerging market countries, since 1990 all Chilean governments have supported policies that strengthen the rule of law and respect for property rights of foreign and domestic investors alike. Most importantly, they granted foreign investors the same rights as those of domestic investors. The Chilean governments realized that this treatment of investors would serve the country better than the erratic economic policies of some other emerging market countries. These countries experience quick fund inflows to government coffers as a result of nationalizations and expropriations of investors' properties. Then these quick inflows are followed by long fund outflows as investors shun these countries. What is of critical importance to investors is that all successive Chilean governments since the 1990s, whether they were center-right or center-left, adhered to these principles that ensure business stability.

International organizations and investors definitely noticed these efforts by Chilean governments and regulators. Chile was ranked 34th out of 189 countries in the world (placing them in the top 18% in the world) in the latest "ease of doing business" index compiled by the World Bank in 2013.<sup>1</sup> A high ranking in the index means that the regulatory environment is more conducive to starting and operating a firm in the country. For comparison, Chile scored higher than not only all four of the BRIC emerging markets (Brazil, Russia, India and China), but also such developed countries as Belgium and France. Chile was also ranked as the 34<sup>th</sup> country in terms of investor protection, which I consider to be the most important subcomponent of the "ease of doing business" index.

Chile also has relatively low levels of corruption in its public sector, according to the 2013 Transparency International's Corruption Perceptions Index, which ranks countries based on how corrupt their public sector is perceived to be. Chile is tied with France for the 22nd place out of 177 countries ranked (top 12% in the world).<sup>2</sup> Chile also has the distinction of being the least corrupt country out of all 21 countries in the MSCI Emerging Market universe.<sup>3</sup>

**Macroeconomic Stability:** Chile has been pursuing wise fiscal and monetary policies for decades. By consistently spending less than they collected in revenues, successive Chilean governments changed the country's status from a net borrower in the early 1990s (net debt of 14.6% of GDP in 1992) to a net creditor (net credit of 6.7% of GDP in 2012).<sup>4</sup>

By committing to fiscal prudence and living within their means in the early 1990s, the successive Chilean governments did not have to print a lot of Chilean Pesos in order to cover their budget deficits, as previous Chilean governments had done in the past when they had unbalanced budgets. This has allowed the country to conquer the problem of high inflation, one of the most difficult problems that plagued Chile previously, and that continues to plague a number of other emerging market countries today. At this point, the country's inflation is less than 3%, a level that is more common in developed countries rather than in emerging markets.<sup>5</sup> In the late 1980s, for comparison, Chile's inflation rates exceeded 20%.<sup>6</sup>

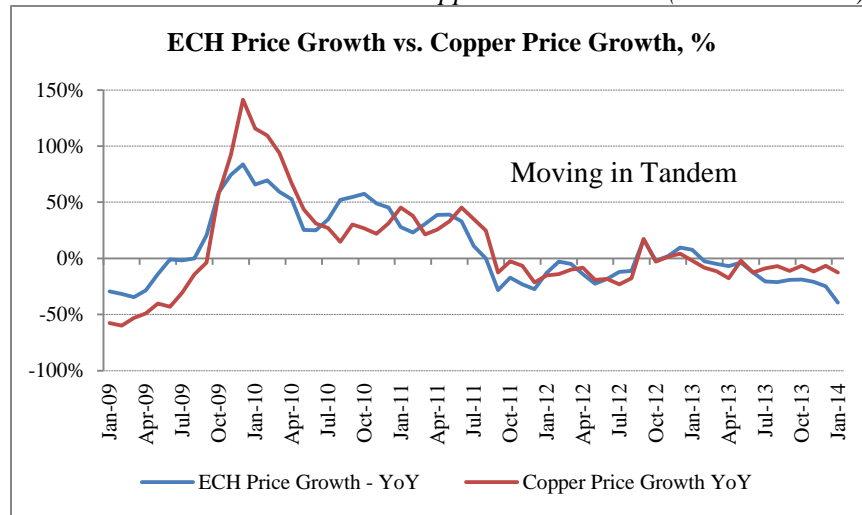
**Openness to Trade:** Since the 1970s, Chile has transformed itself from one of the most protectionist countries in the world to one of the most open.<sup>7</sup> It has signed a number of bilateral and multilateral free trade agreements (FTA) that eliminated or significantly reduced tariffs with such important partners as the United States, European Union, China, Japan and South Korea.<sup>8 9</sup> As the largest exporter of copper in the world, Chile definitely benefits from having FTA agreements with these industrial powerhouses.

**Diversification Benefits:** Investing in ECH provides investors with good diversification benefits. Over the last four years, since the end of February 2010, the average annual correlation between the S&P 500 Index and ECH was only 42%.<sup>10</sup> By comparison, the average annual correlation between the S&P 500 Index and the broader emerging market universe, represented by iShares MSCI Emerging Markets ETF (Ticker: EEM), was 76% over the same time period.<sup>11</sup>

## THE MAIN REASON FOR LOW VALUATIONS

The main reason for the low valuations of ECH in January and February of 2014 is that investors have been pessimistic about the prospects of the price of copper over the next several years. Chile is the largest copper producer in the world, producing around 32% of the world's copper supply in 2012.<sup>12</sup> Furthermore, Chile exports an overwhelming majority of the copper it produces. For example, it exported 98% of the copper it produced in 2013, which represented close to 50% of Chile's total exports.<sup>13 14</sup>

Taking into account copper's importance to the Chilean economy, it is not that surprising that the price of ECH has had a very high correlation with the price of copper (see **Exhibit 2** for ECH and copper price movements). Indeed, the 3-year correlation between the ECH and copper prices ranged from 80% to 90% since the end of October 2011 to the end of January 2014.<sup>15</sup> Currently, investors and business people believe that there is going to be an oversupply of copper as China's economy, the largest importer of copper over the last several years, has slowed from a growth rate of 9% to 7.5%.<sup>16 17</sup> One of the major reasons of this slowing is China's planned transition from an export- and investment-driven growth model to a consumption-driven one.

*Exhibit 2. ECH Price Growth vs. Copper Price Growth (Year over Year), %*

Source: Datastream. The copper price is the cash price of the metal at the London Metal Exchange (LME), the largest of the world's three major exchanges trading copper.

In the following sections, I will explain my thinking on why the copper oversupply might not materialize or, if it does, it will be relatively small. This might result in small drops in the price of copper and the price of ECH, if any. Even if these drops happen, I believe that both prices will start increasing in 2015.

### POTENTIAL CATALYSTS FOR ECH PRICE

There are five positive catalysts for the price of ECH. Four out of the five catalysts are related to copper (two to copper supply and two to copper demand), and one to Chilean interest rates. Once again, it is very interesting that the price of copper is the most important factor for the performance of ECH despite the fact that stocks of companies in the Materials sector, which includes copper mining, are responsible for only 10% of the ECH's market capitalization<sup>18</sup>. What adds to the peculiarity of the copper price being the main driver of the ECH price is the fact that CODELCO (The National Copper Corporation of Chile), the largest copper producing company in Chile, is state-owned.

I believe that the price of copper will be higher than the consensus forecasts in 2014 and 2015 as the copper oversupply might not materialize, or be small (see reasons for this in the next section). However, even if the copper oversupply decreases in 2016 or 2017 in line with the consensus expectations, the increase in the copper price is likely to be discounted sometime in 2015, or 9 to 12 months before the oversupply decreases. This would lead one to expect an increase in the price of ECH in 2015.

The consensus thinking is that there is going to be an oversupply of refined copper in 2014. Copper production surveys and forecasts from the Chilean Copper Commission (Cochilco),<sup>19</sup> <sup>20</sup> Reuters copper market analyst poll,<sup>21</sup> International Copper Study Group (ICSG)<sup>22</sup> and Goldman Sachs<sup>23</sup> forecast that there would be an oversupply of refined copper in 2014. But the oversupply is forecast not to be large in terms of its percentage of the world's total copper production. This expected oversupply would range from 1.2% to 2.9% of the total produced refined copper in 2014. It is within a statistical margin of error of 3% (see **Endnotes and Calculations** section for calculations of the surplus percentages).<sup>24</sup> Most analysts and industry insiders also expect a copper oversupply in 2015. However, they believe that it is likely to drop further to the 1.0% - 1.8% range (see **Endnotes and Calculations** section for supporting calculations of the surplus percentages).<sup>25</sup>

The consensus prices of copper are expected to decline in 2014 and 2015 as the market expects the oversupply of copper. According to a Reuters poll of 33 market professionals in December 2013, the consensus prices of copper were expected to drop from the average cash price of \$7,322 per ton in 2013 to \$7,013 in 2014 (decrease of 4.2%) to \$6,855 in 2015 (further decrease of 2.3% versus the 2014 level).<sup>26</sup> As of the end of January, the price of copper was \$7,096.<sup>27</sup> Once again, I believe that the price of copper will start increasing in 2014-2015, thus leading to the increase in the price of ECH.

Let us take a deeper dive into the five catalysts for the price of ECH.

### **1. Copper Oversupply Might not Materialize Due to Project Disruptions or Cancellations**

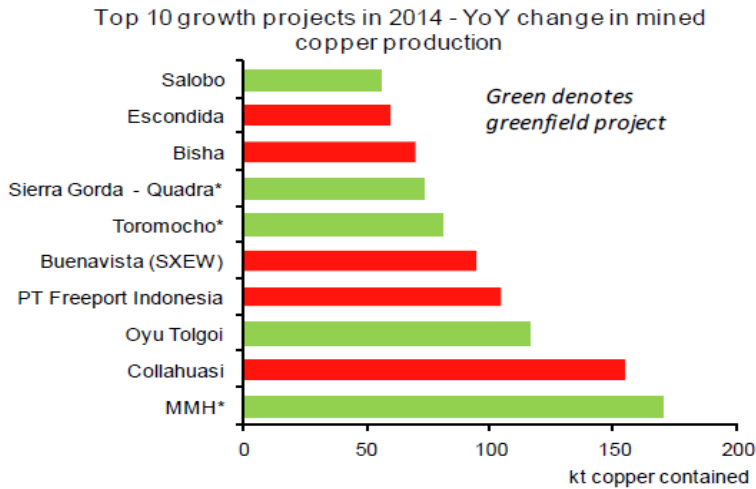
Anticipated oversupplies could easily turn into deficits if production on several of the major mines or smelters is disrupted, as happened in 2013 and 2014 due to port strikes in Chile and an export ban on unprocessed copper ore in Indonesia.<sup>28 29</sup> If this happens, the price of copper is going to increase, most likely leading to an increase in the ECH price.

There is another reason that could lead to the price of copper increasing over the next two years. As a result of the expected oversupply of copper, major mining projects could be scaled down or canceled by copper producing companies. The risk of cancellation increases when there is a consensus in the industry that there is going to be an oversupply of copper, as is the case now.

Ten of the largest new and expansion projects are expected to contribute around one million tons of incremental copper supply in 2014 (see **Exhibit 3** for the list of projects).<sup>30</sup> For comparison, the total oversupply levels are between 260,500 and 632,000 million tons, or lower than the total incremental production from these projects.<sup>31</sup> Greenfield (new) projects (see green bars in **Exhibit 3**) often face higher risks of delays and cancellations than expansions of existing projects (see red bars in **Exhibit 3**). These greenfield projects are responsible for around 500,000 tons of production out of one million (50%). If two or three of these larger projects are canceled or delayed, the oversupply might not materialize or be very small.

From an investment standpoint, it would mean that the copper price might not significantly decline in 2014, as the markets often react to expectations of developments in the industry 9 to 12 months in advance. But even if none of the projects are delayed and there is going to be a refined copper oversupply in 2014-2015, copper market analysts forecast that the oversupply is likely to end by 2016 due to increasing demand for copper.<sup>32 33 34</sup> Financial markets are likely to start discounting this tighter supply in 2015, or 9 to 12 in advance, and the price of copper and the price of ECH are likely to start increasing then. If an investor's time horizon is more than one year, he/she is likely to benefit from increases in the price of ECH since it currently trades at valuations well below its long-term historical average. The longer the time horizon is, the higher the likelihood that an investor would benefit from investing in ECH.

Exhibit 3. Top 10 Projects Are Expected to Contribute Around 1 Million Tons of Incremental Copper Supply in 2014



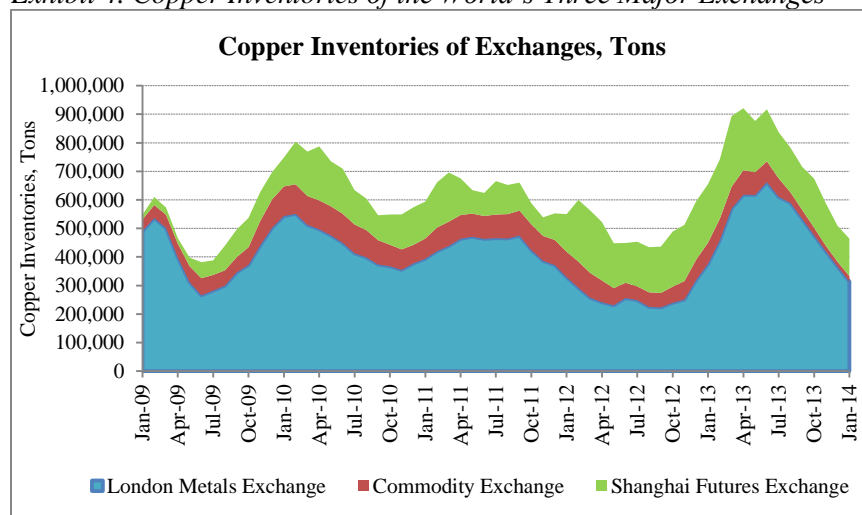
Source: Wood Mackenzie, Macquarie Research.

Note: "MMH" stands for CODELCO's "Mina Ministro Hales" project in Chile.

## 2. Copper Prices Might Not Drop if Not Enough Copper is Refined

Another reason that makes me believe that the widely expected copper oversupply might not materialize in 2014 is that copper refiners are not producing enough refined copper (metal containing at least 97.5% of copper by weight).<sup>35</sup> Copper refiners appear to be a bottleneck to supply in the market. As most analysts see a surplus of copper concentrate at copper mines, inventories of refined copper (or copper concentrate processed by refiners) at the London Metal Exchange (LME), at the Commodity Exchange (COMEX), a division of the New York Mercantile Exchange (NYMEX), and at the Shanghai Futures Exchange, are relatively low (see Exhibit 4 for copper inventory at the world's major exchanges).

Exhibit 4. Copper Inventories of the World's Three Major Exchanges



Source: Datastream.

Even the refining charges that refiners are charging for processing copper concentrates to refined copper, which are the highest in six years, have not been enough of a stimulus for the refiners to refine more of the metal.<sup>36</sup> For example, the world's mines generated an extra 854,000 metric tons of copper contained



in concentrate during the first eight months of 2013; however, refined copper output increased by only 526,000 additional tons, or by only 62% of the incremental concentrate output.<sup>37</sup> The situation remains the same in the first two months of 2014.<sup>38 39</sup> Interestingly, one of the primary reasons industry sources give to explain why refiners are not refining more copper is due to a shortage of scrap metal needed to blend with copper concentrates.<sup>40</sup>

I have just discussed two reasons related to the copper supply that might result in the higher than expected copper prices in 2014-2015. There are also two positive developments on the copper demand side that I will describe in items 3 and 4 below.

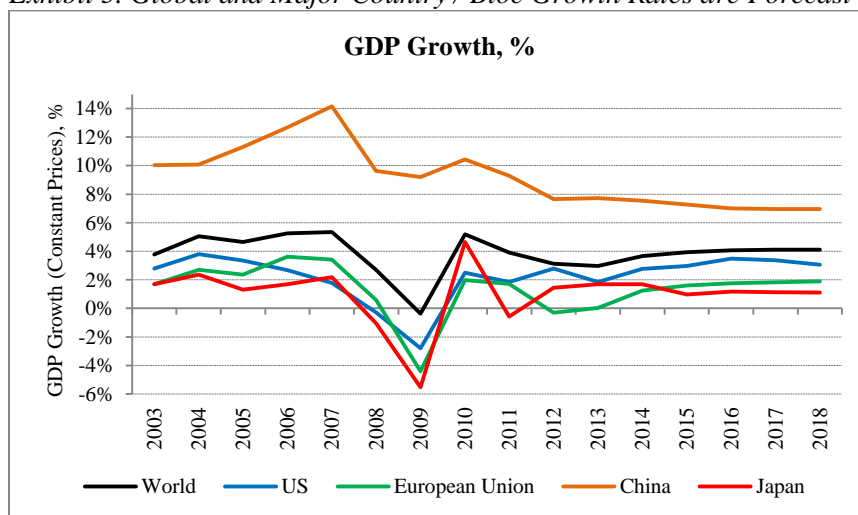
### 3. Increasing Demand for Copper Worldwide (excluding China)

For the purposes of this report, the world was divided into two parts: China, which consumes close to 40% of global copper; and the rest of the world, which is responsible for 60% of copper consumption.<sup>41</sup> This section is devoted to analyzing the drivers of the price of copper in the world excluding China, while the next section is devoted to similar drivers in China. There are three major drivers responsible for increasing copper demand in the world excluding China: (a) accelerating global economic growth, (b) a return of manufacturing to the US, and (c) the growth of renewable energy generation.

#### a. Improving Global Economic Growth

Due to copper use in practically every industrial and infrastructure application, demand for copper is highly correlated with economic growth. Chile, as the largest producer of copper in the world, is well positioned to benefit from the economic growth regardless of what country growth comes from. Global economic growth is expected to accelerate in 2014 and beyond (see **Exhibit 5** for the global GDP and four largest countries / blocs' growth forecasts). While economic growth in China is expected to decelerate, growth is forecast to accelerate in the US, European Union and Japan. The US, the world's largest economy, is expected to grow faster than the other largest developed economies at close to a 3% annual rate. Economic growth in the European Union, the second largest economy after the US, is forecast to increase from zero percent in 2013 to 1.3% in 2014. Japan, the fourth largest economy in the world, is forecast to maintain its growth rate of 1.7% in 2014. Overall, global economic growth is forecast to accelerate to 3.7% in 2014 and stay in the 3.7% - 4.0% range.

*Exhibit 5. Global and Major Country / Bloc Growth Rates are Forecast to Increase in 2014*



Source: International Monetary Fund (IMF).

Note: US, China and Japan (forecasts from 2014), World and European Union (forecasts from 2013).

**b. US “On-Shoring” Trend**

As US firms start moving production back home, Chile is likely to become the major beneficiary of this ‘on-shoring’, or ‘re-shoring’, trend. In August 2013, 54% of executives participating in a survey conducted by The Boston Consulting Group (BCG) said that they are either planning to transfer manufacturing back to the US or are considering it.<sup>42</sup> In February 2012, only 37% expressed their interest in the ‘on-shoring’.<sup>43</sup> According to the survey, the top three factors for the ‘on-shoring’ decisions were: labor costs (cited by 43% of respondents), proximity to customers (35%), and product quality (34%).<sup>44</sup> Other important factors included: access to skilled labor, transportation costs, supply-chain lead time, and ease of doing business.<sup>45</sup> Other companies considered additional drivers of the ‘on-shoring’, such as cheap and abundant natural gas in the US, the rule of law, proximity to universities as sources of innovation, and intellectual property protection (the last two are especially important for high-tech companies).<sup>46</sup>

Wage differentials between China and US, the most important driver of the ‘off-shoring’ trend in the 1990s and 2000s, have decreased significantly. In 2001, when China joined the World Trade Organization, China's average manufacturing wage was 58 cents per hour.<sup>47</sup> By 2015, this wage is projected to be around \$6 per hour, nearly 10 times higher.<sup>48</sup> In the US the wage growth has been significantly lower. If the ‘on-shoring’ trend continues, 20% to 25% of products that were sent offshore will eventually return to the U.S.<sup>49</sup> The BCG projected that production that would return from China, as well as higher exports due to improved U.S. competitiveness in manufacturing, could create 2.5 million to 5 million American factory and related service jobs by 2020.<sup>50</sup> The impact of the ‘on-shoring’ is not going to be limited just to manufacturing as each new domestic manufacturing job is estimated to create three additional jobs in the US, in logistics, transportation, construction, finance, and other areas.<sup>51</sup>

However, many existing factories and equipment in the United States are not suitable for companies that are moving back. The average age of private fixed assets in the US is the highest since 1958 at almost 22 years old.<sup>52</sup> A majority of the US manufacturing assets, such as factories and equipment, have not been upgraded since the ‘off-shoring’ to China and other low-cost locations started in earnest. These companies would have to build new factories and equipment to handle the increased demand since it is impossible to use such old factories and equipment for production of modern products. And copper is critical for wiring, heating and cooling systems, telecommunication links and other purposes in those factories and equipment. In addition, companies would have to buy copper for production purposes. These purchases would lead to higher copper demand, and subsequently translate into an increase in the price of ECH.

**c. Fast Growth of Renewable Energy Generation**

Another strong driver for the price of copper is the fast-growing field of the renewable energy generation. Globally, renewable generation is estimated to rise to 25% of gross power generation in 2018, up from 20% in 2011.<sup>53</sup> According to a recent industry study, renewable energy uses from four to six times more copper than fossil fuels.<sup>54</sup>

**4. Resilient Demand from China**

I think that the market underestimates China’s demand for copper over the next several years. The reason that this is important is that China has been consuming close to 40% of the global refined copper over the last several years.<sup>55</sup> The consensus thinking is that as the country’s economic growth slows while it transitions to the consumption-led growth model, China will use less copper in 2014-2015 leading to lower copper prices and, subsequently, a decrease in the price of ECH.



I disagree with the consensus thinking on this issue. Even as China's economic growth slows down to the 7.5% growth rate, I believe that the use of copper in the country will stay at high levels close to what it used to be during the economic growth stage characterized by exports- and investment-led growth over the last several decades. Despite the general slowdown of the economy (some of which would be caused by the 'on-shoring' to the US), I believe that China's use of copper will not decrease because of several copper intensive initiatives in the country. For example, while the Reuters poll of copper market professionals predicts that the copper prices would decline by 4.2% throughout 2014, China's biggest copper consumer, State Grid Corporation, planned on increasing new power grid construction by 13% during the same year.<sup>56</sup>

There are four major reasons why I believe that the Chinese copper demand is not going to drop in 2014-2015.

**a. Urbanization as an Engine of Copper Demand**

The promotion of urbanization was one of the most important reforms announced at the Third Plenary meeting of the 18<sup>th</sup> Party Congress in November 2013.<sup>57</sup> The new Chinese government aspires to bring 400 million people into cities over the next 10 years instead of 20 years forecast by the previous government.<sup>58</sup> This program would cost around \$6.4 trillion.<sup>59</sup> Bringing these people into existing cities would require upgrading and developing infrastructure, including new housing, schools, factories, power plants, railroads and roads. The construction activities that support this urbanization will require massive amounts of copper.<sup>60</sup>

**b. Relaxation of the One Child Policy**

China relaxed its One Child Policy in late 2013. Now a family can have a second child if one partner in a couple is an only child.<sup>61</sup> Also, in villages, families who have a daughter first will be allowed to have a second child.<sup>62</sup> This relaxation is likely to result in an increase of the population growth rate as 7.5 to 10 million couples are likely to have second children, according to research by China's National Health and Family Planning Commission.<sup>63</sup> This would provide another push for infrastructure and power sector development as people, who can afford it, will try to move to larger apartments.

**c. Exports- and Investment-led Growth Model is Not Dead**

I believe that over the next three to five years China will continue its growth using predominantly its tried and true exports- and investment-led model that it has been using over the last several decades. At the heart of this model is an emphasis on the construction and operation of manufacturing and power plants, and infrastructure (both urban and transportation). These activities require a lot of copper.

While the country's leaders have recently made a decision to replace the exports- and investment-led growth model with the consumption-led growth one, this transition will take years to implement. It is highly unlikely that China would manage to turn into a consumption-driven economy in the short term. The government of China is likely to aggressively push the consumption-driven model instead of its exports- and investment-led growth only as the government sees the first indicators that the consumption-led growth is getting serious traction. Until this happens, China is likely to rely on its exports- and investment-driven growth model.

According to Moody's Sovereign Risk Group, the country needs to grow at above a 6% level to maintain the integrity of its banking system and, subsequently, the country's overall internal stability.<sup>64</sup> If growth drops below this level, the country could be shaken by labor protests and internal strife. In my estimate, given a choice between a subpar economic growth (less than 7%) that mostly relies on the consumption-driven growth versus a 7%+ growth using mostly (at least

initially) the exports- and investment-driven growth, China's government would choose the latter. Stability of the country has been one of the most important aspirations of the Chinese authorities throughout the country's history.

There are at least three major reasons that would make the transition to the consumption-led model challenging and, therefore, slower than expected: (i) lack of social protection of citizens, (ii) lack of confidence in the country's pension system, and (iii) a decreasing ratio of working persons to retirees.

- i. **Culture of Savings:** There were no "safety nets" for the citizens of China for many generations. As a result, the Chinese developed a culture that emphasized savings. For many Chinese, saving is a form of "self-insurance".<sup>65</sup> The money is saved in case it is needed to cover medical bills and education costs. It is also saved for a "rainy day" that could be caused by a member of a family losing a job. China does not have a welfare system that provides a "safety net" to citizens who fall on hard times like the welfare systems of the US, Europe or Japan. The culture of saving is conducive to the exports- and investment-led growth as savings are channeled through banks to finance investments in manufacturing and infrastructure.

A transition from the culture of saving to a consumption mindset would require a cultural change. And cultural changes, even successful ones, take many years to implement. As Peter Drucker, a famous management educator and author, said, "Culture eats strategy for breakfast." Only time will tell whether the strategic decision to transition to the consumption-driven economy, which the current government of China made, would be successful. In order to make this transition possible, the government will have to address at least two problems discussed below.

- ii. **Weak Pension Protection:** Most middle aged and elderly people in China do not have confidence in how they will live during their retirement, as pension payments are inadequate for the majority of retirees. This lack of confidence is likely to continue to lead them to save more for their old age rather than to consume today. China needs to reform its pension system which currently gives confidence only to people who worked for state governments and state organizations, less than 25 percent of all retirees.<sup>66</sup> These 'state' pensioners receive payments twice as high as those of people who worked in the private sector.<sup>67</sup> Under the current system, an average retiree in Beijing, for example, cannot afford a bed in a nursing home by a wide margin.<sup>68</sup> But fixing a pension system is not an easy undertaking. The pension system's reforms, which would result in the complete and equal coverage of the population, are likely to last until around 2050.<sup>69</sup>
- iii. **Unfavorable Demographics:** Another factor weighing over Chinese consumption is the country's unfavorable demographics. Due to the impact of the One Child policy and increasing life expectancy in China, the ratio of working people to retirees is expected to decline as the number of people over 60 is forecast to double by 2030.<sup>70</sup> Under the current pension legislation, the ratio of working people to retirees is expected to drop from 4.9 working people per one retiree in 2013 to only 1.6 working person per a retiree in 2050.<sup>71</sup>

Working age people, who are usually responsible for the most consumption of higher-priced discretionary items (such as cars, electronics, etc.), would be responsible for taking care of their retired parents and grandparents. On average, these older and not-so-wealthy retirees in China consume mostly lower priced staples.

The situation could improve if many Chinese people decide to use their newly acquired right to have a second child under the relaxed One Child policy. Not everybody would be able to exercise this right, though, as the cost of living in major Chinese cities is extremely high.<sup>72</sup> Furthermore, the cost of schooling is also very high.<sup>73</sup> According to government estimates, the policy change will allow an additional 15 million to 20 million couples to have a second child.<sup>74</sup> But only about half of those couples are willing to exercise the right, according to research by China's National Health and Family Planning Commission.<sup>75</sup>

**d. Power Use Increases with Income**

Income per capita growth is going to be another factor increasing China's demand for copper. China's power industry has been one of the largest users of copper in the country. The growth of this industry is likely to increase the Chinese demand for copper. As Chinese citizens' income per capita continues to grow, so will their use of electricity. Higher income countries, on average, use more electricity per capita.<sup>76</sup> As of 2011, China's electricity consumption per capita was less than 25% of that in the United States.<sup>77</sup> China's demand for electricity, and thus for copper used in wiring and other power generating applications, has a very high growth potential.

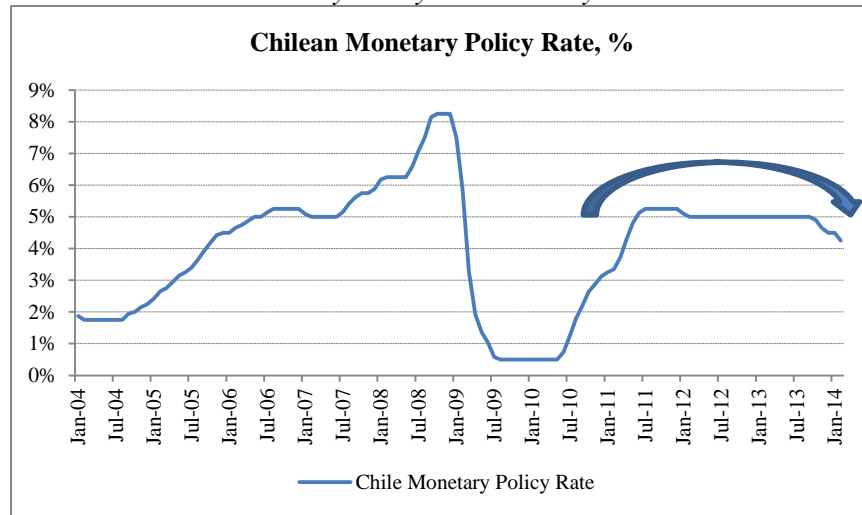
**e. Growth of Renewable Energy Necessary to Combat Environmental Pollution**

The most damaging by-product of the higher electricity usage is China's massive problem of water, soil and, especially, air pollution. The problem is caused by exhausts from manufacturing and construction, and the use of coal in power generation. The air quality is bad in most industrial areas of China. However, it is especially bad in Beijing and some of the industrial cities in Hebei province that borders Beijing.<sup>78</sup> Shanghai Academy of Social Sciences reported recently that Beijing was "barely suitable" for living.<sup>79</sup>

In order to fight the pollution problem, China has set a goal of generating 11.4% of its energy needs from non-fossil fuels by 2015 to reduce its greenhouse gas emissions.<sup>80</sup> According to a recent industry study mentioned earlier, renewable energy uses from four to six times more copper than fossil fuels.<sup>81</sup> The price of copper is likely to benefit from this transition to renewable energy generation in China.

**5. Potential Monetary Interest Rate Cuts in Chile**

The Central Bank of Chile has already cut rates by a quarter of a percent in November 2013, December of 2013 and February 2014. Rodrigo Vergara, president of the Central Bank of Chile, signaled that the goal of the cuts would be to re-energize the economic growth in the country (see **Exhibit 6** for Chilean Monetary Policy Rates).<sup>82</sup> The issue of cutting rates further is going to be discussed at the Monetary Policy meetings of the Central Bank of Chile in the coming months. During the Global Financial Crisis of 2008-2009, the Central Bank of Chile cut rates decisively until they dropped to 0.5%. If GDP growth is going to slow in 2014-2015, then I expect the Central Bank of Chile to cut rates in a similar fashion. Lower interest rates usually lead to higher equity prices, which is positive for ECH.

*Exhibit 6. Chilean Monetary Policy Rate is Likely to Be Cut Further in 2014*

Source: Central Bank of Chile (Banco Central de Chile), Datastream.

### EXPECTED RETURNS

Earlier in the report, I explained why the copper oversupply might not materialize or might be small. However, this oversupply is definitely possible. If an investor's time horizon is 6 to 12 months, the investor should not invest in ECH. However, if an investor's time horizon is longer than 1 year, say 3 to 5 years, the investor can profit handsomely from investing in ECH at current low valuations.

I ran three scenarios (Base, Bear, and Bull) based on different equity earnings growth rates and valuation scenarios over the next 8 years. Due to currently low valuations and continuing high economic growth rates in Chile, which are correlated with equity earnings growth rates, I calculated that the ECH price is likely to appreciate by 12% per year, in US Dollar terms. Opportunities to buy equities of such high quality emerging markets like Chile at such low prices as they were in January and February of 2014 do not come often. Once again, this opportunity materialized due to investors' concerns about slowing of China's economic growth.

### RISKS TO EXPECTED RETURN FORECAST

The risks to my forecast are real. However, I believe that they will not affect my expected return rates for ECH. I will continue monitoring these and other risks that could affect the price of ECH.

**New Center-Left President Can Make Chile Less Business Friendly:** The newly re-elected President of Chile (after a four year break), Michelle Bachelet, has promised to increase corporate taxes from 20% to 25% over the next four years.<sup>83</sup> The revenues raised from the tax will be used to fund universal education up to the university level.<sup>84</sup> While tax increases are almost never popular with investors and business communities in general, which is exemplified by the fact that in Santiago's upscale district of Las Condes only 24% voted for Bachelet, this tax increase might prevent future large-scale strikes similar to those in 2011-2012.<sup>85 86</sup> These strikes were very damaging to the country's economy, and President Bachelet wants to avoid a similar scenario in the future. Also, the President-elect has already committed to her government following fiscal prudence.<sup>87</sup>

During her first presidency, Michelle Bachelet's economic policies were reasonable. She resisted members of her own political coalition who wanted to spend multi-billion windfalls caused by quadrupling copper prices to close the income gap between the haves and have-nots in Chile.<sup>88</sup> These copper revenues also led to a significant appreciation of the Chilean Peso, which made other exports less competitive.<sup>89</sup> In order to save funds for future programs and to put a limit on currency appreciation, she created a sovereign wealth fund, the Economic and Social Stabilization Fund, which accumulates fiscal surpluses that are above 1% of GDP.<sup>90</sup> The country's savings in the sovereign wealth fund allowed her to finance new social policies and provide economic stimulus packages for individuals and companies in the midst of the Global Financial Crisis in 2008 and 2009.<sup>91 92</sup>

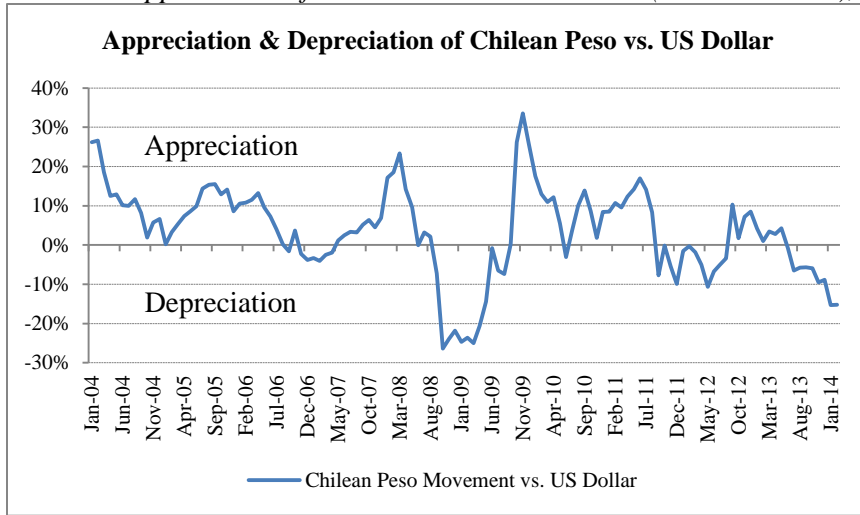
**Slow Economic Growth Resulting in Lower Copper Price:** There is a risk that the global economy will not grow as fast as projected by the IMF and most economists (see **Exhibit 5** for the IMF forecast of the global economic growth). This slowing is possible, but not very probable. Even such permanently bearish economists as Nouriel Roubini, whose nickname is 'Dr. Doom', got bullish on the global economy in 2014.<sup>93</sup>

**Chilean Economy's Dependence on Copper:** Historically, the Chilean economy has been dependent on mining, especially of copper. Copper is still responsible for around 50% of Chilean exports compared to close to 67% in 1973.<sup>94</sup> It is risky when an economy is dependent on exports of one commodity to such an extent, as a price decline in the commodity can easily affect the economy as a whole. Over the last several decades, Chile has been diversifying its economy by becoming a global player in several other sectors of the economy. For example, the country has become the second largest exporter of salmon in the world.<sup>95</sup> Due to the fact that the country's summer is during the winter in the Northern hemisphere, Chile gained a large share of exports of fruits and grapes to the United States, Europe and other countries in the Northern hemisphere. Also, the creation of the sovereign wealth funds such as the Social and Economic Stabilization Fund (\$15.2 billion in assets) and Chile Pension Reserve Fund (\$7.0 billion in assets) created a buffer for a "rainy day".<sup>96</sup>

**Depreciating Currency:** As the Central Bank of Chile reduces its monetary interest rates, the currency can depreciate somewhat. The currency could also depreciate due to the copper oversupply, or even due to a perception of thereof, as capital flows into Chile could decrease over the next couple of years. The third reason for currency depreciation can be the US Federal Reserve Bank's tapering that can also lead to a decrease of capital inflows in emerging markets, including Chile.

However, the Chilean real interest rate differential versus the United States still remains positive. It should put a floor on the Chilean Peso's depreciation versus the US Dollar. Over the last 20 years the Chilean Peso has not depreciated versus the US Dollar by more than 26.4%. That happened in October 2008, when investors were looking for a "safe haven" currency amidst the raging Global Financial Crisis (see **Exhibit 7** for Chilean Peso Appreciation and Depreciation vs. US Dollar). By January 31, 2014, the Chilean Peso has already slid almost 15.3% on fears of the copper oversupply (see **Exhibit 7**). In the worst case, the currency should not depreciate by more than an extra 11%. However, as discussed earlier I do not think that the copper oversupply is going to be massive, if any. As the current gloom related to the copper oversupply dissipates, I expect that there is not going to be much more room for further currency depreciation. Any currency depreciation for the rest of 2014 is unlikely to be significant.

Exhibit 7. Appreciation of Chilean Peso vs. US Dollar (Year over Year), %



Source: Datastream.



**DISCLOSURE**

I follow my own investment advice. I invested in ECH in January and February 2014.

**ENDNOTES AND CALCULATIONS**

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<sup>2</sup> Transparency International, 2013 Corruption Perceptions Index, 2013.

<sup>3</sup> MSCI, Emerging Market Index Composition, [http://www.msci.com/products/indices/country\\_and\\_regional/em/](http://www.msci.com/products/indices/country_and_regional/em/), October 2013.

<sup>4</sup> International Monetary Fund, Chile Net Debt as Percent of GDP, October 10, 2013, retrieved February 18, 2014.

<sup>5</sup> Consumer Price Index (CPI), National Institute of Statistics – Chile, retrieved (via Datastream) February 18, 2014.

<sup>6</sup> Ibid.

<sup>7</sup> Wikipedia, “Miracle of Chile”, retrieved February 18, 2014. Wikipedia refers “Cato Institute and Fraser Institute, “Economic Freedom of the World 1970-1995”, 1996.

<sup>8</sup> Wikipedia, “Miracle of Chile”, retrieved February 18, 2014.

<sup>9</sup> Wikipedia, “Chile – US Free Trade Agreement”, retrieved February 18, 2014.

<sup>10</sup> Datastream. The 12-month total return correlations between S&P 500 Index and ECH ranged on the monthly basis from the maximum of 95% to the minimum of minus 70% over the period from the end of February 2010 to the end of January 2014.

<sup>11</sup> Datastream. The 12-month total return correlations between the S&P 500 Index and iShares MSCI Emerging Markets Index ETF ranged on the monthly basis from the maximum of 98% to the minimum of 6% over the period from the end of February 2010 to the end of January 2014.

<sup>12</sup> U.S. Department of the Interior, U.S. Geological Survey, Mineral Commodity Summaries, January 2013.

<sup>13</sup> Banco Central de Chile, Statistical Database, Accumulated Exports and Accumulated Output Series, retrieved March 1, 2014.

<sup>14</sup> The Centre for International Governance Innovation (CIGI), “Is Chile's Economy Too Reliant on Copper Exports?”, May 21, 2013.

<sup>15</sup> Datastream. Correlation is calculated on the monthly basis.

<sup>16</sup> International Monetary Fund (IMF), World Economic Outlook Database, updated January 22, 2014. GDP growth rate of China was 9.3% in 2011, 7.7% in 2012, and is forecast to be 7.7% in 2013.

<sup>17</sup> Chen Siwu and Wu Zhi, Xinhua News Agency, “China targets 7.5-pct GDP growth”, March 5, 2013. Premier Wen Jiabao targeted the 7.5% growth rate while delivering his last government work report to the 12th National People's Congress (NPC), China's top legislature.

<sup>18</sup> BlackRock, iShares MSCI Chile Capped ETF Fact Sheet, Data as of December 31, 2013.

<sup>19</sup> Juan Andres Abarca, Business News Americas, “Chilean Government Expects Copper to Average US\$3/lb in 2015, Keeps 2014 Forecast”, February 3, 2014.

<sup>20</sup> Reuters, “Chile Sees Copper at \$3.15/lb in 2014, \$3.00 in 2015”, February 3, 2014.

<sup>21</sup> Reuters, “World Supplies of Copper and Aluminum to Shrink in 2014, 2015”, January 21, 2014.

<sup>22</sup> International Copper Study Group, “Copper Market Forecast 2013-2014”, October 2, 2013.

<sup>23</sup> Jae Hur, Bloomberg, “Copper Set on Longest Slide in 27 Years on Factory Data”, February 4, 2014.

<sup>24</sup> The lower number is calculated by dividing the copper oversupply of 260,500 tons from the latest Reuters poll of the copper market analysts by the 2014 forecast of refined production of 22,061,000 tons reported by International Copper Study Group's (ICSG). In calculating the higher number, I used ICSG's forecast of refined copper oversupply of 632,000 tons and divided it by the 2014 forecast of refined production of 22,061,000 tons reported by International Copper Study Group's (ICSG).

Sources: Reuters, “World Supplies of Copper and Aluminum to Shrink in 2014, 2015”, January 21, 2014.

International Copper Study Group, “Copper Market Forecast 2013-2014”, October 2, 2013.

<sup>25</sup> I calculated approximate 2015 refined copper production (22,590,464 tons) by growing the 2014 production number from ICSG by 2.4% production growth rate that I took from Cochilco's forecast. Then I divided 235,000 and 412,000 surplus copper forecasts by 22,590,464 tons to get 1.0% and 1.8% surplus percentages.

Sources: International Copper Study Group, “Copper Market Forecast 2013-2014”, October 2, 2013

Reuters, “Chile Sees Copper at \$3.15/lb in 2014, \$3.00 in 2015”, February 3, 2014.

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<sup>26</sup> Reuters, “World Supplies of Copper and Aluminum to Shrink in 2014, 2015”, January 21, 2014.

<sup>27</sup> Datastream. The cash price of copper at the London Metals Exchange.

<sup>28</sup> Ibid.

<sup>29</sup> Reuters, “Port Strikes Hit Chilean Copper, Fruit Exports”, January 24, 2014.

<sup>30</sup> Macquarie Commodities Research, Commodities Comment, “Copper Supply Staying High”, August 19, 2013.

Source: Wood Mackenzie & Macquarie Research.

<sup>31</sup> The latest Reuters poll of copper market analysts forecast the oversupply of 260,500 tons in 2014. International Copper Study Group’s (ICSG) forecast the refined copper oversupply of 632,000 tons in 2014.

Sources: Reuters, “World Supplies of Copper and Aluminum to Shrink in 2014, 2015”, January 21, 2014.

International Copper Study Group, “Copper Market Forecast 2013-2014”, October 2, 2013.

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<sup>33</sup> Debbie Carlson, Kitco News, “BMO Raises Long-Term Copper Price Forecast, Says Supply Glut Concerns Overblown”, September 11, 2013.

<sup>34</sup> Greta Bourke, Business News America, “Commodity Prices to Fall in 2014, but Will Rebound in 2015-2016 – Goldman Sachs”, December 5, 2013.

<sup>35</sup> International Copper Study Group, “Definitions”, retrieved February 18, 2014.

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<sup>37</sup> Andy Home, Reuters, “Copper Surplus; Now You See It, Tomorrow You Won't?”, December 10, 2013.

<sup>38</sup> Reuters, “World Supplies of Copper and Aluminum to Shrink in 2014, 2015”, January 21, 2014.

<sup>39</sup> Reuters, “Copper Squeeze Likely As Stocks Drop Ahead of Smelter Supply”, February 13, 2014.

<sup>40</sup> Ibid.

<sup>41</sup> Reuters, “World Supplies of Copper and Aluminum to Shrink in 2014, 2015”, January 21, 2014.

<sup>42</sup> The Boston Consulting Group, “Majority of Large Manufacturers Are Now Planning or Considering ‘Reshoring’ from China to the U.S.”, September 24, 2013.

<sup>43</sup> Ibid.

<sup>44</sup> Ibid.

<sup>45</sup> Ibid.

<sup>46</sup> Hugh Welsh, Business Insider, “Why Manufacturing Jobs are Returning to America for the First Time in Decades”, February 27, 2013.

<sup>47</sup> David Conrads, The Christian Science Monitor, “As Chinese Wages Rise, US Manufacturers Head Back Home”, May 10, 2012.

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<sup>49</sup> Made in America Movement, “As Overseas Costs Rise, More U.S. Companies Are 'Reshoring'”, January 28, 2014.

<sup>50</sup> The Boston Consulting Group, “Majority of Large Manufacturers Are Now Planning or Considering ‘Reshoring’ from China to the U.S.”, September 24, 2013.

<sup>51</sup> David Conrads, The Christian Science Monitor, “As Chinese Wages Rise, US Manufacturers Head Back Home”, May 10, 2012.

<sup>52</sup> David Rosenberg, Gluskin Sheff + Associates Inc., “The Year of the Horse ... Breaking Out of The Gates” presentation, February 2014. Data on average age of private fixed assets reported by the Bureau of Economic Analysis.

<sup>53</sup> OECD / International Energy Administration, “Renewable Energy: Medium-Term Market Report 2013”, 2013.

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