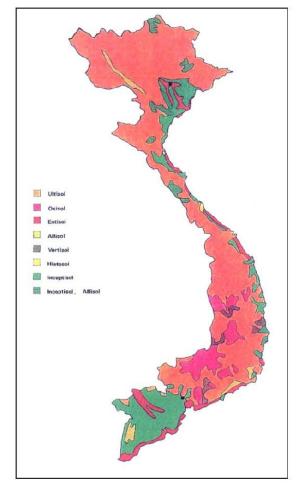


Vietnam Agriculture Opportunities

Q1 2015

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Corr Analytics provides analysis to government and business clients, with a focus on strategic and international political risk. Areas of expertise include international conflict, emerging markets, and quantitative analysis. The company has methodological experience in statistics, surveys, modeling, simulation, prediction, and causal inference. For more information, please visit our website at www.canalyt.com.

Vietnam Report (VNR) is a pioneering company in the fields of evaluation, reports, rating, products and services. VNR provides modeling, consulting, market data, data analysis, investment, research and independent market surveys in Vietnam.

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Corr Analytics has partnered with Vietnam Report, a Hanoi-based corporate ratings and evaluation firm, to provide qualified institutional investors with information on investment opportunities in Vietnam. This report on agriculture investments for Q1 2015 is based largely on original data gathered by Vietnam Report and Corr Analytics.

Vietnam Agriculture and Export Markets

Agriculture investors are increasingly looking towards Vietnam for investment opportunities. Vietnam has 10.3 million hectares of arable land, much of which is devoted to profitable export agriculture.¹ Vietnam's agricultural exports of approximately \$30B per year account for about 20% of Vietnam's total exports.² Frontier investors also increasingly look towards Vietnam for opportunities. According to the Wall Street Journal, corporate sentiment towards Vietnam increased 1.98% between 2014 Q3 and 2014 Q4, and now Vietnam ranks #2, behind Nigeria, as the most-watched country by multinational investors.³

As shown in Figure 1, the biggest 2014 agricultural exports from Vietnam by monetary value were fishery products (\$7.5B), wood (\$5.8B), coffee (\$3.4B), rice (\$2.9B), cashew (\$1.9B), rubber (\$1.7B), fruits and vegetables (\$1.4B), pepper (\$1.2B), and manioc (\$1.1B). The deals proposed to investors by Corr Analytics and Vietnam Report fit these major export markets, including companies that specialize in aquatic feed, livestock feed, rice, fertilizers, maize, cassava, firewood, coffee, rubber, seeds, seed plant, hogs, and hog breeding.⁴

The Trans-Pacific Partnership (TPP), currently under negotiation between the United States and 10 other countries, will likely increase opportunities in Vietnamese export agriculture. According to a 2014 study by the United States Department of Agriculture, Vietnam should gain "modest agricultural trade growth potential" from implementation of the TPP. While coffee and rubber are not likely to gain international market share because they are already benefitting from current preferential trade agreements (PTAs), other Vietnamese exports will experience growth. Specifically, the TPP is likely to help export markets in rice, cassava, pepper, processed foods, and honey. Vietnamese meat, dairy, and fruit, growers, however, could feel greater competition from United States exports to Vietnam when the TPP is implemented.⁵

⁵ Arita, Shawn, and John Dyck. "Vietnam's Agri-Food Sector and the Trans-Pacific Partnership." Washington, DC: United States Department of Agriculture, Economic Research Service, Economic Information Bulletin Number 130, October 2014.



¹ VietnamNet. "Vietnam Launches Zero Hunger Challenge," 1/15/2015. http://english.vietnamnet.vn/fms/society/121153/vietnam-launches--zero-hunger-challenge-.html, accessed January 15, 2015.

² VietnamNet. "Agricultural Producers Can Reap Advantages from New Technology," December 27, 2014, http://english.vietnamnet.vn/fms/business/119486/agricultural-producers-can-reap-advantages-from-new-technology.html, accessed January 15, 2015.

³ Keeler, Dan. "Nigeria Consolidates Status As Most-Watched Frontier Market." *Wall Street Journal,* January 15, 2015, http://blogs.wsj.com/frontiers/2015/01/15/nigeria-consolidates-status-as-most-watched-frontier-market/, accessed January 15, 2015.

⁴ These export figures exclude the last two weeks of 2014. Vietnam Ministry of Finance, General Department of Customs. "Statistics of Main Exports by Fortnight, First Half of December 2014," http://www.customs.gov.vn/Lists/EnglishStatisticsCalendars/Attachments/358/2014-T12K1-1X(EN-PR).pdf, accessed January 13, 2015.

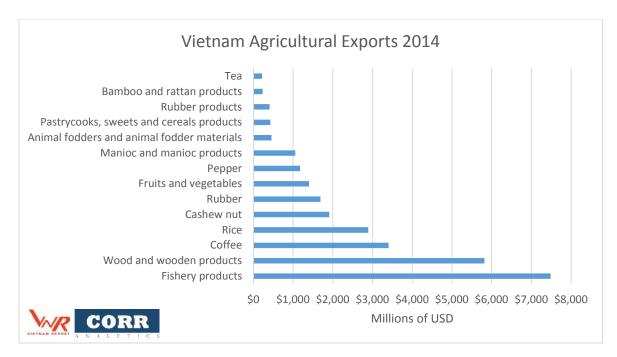


Figure 1: Vietnam Agricultural Exports 2014. These figures are based on data from the Vietnam Ministry of Finance, General Department of Customs, "Statistics of Main Exports by Fortnight, First Half of December 2014," and include year-to-date data up to December 15, 2014. The last two weeks of 2014 are not included.⁶

United States investors are well-placed to take advantage of greater imports and exports between Vietnam and the United States that might result from implementation of the TPP. While US foreign direct investment (FDI) in Vietnam is relatively low compared to that from Japan and South Korea (Vietnam's top FDI investors), the United States held the position as top importer of Vietnamese products for the first 7 months of 2014, according to Vietnamese Customs. The United States imported approximately \$16B in the first 7 months of 2014. China and Japan, the next biggest importers, each imported approximately \$9B over the same period. Given the extensive imports of goods from Vietnam, export-driven foreign direct investment should find fertile ground.⁷

The top agricultural FDI investors in Vietnam come from Taiwan, Indonesia, and Thailand. By October 20, 2014, \$3.6B of foreign direct investment had been made in 516 agriculture projects, or 3% of the total projects and 1.5% of the total registered FDI capital. Per-project scale of FDI is small in agriculture, with \$6.6M per project investment on average, compared with \$15M per project for other sectors. ⁸

⁸ VietnamNet. "Farming Offers Fertile Investment Soil." December 20, 2014. http://english.vietnamnet.vn/fms/business/118505/farming-offers-fertile-investment-soil.html, accessed January 15, 2015.



⁶ Vietnam Ministry of Finance, General Department of Customs. "Statistics of Main Exports by Fortnight, First Half of December 2014," http://www.customs.gov.vn/Lists/EnglishStatisticsCalendars/Attachments/358/2014-T12K1-1X(EN-PR).pdf, accessed January 13, 2015.

⁷ Vietnam Customs.

http://www.customs.gov.vn/Lists/EnglishStatistics/ViewDetails.aspx?ID=420&Category=Express%20news&Group=Trade%20news%20%26%20Analysis&language=en-US, accessed January 13, 2015.

The agriculture export industry competes for labor and capital with other major export sectors, including textiles, manufacturing, and energy. Agricultural imports in Vietnam are scarce, but include \$1.9B of animal fodder in the first seven months of 2014.⁹

Asian Foreign Direct Investment in Vietnam Agriculture

Japan and South Korea are both making concerted efforts to encourage export-driven foreign direct investment into Vietnamese agriculture. According to the former Prime Minister of Japan, Yukio Hatoyama (current President of the East Asean Community Institute), Vietnam and Japan have agreed to a plan in which Japanese IT groups will cooperate with Vietnamese farmers to improve Vietnam's agricultural production to export quality. ¹⁰

The Bank of Tokyo Mitsubishi is providing capital for Japanese companies to invest in Vietnam. Japan's leading retail chain, Aeon, has a deal with the Bank of Tokyo Mitsubishi to seek wholesale suppliers. Aeon has outlets in Japan, China, Cambodia, Indonesia, Thailand, and Malaysia. In 2013, Aeon purchased \$6.8M of Vietnamese goods, including fruits and vegetables (\$985K), seafood (\$3.9M), and processed foods (\$1.9M).¹¹

In October 2014, Japan's Fujitsu and Vietnam's FPT agreed to deploy Fujitsu's Akisai Cloudbased computing technology to support

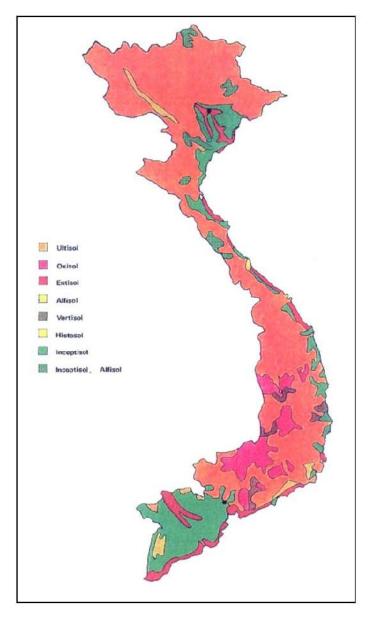


Figure 2: Soil types in Vietnam. Source: Food and Agriculture Organization of the United Nations, http://www.fao.org/docrep/009/y1177e/Y1177E20.jpg, accessed January 15, 2015.

http://www.customs.gov.vn/Lists/EnglishStatistics/ViewDetails.aspx?ID=420&Category=Express%20news&Group=Trade%20news%20%26%20Analysis&language=en-US, accessed January 13, 2015.

http://english.vietnamnet.vn/fms/business/118505/farming-offers-fertile-investment-soil.html, accessed January 15, 2015.

http://english.vietnamnet.vn/fms/business/118505/farming-offers-fertile-investment-soil.html, accessed January 15, 2015.



⁹ Vietnam Customs.

¹⁰ VietnamNet. "Farming Offers Fertile Investment Soil." December 20, 2014.

¹¹ VietnamNet. "Farming Offers Fertile Investment Soil." December 20, 2014.

agricultural management in 2015 to 2016. Fujitsu will showcase the technology by building a greenhouse in Hanoi that pilots the application and other high-tech smart agricultural methods.

The Korea Rural Community Corporation is seeking agricultural development funds from the Government of Korea. Lotte Mart, a retail chain of South Korea with stores in Vietnam, will likely import from Vietnam starting in late 2014 or early 2015. The chain's Vietnam stores stock 90% Vietnamese agricultural goods. ¹²

Challenges and Growth Opportunities in Vietnam Agriculture

The agriculture sector faces challenges including non-competitive technologies, poor infrastructure, an undertrained workforce, and lower quality standards insufficient for export goods. Environmental challenges include climate change, rising sea levels, deforestation and soil erosion. According to the World Wide Fund for Nature (WWF), Vietnam lost 43% of its forest cover between 1973 and 2009. However, the Government of Vietnam takes improvement of agricultural processes seriously, and is aggressively seeking protections of the environment, improved infrastructure investment, including roads that will facilitate exports, and better irrigation systems. The government is working with foreign governments, especially Japan and South Korea as noted above, to gain agricultural technology transfer to make Vietnamese exports more competitive. ¹³

The Government of Vietnam has invested heavily in agricultural sciences at Vietnamese universities and in leading agricultural firms. More than 10,800 scientists work in the agriculture sector, and the government spends over VND \$1T (\$46.9M) annually through the Ministry of Agriculture and Rural Development (MARD) on agricultural scientific research and technology transfer. This is over one-third of the total government budget devoted to science and technology transfer. Recent examples of agricultural technology improvements have been in post-harvesting, and application of Japanese "Cash" and Israeli "Juran" technologies to preserve tuna, shrimp, and litchi. The government is also increasing attempts to process to Japanese quality standards, thereby enabling export of greater quantities of agricultural products to Japan.¹⁵

Areas of likely growth for high-technology agricultural exports in 2015 include the Vietnamese provinces of Hanoi, Vinh Phuc, Phu Yen, Thai Binh and Nghe An, which have all recently been publicized as

¹⁵ VietnamNet. "Agricultural Producers Can Reap Advantages from New Technology," December 27, 2014, http://english.vietnamnet.vn/fms/business/119486/agricultural-producers-can-reap-advantages-from-new-technology.html, accessed January 15, 2015.



¹² VietnamNet. "Farming Offers Fertile Investment Soil." December 20, 2014. http://english.vietnamnet.vn/fms/business/118505/farming-offers-fertile-investment-soil.html, accessed January 15, 2015.

¹³ VietnamNet. "Vietnam Launches Zero Hunger Challenge." 1/15/2015, http://english.vietnamnet.vn/fms/society/121153/vietnam-launches--zero-hunger-challenge-.html, accessed January 15, 2015; Thu Ha, "The Mekong Delta Cries for Help," VietnamNet, July 21, 2011, http://english.vietnamnet.vn/fms/special-reports/10516/the-mekong-delta-cries-for-help.html, accessed January 15, 2015; Parameswaran, Prashanth. "Vietnam May Crack Down on Dam Investors: Government Mulls Harsher Penalties as Investors Fail to Meet Obligations." *The Diplomat*, January 3, 2015. http://thediplomat.com/2015/01/vietnam-may-crack-down-on-dam-investors/, accessed January 15, 2015.

https://thediplomat.com/2015/01/vietnam-may-crack-down-on-dam-investors/, accessed January 15, 2015.

https://thediplomat.com/2015/01/vietnam-may-crack-down-on-dam-investors/, accessed January 15, 2015.

https://thediplomat.com/2015/01/vietnam-may-crack-down-on-dam-investors/, accessed January 15, 2015.

http://english.vietnamnet.vn/fms/science-it/118978/how-much-does-vietnam-spend-on-agricultural-researchhtml, accessed January 15, 2015.

receiving foreign or government investments in agricultural technology.¹⁶ For example in May 2014, the Japanese companies Always and Veggy indicated an interest in starting a 5-10 hectare agricultural operation in the northern province of Vinh Phuc that would yield \$1M per year in exports, expandanble to 50 hectares in a planned second-stage.¹⁷

Political Risk and Opportunity in Vietnam Agriculture

Political risk takes many forms, but in Vietnam agricultural investments a major risk is an increase in taxes that follows realization of high returns. One of the companies proposed for investment here, Enterprise #1 detailed below, was successful in titanium and other mineral mining for export, but an increase in mining royalties decreased the profitability of those sectors and led it to refocus on other sectors, including agriculture.

The practice of increasing taxes following investment is a particular challenge for international investors, but it even applies to local investors. According to agricultural expert Dr. Vu Trong Khai, larger farms and technology infusions are needed to make Vietnamese agriculture more profitable, but the threat of increased taxes dampens investor enthusiasm. "The state policies must closely follow and support farmers and traders," said Dr. Vu to online newspaper VietnamNet. "Previously I talked about the tax policy on high quality rice for export. They have just opened the new market but the government immediately imposed taxes and that policy eliminated dynamics of business development." ¹⁸

Vietnam's government is aware of these problems and is seeking and encouraging agricultural reform that should improve the investment climate for foreigners in the next five years. According to the former Director of Vietnam's Department of Agriculture and Rural Development, Mr. Nguyen Minh Nhi, three major political reforms would improve agricultural production in Vietnam:

- 1) Land currently farmed by small farmers, which is often a holding too small to be profitable, should be repurchased by the government for aggregation into larger holdings of rice, sugarcane, rubber, and coffee. The farmers should be provided with alternative employment.
- 2) State-owned rice trading corporations such as Vinafood 1 and Vinafood 2 should be privatized (equitized in local parlance), and deprived of special advantages over similar private-sector companies.
- 3) The government should cease subsidizing agriculture in violation of World Trade Organization rules.

¹⁸ VietnamNet. "Rice Export: Vietnam Needs to Develop High-Tech Agriculture." December 17, 2014. http://english.vietnamnet.vn/fms/special-reports/118349/rice-export--vietnam-needs-to-develop-high-tech-agriculture.html, accessed January 15, 2015.



¹⁶ VietnamNet. "Agricultural Producers Can Reap Advantages from New Technology," December 27, 2014, http://english.vietnamnet.vn/fms/business/119486/agricultural-producers-can-reap-advantages-from-new-technology.html, accessed January 15, 2015; Dat Viet. "How Much Does Vietnam Spend on Agricultural Research?" VietnamNet, December 31, 2014. http://english.vietnamnet.vn/fms/science-it/118978/how-much-does-vietnam-spend-on-agricultural-research-.html, accessed January 15, 2015; VietnamNet. "Japan Plants Seeds of Hi-Tech-agriculture.html, accessed January 15, 2015.

¹⁷ VietnamNet. "Japan Plants Seeds of Hi-Tech Agriculture." January 4, 2015. http://english.vietnamnet.vn/fms/business/119013/japan-plants-seeds-of-hi-tech-agriculture.html, accessed January 15, 2015.

Whether the reforms above will come to fruition in the next few years is unknown, but at least former officials are discussing the ideas publicly, and major news outlets and current government officials are listening. ¹⁹

Agricultural Privatization

The privatization of major state-owned enterprises (SOEs) in Vietnam that was initiated by Government Decree 37 in 2014 is rapidly affecting the agricultural sector. The Government of Vietnam plans to withdraw VND 3.2 trillion (\$150.6M) from 167 businesses owned by the Ministry of Agriculture and Rural Development (MARD). In 2014, the Government of Vietnam privatized VND776.2 billion (\$36.5M) from 28 member businesses of the Vietnam Rubber Group (VRG), and privatized VND54 billion (\$2.5M) from the Southern Food Corporation. This comprised 17% of the target privatizations. In 2014, MARD also privatized the Corporation for Building Agriculture and Rural Development, the Vietnam National Seaproducts Corporation, the Vietnam National Tea Corporation, Fruit and Agricultural Products Corporation, Vietnam National Forestry Corporation, Agricultural Materials Corporation, Vietnam Southern Food Corporation, and Vietnam National Vegetables. ²⁰

After the 2014 privatizations, MARD retains investment of VND 3.6T (\$167.6M) in 13 groups, corporations and companies. MARD plans to privatize the Forestry Corporation, Agricultural Materials Corporation, three Viet Nam Rubber Industry Corporation entities, seven Southern Food Corporation entities, and five Viet Nam Coffee Corporation entities.²¹

Featured Vietnam Agriculture Investments

The Vietnam Report research team assembled nine potential deals for investors, depicted in Figure 3. The deals range in size between \$226,000 and \$104.2M USD. Most proposed deals are in the range of \$30M to \$50M USD. As mentioned earlier, the deals include companies that specialize in aquatic feed, livestock feed, rice, fertilizers, maize, cassava, firewood, coffee, rubber, seeds, seed plant, hogs, and hog breeding. Estimated return on equity (ROE) of the deals is between 10% and 30%, and four of the nine deals offer a stake of 51%. Other stakes offered range between 30% and 45%.

²¹ VNS. "MARD Divested US \$70mln from 72 Businesses in 2014.", VietnamNet, January 10, 2015. http://english.vietnamnet.vn/fms/business/120757/mard-divested-us-70mln-from-72-businesses-in-2014.html, accessed January 15, 2015.



¹⁹ VietnamNet. "Rice Export: Vietnam Needs to Develop High-Tech Agriculture." December 17, 2014. http://english.vietnamnet.vn/fms/special-reports/118349/rice-export--vietnam-needs-to-develop-high-tech-agriculture.html, accessed January 15, 2015.

²⁰ VNS. "MARD Divested US \$70mln from 72 Businesses in 2014.", VietnamNet, January 10, 2015. http://english.vietnamnet.vn/fms/business/120757/mard-divested-us-70mln-from-72-businesses-in-2014.html, accessed January 15, 2015.

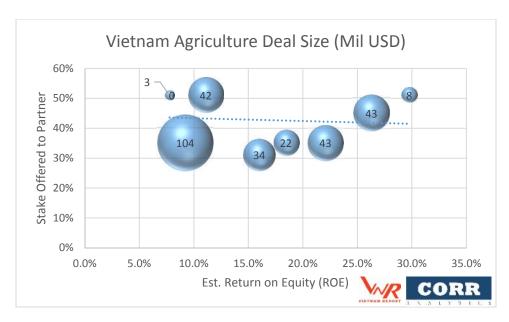


Figure 3: Vietnam Agriculture Deal Size (Mil USD). Data provided by Vietnam Report in December 2014.

Figure 4 depicts equity, which was extracted from company reports. Companies in the proposed deals have assets that range from \$14M to \$466M USD, and debt that ranges from \$5M to \$168M USD. Most companies have between \$100 and \$200M USD in assets, and less than \$100 USD in debt. The largest company has \$466M in assets, \$168M in debt, and \$298M USD in equity. The linear regression of assets against debt provides a visual to show companies that have an abnormally high or low debt-to-asset ratio. Companies below the dotted line are favorably placed with a lower than expected debt-to-asset ratio.

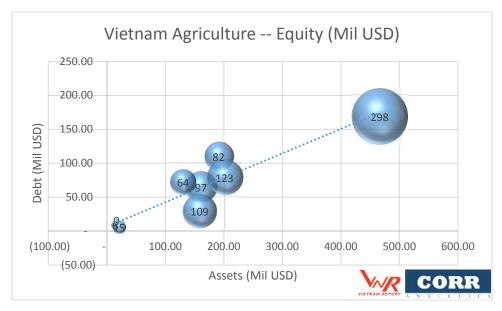


Figure 4: Vietnam Agriculture Equity (Mil USD). Data provided by Vietnam Report in December 2014.



Vietnam Agriculture Case Studies

Corr Analytics and Vietnam Report interviewed two agriculture company Chief Executive Officers to provide further detail as case studies. The interviews took place in the Vietnam Report office in Hanoi, Vietnam, in December 2014. Enterprise #1 is a feed, minerals, shipping, and tourism business that is considering spin-off of its agriculture enterprises. It is not included in the quantitative financial data presented above. Enterprise #2 is a hog breeding and production enterprise. It is included in the financial data above. Thus a total of 10 companies are represented in this report.

Entreprise #1: Feed, Minerals, Shipping, Tourism

Enterprise #1 is state-owned, with an estimated market capitalization of \$260M USD. Thirty-five percent of the company's value is in agriculture, 30% in mineral processing, and the rest is in shipping, tourism, and other sectors.

The company was successful in the past extracting and processing titanium, ilmenite, rutile, zircon, manganese, quartz, and gypsum for export (including with a major international chemical company). That business is not doing well currently because of slowing demand since 2008, and an increase in taxes. However, the mining company does have a new concession in Laos.

The most successful parts of the company are now agriculture and tourism.

The agriculture part of the company is focused on pig breeding and slaughter. The company has a 70% market share of hog sales in the province in which it is located. The company is looking to expand its agricultural production in the fields of cattle, deer, and vegetables. The company has units that produce their own fertilizer, so they have a complete value chain from fertilizer to table.

The company would like to sell a 20-25% share of its equity to fund agricultural expansion. The company may be willing to sell 51% of its equity, but this is a Board of Directors' decision. The company can spin off 100% of the agricultural part of the company for about \$85-\$100M USD. According to the CEO, Government Decree 210 supports agricultural investment. He said the new enterprise law gives foreign companies the right to compete in local markets on an equal basis.

Enterprise #2: Hog Production

Enterprise #2 is a top pig production company in Vietnam. It is privately owned, with one of its subsidiaries publicly listed. It includes farm-to-table vertical integration, including genetics, feed, medicine, production, and processing facilities. It is a top-ten feed producer in Vietnam, and a top-three hog feed producer. The company is one of the largest global hog producers. It sells mostly in the domestic Vietnam market, but plans to increasingly produce for export as it uses European technology and is compliant with most international standards. The company has 2,000 purebred hogs used for genetic development, making it one of the top-3 genetic hog breeders in Vietnam. It develops different strains of hog to match tastes in China, Vietnam, and Europe.

The company is privately owned, with over 5% owned by an international Western investor, who acts as Chairman of the Board. An international accounting company is currently completing a valuation. It has \$9M USD of fixed capital, with an annual profit of \$2.5M USD. An approximate valuation of the company is \$40M to \$50M USD.



Vietnam Report recently named the company one of Vietnam's 500-fastest growing enterprises. The company plans to triple production by 2020. It requires a capital investment of \$30M USD to achieve this goal. In 2013 the company produced 30,000 hogs, and the company produced 80,000 hogs in 2014. The company plans to produce 150,000 hogs in 2015 and 600,000 hogs in 2020. With investment capital of \$50M USD, the rate of increase would be higher, with an estimated 1,000,000 hogs produced by 2020.

Conclusion

Vietnam agriculture is becoming an increasingly attractive destination for foreign direct investment as the country globalizes its economic orientation and seeks to build export markets in Europe and the United States. Privatization of state-owned enterprises, liberalization of trade, and a shifting political orientation towards the West are likely to improve opportunities for Western investors over the next five years. The Trans-Pacific Partnership (TPP) between 11 countries, including the United States, will likely yield a wealth of new opportunities and growth to Vietnamese export-oriented agriculture.

For further information on these and other investment opportunities in Vietnam, please go to www.canalyt.com or contact Corr Analytics at info@canalyt.com.

