

Chain Reaction Research

1320 19th Street NW, Suite 400
Washington, DC 20036
United States

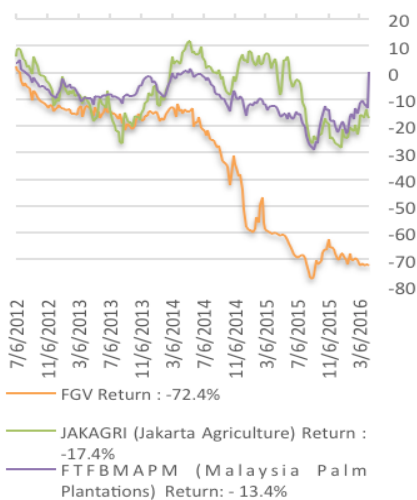
Website: www.chainreactionresearch.com
Email: info@chainreactionresearch.com

Authors:

Milena Levicharova
Scott Paul
Eric Wakker

June 7, 2012 IPO, as of April 8, 2016

Source: Thomson Reuters



FGV's 2015 financial results

Revenue:\$4 billion
Net Profit:\$30 million
Gross Margin:12.2%
Operating Margin:3.0%
Net Income Margin:0.1%
EPS:\$0.01
Crude Palm Oil:~ 3,101,000 tons
Contested land bank:~22%

Disclaimer:

This report and the information therein is derived from selected public sources. Chain Reaction Research is an unincorporated project of Climate Advisers, Profundo, and Aidenvironment (individually and together, the "Sponsors"). The Sponsors believe the information in this report comes from reliable sources, but they do not guarantee the accuracy or completeness of this information, which is subject to change without notice, and nothing in this document shall be construed as such a guarantee. The statements reflect the current judgment of the authors of the relevant articles or features, and do not necessarily reflect the opinion of the Sponsors. The Sponsors disclaim any liability, joint or severable, arising from use of this document and its contents. Nothing herein shall constitute or be construed as an offering of financial instruments or as investment advice or recommendations by the Sponsors of an investment or other strategy (e.g., whether or not to "buy", "sell", or "hold" an investment). Employees of the Sponsors may hold positions in the companies, projects or investments covered by this report. No aspect of this report is based on the consideration of an investor or potential investor's individual circumstances. You should determine on your own whether you agree with the content of this document and any information or data provided by the Sponsors.

FELDA GLOBAL VENTURES (FGV:MK)

RSPO credentials at risk, immediate cash flow impacts

New data shows that Felda Global Ventures Holdings Berhad (FGV:MK) is in breach of Roundtable on Sustainable Palm Oil (RSPO) standards, as its subsidiaries cleared 880 ha of identified High Conservation Value peatlands. RSPO certified sustainable palm oil (CSPO) often sells at a premium to crude palm oil (CPO), which means FGV may lose this premium if temporarily suspended from RSPO. Malaysian palm oil giant IOI Corporation was temporarily suspended from RSPO in March 2016. If FGV follows suit it could lose a CSPO premium of 1% to 2% compared to their average 2015 selling price, resulting in \$6 to \$12 million in cash-flow-at-risk in 2016, excluding broader market share losses.

FGV's core business is concentrated in Malaysia and Indonesia where the company has most of its palm oil plantations, mills, refineries, rubber and sugar operations, an oleochemical plant, bulking installations and transport hubs. The company also has refineries in Turkey, Pakistan, and China, an oleochemical plant in the USA, a rubber processing facility in Thailand, distribution centers in the Philippines and Cambodia, as well trading offices in France and Spain.

Before FGV's June 2012 IPO, the company set a goal to become the world's largest palm oil company with a targeted land bank of over 1 million ha. Despite a number of acquisitions, the company has not reached its goal. Instead, over the same period, FGV (-72.4%) has had disappointing financial performance in comparison to relevant Indonesian (-17.4%) and Malaysian (-13.4%) regional indices.

Yet, growing global CSPO demand (162% increase year-over-year) – driven in large part by over 300 corporate "no deforestation" purchasing policies, a strong dollar, and climate change impacted-weather conditions – is creating clear market signals that new CEO Zakaria Arshad can address to maintain FGV's competitive advantage. Mr. Arshad's five key opportunities to improve FGV's financial performance and risk profile are:

- Integrate contested land bank risk analysis within a firm-wide financial risk management culture to prevent a repeat of FGV's subsidiaries knowingly clearing High Conservation Value areas and peatlands
- Manage FGV's plantation assets in accordance to RSPO policies to avoid future suspension and cash-flow-at-risk
- Grow firm value through value-added CSPO product development rather than "buying earnings" through financially risky acquisitions that reduce interest coverage ratios and increase leverage
- Resolve issues pertinent to FGV's 22% contested land bank so that FGV can sell firm-wide "higher-margin" CSPO into a growing global market
- Adopt integrated sustainability and financial risk analysis from the Board of Directors to the plantation manager to improve overall risk management

FGV achieved RSPO progress in some locations

Water usage decrease - 23%
 Bio oxygen use decrease - 19%
 CSPO..... ~ 41%
 Certified land bank..... ~ 89%

FGV lags behind peers in

Sustainability policies are incomplete and inconsistent
 No supply chain transparency
 Active deforestation of HCV forests
 No High Carbon Stock commitment

RSPO Certification and Contested Land

Progress with RSPO. Considering FGV's size, significance to the Malaysian economy, and governance complexities, its performance to RSPO standards since its IPO 2012 is material (Table 1).

Table 1 FGV's RSPO performance

RSPO commitment	FGV achievement
RSPO certification	2010 - FGV the world's 1st smallholder organisation to achieve RSPO Certification
RSPO certified land	417,222 ha, 89% of total (does not include FELDA land managed by FGV)
RSPO certified mills	39 Felda Palm Industries Sdn Bhd, (FPISB)
RSPO certified estates	82 Felda Global Ventures Plantations Malaysia Sdn Bhd, (FGVPM) and 7 Felda Agricultural Services Sdn Bhd (FASSB)
RSPO certified oil	1,238,602 metric tons, 41% of total
Time Bound Plan	All oil palm plantations certified by 2017
# of complaints at complaints panel	2 in Malaysia
# of court cases	7 pending, for damages with high-end pay out of \$600 million

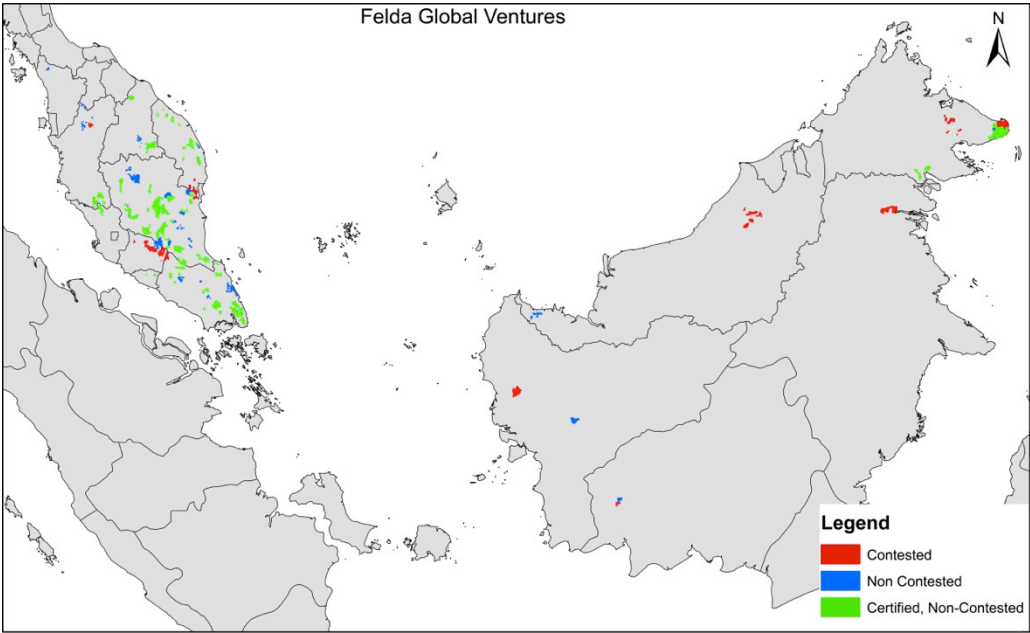
FGV's sustainability credentials are at risk. Due to serious non-compliance with RSPO standards and buyers' growing preference for 'no deforestation, no peat, no exploitation' (NPDE) purchasing policies, FGV faces significant reputation risk. Complicating matters, 22% of the company's land bank is contested (Table 2). This includes any portion that is de facto or potentially subject to dispute due to actual or perceived non-compliance with law, RSPO standards and/or buyers' NDPE policies. Additionally, FGV's joint venture refinery in Batam purchases CPO from controversial supplier Duta Palma that was expelled from RSPO's membership in 2013.

Sustainability policy upgrade required. FGV lags behind its peers in embracing and enforcing sustainability policies that reduce risk of dispute. Specifically, FGV policy does not support High Carbon Stock (HCS) forest conservation. It does not have a grievance procedure that is accessible to stakeholders and the group does not publish a supplier list. On the other hand, FGV had made publicly available high-resolution land bank maps (Malaysia) through its RSPO Annual Communication on Progress (ACOP) report of 2013-14. Also, FGV management states that any new land bank acquisitions would exclude peatland.

Table 2 FGV Contested Land Bank

Drivers of contested land bank	Period	Criteria	Ha
Peatland forest clearance (through JV)	2011 – Present	RSPO, NDPE	84,784
Smallholder court cases West Malaysia	2010 – Present	Malaysian law, RSPO, NDPE	18,000
Deforested area, overall	2014 – Present	NDPE	15,716
Riparian buffer and floods, Sabah	2013 – Present	NDPE	15,000
Encroachment without FPIC, overall	2013 – Present	Malaysian law, RSPO, NDPE	4,148
Open burning, West Malaysia	2012 – Present	Malaysian law	3,653
Mangrove forest clearance by association, Sabah	2014 – Present	NDPE	890
Bauxite mining by association, West Malaysia	2013 – Present	Malaysian law	283
High Conservation Value area clearance, West Kalimantan	2015 – Present	RSPO, NDPE	240

Figure 1
FGV's RSPO-certified,
contested, and non-
contested land bank.



Indonesia

Clearance and degradation of identified High Conservation Value (HCV) peat forests. AidEnvironment has documented two cases where FGV majority-owned subsidiaries operating in Indonesia, have recently degraded and fully cleared HCV areas identified by RSPO-approved assessors. This is a clear breach of RSPO's Certification System rules and the violation may result in suspension of the member group as well as all subsidiaries. The circumstance is similar to the recent RSPO suspension of IOI Corporation, which resulted in IOI losing valuable CSPO premiums and buyers, and an increase in their reputation risk. FGV's revenue could decline by \$6 - \$12 million in 2016 if it loses a CSPO premium of 1% to 2% as a result of a temporary suspension.

These cases relate to the non-compliance concerns PT Citra Niaga Perkasa (PT CNP) and PT Temila Agro Abadi (PT TAA), which FGV acquired in 2012 and 2013. Both companies passed RSPO's New Planting Procedure (NPP), in spite of 75% of their land banks being located on peatland and remaining largely forested (Table 3).

Table 3
Peatland conversion PT CNP and PT TAA

FGV subsidiary	Total land bank (ha)	Peatland (ha)	Total cleared 2010-15 (ha)
PT Citra Niaga Perkasa	14,385	11,006	8,797
PT Temila Agro Abadi	8,193	5,492	5,266
Total	22,578	16,498	14,063

PT CNP cleared a 240 ha area HCV (values 1 to 4) on deep peat (>3 meters) in 2015.

Figure 2
Clearance of HCV deep peat
forest by PT CNP in 2015.
From left to right: August
13, 2013; February 10, 2015;
September 6, 2015. Dark
green: intact peat forest;
light green: land clearings.



Figure 3
Drone image showing the clearance of identified HCV deep peat forest by PT CNP (January 22, 2016).

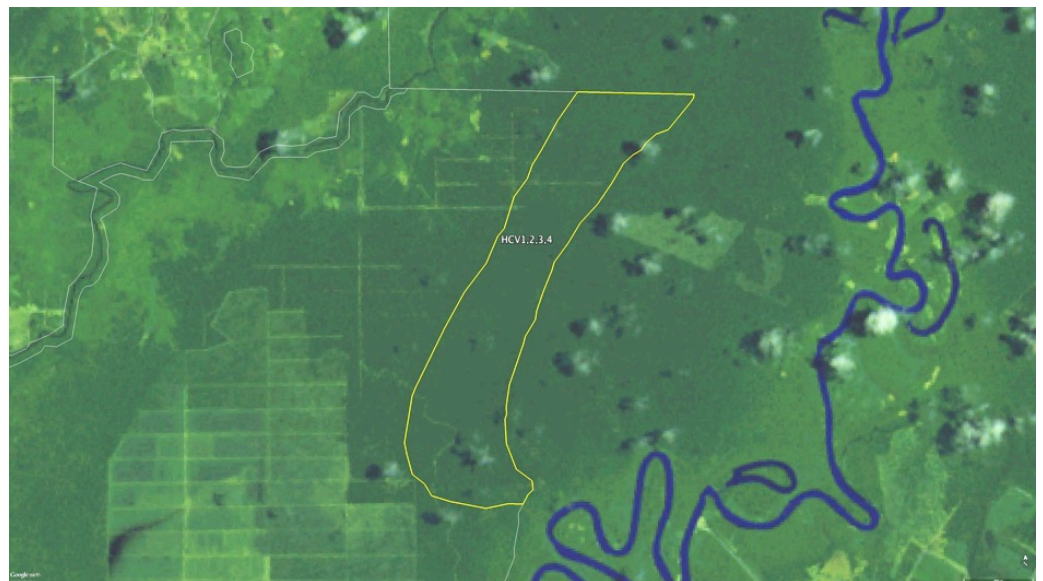
On March 4, 2016, FGV representatives verbally acknowledged to AidEnvironment that the company had cleared the HCV area, arguing that the local community and



government had forced them to develop the area. FGV hopes to settle the case with RSPO whose rules command that non-compliance is escalated to a formal complaint procedure.

Operating on lands adjacent to PT CNP is FGV subsidiary PT Temila Agro Abadi (PT

Figure 4
PT TAA's intact HCV area (September 14, 2013).



TAA). PT TAA had commissioned an HCV study in April 2013 and that assessment identified conservation values 1-4 in a 650 ha deep (>3m) peat forest, adjacent to a protected forest. By August 2014, PT TAA was well on its way to clear 440 hectares within the HCV area.

Figure 5
Stacking in PT TAA's HCV area (August 21, 2014)



Figure 6
Drone image showing stacking lines inside PT TAA's HCV area (September 3, 2014).



The development has since been halted, but a 30 kilometre drainage canal network remains inside the HCV area, gradually lowering the water table from the peat soil which thus greatly increases the likelihood of fire in the future. AidEnvironment estimates FGV's compensation liability at \$2 million, due to degradation of 680 ha of HCV (co-efficient 1.0).

The remaining undeveloped peat forest within PT CNP and PT TAA's land bank now represents a stranded asset to FGV.

PT SON and a contested supply chain. PT Synergy Oil Nusantara (PT SON) operates a facility to refine palm oil and palm kernel oil in Batam, Indonesia. The refinery is a joint venture of FGV, IFFCO, and Tabung Haji. IFFCO is, in turn, a joint venture company between FGV and IFFCO Holdings Limited.

As of August 2015, of the 56 Crude Palm Oil Mills that supply to PT SON, 15 are controlled by the Duta Palma Group whose RSPO membership was terminated in 2013 due to Code of Conduct violations. Duta Palma subsidiaries in Riau and West Kalimantan are linked to large-scale deforestation, peat drainage, burning and haze, law violations and serious land conflicts over the past 20 years. Three Duta Palma directors are currently being investigated by Indonesia's Anti-Corruption Commission (KPK). Annas Maamun, ex-Governor, Riau Province, was found guilty of accepting bribes from Duta Palma.

In spite of its significant purchasing relations with the Duta Palma group, PT SON was awarded RSPO Supply Chain Certification for a 5-year period. The refinery operates on the basis of "Mass Balance", which allows it to claim that its palm oil "contributed to the production of certified sustainable palm oil".

Sarawak

Felda first entered Sarawak in the 1980s and its Sempadi estates near Kuching are being replanted. Several regional villages filed a lawsuit against FELDA and the L&S Department over contested land issues but the case has been pending hearings for 16 years.

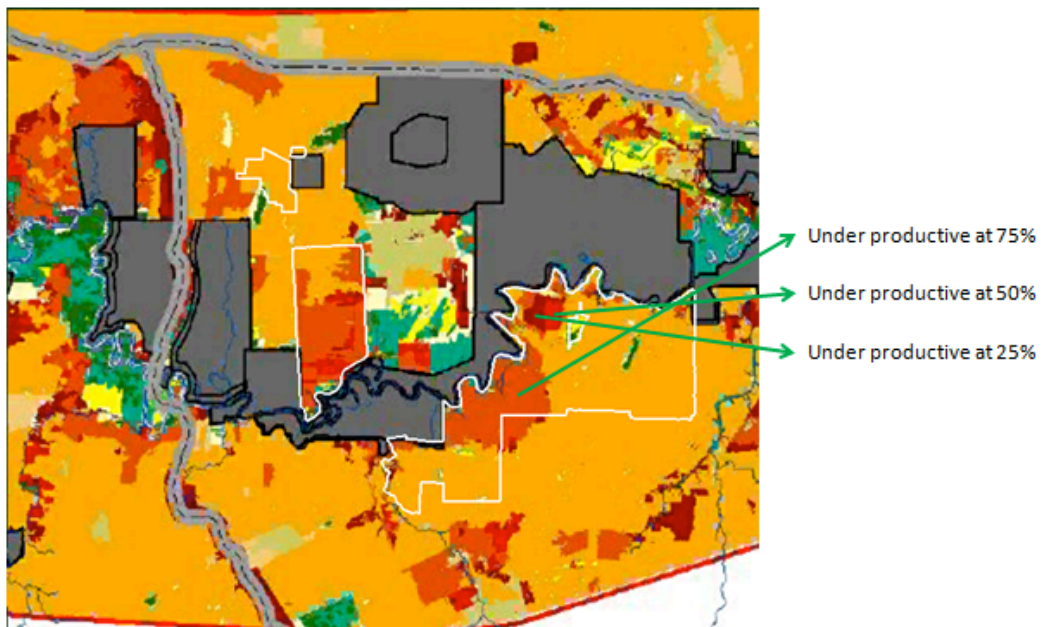
FGV recently purchased a new sustainability risk in the East Malaysian state when it acquired Asian Plantations (AP) in 2015. Listed on the London Stock Exchange's Alternative Investment Market, AP holds a 26,000 ha land bank in Sarawak. Prior to purchase, Asian Plantations had cleared 12,000 ha of forest. Although in 2016 FGV filed an RSPO New Planting Procedures (NPP) document, it would not be able to access Wilmar's Bintulu Edible Oils and Sime Darby's Austral refineries should AP proceed to clear the remaining ~5,600 ha forest without HCS assessment. As a result, AP may resort to supplying BLD's Kirana refinery, possibly at discounted price.

Sabah

FELDA also entered Sabah in the 1980s. Here, its main development is the Sabahat Group in the far northeast of the Sabah State. FGV recently expanded its Sabah land bank through acquisition of Pontian United Plantations and Golden Land.

Kinabatangan River floodplain restoration. In 2009, the Chief Minister and Director of the Sabah Forestry Department adopted a resolution which required riparian buffers and wildlife buffer zones of at least 100 meters along all major rivers, in addition to corridors for connecting forests. Riparian buffers are of essential

Figure 7
PT Pontian's diminished productivity by 25%-75%. Kinabatangan River: "A single tree riparian buffer zone".



ecological value, particularly for orangutans and the Bornean pygmy elephant, which migrate through the area. Forest buffers also reduce human-wildlife conflict. In 2013, FGV acquired Pontian from Asiatic Development, who first developed the estates in the 1990s. Although the Pontian estates are RSPO certified, its riparian buffers generally measure 35-50 meters. FGV committed funds to restoration of existing buffers but 100m buffers will also require some planted land to be abandoned. Complicating matters, a 2014 peer reviewed academic study showed that regular flooding affects oil palm productivity in the Kinabatangan plain and a significant portion of Pontian's landbank is considered under-productive for this reason. While losses maybe offset by gains from less affected areas, conservation groups argue that areas with substandard productivity should be restored and set aside for conservation.



Peninsula Malaysia

Palm development began here in the 1950s and today most estates are in the process of replanting. Here, over half of the land bank is RSPO certified. However, there is concern that FGV has not acted on RSPO Corrective Action Requests to adopt and implement tangible risk reduction strategies. Issues include resolution of long lasting land conflicts with Indigenous peoples or the up taking of fair relations with plantation workers and smallholders.

FGV is a defendant in seven smallholder court cases, with potential high-end \$600 million liability. While FGV is one of the first firms to gain RSPO smallholder certification (40,000 individuals), it is also a defendant in seven legal suits brought forth by 4,500 settlers. These cases resemble the Felda Kemahang 3 case in 2010, where the Court awarded 354 settlers \$2.8 million in damages due to FGV's fraudulent practices regarding oil extraction rates (OER) (Table 4).

Table 4 Current status of smallholder lawsuits filed against FGV

Case	Status	# settlers	\$ MLN
Kuantan High Court (Civil Suit No. 22NCVC-104/4/2012) brought by Mohd Saleh Bin Ishak & Others	Continued trial in April, 2016	770	\$118
Temerloh High Court (Civil Suit No. 22-23-06-2011) brought by Mohamad Razali Bin Ithnain and Others	Continued trial in April, 2016	711	\$109
Temerloh High Court (Civil Suit No. 22NCVC-39-09-2011) brought by Mat Napi Bin Saaid & Others	Continued trial in April, 2016	550	\$91
Johor Bahru High Court (Civil Suit No. MT3-22-453-2009) brought by Rahman Bin Jamri and Others	Court ordered plaintiffs to follow arbitration.	-645	\$(18)
Seremban High Court (Civil Suit No. 22-219-2010) brought by Kari Bin Mohd Salleh and Others	Continued trial in April, 2016	765	\$73
Temerloh High Court (Civil Suit No. 22NCVC-40-09-2011) brought by Abdullah Bin Arshad and Others	N.A.	365	\$56
Kuantan High Court (Civil Suit No. 22NCVC-129-6/2012) brought by Md Hamidin bin Ab Rani and Others	N.A.	957	\$147
Temerloh High Court (Civil Suit No. 22 NVCV-44-12/2012) brought by Abdul Rashid bin Abdul Wahab and Others	N.A.	351	\$3
Total		4,469	\$596

Note: It is important to consider that these cases may not be settled in the near-term. Similar cases in Malaysian courts have taken about a decade to be settled. Finally, even when an award is given, payment may be postponed.

Encroachment on Indigenous Peoples' land. FGV and FELDA are alleged to have encroached on Indigenous Peoples land in various regions. Some land conflicts remain pending resolution, others have resulted in monetary or land development compensation (Table 5).

Table 5 Disputed land due to encroachment allegations

Community	Location	Court Order	Year	Disputed area (ha)
Begahak	Tungku, Sabah	Pending	2015	2,671

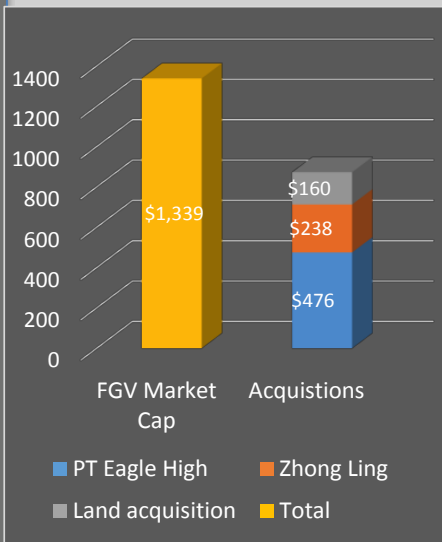
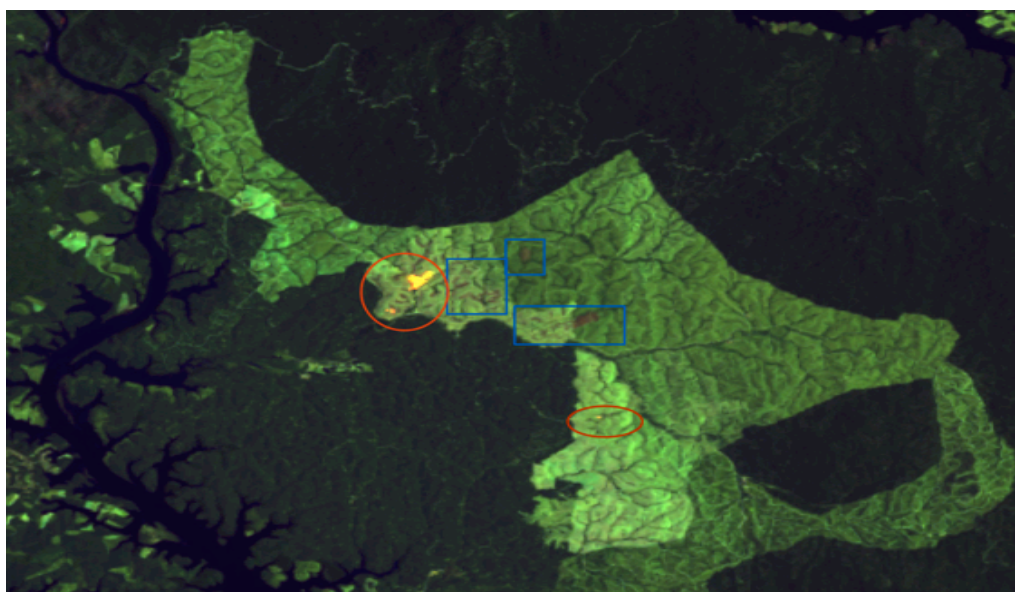


Figure 8
FGV's Ladang Tawai late March 2016 with large red circle representing an active fire of 20 football fields in size. The blue rectangles illustrate 'burn scars', areas that were recently burnt to clear land for planting.

Community	Location	Court Order	Year	Disputed area (ha)
Villagers of Nangabulik	Lamandau district, Central Kalimantan	Land compensation	2013	856
Temiar (Orang Asli)	Temiar land in Kg Jeram Papan, Gerik , Perak	Financial compensation	2013	761
Native villagers	Tanjung Labian, Sabah	Pending	2015	320
Iban and Malay villagers	Kampung Sungai Limau, Kualu, Klauh, Sungai Keribang, Sungai Chupin, Lundu, Sarawak	Pending	2003	N.A.

Open Burning in Ladang Tawai, Perak: Spatial analysis shows that FGV's subsidiary Ladang Tawai in Perak, West Malaysia, starting in April 2014, practiced open burning during replanting of rubber estates. The occurrence of active fires correlates with the clearance of over-mature rubber trees. Open burning is a violation of the Malaysian Environmental Quality Act 127, 1974 and FGV's own sustainability policy.

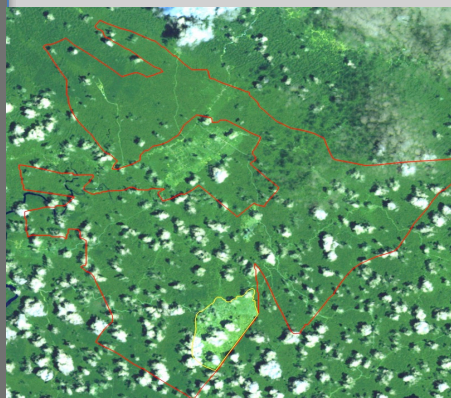


Labor and reputation risks. Investigations by The Wall Street Journal condemned the migrant working conditions at FGV plantations in Peninsula Malaysia as below international standards. Reported allegations include human trafficking, forced labour, illegal employment, abuse, and non-compliance with minimum wages. Accreditation Services International did not find evidence of forced or trafficked labor but it did suspend two Certification Bodies (CB) accredited under the RSPO program for failing to identify major non-compliance with labor related standards in FGV's Pasoh, Serting Hilir, and Palong Timur Palm Oil Mill supply bases.

Several FGV acquisitions on hold or no longer being pursued

As of March 2016, FGV had several pending acquisition deals at cumulative value \$874 million, more than half the market value of FGV itself. The pursuit of all deals had the potential to increase the company's operational funding risks as its cash and other financial reserves were already being depleted. The total cost of the proposed

Figure 9
Deforestation suspended. Following interventions by Cargill and Golden Agri-Resources, EHP suspended land clearing in PT Varia Mitra Andalan in 2015. The company had cleared 1,000 ha of its 20,000 ha heavily-forested concession in Sorong, West Papua.



acquisitions would not have been additional to net income, with potential costs greater than possible revenue. Any mix of borrowing and cash financing could have further constrained the company's earnings with servicing costs. These acquisitions now appear to be halted.

Zhong Ling acquisition now is off the table. The offering price for a 55% stake in Zhong Ling was 9x its earnings, while subject to restatement and even a 3-year revenue guarantee was envisioned in the acquisition plan. Despite Zhong Ling's profitability being higher than FGV's, the earnings uncertainty raised concerns whether the target company would actually be able to deliver growth, synergies and value to FGV. The acquisition was cancelled on April 8th 2016, reviving hope that the company will focus attention instead on its existing operations.

FGV's bid for a 37% stake in the Indonesian PT Eagle High Plantations appears unlikely. FGV's overpriced offer met significant shareholder and banking opposition, as the \$680 million price was 63x net earnings, 4 times the industry average. Malaysia's Federal Land Development Authority (FELDA), which owns 33.7% of FGV, may instead pursue the deal through one of their unlisted arms. However, as recently as mid-March 2016, FGV made a statement that the Eagle High Plantation (EHP) deal was still under consideration. Speculation suggests that the acquisition may occur at c. 44x net earnings or \$476 million, 30% less than the original offer.

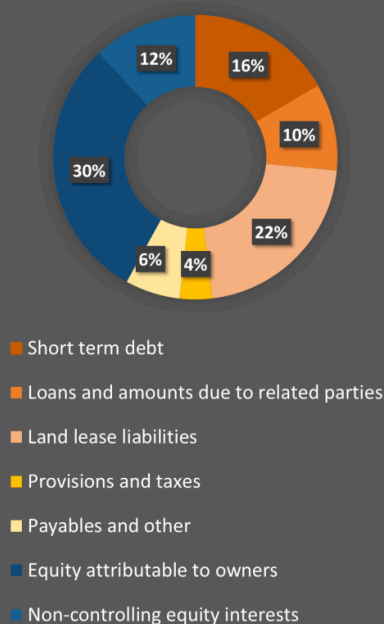
FGV's \$160 million acquisition from Golden Land Berhad has contested land bank risk. As stated above, in 2013 FGV completed this deal through its subsidiary Pontian United Plantations Berhad. Pontian United Plantations Berhad wholly-owned subsidiaries YPSB, SKSB, TEOPP and LKSB land bank is contested because of inadequate riparian buffer zones and flood damages. Furthermore, the RSPO status of the new subsidiaries is unclear.

Land acquisition strategy redirected towards brownfields, yet better risk management controls for acquisitions are required. During its June 2012 IPO, FGV announced ambitious plans to expand through greenfield acquisitions in Papua New Guinea, Cambodia, Cameroon, Liberia, Philippines, and Myanmar. FGV's goal to be the world's largest palm oil company with a land bank > 1 million hectares has not been achieved. Although FGV redirected its strategy to focus on (mostly) brownfield acquisitions, many have commented that these were overpriced (Table 6).

Table 6 Recent acquisitions of FGV

Area	Company	Deal Type	Year	Ha	\$ MLN	\$ per ha
West Kalimantan, Indonesia	PT Citra Niaga Persasa	greenfield	2012	14,385	\$10.6	\$737
Central & North Kalimantan, Indonesia	Trurich Resources	greenfield	2012	42,000	\$71	\$1,690
West Kalimantan, Indonesia	PT TAA & PT LBP	>4% planted oil palm	2013	21,037	\$11	\$523
Kinabatangan Sabah, Malaysia	Pontian United Plantations	~ all planted land, 1 mill, 1 crushing facility	2013	16,000	\$300	\$18,750
Sarawak, Malaysia	Asian Plantations	>50% planted oil palm, crushing & milling facility	2015	24,622	\$157	\$6,376

Capital Breakdown 2015



Area	Company	Deal Type	Year	Ha	\$ MLN	\$ per ha
Total				106,036	\$550	

FGV is financed by related parties. FGV is 42% equity financed and 58% debt financed. Minority interests represent 12% of FGV's capital, as it has several active joint ventures (e.g. FPG Oleochemicals, Bunge ETGO, Felda IFFCO and Mapak Edible Oil). Together with the land-lease agreements (22%) and a significant portion of related-party loans (10%), no less than 44% of FGV's total capital (equity and liabilities) are financed by related parties, which suggests potential for possible conflicts of interest.

During the past 7 years, JPMorgan Chase, Merrill Lynch (Singapore), CIMB Bank, and AmlInvestment Bank were FGV's advisors for merger and acquisition activities. During the FGV's IPO in June 2012, the underwriting syndicate consisted of the banks listed in Table 7, with estimated allocations based on each bank's role.

Table 7 FGV June 2012 IPO: Bank Underwriters

Banking Group	Country	\$ MLN
CIMB Group	United States	\$681
Malayan Banking	Malaysia	\$681
Morgan Stanley	United States	\$659
Deutsche Bank	Germany	\$410
JPMorgan Chase	United States	\$410
Affin	Malaysia	\$43
RHB Banking	Malaysia	\$43
Alliance Bank	Malaysia	\$21
BIMB Holdings	Malaysia	\$21
DRB-HICOM	Malaysia	\$21
Hong Leong Group	Malaysia	\$21
K&N Kenanga Holdings	Malaysia	\$21
KAF Group	Dubai	\$21
Public Bank	Malaysia	\$21
Yayasan Pelaburan Bumiputra	Malaysia	\$21
Total		\$3,292

Source: ThomsonONE and Profundo

FGV's land-lease agreements understate interest coverage risk. Malaysia's Federal Land Development Authority (FELDA) is FGV's largest shareholder and subsidizes FGV through a high discount rate of 9.47% applied to the 99-year land-lease agreements signed in 2011. Currently 85% of FGV's land is leased from FELDA. While land-lease discount rates are contingent on commodity prices, yields, replanting costs, and total hectares planted, they are also contingent on discount factors for future cash flows. FGV's 9.47% discount rate means that its land-lease liabilities may be significantly underfunded.

FGV's Debt to Equity ratio is 3x peers, profitability worse than peers. FGV's long-term debt to its equity is higher than peers, driven by its land lease agreements (Table 8). This puts pressure on FGV's cash flow from CPO and CSPO sales to fund interest coverage and principal repayment.

Table 8 FGV Leverage

Leverage	Industry Median	2010	2011	2012	2013	2014	2015
Assets/Equity	2.12	2.04	1.74	2.70	3.18	3.25	3.32
Debt/Equity	0.26	0.86	0.47	0.40	0.66	0.74	0.84
% LT Debt to Total Capital	11.9%	37.6%	20.7%	17.2%	18.7%	17.9%	14.6%

Sources: Thomson Reuters and Bloomberg

FGV's revenue declined in 2015, compared to 2014, and is less than industry median (Table 9). FGV's 2015 3% operating profit and 0.1% income after tax margin significantly underperform its industry peers (Table 10).

Table 9 FGV profitability

Key Income Statement	Industry Median (mln)	2011	2012	2013	2014	2015
Total Revenue	\$979	\$2,438	\$4,175	\$3,991	\$5,005	\$4,015
Gross Margin	32.9%	13.3%	27.2%	12.2%	7.0%	12.2%
EBITDA Margin	12.1%	7.5%	26.6%	8.0%	10.1%	5.2%
Operating Margin	9.2%	11.6%	23.2%	7.4%	11.8%	2.9%
Pretax Margin	8.9%	11.7%	25.6%	8.5%	12.2%	2.4%
Net Margin	7.4%	9.1%	18.8%	6.8%	9.0%	1.5%

Source: Thomson Reuters and Bloomberg

FGV's key price multiples lag peers. On a stand-alone basis, FGV's performance is 2x to 10x worse than peers' median (Table 10). FGV's income after tax margin of 0.1% contrasts with peers' median 7.9% and mean 10.8%. FGV's lower margins reflect company's reduced profitability and competitiveness.

Table 10 FGV Relative performance

Identifier	Company Name	Market Cap (MLN)	Operating Profit	Income After Tax	ROA	ROE	Price to Cash Flow	Price To Book
Peer Mean		\$4,153	18.0%	10.8%	4.4%	6.8%	26.8	2
Peer Median		\$2,043	12.3%	7.9%	4.3%	7.3%	14	1.9
FGVH.KL	Felda Global Ventures	\$1,350	3.0%	0.1%	2.0%	3.4%	8.6	0.9
ANJT.JK	Austindo Nusantara Jaya	\$423	10.2%	-6.1%	2.4%	2.9%	30.4	1.3
BUMI.SI	Bumitama Agri	\$951	25.2%	17.9%	7.2%	14.6%	10.1	1.8
FRLD.SI	First Resources	\$2,075	46.9%	30.0%	8.8%	15.6%	9.8	2.3
GENP.KL	Genting Plantations	\$2,012	20.1%	12.9%	4.5%	7.0%	29.6	2
GAGR.SI	Golden Agri-Resources	\$3,335	2.9%	0.8%	0.4%	0.7%	13.7	0.4
HAPP.KL	Hap Seng Plantations Holdings	\$467	27.5%	21.8%	4.5%	5.1%	15.2	1
IJMP.KL	IJM Plantations	\$756	12.3%	6.2%	3.6%	6.2%	30.9	2
IOIB.KL	IOI Corporation	\$7,359	12.4%	0.0%	-3.5%	-10.0%	120.7	6.3

Identifier	Company Name	Market Cap (MLN)	Operating Profit	Income After Tax	ROA	ROE	Price to Cash Flow	Price To Book
KLKK.KL	Kuala Lumpur Kepong	\$6,078	12.2%	9.5%	7.0%	11.5%	12.9	2.5
SIME.KL	Sime Darby	\$11,408	6.8%	4.6%	4.1%	7.5%	14	1.5
UTPS.KL	United Plantations	\$1,259	36.0%	29.5%	11.5%	12.6%		2.4
WLIL.SI	Wilmar International	\$13,718	3.6%	2.9%	2.9%	7.7%	7.2	0.9

Source: Thomson Reuters and Bloomberg

Market risks, minority shareholder risks, lower FFB yields

FGV's operational efforts have led to suboptimal productivity as many plantations are past peak productivity rates. While planting is estimated to be at replacement rates, some palm oil tree stocks have oil extraction rates lower than peers.

Low yields, high replacement costs, FGV's average plantation age beyond prime.

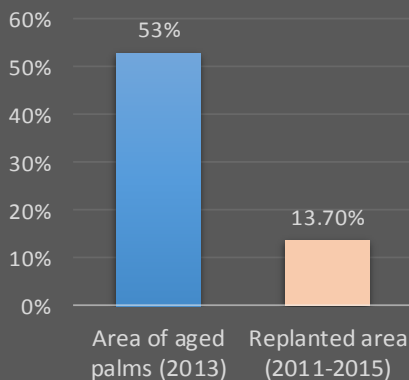
53% of FGV's palm oil trees were beyond prime age in 2013, at average age of 20 years. Peak productivity is reached at 14. The difference between yields of top productive trees and 20-year-old trees is 9% - 16%. FGV's lower replacement rates create long-term diminished yields, negatively impacting its profitability. FGV reports replanting rates of more than 5% p.a., while the company – in aggregate – has managed to replant only 13.7% over the past 5 years. Even if the percentage newly planted areas is taken into account (41,775 ha as reported), more than 30% of FGV's land remains sub-optimally productive.

Palm Oil Upstream segment year-over-year revenue down 60%. A 60% year-over-year down turn is the result of FGV changing its business model to selling CPO through its TML segment from selling through its Palm Oil Upstream segment. Similarly, its Palm Oil Downstream segment declined 44% year-over-year, as FGV's local refineries changed their business models as part of FGV's Transformation Plan. In 2015, FGV also registered its external palm oil sales under its Trading, Marketing, and Logistics segment, instead of under its Palm Oil Downstream segment.

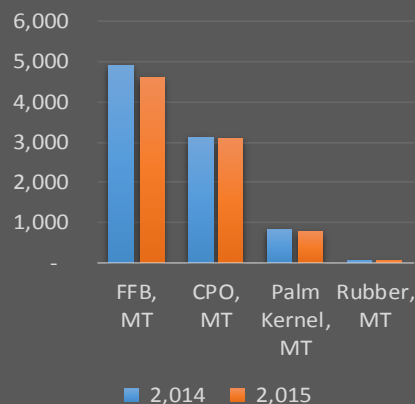
Market conditions diminish revenue, possibly short-term upside. In 2015, FGV saw an 8% decline in its average selling CPO price, which was a significant factor for the lower revenue of the company. It also had significant exchange rate exposure to a strong US dollar. Yet, the reduced supply of palm oil due to El Niño suggests that CPO prices may increase in the near-term due to constrained supply.

75% of FGV's shares are owned by Malaysian government-related entities creating risk for minority shareholders. Table 11 and Table 12 list FGV's primary institutional shareholders. Table 11 lists the Malaysian government-related institutions that own 75% of FGV's shares. For example, 33.7% of FGV is owned by FELDA. Table 12 lists FGV's other significant institutional investors. Most institutions own less than 1%, which suggests that they may have significant minority shareholders risk.

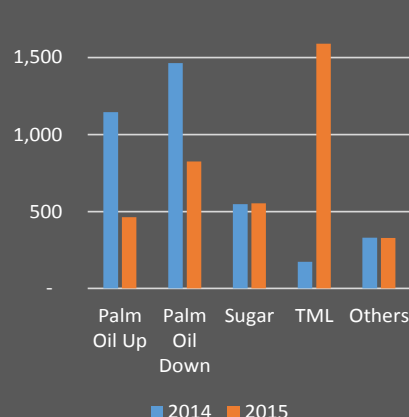
Aging plantation vs replanting



Productivity



Segment performance



Oil extration rate

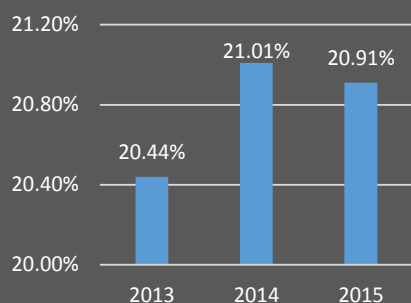


Table 11 FGV's government-related shareholders

Investor	Parent	\$ MLN	%
Lembaga Kemajuan Tanah Persekutuan	FELDA	\$636	33.66
Permodalan Nasional Berhad (PNB)	Yayasan Pelaburan Bumiputra	\$168	8.87
Lembaga Tabung Haji	Malaysian Hajj Pilgrims Fund	\$117	7.78
Koperasi Permodalan Felda Malaysia Berhad	FELDA	\$110	5.80
Kumpulan Wang Persaraan (Diperbadankan)	KWAP Retirement Fund	\$50	5.09
Kerajaan Negeri Pahang	Kerajaan Negeri Pahang	\$95	5.00
Employees Provident Fund (EPF)	Employees Provident Fund	\$71	5.00
Sawit Kinabalu Sdn. Bhd.	Sabah State Government	\$46	2.44
SDB Asset Management Sdn. Bhd.	Sabah Ministry of Finance	\$34	1.81
Total Governmental Participation		\$ 1,327	75.00%

Source: Thomson Reuters

Table 12 FGV's main independent shareholders

Parent	Country	\$ MLN	%
Public Bank	Malaysia	\$19	1.02
Lembaga Tabung Angkatan Tentera	Malaysia	\$18	0.97
Vanguard	United States	\$17	0.92
Ekuiti Yakinjaya	Malaysia	\$11	0.57
Bank of New York Mellon	United States	\$6	0.43
BlackRock	United States	\$5	0.34
Pensioenfonds Zorg & Welzijn	Netherlands	\$3	0.16
Dimensional Fund Advisors	United States	\$2	0.15
St. James's Place Wealth Management	United Kingdom	\$2	0.13
Oversea-Chinese Banking Corp	Malaysia	\$2	0.12
Van Eck Global	United States	\$2	0.12
CIMB Group	Malaysia	\$2	0.10
Eaton Vance	United States	\$2	0.10
Caisse de dépôt et placement du Québec	Canada	\$1	0.08
TIAA-CREF	United States	\$1	0.07
CPP Investment Board	Canada	\$1	0.07
ABP	Netherlands	\$1	0.07
BlackRock	United Kingdom	\$1	0.07
PTB Unit Trust	Malaysia	\$1	0.06
State Street	Malaysia	\$1	0.05
Listed institutional shareholders		\$96	5.6%
Other shareholders not listed		\$261	19.4%
Total independent shareholders		\$357	25%

Source: Thomson Reuters