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China Huishan Dairy (6863 HK): A Near Zero

Company: China Huishan Dairy Holdings Co Ltd.	Stock Price: HKD 2.85
Ticker: 6863 HK	Market Cap: HKD 38.4 billion
Industry: Dairy	Float: 3.5 billion shares
Report Date: December 16, 2016	Average Volume (30-day): 11.9 million shares

Part 1

We are short China Huishan Dairy Holdings (6863 HK / “Huishan”) because we believe it is worth close to Zero. We conclude Huishan is a fraud. In this first report on Huishan, we detail the following conclusions and supporting facts.

Since at least 2014, the company has reported fraudulent profits largely based on the lie that it is substantially self-sufficient in producing alfalfa. We found overwhelming evidence that Huishan has long purchased substantial quantities of alfalfa from third parties, which gives us no doubt that Huishan’s financials are fraudulent.

We believe Huishan has engaged in CapEx fraud related to its cow farms. We estimate that Huishan has overstated the spending on these farms by RMB 893 million to RMB 1.6 billion. The primary purpose of the CapEx fraud is likely to support the company’s income statement fraud.

Chairman Yang appears to have stolen at least RMB 150 million of assets from Huishan – the actual number is quite possibly higher. The theft relates to the unannounced transfer of a subsidiary that owned at least four cow farms to an undisclosed related party. It is clear to us that Chairman Yang controls the subsidiary and farms.

Even if Huishan’s financials were not fraudulent, the company appears to be on the verge of default due to its excessive leverage. Taking Huishan’s financials at face value, its credit metrics are horrible. The leverage is so substantial that in FY16, Huishan’s auditor appears to have stopped just short of issuing a “going concern” qualification. Given that we conclude Huishan’s reported profits are fraudulent, we have no confidence that Huishan can make it through the next year without defaulting. There are clear signs of enormous financial stress, including the types of financing Huishan is trying to employ and halted projects. The asset side of Huishan’s balance sheet, in our opinion, is massively overstated due to fraudulent profits and cash, overvalued biological assets, and certain highly suspicious asset accounts.

Although Huishan has a “real business” in contrast to a typical Zero, its massive leverage cause us to conclude that its equity is close to worthless. It is our view that Huishan’s asset values and reported profits are inflated by significant amounts, and that its cash is greatly overstated. The extent of these overstatements are unclear, and it is likely there are other asset accounts that are similarly afflicted. Valuing Huishan’s true equity value requires knowing the truth about its accounts – and truth is in short supply at Huishan.

CCASS data strongly suggests that a significant portion of Huishan’s outstanding shares has been pledged as collateral for loans. If we are correct, this presents a significant risk to long holders if the borrower(s) is / are unable to meet margin calls.

We researched Huishan for several months. During this time, our investigators visited 35 farms, five production facilities (including one that was halted mid-construction), and two announced production sites that had no evidence of construction. Additionally, our investigators conducted drone flyovers of selected Huishan sites. We engaged three dairy experts, including two with deep backgrounds in China dairy farming. We and our investigators spoke with suppliers and importers of alfalfa in three different provinces, some of whom were selling alfalfa to Huishan. In addition, we conducted extensive due diligence into Huishan’s topline, which we will discuss in Part 2.

Fraudulently Inflating Margins by Falsely Claiming Alfalfa Self-Sufficiency

We conclude that Huishan has fraudulently inflated its gross margins and reported profits since at least FY14 by lying about being self-sufficient in alfalfa. Huishan cites self-sufficiency in alfalfa production as the main driver of its industry-leading gross margin. Our research indicates that Huishan was never self-sufficient in alfalfa. Instead Huishan has bought substantial quantities of alfalfa from third parties at higher prices than its claimed production costs. The company also claims to preserve margins by implementing a feed cost reduction effort that we find dubious. Starting in FY16, Huishan began claiming that it is decreasing alfalfa rations to engineer lower milk yields in an environment of depressed prices. We do not believe this holds water, and instead view it as a ham-fisted attempt to unwind the alfalfa fraud.

What is alfalfa?

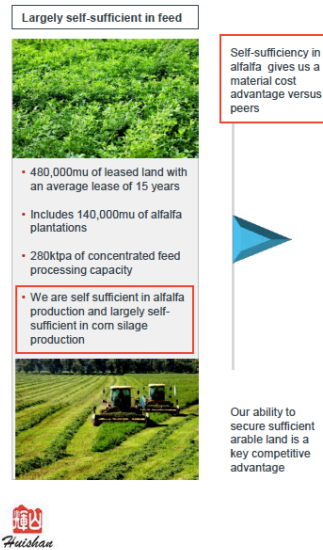
Alfalfa is a protein and vitamin rich grass that boosts milk yield and protein content, a key determinant in the selling price of raw milk. It is the “grass” in Huishan’s much-heralded fully integrated “Grass to Glass” model.¹

Huishan has claimed to be self-sufficient in producing alfalfa

Huishan implied self-sufficiency in alfalfa as early as FY13 by reporting an alfalfa crop surplus.¹ The slide below from Huishan’s FY15 annual presentation repeats this claim.²

¹ Huishan Prospectus, p. 1

² Huishan FY15 Annual Presentation



Huishan's purported alfalfa self-sufficiency is the cornerstone of its margins

Because Huishan has in fact been purchasing substantial quantities of alfalfa from third parties, its profits have been fraudulently overstated by a massive amount. By claiming to be self-sufficient in alfalfa production, Huishan has reported outsize margins by purportedly not having to purchase alfalfa from third party vendors or arranging long-haul transportation.³ In its IPO prospectus, Huishan claimed its own production costs were \$70/mt (approximately RMB 437/mt), versus approximately \$400/mt (approximately RMB 2,500/mt) for imported alfalfa. Huishan emphasized logistics cost and quality advantages of having their alfalfa farms close to its feed processing companies and dairy farms.⁴ The short supply chain also supposedly meant improved retention of the grass' protein content that otherwise is degraded during transportation and handling.⁵ We estimated Huishan reported a cost savings of a short supply chain for alfalfa to be RMB 83 to 110 million (RMB 600 to 800/mt) based on FY14 reported production volumes.⁶

Huishan has booked biological gains on purported harvested alfalfa crops. As shown below, from FY13 through FY16, bio-gains from alfalfa comprised 19% to 24% of Huishan's pre-tax profits. These low production costs were the catalyst for improving margins in its dairy farming business segment from 42.7% to 59.8% during FY11 to FY13.⁷ In 2013, a major investment bank estimated that Huishan's alfalfa plantations contributed 22% of cash EBITDA (excluding biological losses) to its dairy farming business.

Table 1: Gain Arising on Initial Recognition of Alfalfa and Crops at Fair Value Less Costs to Sell Upon Harvest (RMB '000)

	2013	2014	2015	2016
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³ Huishan 2013 IPO Prospectus, pp.128

⁴ Huishan 2013 IPO Prospectus, pp.126, 128

⁵ Huishan Prospectus, p.126

⁶ Huishan FY2014 AR, p. 13, 2014 Annual Results Presentation p. 13, et alia.

⁷ Huishan Prospectus, pp.233, 237

Alfalfa Fair Value Gain	240,621	243,219	224,690	132,851
Other Feed Crops Fair Value Gain	0	116,210	256,329	308,007
Total Gain Arising From Feed Crops	240,621	359,429	481,019	440,858
Pre-Tax Income	1,012,415	1,249,229	927,831	693,857
% Profit Generated From Alfalfa	23.8%	19.5%	24.2%	19.2%
% Profit Generated From All Feed Crops	23.8%	28.8%	51.8%	63.6%

Sources: Prospectus, Annual Reports

Most of Huishan's comps do not claim to grow substantial amounts of alfalfa. As a result, Huishan reports gross margin and EBITDA substantially higher than those of its peers. Because Huishan has not been self-sufficient in producing alfalfa, the reported outside margins are fictitious.

		Gross Margin				EBITDA Margin			
		LTM	FY 15	FY 14	FY 13	LTM	FY 15	FY 14	FY 13
Beijing Sanyuan Foods Co. Ltd.	600429 CH	30.9%	29.9%	22.8%	21.3%	2.0%	3.0%	-0.2%	-2.1%
Yashili International Holdings Ltd.	1230 HK	50.7%	50.8%	51.1%	53.5%	0.0%	3.3%	10.9%	14.4%
China Mengniu Dairy Co. Ltd.	2319 HK	32.2%	31.3%	30.3%	27.0%	7.5%	7.5%	7.2%	6.6%
Inner Mongolia Yili Industrial Group Co. Ltd.	600887 HK	38.4%	36.4%	33.1%	28.7%	10.9%	11.1%	11.0%	7.6%
Bright Dairy & Food Co. Ltd.	600597 CH	39.4%	36.1%	33.7%	34.7%	9.0%	6.9%	5.9%	6.2%
China Huishan Dairy Holdings Co. Ltd. ⁽¹⁾	6863 HK	61.9%	61.9%	68.3%	64.4%	44.2%	44.2%	48.5%	49.1%

Source: S&P Capital IQ

⁽¹⁾ Because 6863 is on a March FY, we compare 6863 FY 16 numbers to comps' FY 15, FY 15 vs. FY 14, and FY 14 vs FY 13.

Huishan appears to be trying to take some of the air out of the fraudulent margins by reporting escalating alfalfa production costs. Alfalfa production costs rose 31% from \$70/mt (approx. RMB 422/mt) in 2013 to \$92/mt (approx. RMB 579/mt) in 2014 and another 16% to \$107/mt (approximately RMB 656/mt) in 2015.⁸⁹¹⁰ From the company's bio asset valuation tables, we estimate that Huishan booked a 14% per ton increase in FY16 to US\$122/mt (approximately RMB 773/mt).

Huishan lied about being self-sufficient in alfalfa

Huishan has been lying about being self-sufficient in alfalfa likely since at least FY14.¹¹¹²

- Our investigators found Huishan using Anderson Hay & Grain Company alfalfa imported from the U.S.¹³ Anderson's China agent confirmed that Huishan has been a significant client since 2013.
- Employees at nine farms confirmed that Huishan purchases alfalfa from third parties overseas and in Heilongjiang.

⁸ Huishan Prospectus, p. 126

⁹ Huishan FY14 Annual Report, p. 13

¹⁰ Huishan FY15 Annual Report, p. 13

¹¹ Huishan Prospectus, p.2

¹² Huishan FY15 annual results presentation, p. 17, January 2015 Deutsche Bank Access China Conference Presentation, p. 15, April 2015 Daiwa Presentation, p. 15

¹³ <http://www.anderson-hay.com/>

- A Heilongjiang alfalfa distributor also confirmed that his company has a longstanding relationship to supply Huishan with sheep grass and alfalfa.
- A sign at one of Huishan’s “show farms” states that it feeds the cows with alfalfa imported from the U.S.
- An investor who diligenced Huishan in 2014 provided us with photographs his investigators took on Huishan farms that show it was feeding U.S. alfalfa produced by El Toro.
- On the surface, Huishan’s purported alfalfa production is hard to believe, given the flooding issues in Liaoning where it has its farms.
- We spotted a red flag in Huishan’s reported alfalfa production – its alfalfa production per head has decreased precipitously since its IPO, once again supporting our conclusion that Huishan’s alfalfa claims are false.

Our investigators discovered Huishan has been a significant customer of Anderson. It appears Anderson supplied quantities approximately equal to half of Huishan’s purported FY14 alfalfa production. Our investigators took the below photograph at a Huishan farm.



We contacted Anderson’s importer/agent in China, who confirmed that Huishan has been a customer for three years. According to the agent, Huishan’s shipments from Anderson started in 2013 with approximately 70,000 mt that year, dropped to 30,000-40,000 mt/yr in 2014 and 2015 when the China milk market softened, and that volume improved modestly in 2016. The reported volumes supplied by Anderson in 2013 alone equate to about half of Huishan’s FY14 (April 1, 2013 to March 31, 2014) reported total internal consumption. The importer/agent also provided current market prices, quoting RMB 2,330/mt (approximately US\$345) based on delivery at the port of Dalian.¹⁴

Huishan purchases domestic alfalfa from third parties as well. A Heilongjiang distributor confirmed that they have been supplying the Company with alfalfa and sheep grass for several years and have very good “guanxi” with the Company’s purchasing manager.¹⁵

¹⁴ At Oct. 2016 forex rates of 6.75 RMB:USD

¹⁵ Guanxi literally means a “personal relationship.” In business, it is often used to allude to relationship capital accrued through the give and take of special favors and is a common euphemism for bribes or kickbacks.

Signage on Huishan's farms further contradicts its filings. Visitors to one of the company's "show farms" are told calves raised there are fed premium alfalfa imported from the US.

An investor who conducted extensive due diligence on Huishan in 2014 gave us information that corroborates our investigators' work. We were told that in 2014, the investor's investigators visited seven farms with about 16,000 cows in total. The investigators reported these farms used imported alfalfa extensively, if not exclusively.¹⁶ Their photos show imported alfalfa in its export wrapping from El Toro, one of the US's largest alfalfa exporters.¹⁷ (Because we did not engage these investigators ourselves, we only cite their work product as evidence that corroborates our own research. We believe the investor and their diligence work are credible, but we cannot attest to the accuracy of their research.)



Bales of El Toro alfalfa on a Huishan farm. Photographs taken in 2014 by investigators dispatched by another investor.

We believe one reason that Huishan cannot grow enough alfalfa for its needs is that northeastern China isn't a good area for this crop. Despite touting Liaoning as "one of the most suitable planting areas for alfalfa growing," the region's climate poses stark challenges.¹⁸ Many of Huishan's alfalfa farms are in Chang Tu Township in Liaoning.¹⁹ A January 2014 court judgment regarding a dispute in Chang Tu over fields leased to Huishan highlights these issues: a defendant pointed out that farming in that area was risky and that over a ten-year period the Liao river flooded the leased parcel numerous times.²⁰

The third party investor's investigators visited Chang Tu in the winter of 2014. They reported having conversations with local farmers who reported serious damage to Huishan's fields from

¹⁶ Other investor investigator report, July 2014, p. 4

¹⁷ <http://www.eltoroexport.com/export-hay/products/>

¹⁸ Huishan Prospectus, p.73

¹⁹ Huishan Prospectus, p. 176

²⁰ “该地段守着辽河，承包的时候有风险，后来转包给辉山乳业，所承包的地段十年九涝，辽河涨水就绝收。”<http://wenshu.court.gov.cn/Content/Content?DocID=0cabe530-023c-493c-ab5c-cl18ea5201d2>

flooding in summer 2013, which caused an estimated crop loss of RMB 40 million.²¹ In summer 2014, the alfalfa farms reportedly suffered debilitating drought, again impacting production.²²

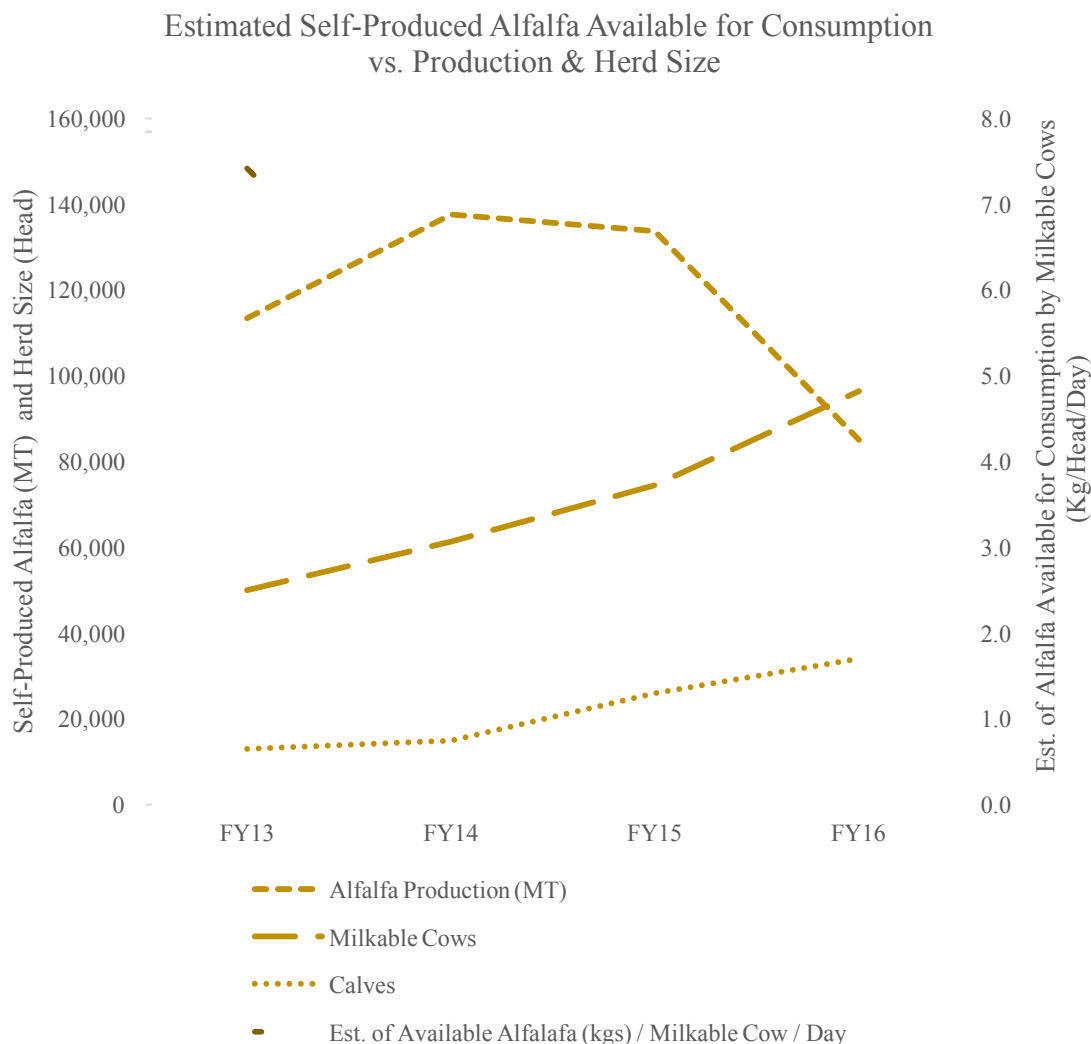
The ratio of reported alfalfa production to herd size belies Huishan's claims of self-sufficiency. Since the IPO, the growth rates of supply and demand have diverged markedly. While the reported number of milkable cows doubled and the number of calves nearly tripled over the past four years, annual production and acreage under cultivation failed to keep pace.

A calculation of alfalfa available for consumption on a per head basis (based on the Company's production, surplus, and calf and milkable cow herd size numbers) indicates that from FY13, the available quantity of self-produced alfalfa for milkable cows (kg/day) declined each year. The available ration of self-grown alfalfa declined year-on-year by about 9% in FY14, 24% in FY15, and 53% in FY16. As the following chart shows, Huishan's reported 2015 (FY16) alfalfa production is down 25% on an absolute basis from FY13, and declined every year on a per head of milkable cow basis since its IPO.

²¹ Investigative report from 2014 on Huishan. Another investor commissioned this fieldwork and provided the report Muddy Waters Capital.

²² Huishan FY15 Annual Report, p. 13.

□



Claim of Boosting Margins by Reducing Feed Costs Lacks Credence

We believe Huishan is trying to unwind its yield fraud by claiming changes to its feed mix. If the company were actually reducing yields, Huishan would be losing money in doing so and shrinking its reported margins. Therefore, we see this claim as a way to try to avoid exposure of its fraud. Facing declining raw milk ASPs, Huishan claimed to boost profit margins by reducing feed costs, with just a minor drop in raw milk yields (9.1 in FY15 vs. 8.6 in FY16).²³ In its interim report published in late November 2016, Huishan announced that it deliberately lowered milk yields to 7.8 tons “to further reduce the cost of raw milk and control our production volume.”²⁴

Chinese and American dairy experts with whom we spoke dispute the logic, wisdom, and commercial feasibility of such action. They noted that it runs counter to best practices utilized

²³ Huishan FY16 Annual Report, p. 14

²⁴ Huishan Announcement of Interim Results for the Six Months Ended September 30, 2016 (published 29 November 2016), p. 41.

for the past decade, and would most likely result in a decline in profitability. The authors of a study in 2006 on the impacts of marginal cost and profitability by altering the quality of the feed ration found that “significant profit opportunities can be lost in the false pursuit of reducing input costs” and that “it is unlikely...that it is ever financially wise to deliberately limit the energy intake of a milking dairy cow.”²⁵

Our analysis of financial data reported by Huishan shows that revenue decreases from lost sales exceed the cost savings from altering feed rations, corroborating these expert opinions. Huishan reported 74,389 milkable cows and feed cost of RMB 946,100,000 in FY15, and 96,339 milkable cows and feed cost of RMB 1,050,029,000 in FY16.²⁶ While the company purportedly saved RMB 1,646 in annual feed costs per cow, it lost RMB 2,208 in sales per cow, which equals a net marginal loss of RMB 562 per cow.

Table 3: Change in Feed Costs and Sales per Milkable Cow After Feed Adjustment			
<i>(figures in RMB)</i>	Original feed	Adjusted Feed	Change
Feed cost per milkable cow	13,947	12,301	-1,646
Sales per milkable cow	40,177	37,969	-2,208

We Estimate Huishan Inflated Dairy Farm CapEx by as Much as RMB 1.6 Billion

We estimate that since its IPO, Huishan inflated CapEx for dairy farm construction by RMB 893 million to RMB 1.6 billion. Our conclusions are based on our investigators visiting 17 Huishan cow farms started or completed since the IPO, extensive research of government records, and consulting industry experts. Overstating CapEx is typical for frauds. When a company reports fake profits, it has a “fake cash problem.” The only anti-fraud device most audits employ is cash confirmation. Although many frauds in China have forged cash balances, it can be challenging to do so. As a result, frauds tend to buy assets and over-report the amounts they paid. This gives them an excuse for not actually having the cash their reported profits imply. In our opinion, Huishan is inflating its CapEx in a manner consistent with this pattern.

Because Huishan does not expressly disclose the amounts it spends on constructing dairy farms, we have to estimate it. Huishan’s prospectus seems to attempt to mislead investors into believing that the company planned to spend approximately RMB 45.2 million per farm. However, we estimate that from FY14 to FY16, Huishan booked approximately RMB 89 million for each of the 32 farms it built – totaling RMB 3.0 billion.²⁷ We believe the actual amount Huishan could have expended is substantially less than that amount. Furthermore, on several

²⁵ “Marginal Thinking: Making Money on a Dairy Farm”, WCDS Advances in Dairy Technology (2006) Volume 18:137-155, <http://www.wcds.ca/proc/2006/Manuscripts/Eicker.pdf>

²⁶ Huishan FY16 Annual Report, p. 14, 29.

²⁷ Huishan FY16 AR, p. 14, Also note: In its FY16/17 Interim report the Company reduced the total number of farms to just 81 without explanation.

occasions we encountered milking farms lacking milking equipment, and thus incomplete, again leading us to question the total amount of CapEx deployed to-date.

Huishan is cagey about its dairy farm CapEx spending.

Huishan has always been opaque about its dairy farm CapEx. While the IPO prospectus excludes an average construction cost, the disclosed use of proceeds appeared to indicate that the average CapEx for the 45 new farms would be RMB 45.2 million per farm including land, construction, machinery, and equipment. (This figure is in line with what industry experts that we consulted consider to be the likely cost range of its farms.)

Table 1: Announced Use of IPO Proceeds				
Huishan 2013 IPO Use of Net Proceeds	Announced Plan for Net Proceeds from 2013 IPO Prospectus			Allocation Based on % of Actual Funds Raised (RMB MM)
	Projected (HKD MM)	Intended Allocation %	Projected (RMB MM)	
IPO Funds to be Raised	\$6,979.10	100.00%	¥5,535.2	¥5,983.7
Import 75,000 dairy cows	\$1,200.00	17.00%	¥951.7	¥1,017.2
Construct 45 dairy farms	\$2,400.00	34.00%	¥1,903.5	¥2,034.5
Land for Dairy Farms	\$306.00	12.80%	¥242.7	¥259.4
Construction of Dairy Farms	\$1,668.00	69.50%	¥1,322.9	¥1,413.9
Equipment, Machinery for Dairy Farms	\$426.00	17.80%	¥337.9	¥361.1

Source: Prospectus, Use of Proceeds, pp. 270-271

The prospectus seems to give Huishan the wiggle room to spend substantially more on dairy farms. Elsewhere in the prospectus, Huishan indicates that it supposedly has supplemental funds it plans to add to the spend on dairy farms. In a paragraph related to Connected Party Transactions, the company states that the total planned expenditure to complete five farms would be around HKD\$ 89 million each (~RMB 70 million), which exceeds by a large margin the amount implied using Proceeds disclosure.²⁸ However, throughout the Prospectus the wording on disclosures for the sources of funds for future expenditure varies. In many places, the Prospectus specifies when the IPO proceeds will be the sole source of funding. Language like

²⁸ Huishan 2013 Prospectus, pp. 182-183

the below is repeated in disclosures relating to intended expenditures for new 360,000 tpa liquid milk plant, the 33,000 tpa milk powder plant, and two feeds processing plants to be built in Liaoning:²⁹

Approximately 3%, or HK\$200 million will be used for constructing two feeds processing plants in Liaoning Province with annual capacity of 100,000 tonnes (expected expenditure to be HK\$94 million) and 200,000 tonnes (expected expenditure to be HK\$106 million), respectively, which are expected to be completed during the years ending March 31, 2016 and March 31, 2017, respectively. We expect to fund the construction plan entirely by the net proceeds from the Global Offering.

The “entirely” through offering proceeds verbiage is notably absent in discussion of the use for proceeds for dairy farm construction, opening the door to per farm CapEx exceeding the disclosed use of IPO proceeds.

Approximately 34%, or HK\$2.4 billion will be used for constructing 45 new dairy farms located in Liaoning Province in the coming three years. In particular, we plan to establish 5, 18 and 22 dairy farms for the years ending March 31, 2014, 2015 and 2016, with expected expenditure of approximately HK\$267 million, HK\$960 million and HK\$1,173 million, respectively. In particular, for the year ending March 31, 2014, we plan to spend HK\$34 million to acquire land, HK\$194 million to construct the dairy farm and HK\$39 million to acquire the equipment and machinery. For the year ending March 31, 2015, we plan to spend HK\$122 million to acquire land, HK\$668 million to construct the dairy farm and HK\$170 million to acquire the equipment and machinery. For the year ending March 31, 2016, we plan to spend HK\$150 million to acquire land, HK\$806 million to construct the dairy farm and HK\$217 million to acquire the equipment and machinery.

We estimate that from FY14 through FY16, Huishan booked CapEx of RMB 89 million per dairy farm; FY16 CapEx appears to have ballooned to RMB 107 million.

From Huishan’s cashflow disclosures, we estimate Huishan booked average dairy farm CapEx spend of RMB 89 million during FY14 through FY16. We estimate that in FY16, Huishan booked average spend of RMB 107 million. If our estimates are generally correct, the increase in FY16 likely is related to Huishan’s increasing financial stress. Government environmental impact reports support our three-year average estimate, showing total investments of RMB 90 million to 99.9 million per each farm that principally produces raw milk, and RMB 64 million to RMB 81 million for farms principally engaged in breeding and raising calves (which require no milking equipment and fewer amenities).

We use Huishan’s cash flow disclosures to estimate average dairy farm CapEx spend. Huishan’s annual reports provide detail on cash flow utilized for PP&E expenditures and breaks out capital expenditures in its segment reporting. Using Company-supplied data we estimated the CapEx dedicated to PP&E for the 32 farms reportedly built from FY14 through FY16. These calculations show that over the three-year period the average claimed CapEx spend for PP&E per dairy farm was very likely RMB 89 million, which we believe is a low / company favorable estimate.

²⁹ Huishan 2013 Prospectus, pp. 270-271

We first deduct the segment CapEx for liquid milk and milk powder processing (the processing plants) as well as the PPE expense for motor vehicles from the cash flows utilized for PP&E. This isolates the PP&E for the dairy farming segment. The dairy farming segment still includes plantation operations, feed processing, as well as dairy farming; therefore, we estimate the PP&E for feed processing plants based on the changes announced in the annual use of proceeds statement (which was to be funded entirely from the IPO proceeds³⁰) and estimate the additional PP&E for the plantations as being half of that used for the procurement of the equipment listed in the IPO. The changes in construction in process were then factored back into the total, providing an estimate for the total CapEx for PP&E on completed farms.

Table 2: Dairy Farm CapEx Spend on PP&E Based on Changes in Cash Flows, FY14-16 (RMB millions)						
	FY14	FY15	FY16	Total	Calculation	Sources
CASH FLOW for PP&E	1,671	2,710	1,179	5,560	a	AR: Cash flow
PPE CapEx - Plant - Liquid milk	146	641	289	1,076	b	AR: Segment info. PPE
PPE CapEx - Plant - Milk powder	220	211	82	513	c	AR: Segment info. PPE
PPE CapEx - Motor Vehicles	43.04	75.22	66	184	d	AR: Segment info. PPE
Cash flow - PP&E - Dairy Farming	1,262	1,783	742	3,787	e=a-b-c-d	
PPE for Plantation Buildings	27	27	6	60	f	Note 1 (Estimate)
Capex on Feed Processing Plants	-	63	57	119	g	AR: Use of Proceeds (100% from Use of Proceeds)
Changes to Construction in Process	(335)	1,845	(745)	765	h	AR: PPE
Total CapEx for PP&E - Completed Farms				2,843	i=e-f-g-h	
Addition of Farms	9	10	13	32	j=h/f	AR: Dairy Farms
Avg. PP&E per Dairy Farm				89	k=h/j	

³⁰ Huishan 2013 IPO Prospectus, p. 270

We consider this estimate to be conservative because:

- *Note 1*: The PPE for plantation buildings is not specifically disclosed. We estimate it based on a 2:1 ratio of feed processing plants to plantation building expense as we believe that the processing plant will require much greater CapEx than the plantation farm sheds, storage, and office spaces. In FY16 no expansion of the plantations took place, so it is likely that no new construction took place; therefore, the allocation of the expense was 45% to each of FY14 and FY15, and just 10% to FY16. In 1H17, the Company reported a decrease in plantation lands of 90,000 mu. If the Company had considered this a possibility, new investments in FY16 would very likely have been further curtailed.
- The CapEx for plants includes both PP&E and land lease payments. Because PP&E excludes land, the additions for constructing the plants alone would be lower than the total CapEx for plants. This is company favorable because it likely overestimates the amount of PP&E spending for plants, and thus results in a lower per dairy farm estimate.
- The changes in Construction in Process (CIP) includes that for plants, however we adopted assumption that all CIP was for the dairy farms. Likewise, motor vehicles include farm and non-farm operations. We assume all PP&E in this category apply to dairy farms. This is company favorable because it likely underestimates the amount of CIP allocated to plants, and thus results in a lower per dairy farm estimate.

In FY16, there was less non-dairy farm investment and construction activity, no feed plantations lands were added, the Shenbei plant was finished, and the Jiangsu plant was also nearly complete, so investments in processing plants were considerably smaller. In FY16, Huishan completed 13 operational dairy farms. Based on FY16 numbers, we calculated an average per farm CapEx spend of approximately RMB 107 million (see Table 3 below), suggesting that the dairy farm CapEx inflation increased in FY16 – possibly due to Huishan’s financial stress (see *Huishan’s Liquidity Appears to be on the Knife’s Edge, it has Dubious Assets, and its Reported 1H17 Cash Flow is Almost Certainly Fraudulent*).

Table 3: Dairy Farm Capex Spend Based on PP&E Based on Changes in Cash Flow FY16			
	RMB mm	Calculation Ref#	Source
CASH FLOW for PP&E	1,179	a	FY16 AR p.79
Capex - Plant - Liquid milk	289	b	FY16 AR p.102
Capex - Plant - Milk powder	82	c	FY16 AR p.102
PPE - Equipment for plantations, vehicles, etc.	100	d	FY16 AR p.116, FY15 AR p.102
Cash flow - PP&E - Dairy Farming	708	e=a-b-c-d	
PPE for Plantation Buildings	6	f	Note 1 (Estimate)
Capex on Feed Processing Plants	57	g	FY16 AR p.34, FY15 AR p.29
Changes to Construction in Process	(745)	h	FY16 AR p.117
Total CapEx for PP&E - Completed Farms	1,390	i=e-f-g-h	
Addition of Farms	13	j=h/f	FY16 AR p.14
Avg. PP&E per Dairy Farm	107	k=h/j	

Liaoning government documents accord with our estimates. Our review of publicly accessible Liaoning Province environmental impact reports from 2014 and 2015 found numerous instances where Huishan appears to have made claims of building new farms with total investments in the same range as that identified from our cash flow analysis. The reports list projected total investments for individual farms principally producing raw milk of RMB 90 million to 99.9 million (which should include the land leases of approximately RMB 5 million to RMB 6 million). Reports for farms that are principally breeding and raising calves projected spending of RMB 64 million to RMB 81 million. We believe Huishan reported inflated numbers for these reports to win greater support from local officials, and to support the CapEx numbers it provides its auditor.

We conclude that Huishan’s real spend per dairy farm is substantially lower than our estimates of its reported spend.

We consulted two China dairy farm experts with first-hand knowledge of farm construction costs to assist in estimating Huishan’s actual dairy farm construction costs. We provided them with photos and videos from seven post-IPO dairy farms our investigators visited.³¹ Expert A opined that the maximum Huishan spent per milking farm was only likely RMB 60 million (assuming a 3,000-head farm). Expert B opined that the maximum per such farm was likely only RMB 35 million. Based on our estimated reported dairy farm construction costs, these estimates suggest that since going public, Huishan has overstated average dairy farm CapEx by one third (~RMB 29 million) to over one half (~RMB 54 million). Our estimates that actual construction costs are much lower than those calculated from PP&E expenditure analysis were corroborated by: a manager at one post-IPO farm, construction contractors at one farm presently being built, and bidding documents for two other post-IPO farms.

A common method to estimate farm construction costs is to estimate the budget per head. Our experts provided estimates of a reasonable construction budget for a 2,500-head milking farm in China built according to three quality standards: low, medium, and high. (The estimated budget is shown in Appendix 1). The estimated construction costs per head by standard are as follows:

Low Quality	RMB 14,000 / head
Medium Quality	RMB 21,000 / head
High Quality	RMB 30,000 / head

These estimates are company-favorable, as based on a comparison to “show farm” Dengshipu, these costs are high. (By “show farm”, we are referring to the Dengshipu and Bajiazi farms, which are built to a markedly higher standard than the other farms our investigators have visited. Huishan features these farms in promotional material and on investor tours.³² Dengshipu features the best and “most technologically advanced” dairy equipment the Group has inside nice physical facilities to create a good impression for visitors. It is very hard to justify that other less sophisticated, smaller farms could have the same cost structure. Dengshipu’s total investment according to the environmental impact report and per a placard in the visitor center as of September 2016 is RMB 99.9 million. Its design capacity is 6,590 head, which is twice that of the other post-IPO farms.

With our estimate, supported by the Liaoning environmental impact reports, that Huishan is reporting spending RMB 90 million to RMB 99 million per 3,000-cow milking farm, the implied spending per head is RMB 30,000 to RMB 33,000, while a RMB 64-81 million expenditure for a 4,000 cow-breeding farm equates to a range of RMB 16,000-20,300/head.

Our experts opined that the construction quality and build out of the post-IPO farms our investigators visited was not high end. The selection and omission of certain features and equipment suggested that the farms were still mid-range at best. Expert A opined that the upper

³¹ To maintain the objectivity of the experts, we did not identify ourselves as Muddy Waters; nor, did we explain our suspicions, or provide other documents pertaining to the farms’ total investment figures or valuations.

³² See for example, “A Grass to Glass Journey” Investor Tour in collaboration with CLSA, 15-16 May, 2014: http://Huishandairy.todayir.com/attachment/201603310051451781214748_en.pdf

end estimates for the construction cost for new milking farms was RMB 20,000 per head, (RMB 60 million for a 3,000-cow farm). Expert B stated that “from the picture, all I can tell you is that these farms are built very cheaply,” and put his maximum expenditure at RMB 30-35 million per farm, or about RMB 10,000 to RMB 12,000 per head.

The upper end estimate for non-milking cow farms was RMB 15,000 per head for the best among them, while the lower end is at or below 10,000 per head. In the case of Huishan Jinxing Farming in Boyu Shoushan, Expert A opined that with its lack of freestalls, small sheds, and use as a youngstock or dry heifer farm (without milking equipment) when at high stocking rates it could be as little as just in the single thousands of RMB per head.

Our investigators corroborated that construction cost estimates were much lower than our estimate of the reported amounts. In a discussion with a deputy farm manager on a newly built Liaoning Huishan Dairy Group Woniushi Farming Co. farm with a capacity for 3,000 cows, in Lijiapu Village we learned that although operational as a “dry cow” and “young heifer” farm, it was not yet fully operational. The delivery and installation of its milking equipment had been postponed. As satellite imagery from September 2015 showed that the farm construction was nearly complete, we found this long delay to be surprising.

During our investigation, we found that this was not the sole instance of milking farms being built out far enough to become “operational,” but halted before completing the milking parlor and/or installing all of the necessary equipment for milking. This finding is significant because it implies an even greater delta between the real CapEx expenditure on PP&E, and that derived from the cash flow analysis. However, to be conservative in our estimates, we did not attempt to model this into our calculations.

The finding that the farm was still in a mid-point stage of construction prompted further discussion about the build out costs. The farm manager broke down the construction costs, excluding land, both with and without milking equipment. According to this farm’s manager, the build out for the physical as constructed to date was just RMB 20 million and when all of the equipment related to milking, (such as the parlor, cold storage, testing, etc.) was installed and the farm was operational as a milking farm the total still came to only about RMB 40 million.

■ **China Dairy Expert Advisor Bio’s:**

Expert A has been engaged in dairy operations in China for over 35 years. He graduated from an American Veterinary College. He currently oversees over 20,000 milking cows across a dozen farms. In a prior position, he worked for a major foreign dairy operator in China, overseeing approximately 15,000 cows and oversaw dairy farm construction. Over the years, he has visited dairy farms of numerous large companies and has deep insight into Chinese dairy farm management, operations, and costs.

Expert B is a Chinese advisor with a specialty dairy consultancy. His company supports dairy farm operators across China that have nearly 350,000 cows under management, including large herds supplying the top bands such as Mengniu and Yili. His expertise includes farm operations and management, and new farm planning and development.

If we add about RMB 5.76 million for a pre-paid land lease, the total increases to RMB 45.76 million, almost identical to the average cost implied in the IPO prospectus's Use of Proceeds.³³ However, this figure is still less than half of the RMB 96.2 million reported total investment for the project reported to the Liaoning Environmental Protection Bureau, and about half our estimate for Huishan's reported average spend.³⁴

Construction workers at a farm in the early stages of construction on the outskirts of Shenyang corroborate our estimates of actual construction costs. The workers confirmed that the site was to be a Huishan farm on about 200 mu designed to hold 3,000 cows. It would contain the office, dormitory, cow sheds, production facilities, etc. and from their description would be composed of concrete and steel buildings following the post-IPO "standard" design. Based on their project knowledge, the construction cost excluding land and the milking equipment would run about RMB 30 million. Even if adding another RMB 20 million or more for additional dairy production related equipment, the total is still close to just half of the typical build costs publicly announced in their environmental impact statements. The expected construction costs are about half of our estimate of Huishan's reported average spend of RMB 89 million.

Bidding Documents

Bidding documents for two post-IPO Huishan farms support our estimates of actual farm construction costs. From time to time Huishan posts invitations for contractors to bid on their new construction projects. The posting from 2014 below is for a 3,000-head dairy farm for Liaoning Shiling Farming Co. Ltd., a subsidiary of Huishan.³⁵ It is to have a construction area of 61,000 m² on a farm of approximately 273,000 m² (410 mu) which would make it among Huishan's largest farms. The reported construction cost estimate is just RMB 30 million.³⁶

The bidding documents include mention of the exterior walls, the brick, steel, and alloy steel, building materials, fire walls, plumbing and waste water drainage systems, ventilation, A/C, lighting, fences, cow bed construction, a sedimentation pond, anaerobic reactor, as well as cold storage, feeding equipment, disease prevention testing equipment. The bidding announcement also includes a note that, "Due to a wide range of equipment and materials required for the project, the requirements are not all listed one by one, and the specifics for the project may vary."

³³ The Prospectus estimated that the land for the 45 dairy farms would require 12.8% of the 34% of the total proceeds, equating to RMB 259.4 million for 45 farms, or RMB 5.76 million per farm. Based a 15-year lease, 250 mu of land (larger than most of the new farms), RMB 5.76mm equates to RMB 1,533/mu/yr. This figure appears to be quite high, we used it as-is in the estimate.

³⁴ http://www.sypb.gov.cn/data/2015_12_15/201512159249.html

³⁵ Huishan FY15 AR, p. 111

³⁶ <http://p.tgnet.com/LNSLZY/>

辽宁世领自营牧场有限公司沈阳石山子3000头成母牛现代化养殖场项目

Liaoning Shiling Farming Co. Ltd. 3000 Head Dairy Farm

功能操作 ▼

项目详情	项目联系人(I)	设备材料	相关项目
项目概况			
编号: 242886			
工程地区	沈阳市	更新时间	2014-08-15(发布时间:2014-08-15)
项目类别	工业建筑	工程类型	商业、新建
项目阶段	2014-08-15审核时处于完工阶段	建筑层数	--
Construction Area: 建筑面积	61000平方米 Sqr. Meters	Total Land Area: 占地面积	273000平方米 Sqr. Meters
Est. Const. Cost: 工程估价	3000万 30 million RMB	建设周期 (规划)	2014年01月 至 2015年01月 (预估已竣工)
项目地址:	辽宁省沈阳市沈北... 查看详情>>		
项目简介:	辽宁世领自营牧场。查看详情>>		
可能用到的设备材料	辽宁世领自营牧场有限公司沈阳石山子3000头成母牛现代化养殖场项目-可能用的设备材料: 1、外墙涂料、门窗、防火门、密封材料。 2、多孔砖墙, 轻钢龙骨石膏板墙, 岩棉夹心复合金属壁板。 3、铝塑板外墙, 给排水管道, 电线电缆。 4、通风空调, 光源灯具。 5、围栏、高床保育栏、分娩栏、沉淀池、厌氧反应器 6、冷冻库、拌料器、喂料器、检验检疫仪器 (因项目所需设备及材料种类繁多, 未能一一列出, 具体以项目实际情况核实为准)		
甲方及其联系方式			
业主	单位: 辽宁世领自营牧场有限公司		近期参与项目 更多联系方式
	姓名: ***先生(前期参与人)查看详情人>> 电话: 024-8808**** 查看电话>> 地址: 辽宁省沈阳市沈北新***** (邮编: 110000)		

Another bidding document from this period is for a 4,000-head breeding farm for the then Huishan subsidiary Huishan Investments Fuyu Shenyang Farming Co. Ltd.³⁷³⁸ The construction area is designed to be 65,000 m² with an estimated construction cost of RMB 35 million. As a beef cattle farm, it should be designed without milking equipment, making it less expensive to construct. That it is not makes for an interesting anomaly. Besides adding to the evidence that the real farm construction costs were a fraction of that implied by cash flow analysis, this farm project is significant as it is among those four transferred to an undisclosed related party who is engaged in cattle ranching and the slaughtering, marketing, and sales of beef and veal.

沈阳市辉山投资富裕沈阳牧业有限公司新建郝官4000头肉牛现代化养殖场项目

Shenyang Huishan Investments Fuyu Shenyang Farming Co. Ltd. Construction of New Haoguan 4000 Head Modern Cattle Farm Project

功能操作

项目详情	项目联系人(2)	设备材料	跟进记录(1)	相关项目	叫上朋友一起跟项目:
项目概况					肉牛 Beef Cattle
					编号: 243296
工程地区	沈阳市	Industrial Construction, Office, Ag. Water, Environ. and Energy Conservation		更新时间 Last Update	2014-08-18(发布时间:2014-08-18)
项目类别 Project Type	工业建筑、行政办公、农业水利、环保节能			工程类型 Project Type	商业、新建 Commerce, New Construction
项目阶段	2014-08-18审核时处于竣工测试阶段			建筑层数	--
建筑面积 Construction Area	65000平方米 65,000 sqr meters			占地面积	--
工程估价 Est. Cost	3500万 35 million RMB			建设周期 (规划)	2014年01月 至 2015年01月 (预估已竣工)
项目地址:	辽宁省沈阳市康平... 查看详细>>			Construction Period (Planned) Jan 2014~Jan 2015 (Estimated)	

³⁷ <http://p.tgnet.com/SYHSTZ1/>

³⁸ Huishan FY14, AR p. 146

That four such farms were built, but subsequently transferred out of the Group's control they likely do not appear in the total number stating in each reporting period for the number of standardized farms that the Company is operating. However, they partially account for the CapEx inflation. Nevertheless, as seen below, even the four farms totaling RMB 140 million will make up only a small portion of the difference in the total CapEx inflation associated with new farm construction.

We estimate that in aggregate, Huishan inflated farm CapEx by as much as RMB 1.6 billion.

Of the 32 reported farms started or completed since the IPO, our fieldwork suggests that most were built to an updated design. Among them is the larger scale Dengshipu Farm, which is built to a more sophisticated design. We believe its reported construction cost of RMB 99.9 million is more likely to be accurate, so we exclude it from the inflation calculation. A sign at Dengshipu also states that its investment was RMB 100 million. We thus calculate the cost differential for just 31 farms, which are built to the new "standard". The table below summarizes the range of estimates and their sources.

Table 4: Range of Construction Cost Estimates	
	<i>RMB millions</i>
Estimates from Cash Flow for PP&E in Huishan Audited Financial Statements, Avg FY14~16	89
Estimates from Cash Flow for PP&E in Huishan Audited Financial Statements, FY16	107
Farm Total Investment reported in Local Government Announcements, Dairy Farms	90-100
Farm Total Investment reported in Local Government Announcements, Breeding Farms	63-81
China Dairy Expert A, Estimate for Huishan's new Dairy Farm Construction (Upper Limit)	60
China Dairy Expert B, Estimate for Huishan's new "standard" Dairy Farm Construction	30-35
Huishan Deputy Farm Manager, Reported Cost for a Dairy Farm Complete with Milking Eqpt.	40
Huishan Bidding Documents, Estimated Construction Cost for a Cattle (Beef) Farm	35
Huishan Bidding Documents, Estimated Construction Cost for Dairy Farm	30
Contractor on Huishan Dairy Farm Construction Site, Reported Budget without Milking Eqpt.	30

Utilizing the upper end of these ranges of cost estimates (RMB 60 million), the construction CapEx for the 31 new "standard" farms was inflated by RMB 893 million. As this is the upper limit for the farm cost estimate, RMB 893 million is our low-end estimate for dairy farm CapEx inflation.

Dairy Expert B's estimates were closer to those provided in the construction bidding documents of RMB 30-35 million. Using his high-end estimate and applying it to all 31 farms, the CapEx inflation is estimated to be RMB 1.668 billion. The estimates provided by the Huishan deputy farm manager with first-hand knowledge of the farms costs are probably closer to the truth. Applying the cost reported by the Huishan deputy farm manager of RMB 40 million per milking cow farm and RMB 20 million for a non-milking cow farm at the same land lease cost, the estimated total CapEx inflation rises to above RMB 1.668 billion.

As noted in explaining the assumptions regarding our cash flow analysis, we adopted conservative assumptions in our estimates when figures were not clearly disclosed, as such the real total inflation of dairy farm CapEx may be even greater.

Source	Farm Type	Farm Construction Cost	Avg PPE New Farm per Cash Flow Analysis	Per Farm PPE Inflation	QTY	Total PPE Inflation
China Dairy Expert A	Milking & Non-Milking	60	89	28.8	31	893
Huishan Deputy Farm Manager	Milking	40	89	48.8	25	1,633
	Non-Milking	20	89	68.8	6	
China Dairy Expert B	Milking & Non-Milking	35	89	53.8	31	1,668

The most likely use for the “diverted” CapEx was that of an accounting gimmick wherein Management needed to balance inflated sales (and therefore not existent cash) with inflated expenses.

New but Incomplete Farms Raise Further Questions about CapEx Spend

Several instances of incomplete farms again lead us to question the total amount of CapEx deployed to-date. It also suggests that the Company overbuilt in a depressed market and/or is facing cash flow problems hindering completion of these projects.



Incomplete construction at Huishan Wufeng Dairy Erdao Hezi. Photo by MWC investigator.

Per discussions our investigators had with workers at Huishan Wufeng Dairy Erdao Hezi, a post-IPO standard milking farm, construction there began in mid-2014 and halted in 2015. Like Lijiapu, Erdao Hezi is currently housing non-milking cows. Here too the soft side walls were lowered to reduce cross ventilation during the very cold weather that day. According to one of the experts that we consulted, in attempting to maintain heat in this fashion they run the risk of raising humidity, ammonia, and pathogen levels with damaging effects.



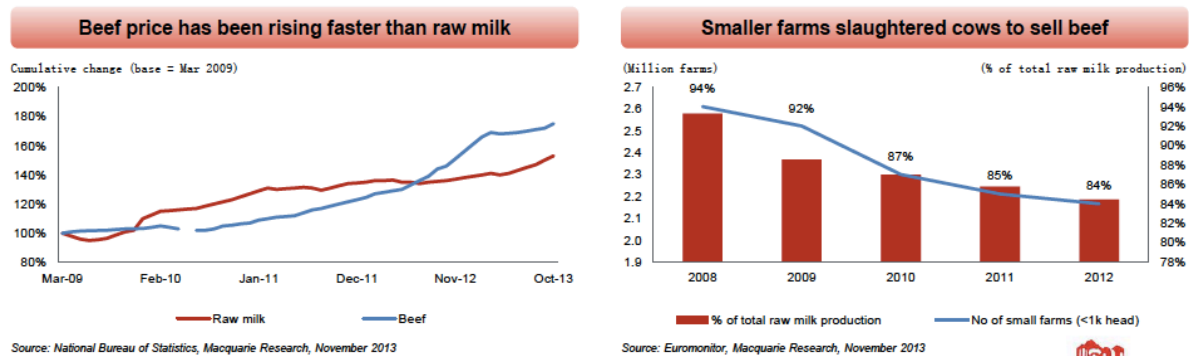
Incomplete construction at Huishan Wufeng Dairy (Fuxin) Xintun Farm #2. Photo by MWC investigator.

Huishan Wufeng Dairy (Fuxin) Xintun Farm #2 was also designed to be a 3,000-cow dairy farm. Our investigators visited the farm in November 2016 and spoke with employees. Construction started in the middle of 2014 and limited operations began in March 2015. Onsite staff explained that the farm is just engaged in raising calves and had about 2,000 head. The farm is not doing any milking because the facilities were incomplete and the equipment had not been installed. They expected the farm to begin supplying milk in 2017.

Huishan Chairman Appears to Have Stolen Assets Worth at Least RMB 150 Million Through an Undisclosed Related Party Transaction

Through an undisclosed related party transaction, we estimate Huishan Chairman Yang Kai stole at least RMB 150 million of assets. In December 2014 (over one year post-IPO), Huishan transferred a subsidiary with at least four cattle farms to a party who is almost certainly a proxy for Chairman Yang. We estimate these farms were worth RMB 150 million, which we based on interviews of Muhejia employees and analysis of publicly available documents. The value of the farms was probably higher than our estimate because they likely contained cattle.

We believe Chairman Yang intended to use shareholder funds to pay for construction of beef ranches that he would transfer to himself. Starting in 2011, China's beef prices rose faster than that of milk. In early 2014, beef prices remained on the ascent even as milk prices collapsed.³⁹ Demand for Chinese beef peaked as production fell short of demand.⁴⁰ For an owner of large-scale dairy farm with calves and heifers to spare, this was certainly great news and a good opportunity. We learned from interviews this fall with employees of Muhejia, a cattle ranching company owned by the Chairman Yang Kai, that since at least 2013 a plan had been in place for the company to move into the slaughtering and beef sales and distribution business.⁴¹



HIGHLY RESTRICTED



33

Charts from Huishan's FY14 HSBC Presentation showing rapid rise of beef prices and declining number of small farms.

Chairman Yang and his wife own Liaoning Muhejia Livestock and Technology Co. Ltd. ("Muhejia").⁴² As explained next, Muhejia used a proxy to take at least four farms from Huishan. Muhejia has had five names in two years, which we believe is an attempt to conceal this (and possibly other) improper transaction. This table shows the strangely frequent re-naming of Muhejia:

³⁹ <http://www.reuters.com/article/dairy-prices-idUSL4N0QC2JR20140806> ,

<http://www.globalmeatnews.com/Industry-Markets/China-beef-firm-posts-strong-performance> ,

<http://www.globalmeatnews.com/Industry-Markets/Chinese-beef-prices-soar-as-local-cattle-herds-shrink>

⁴⁰ 2016 industry data projects that China's consumption will increase 3.4 percent to 7.59 million tons, exceeding production of 6.79 million tons <http://www.bloomberg.com/news/articles/2016-09-22/china-removes-ban-on-some-u-s-beef-imports-with-conditions-itduo0qv>

⁴¹ Interview with Muhejia salesman in Shenyang.

⁴² http://www.Huishandairy.com/Investor/EN_20150926.pdf

Table 1: The Many Names of Liaoning Muhejia		
Current/Prior Name	Chinese Name	Date of Change
Fuxin Blue Moon Foods Co. Ltd.	阜新蓝月亮食品有限公司	-
Liaoning Fuda Cattle Co. Ltd.	辽宁福大牛业有限公司	12/12/2014
Muhejia Livestock Technology Holding Co., Ltd.	牧合家畜牧科技股份有限公司	12/8/2015
Zhangwu Fuda Cattle Co., Ltd.	彰武福大牛业有限公司	1/20/2016
Liaoning Muhejia Livestock and Technology Co., Ltd.	辽宁牧合家牛业科技有限公司	4/5/2016



*Signboard at Muhejia complex in Zhangwu, ghosts of prior company names can be seen on wall in background.
Photo by MW investigators, November 2016.*

Huishan's disclosures about Liaoning Muhejia refer to it by an informal English name, Liaoning Ainyveal, which we also believe is an attempt to obscure.⁴³

F.U. with FuYu

Huishan transferred the Fuyu farms to Muhejia, an entity controlled by Yang Kai. The following timeline lays out the key events:

- **April 11, 2014:** Huishan establishes Huishan Investment Fuyu Shenyang Farming Company ("Fuyu") for "dairy farming business".⁴⁴ (As we explain below, it seems likely

⁴³ Huishan Group, however, disclosed a business agreement with Liaoning Ainyveal as a connected party transaction with Chairman Yang Kai in September 2015. (See http://www.Huishandairy.com/Investor/EN_20150926.pdf) To confound matters further, Huishan's 2016 annual report continues to refer to Liaoning Ainyveal, with Kai and his spouse indirectly owning 66.7%, even though its name has changed three times since then. (See http://www.Huishandairy.com/Investor/EN_20150926.pdf and Huishan FY16 AR, p.68)

⁴⁴ Huishan FY14 Annual Report, p. 146.

this subsidiary was always intended to be used for beef ranching, rather than dairy farming.)

- **May 2014 through December 2014:** Government records show that between May 2014 and the transfer, Fuyu had completed construction of at least four cattle farms.
- **23 December 2014:** Transfer of Fuyu shares from Huishan Dairy (China) Co., Ltd. (formerly named Huishan Investment Co., Ltd) to newly-formed entity Liaoning Fuhan Farming Company Ltd., controlled and 100%-owned by an individual named Wang Bing.⁴⁵⁴⁶ Huishan's FY15 financial reports disclose no consideration received for the disposal of subsidiaries.⁴⁷ Wang and Fuhan Farming are almost certainly proxies for Muhejia and Chairman Yang. We estimate the value of the assets transferred was at least RMB 150 million. It is likely that the transferred farms included cattle, which would increase the value of transfer.

Huishan formed Fuyu on April 11, 2014.⁴⁸

38 NON-ADJUSTING EVENTS AFTER THE REPORTING PERIOD

(a) Establishment of subsidiaries

On April 10, 2014 and April 11, 2014, the Group established five wholly-owned subsidiaries, Huishan Investment Fenghuang Shenyang Farming Co., Ltd., Huishan Investment Hengfeng Shenyang Farming Co., Ltd., Huishan Investment **Fuyu** Shenyang Farming Co., Ltd., Huishan Investment Shajin Shenyang Farming Co., Ltd., and Huishan Investment Tengda Shenyang Farming Co., Ltd., to conduct dairy farming business. Up to the date of issue of these financial statements, the above subsidiaries have not started their operations yet.

Government records show that Fuyu had completed construction of at least four beef ranches by the time of the transfer on December 23, 2014.

A 2015 report by the Liaoning City Village Committee for Agricultural and Animal Husbandry Economy affairs lists fourteen Huishan Group standard farms that applied for subsidies.⁴⁹ Among them are four Fuyu farms with dates of construction listed as May through December 2014. The announcement reads:

“Notice of Public Announcement of the List of Qualified Standardized Livestock Farm Projects by the Huishan Dairy Group in Shenyang City in 2015

Based on material examination, field investigation, project inspection and acceptance of the Huishan Dairy Group's standardized livestock farms, the list of qualified projects of 14 standardized livestock farms of Huishan Dairy Group in 2015 were determined by districts and counties (cities) List, is to be made public for review by the community. It shall be publicly available for 7 days (December 24 to December 30, 2015). During the public period, if there is discovery of problems, you can phone or submit a form to the

⁴⁵ On January 29, 2015, Huishan Investment Fuyu Shenyang Farming Company changed its name to Shenyang Fuyu Farming Company Ltd.; added breeding to scope of operations; appointed Wang Bing as legal representative, Executive Director and General Manager.

⁴⁶ SAIC records show: sole ownership of Fuyu by Liaoning Fuhan; Wang Bing owning 5% of Fuhan Farming directly, and 95% indirectly through Liaoning Younong Investment Company Ltd.

⁴⁷ Huishan FY15 AR, p. 70.

⁴⁸ Huishan FY14 AR, p. 146.

⁴⁹ <http://www.synw.gov.cn/Pages/Content.aspx?channelId=ChannelInfo;29ba441e-62b3-44db-8c17-a254940ebc98&newsId=NewsInfo;d6482839-7181-460d-a463-bc002fe58169>

City Council of Agriculture and Animal Husbandry Department to reflect such findings. Problems reported are to be factual and the real name of the submitter must be used. The valid time of the letter shall be based on the local postmark time at the time of dispatch.”

Below is the original in Chinese, showing that four Fuyu farms were completed by the time of the transfer:

关于沈阳市2015年辉山乳业集团 畜禽标准化规模养殖场合格项目名单 公示的通知

发布时间：2015-12-24 【字号：大 中 小】

经各区、县（市）对辉山乳业集团畜禽标准化规模养殖场项目材料审核、实地考察、立项、验收等基础上，确定了2015年辉山乳业集团畜禽标准化规模养殖场14家合格项目名单，现予以公示，接受社会的监督。公示时间7天（2015年12月24日至12月30日）。公示期间，如发现问题，可以通过电话或信函的形式向市农经委畜牧产业处反映。反映问题要实事求是，署真实姓名。信函的有效时间以发信时的当地邮戳时间为准。

联系电话：024-22842652

通信地址：沈阳市农村经济委员会畜牧产业处（沈阳市和中山路229号）

邮编：110001

沈阳市2015年畜禽标准化规模养殖场项目补助名单（辉山集团）（立方米、万元）

区县名称	养殖场名称	地址	法人 Legal Person	电话 Tel.#	畜禽品种	防疫合格证号	建设时间 (年、月、日) Period of Construction (Yr,Mo,Dy)	畜禽舍面积 (㎡)	畜禽栋舍数	饲养量 (头、只)		拟补贴资金 (万元)	备注
										现存栏量	出栏量 (有检疫证明)		
Shenyang Fuyu Caojia	沈阳富裕牧业有限公司曹家4000头肉牛标准化养殖场	康平县小城子镇曹家村	王冰 Wang Bing	024-88084909	肉牛 Beef	(康)动防合字第20140026号	2014.05-2014.12	29789.2	16	Herd Size 4000	Qty Sold 401	Subsidies to be Paid 200	验收合格
Shenyang Fuyu Fuyu	沈阳富裕牧业有限公司富裕4000头肉牛标准化养殖场	康平县小城子镇富裕村、裴家街村	王冰 Wang Bing	024-88084909	肉牛 Beef	(康)动防合字第20150008号	2014.08-2014.12	29789.2	16	4000	130	200	验收合格
Shenyang Fuyu Haoguan	沈阳富裕牧业有限公司郝官4000头肉牛标准化养殖场	康平县郝官屯镇郝官屯村	王冰 Wang Bing	024-88084909	肉牛 Beef	(康)动防合字第20150007号	2014.06-2014.12	29789.2	16	4000	411	200	验收合格
Shenyang Fuyu Liunuijiang	沈阳富裕牧业有限公司刘木匠4000头肉牛标准化养殖场	康平县沙金台乡刘木匠农场	王冰 Wang Bing	024-88084909	肉牛 Beef	(康)动防合字第20150009号	2014.05-2014.12	29789.2	16	4000	1722	200	验收合格
Huishan Investments Fenghuang	辉山投资凤凰沈阳牧业有限公司柳树屯4000头育成牛标准化养殖场	康平县柳树屯乡柳树屯村、西北土村	徐广义 Xu Guangyi	024-88084909	育成牛	(康)动防合字第20150002号	2014.05-2014.12	39023.36	6	1800	0	220	验收合格

Note that the announcement states that these farms were designed for beef ranching, which strongly suggests that the farms were never intended to be operated by Huishan, and that the plan all along had been to use Huishan investors' money to build beef cattle ranches for Chairman Yang. Additionally, a public bidding announcement, updated in August 2014, provides some details on the construction project for one of Fuyu's cattle farms and states that the farm is designed for cattle meat (beef), not dairy or breeding.⁵⁰

Huishan transferred Fuyu on December 23, 2014.

⁵⁰ <http://p.tgnet.com/SYHSTZ1/>

变更时间：2014-12-23

Date of Change: December 23, 2014

变更项目：投资人信息变更（包括投资人、出资额、出资方式、出资日期、投资人名称等）

Change Item: Investor Information Change (Including Investor, Paid In Reg Cap, Paid In Method, Paid in Date, Investor Name)

变更前：1 辉山投资有限公司；

Change From: Huishan Investments Co., Ltd.

变更后：1 辽宁富瀚畜牧有限公司；

Change To: Liaoning Fuhun Livestock Co., Ltd.

Wang and Fuhun Farming are almost certainly proxies for Muhejia and Chairman Yang.

SAIC files show that Fuyu is controlled by Muhejia. Our fieldwork confirmed that Muhejia controls the Fuyu farms. A blog promoting Muhejia beef shows that Fuyu is a Muhejia farm. The Shenyang government announcement showing Fuyu's farm construction timelines uses the same phone number for both Fuyu and Huishan – despite the announcement having been published one year after the transfer and reflecting Wang Bing as Fuyu's Legal Representative. This indicates Fuyu is still under Chairman Yang's control, despite Huishan having no ownership.

SAIC files show that Fuyu is controlled by Muhejia. SAIC files list the contact for Fuyu as yingcun.sha@muhejiagroup.com. The telephone numbers 88084909 and 88084919 are Muhejia phone numbers; one is also shared with Huabao Investments, a Yang Kai-owned company invested in Muhejia,⁵¹ and the other used for some Huishan Farms.⁵²

Shenyang Fuyu Livestock Co., Ltd		Formerly: Huishan Investment Fuyu Shenyang Livestock Co., Ltd.	
沈阳富裕牧业有限公司 曾用名：辉山投资富裕沈阳牧业有限公司			
Phone: 电话: 88084919	Email: 邮箱: yingcun.sha@muhejiagroup.com	地址: 康平县小城子镇曹家村杨家组	
基本信息		Address: Kangping County, Xiaochengzi Town, Caojia Village, Changjiazuo	
法定代表人: 王冰	Legal Rep.: Wang Bing	注册资本: 10000 万人民币	Registered Capital: 100 million RMB
状态:		注册时间: 2014-04-11	Registration Date: April 11, 2014
存续（在营、开业、在册）			

Our fieldwork confirmed that Muhejia owns Fuyu farms. Our investigators met with a Muhejia salesman who knew Wang Bing. The salesman confirmed he is involved with Muhejia's upstream cattle ranch operations and that Yang Kai was still the big boss. When visiting the

⁵¹ <http://www.qixin.com/company/0b47ddd6-4d7c-494d-bccd-e5ed7c54a6e3>

⁵² See Huishan contact number in list of 14 standardized livestock farms in this report, the Jinxing Animal Husbandry Co., Ltd. of Liaoning Huishan Dairy Group at <http://www.chaojixinxi.com/waimaogongsi/show.php?id=417462>, the Jinzhou SAIC file for 辽宁辉山乳业集团周家牧业有限公司 [http://www.jzaic.com/AccessoriesFolders/JZGS INFO_636053155044843750RC6.xls](http://www.jzaic.com/AccessoriesFolders/JZGS_INFO_636053155044843750RC6.xls)

Fuyu farms, we found the farm gates to be uncharacteristically without signage. Upon inquiry, we learned that the workers believed that the farms belonged to Huishan with them being just another division, albeit one raising cattle for beef as opposed to dairy cows for milk. On one Fuyu farm, the gate guard repeatedly confirmed that the farm was Huishan's and built by Huishan, but also acknowledged that Muhejia owned the farm. This guard subsequently assisted our researchers to call the farm manager who then confirmed the farm was indeed Fuyu.

A blog promoting Muhejia beef shows that it owns Fuyu farms. The following blog identifies Fuyu Cattle Farm as part of the Muhejia group.⁵³

好场产好肉（一）富裕牛场-牧合家畜牧-微头条(wtoutiao.com)
Good Farm Good Meat (1) Fuyu Cattle Farm - Muhejia Livestock - Blog (wtoutiao.com)

好场产好肉（一）富裕牛场-牧合家畜牧-微头条(wtoutiao.com)

微头条·文章

首页科技娱乐体育干货女人设计时尚旅游美食语录健康最新搜索好场产好肉（一）富裕牛场富裕

牧合家畜牧(姜凯（富裕牛场）) · 2016-07-23 16:35
 Muhejia Livestock (Jiang Kai (Fuyu Cattle Farm))

微信扫一扫，加我好友 →→→



好场产好牛。好牛产好肉正所谓好牛产好肉，好牛在好的环境中才能产出好肉。要吃到好肉，要选生活在好环境中的牛生产的肉哦！所以为了让你选到好肉，现在为你深度解读牧合家集团是在什么样的好牛场养的牛。富裕牛场——牧牛人之家作者/姜凯（富裕牛场）

Good farm good cow, and a good cow produces good meat, so a good farm produces good meat. Good cows can only produce good meat in a good environment. To enjoy good meat you need to choose beef from cows good living environment. So to help you choose to good meat, lets make an in depth exploration of the livestock group Muhejia to find out what kind of farm and cattle they have. Fuyu Cattle Farm - Home of the Cow. Author / Jiang Kai (Fuyu Cattle Farm)

We estimate the value of the assets transferred was at least RMB 150 million.

We calculate the value of the infrastructure of the four farms transferred from Huishan to Muhejia to be RMB 150 million. According to an online construction cost estimate, the estimated project cost for a single farm was RMB 35 million (excluding the cost of obtaining the cows).⁵⁴

⁵³ http://www.9500w.cn/page/wtt_wzaobao_com/p/22dcBb2.html, subsequent post identifies the address for one of Fuyu's four farms: Fuyu Fuyu as well.

⁵⁴ <http://p.tgnet.com/SYHSTZ1/>

沈阳市辉山投资富裕沈阳牧业有限公司新建郝官4000头肉牛现代化养殖场项目 [功能操作](#)

Shenyang Huishan Investments Fuyu Shenyang Farming Co. Ltd. Construction of New Haoguan 4000 Head Modern Cattle Farm Project

项目详情 项目联系人(2) 设备材料 跟进记录(1) 相关项目 叫上朋友一起跟项目:

牛肉: Beef

项目概况				编号: 243296
工程地区	沈阳市	Industrial Construction, Office, Ag. Water, Environ. and Energy Conservation	更新时间 Last Update	2014-08-18(发布时间:2014-08-18)
项目类别 Project Type	工业建筑、行政办公、农业水利、环保节能	Text	工程类型 Project Type	商业、新建 Commerce, New Construction
项目阶段	2014-08-18审核时处于竣工测试阶段			建筑层数 --
建筑面积 Construction Area	65000平方米	65,000 sqr meters	占地面积	--
工程估价 Est. Cost	3500万	35 million RMB	建设周期 (规划)	2014年01月 至 2015年01月 (预估已竣工)
项目地址:	辽宁省沈阳市康平... 查看详细>>			Construction Period (Planned) Jan 2014~Jan 2015 (Estimated)

As four Fuyu farms were transferred, the construction cost alone imputes a time and materials value of RMB 140 million. Including additional soft costs and considering the value of the whole exceeding that of the parts, the implied value would exceed RMB 150 million.

At the end of 2014, Fuyu's total assets were reported as RMB 150.4 million, with RMB 121.2 million in liabilities, leaving owner's equity of capital as RMB 29.2 million. The Huishan FY15 AR does not record any disposal of subsidiaries. We highly doubt that an improper undisclosed transaction of this nature would be accompanied by a proper reassignment of loans and other liabilities. Based on the SAIC annual report from 2014, the likely loss to Huishan resulting from this undisclosed asset transfer is at least the total asset value, or RMB 150.4 million.

Huishan likely also transferred cattle, which would have made the theft even larger. While Fuyu's scope of operations was not updated to include breeding until late January 2015, a search of the National Breeder's license registry revealed that on December 9, 2014 Fuyu received its breeding permit.⁵⁵

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单位名称	畜种	代次	经营范围	许可证号	发证机关	有效 Effective date
沈阳富裕牧业有限公司 Fuyu	黄牛	祖代(一级扩繁)	纯种(荷斯坦、安格斯、利木赞、西门塔尔) 杂交种牛、商品牛	(2014)辽A020013	沈阳市农村经济委员会	2014-12-9至2017-12-8

In 2015, Fuyu applied for a "large scale cattle ranching enterprise subsidy", declaring that two farms had more than 1,200 head per farm and a third had 510 head.⁵⁶ Breeding records show that cows belonging to Fuyu were impregnated beginning on January 7, 2015, just 14 days after the transfer. By the time of the official company name change and reappointment of senior management was completed on January 29, 2015, breeding records list 151 cows aged 14 to 31

⁵⁵ http://www.chinazxq.cn/zheng_list.asp?username=user38606

⁵⁶ <http://www.lnah.gov.cn/zwgk/tztg/201508/P020150805579297558437.pdf>

months as being impregnated, suggesting these cows were already on the farm in late December, thus predating the transfer.⁵⁷

Huishan's Liquidity Appears to be on the Knife's Edge, it has Dubious Assets, and its Reported 1H17 Cash Flow is Almost Certainly Fraudulent

Even if Huishan's financials were not fraudulent, the company appears to be on knife's edge due to its excessive leverage. The leverage is so substantial that in FY16, Huishan's auditor appears to have stopped just short of issuing a "going concern" qualification. Given that we conclude that its reported profits are fraudulent, we have no confidence that Huishan can make it through the next year without defaulting. There are numerous signs of enormous financial stress, including the types of financing Huishan is trying to employ, unfinished projects, and even taking Huishan's financials at face value, horrendous credit metrics.

The asset side of Huishan's balance sheet, in our opinion, is massively overstated due to fraudulent profits and cash, overvalued biological assets (which are fair valued as Level 3 assets), and certain highly suspicious asset accounts.

We believe Huishan is in very real danger of defaulting in the next year.

Huishan's auditor obviously has not concluded that Huishan's financials are fraudulent; yet, it appeared to stop just short of issuing a going concern qualification in its FY16 audit. Even taking Huishan's financials at face value, its credit metrics are well into the "red zone". In our opinion, Huishan has a high chance of defaulting in the next year due to its massive short-term debt. Huishan is resorting to creative financing that we believe shows its desperation. Huishan's incomplete projects show it is financially stressed – construction on its RMB 6.8 billion Xifeng liquid milk plant had been stopped when our investigators visited in July 2016; and, instead of finding a RMB 8.8 billion liquid milk facility in the Kangping Development Zone in Liaoning, all we found were some cow statues.

Huishan's auditor appears to be telling investors the company is on knife's edge.

KPMG, Huishan's auditor, appears to have been very close to issuing a "going concern" qualification in its FY16 audit. (The auditor obviously is not considering fraudulent financials in its assessment.) Our interpretation of the below disclosure in the notes to the financials is that KPMG only avoided issuing a formal going concern qualification based on assurances from Huishan's directors. The assurance centers around supposedly having "unconditional banking facilities" of RMB 11.2 billion. The disclosure reads as follows:

"These consolidated financial statements have been prepared on a going concern basis notwithstanding the net current liabilities as at March 31, 2016 because the directors of the Company are of the opinion that based on the unconditional banking facilities of RMB 11,231,622,000 not yet utilised by the Group as of the date of issue of these consolidated financial statements, the Group would have adequate funds to meet its liabilities as and when they fall due at least twelve months from the end of the reporting

⁵⁷ http://www.lnah.gov.cn/zwgk/tztg/201508/t20150805_1812049.html

period. Accordingly, the directors of the Company consider it is appropriate to prepare the consolidated financial statements on a going concern basis.”⁵⁸

Even more alarming is its 1H17 interim report, wherein Management reported this credit facility declined to just RMB 5.0 billion, implying that if this liquidity pool is real, it had been drained by more than half.⁵⁹

Even taking Huishan’s financials at face value, its credit metrics are well into the “red zone”.

Other eye-popping Huishan credit metrics (taking its financials at face value) include:

- Net interest finance cost increased by almost 3x from RMB 205.7 million in 2014 to RMB 322.8 million in 2015 and RMB 681million in 2016.⁶⁰⁶¹⁶² As of September 2016, finance costs were up to RMB 451.3 million for the first half of the 2017 fiscal year.⁶³
- In 2016, bank charges and other finance costs increased 3x from RMB 10.4 million in 2015 to RMB 37.5 million in 2016.⁶⁴ For the six months ending September 30, 2016, these costs were a staggering RMB 53.8 million.⁶⁵ There is no footnote to explains what these “other finance costs” are.
- Bank deposits to secure bills payable increased +300% year-on-year (RMB 946 million in 2016, up from RMB 314 million in 2015).⁶⁶ As of September 30, 2016, these deposits stood at RMB 962.6 million.⁶⁷ Huishan has shed no light on what these payables are.
- Another potential finance lease agreement for the sale of unspecified property, plants and equipment for a consideration up to RMB 300 million and a lease back rate of 5%.⁶⁸

Huishan has a high chance of defaulting in the next year due to its massive short-term debt.

With 70% of the company’s debt coming due in less than a year and a limited free cash flow profile, Huishan’s debt profile presents a very high risk of a near term default. (This assessment is without considering our conclusion the company is a fraud.) Huishan will need to somehow address RMB 11.1 billion coming due within a year.⁶⁹

Serious questions arise with the company’s recent cow sale lease back attempts significant recent increase in short-term borrowings. The cow sale and leaseback attempts and drawdowns on its

⁵⁸ Huishan 2016 Annual Report, p. 82.

⁵⁹ Huishan 2016/2017 Interim Report, p. 11

⁶⁰ Huishan 2014 Annual Report, p. 23

⁶¹ Huishan 2015 Annual Report, p. 27

⁶² Huishan 2016 Annual Report, p. 32

⁶³ Huishan, Announcement of Interim Results for the Six Months Ended September 30, 2016: p. 2

⁶⁴ Huishan 2016 Annual Report, p. 32

⁶⁵ Huishan, Announcement of Interim Results for the Six Months Ended September 30, 2016: p. 20

⁶⁶ Huishan 2016 Annual Report, p. 138

⁶⁷ Huishan, Announcement of Interim Results for the Six Months Ended September 30, 2016: p. 26

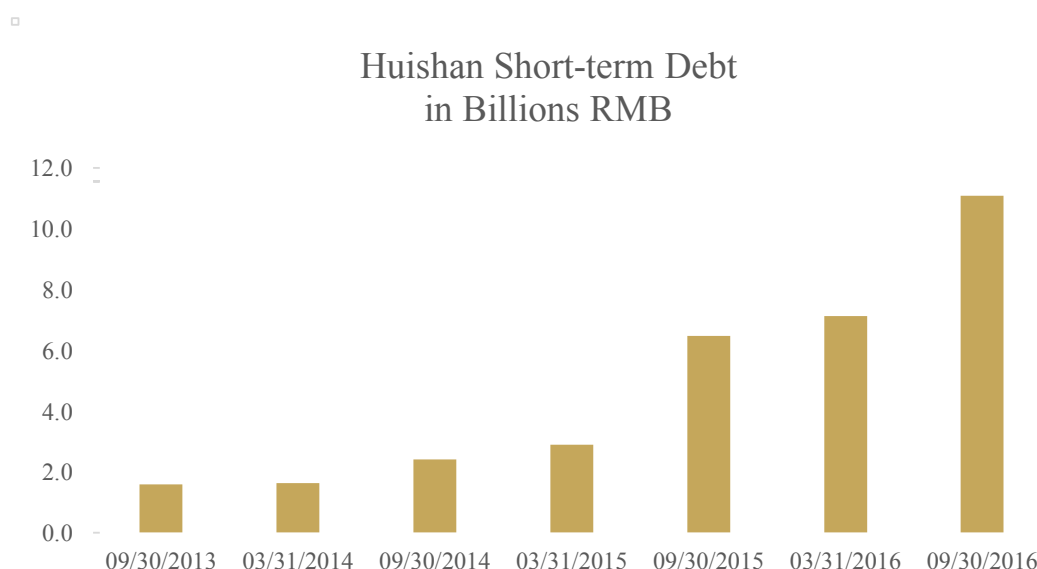
⁶⁸ Huishan, Voluntary Announcement – Finance Lease Framework Agreement, December 8, 2016

⁶⁹ Huishan, Announcement of Interim Results for the Six Months Ended September 30, 2016: p. 11

loan facilities imply that Huishan is concerned about its near-term liquidity and looming near-term debt maturity. 88% of Huishan's debt is already secured or guaranteed by PP&E, leases and equity. The ability for the company to offer up additional collateral at this stage is highly questionable – particularly given our conclusion that PP&E has been greatly inflated. The company has also announced that it is exploring listing some assets in mainland China.⁷⁰ We see this as more evidence that it is running out of traditional ways to access capital, and is looking to less sophisticated investors to keep the company from collapsing.

The company has found ways to get short-term loans from banks to shore up short-term cash needs. Huishan's CFO has been talking about extending the maturities on Huishan's loans; however, debt due within one year has spiked 55.4% in 1H17 to RMB 11.1 billion.⁷²

The graph below shows a huge increase in short-term debt borrowings for Huishan over the past three years.



We find the below statement from the 1H17 interim results puzzling because the auditor indicated the only reason it did not issue a going concern qualification was the supposed availability of RMB 11.2 billion in borrowing capacity.⁷³ However, six months later, Huishan has significantly less borrowing capacity and RMB 11.1 billion debt coming due within a year.⁷⁴ This statement seems unduly blasé about whether investors should be worried about Huishan as a going concern:⁷⁵

“These condensed consolidated interim financial statements have been prepared on a going concern basis notwithstanding the net current liabilities as at September 30, 2016 because the directors of the Company are of the opinion that based on the unconditional

⁷⁰ <http://www.thestandard.com.hk/section-news.php?id=176981>

⁷¹ <http://www.hkexnews.hk/listedco/listconews/SEHK/2016/0429/LTN201604291880.pdf>

⁷² RHB report dated 1 December 2016, China Huishan Dairy: Hong Kong Results Review 1H FY17, p. 4.

⁷³ Huishan FY16 Annual Report, p. 82

⁷⁴ Huishan, Announcement of Interim Results for the Six Months Ended September 30, 2016, p. 11

⁷⁵ Huishan 1H17 Interim Results, p. 11.

banking facilities of RMB4,984,858,000 not yet utilised by the Group as of the date of issue of this interim financial report, the Group would have adequate funds to meet its liabilities as and when they fall due at least twelve months from the end of the reporting period. ”

This undrawn facility amount has decreased RMB 6.25 billion over the last six months to RMB 4.98 billion, which is somewhat alarming since the company supposedly generated free cash flow in that same time.

As can be seen from the company’s latest interim results, the debt guaranteed by intra-group entities spiked by 27.8% in 1H17 to RMB 11.0 billion. The company should explain why this line item has increased so much, and provide details of the covenants and which entities are guaranteeing these loans.

At September 30, 2016 and March 31, 2016, the Group’s bank loans were secured as follows:

	At September 30, 2016 RMB'000	At March 31, 2016 RMB'000
Jointly secured by lease prepayments and property, plant and equipment and own equity interests of the Group and guaranteed by intra-group entities	287,733	321,642
Secured by property, plant and equipment of the Group and guaranteed by a third party	75,000	100,000
Secured by lease prepayments of the Group and guaranteed by the controlling shareholder and his close member of family	60,000	60,000
Secured by lease prepayments and property, plant and equipment of the Group	1,064,950	1,082,250
Secured by term deposits with banks and guaranteed by intra-group entities	—	80,000
Secured by deposits with banks and guaranteed by a third party and intra-group entities	146,912	142,146
Guaranteed by intra-group entities, the controlling shareholder and his close member of family	200,000	200,000
Secured by the Group’s own equity interests and guaranteed by intra-group entities	587,740	109,675
Guaranteed by intra-group entities	11,017,343	8,623,195
Unguaranteed and unsecured	<u>1,914,014</u>	<u>1,600,594</u>
	<u>15,353,692</u>	<u>12,319,502</u>

Using low end consensus forward EBITDA of ~ RMB 1.6 billion, Huishan is levered 10.0x with RMB 16.0 billion of debt.⁷⁶ These leverage ratio numbers are equivalent to distressed leverage ratios. Because we believe Huishan's EBITDA is largely (if not entirely fraudulent), we see the real leverage ratio as greatly higher.

Sep-16	
Short Term Debt	
Current Bank Loan	10,805
Current Other Borrowings	282
Total Short Term Debt	11,087
Long Term Debt	
Bank Loans	4,549
USD Bank Loan	
Other Borrowings	405
Total Debt	16,041
% Secured or Guaranteed	88%
% Unsecured	12%

Huishan is resorting to creative financing that we believe shows its desperation.

In May, we jokingly suggested on Twitter that Huishan's announced cow sale and leaseback transaction with Guangdong Yuexin Finance Lease Co. Ltd, should be considered for the year's most humorous transaction award.⁷⁷ In the end, it appears Guangdong Yuexin didn't like being the punch line. On November 27, 2016, just two days before the release of its 1H17 interim results, Management announced that it was "reformulating its plans with respect to finance lease arrangements" because the 50,000-cow sale lease-back for RMB 1 billion with Yuexin "lapsed" and never took effect.⁷⁸ If Guangdong Yuexin's due diligence turned up anything similar to ours, that outcome is easy to understand.

The November 27 bulletin announced a new counter party to the sale and leaseback, but on a smaller scale, with slightly higher ratio of collateral required: 40,000 cows for RMB 750,000 million, and at the same 6.2% interest rate. At the time of the original announcement, analysts speculated that this sale and leaseback was intended to raise funds intended for additional share buybacks.⁷⁹ However, the original high-profile nature of the original cow leaseback and the timing of the new announcement, imply that the Company knows it cannot afford the fallout if

⁷⁶ Source: Bloomberg Earnings Estimate

⁷⁷ http://www.Huishandairy.com/Investor/EN_20160429_1.pdf

⁷⁸ http://Huishandairy.todayir.com/attachment/2016112718170100002670960_en.pdf

⁷⁹ <https://www.bloomberg.com/news/articles/2016-05-25/cash-cows-fund-china-dairy-firm-that-defied-stock-market-slump>

the new deal fails. Its short-term debt financing requirements are pressing and lack of confidence could constrain or undermine its ability to roll over debt. Were the cow sale leaseback transaction to fail, it would could put Huishan's entire capital structure at risk.

Milking assets: More sales and leasebacks.

These “cows for cash” plans are not the Company's only sales and leasebacks. Two plant and equipment sales and leasebacks were on the books at the end of FY16 for over RMB 541 million. Huishan added RMB 146 million of sales and leaseback of PP&E and dairy cows⁸⁰ in 1H17, for a total of RMB 687 million payable in full within three years.⁸¹ Additionally, a new sale and leaseback for RMB 300 million for PP&E was announced on December 8, 2016 with JIC (Tianjin) Leasing Co., Ltd. bringing the total (ex-cows) to six sales and leasebacks involving four financing companies for nearly RMB 1 billion plant and equipment.⁸³ Adding in the RMB 750 million replacement transaction for the cows, the total value of assets liquidated comes to RMB 1.7 billion. These transactions provide immediate cash infusions, but come with additional medium-term obligations.

Incremental “innovation”: Huishan plans to issue a high interest WMP.

In late June 2016, Huishan's Executive Director, Ge Kun, stated that the Company would further consider “innovative financing tools” like the cow sales and lease back.⁸⁴ Just two weeks later, the story of a new financing innovation for Huishan emerged in the Chinese news. The Company would be working with Zhejiang Internet Finance Trade Center Holding Co. Ltd. to raise short-term funds through the sale of WMPs to high net worth individuals. The Zhejiang Internet Finance Trade Center Holding Co. Ltd was to be responsible for marketing the product, and Huishan for issuing the credit guarantee. The tenor was slated to be only 183-days while paying an annual interest rate of 7.2%.⁸⁵

A Huishan Dairy official involved in the deal tried to put a positive spin on this extremely costly financing, “This will be our first serious effort to interact with East China's high-end investors,”⁸⁶ adding that these investors were more financially savvy. Outside of the news story, no formal announcement has been made by the Company regarding this offering. However, if these East China investors are really savvy this WMP will be a tough sell.

⁸⁰ Huishan does not provide specifics on number or value of dairy cows.

⁸¹ Huishan 2016 Annual Report, p. 144

⁸² Huishan FY17 Interim Report, p. 31

⁸³ http://Huishandairy.todayir.com/attachment/2016120912320100002682959_en.pdf

⁸⁴ <http://www.scmp.com/business/companies/article/1983717/dairy-operator-china-Huishan-says-it-will-continue-its-creative>

⁸⁵ 辉山乳业跨界合作：华东市场的另类开启方式，浙江互联网金融资产交易中心股份有限公司，

<http://weibo.com/ttarticle/p/show?id=2309351000063996784308406453> ,

http://news.ifeng.com/a/20160713/49347710_0.shtml

⁸⁶ Translation by MWC.

Collateral and equity squeeze portend calamity.

Huishan faces a collateral and equity squeeze that is extremely dangerous. The company's RMB 15.3 billion in bank loans, nearly RMB 11 billion of which come due in September 2017, exceed equity by 18.6% as of September 30, 2016.⁸⁷

Construction stopped on the RMB 6.8 billion Xifeng liquid milk plant.

Huishan Dairy (Xifeng) Co., Ltd's liquid milk investment project is in Xifeng. Our researchers found the site essentially abandoned with construction half complete. A security guard onsite explained that the construction had been going on for approximately two years but had ground to a halt in 2015. The guard did not have details as to why, but stated that Xifeng Dairy was not hiring.

Information panels onsite describe the scope of the project. The total investment for the Xifeng project was to reach RMB 6.8 billion, RMB 900 million of which had already been made. The project was to consist of 21 cow farms, a dairy processing factory with liquid milk production capacity of 300 tons per day, and biogas power and fertilizer facilities. The plans for the Xifeng factory call for it to eventually cover a total area of land of 265,690.5 m² (about 400 mu).

A Tieling city government announcement regarding the project provided details that varied slightly from those posted on location. The processing plant and farms were two separate projects. The Huishan Xifeng project commenced in May 2014 and was to be completed by October 2015. The dairy-processing project is to cover 27 hectares of land with an investment of RMB 1.37 billion.⁸⁸ A construction project database contains information as of April 5, 2016, stating that main construction is ongoing.⁸⁹ Our researchers spoke with an employee of the Huishan project office at the Xifeng Industrial Zone Management Committee who confirmed that construction was not complete but also did not know a new timeline for completion.

The 2015 SAIC file reported that Huishan Dairy (Xifeng) Co. had registered capital of RMB 100 million, total assets of RMB 203.7 million, total liabilities of RMB 106.4 million, owner's equity of RMB 97.3 million, and losses of RMB 2.3 million.

Huishan RMB 8.8 billion liquid milk plant investment in Kangping: Nothing but cow statues

Huishan claims to have a liquid milk products production facility called Huishan Investment (Shenyang) Dairy Co. Ltd. in the Kangping Development Zone in Kangping County, Liaoning. Our investigators visited the development zone in July 2016 and found no operational factory or construction site under the name of Huishan – only a group of cow statues, that we can only guess was intended as a kind of public relations feature.

⁸⁷ Huishan FY17 Interim Results, p. 5
⁸⁸

<http://www.tieling.gov.cn/xwzxshowall.asp?table=tst2005&fID=10853&n=%255B%25CF%25D8%253Cfont%20background=&nn=>

⁸⁹ <http://gc.buildnet.cn/Home/ProjectDetail/BzL6lDCb9CWCUM8avuSeeyNweNF6cwVy>



Cow statues in Kangping Development Zone. Photo by MWC investigator.

A media report from June 2014 claims that Huishan launched its dairy industry cluster in December 2013 and that, like Xifeng and Fuxin, it would consist of dairy processing factories, farms and related facilities that cover the whole value chain of dairy production. Total investment would be RMB 8.8 billion with an estimated completion in 2016. The report does not mention the timeline for constructions of the dairy processing factory in the Kangping Development Zone.⁹⁰ The magistrate of Kangping County visited the Kangping dairy processing factory project and inspected the construction progress, indicating that the project was not finished then.⁹¹

According to a public bidding notice, Huishan invited proposals for the power engineering and construction of “Huishan Dairy’s project in Kangping.” The proposed construction period is listed as December 1 to December 31, 2014.⁹² A March 2016 Kangping County Investment Bureau report on 26 major investment projects includes Huishan’s Kangping dairy industry cluster as one of the key construction projects for 2016, but does not provide any details on a timeline.⁹³ Additional media searches and field observations found no evidence of a construction site in Kangping Development Zone of this project’s scale, leading us to conclude that processing facilities to make up the core of this dairy cluster have undergone only preliminary stage development at best.

⁹⁰ http://www.hesitan.com/nnyw_qydt/2014-06-10/122366.shtml

⁹¹ http://www.hesitan.com/nnyw_qydt/2014-06-10/122366.shtml

⁹² <http://www.jszhaobiao.com/bz-notice-c-33161309.html>

⁹³ <http://www.szwinc.com/e/5710.html>

We Believe Huishan's Asset Accounts are Massively Overstated

In addition to what could be a cow farm PP&E overstatement as large as RMB 1.6 billion, we have substantial concerns about other asset accounts. Even forgetting the evidence of fraudulent profits, Huishan's cash balance is highly suspicious due to the company's nonsensical capital structure. Huishan's inventory presents a significant red flag. We strongly doubt Huishan's reported raw material prepayment balances. Huishan appears to be hiding a RMB 1.5 fair value loss on biological assets (cattle).

Huishan's cash balance is highly suspect – even forgetting that its profits are fraudulent.

Huishan's recent capital market activity supports our view that the company is a fraud – particularly considering its strong reported 1H17 cash flow. In our experience, one of the most common signs a company is forging its cash balances is borrowing more money than it seemingly needs to, and at rates higher than what it earns on its cash. Huishan fits this profile. It reported cash and short-term investments of RMB 9.8 billion in 1H17, up from RMB 4.1 billion as of FY16.⁹⁴ From March 31, 2016 through September 30, 2016, Huishan reports operating cash flow of RMB 3.1 billion and levered free cash flow of RMB 2.7 billion.⁹⁵

Despite these strong results, Huishan is borrowing at rates far higher than it purports to receive on its cash and short-term investments. In early 2016, Huishan invested RMB 845 million in WMPs at 3.2% to 3.8%, but then in April 2016 attempted to secure RMB 1 billion through a dairy cattle sale and leaseback scheme at 6.2%.^{96,97} After the initial cow sale and lease back fell through, the company announced a new replacement RMB 750 million sale and leaseback agreement at the same interest rate.⁹⁸ According to a newspaper report, Huishan is planning the sale of its own WMP at an annual rate of 7.2% for 183-day paper.^{99,100}

Huishan's inventory presents a significant red flag.

Huishan reported a big blow out in inventory of “semi-finished and finished goods” in FY2016, more than doubling from RMB 463 million in 2015 to RMB 987 million in 2016.¹⁰¹ In 2014, it was only RMB 189.7 million.¹⁰² While the company does not provide insight into such inventories in its FY17 interim report, it does cite the “exceptional” case of sales of 13,484 tons of dairy ingredients (whole milk powder) for over RMB 171.4 million.¹⁰³ It appears then that the inventory blowout of prior years was in part because Huishan converted raw milk it couldn't sell into whole milk powder. As the shelf life for whole milk powder is limited and the company

⁹⁴ Huishan, Announcement of Interim Results for the Six Months Ended September 30, 2016: p. 4

⁹⁵ Huishan, Announcement of Interim Results for the Six Months Ended September 30, 2016: p. 9

⁹⁶ Huishan 2016 Annual Report, p. 138

⁹⁷ http://www.Huishandairy.com/Investor/EN_20160429_1.pdf

⁹⁸ http://Huishandairy.todayir.com/attachment/2016112718170100002670960_en.pdf

⁹⁹ 辉山乳业跨界合作：华东市场的另类开启方式，浙江互联网金融资产交易中心股份有限公司，
<http://weibo.com/ttarticle/p/show?id=2309351000063996784308406453>

¹⁰⁰ http://news.ifeng.com/a/20160713/49347710_0.shtml

¹⁰¹ Huishan 2016 Annual Report, p. 135

¹⁰² Huishan 2014 Annual Report, p. 109

¹⁰³ Huishan, Announcement of Interim Results for the Six Months Ended September 30, 2016: p. 47, 53

notes that further sales are not sustainable, it seems to us that the inventory should be written down.

Another inventory-related oddity is the fact that Huishan claimed no raw milk balances at year-end of FY13 and FY14.¹⁰⁴ Huishan has not mentioned raw milk balances in its filings since then. We believe this is a lie, albeit a strange and unnecessary one, possibly propagated to portray the company as highly efficient. In its prospectus, Huishan asserts that it “ha[s] always sold or consumed [its] raw milk at the day of milking.”¹⁰⁵

Given that dairy farm and milking operations are continuous, and our research indicates that raw milk pickups typically occur at most twice a day, there could be as much as one-half day of output in cold storage at a farm on any given day. In FY14, for example, this would have amounted to as many as 500 tons of raw milk worth RMB 2.5 million. While this is not a material amount, it does point to the company’s propensity to mislead investors on its operations and its financial reality.

Huishan’s prepayments for raw materials are highly suspicious, and add to our extreme skepticism about the value of the company’s assets.

Huishan is making huge prepayments for unspecified raw materials, which given the company’s stretched financial position, does not make sense. Therefore, we find this account highly suspicious. Prepayments for purchase of raw materials increased 545% year-on-year (RMB 1.56 billion as of FY16, up from RMB 242 million as of FY15).¹⁰⁶ As of September 30, 2016, the number came down to RMB 493 million.¹⁰⁷ We are at a loss to explain what raw materials Huishan would be buying. To put things in perspective, RMB 1 billion would buy:

- Enough imported alfalfa to feed all Huishan’s milkable cows a standard ration (not the current reduced ration) for over three years,¹⁰⁸
- Building materials to construct over 50 new farms,¹⁰⁹

¹⁰⁴ As at March 31, 2014, the Group did not have any unsold or unused raw milk but had RMB156.13 million harvested but unused alfalfa grass and other feed crops with a respective gain of RMB86.51 million recognised upon harvest (March 31, 2013: RMB22.61 million harvested but unused alfalfa grass, which have been used up in the year ended March 31, 2014 with the respective gain of RMB18.26 million charged to the cost of sales for the year ended March 31, 2014).

--2014 AR, p.88

As at March 31, 2011 and 2012, the Group did not have any milked or harvested but unsold or unused raw milk or alfalfa grass. As at March 31, 2013, the Group did not have any unsold or unused raw milk but had RMB22.6 million harvested but unused alfalfa grass.

--2013 Prospectus, p. I-74

¹⁰⁵ Huishan Prospectus, p. 214

¹⁰⁶ Huishan 2016 Annual Report, p. 138

¹⁰⁷ Huishan, Announcement of Interim Results for the Six Months Ended September 30, 2016: p. 26

¹⁰⁸ Assumes a 3 kg/day ration for milkable cows and 1 kg/day for calves, imported alfalfa price of CIF US\$400/mt (Company’s 2015 figure), herd sizes based on avg. herd size numbers in the 6 mos from 3/31/2016~9/30/2016 reported by the Company.

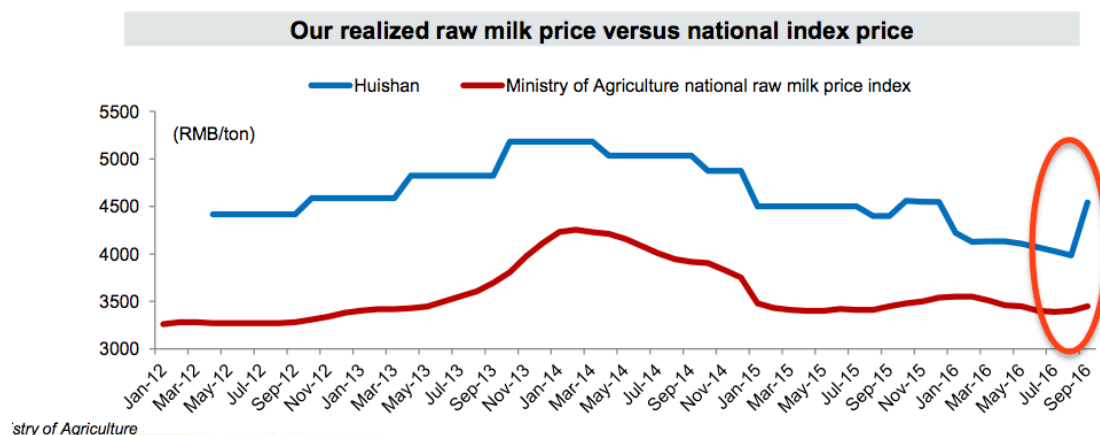
¹⁰⁹ If basic infrastructure costs ran at RMB 20mm/farm, the figure for a complete new farm provided by a Huishan deputy farm manager.

- 80,000 Holsteins from Australia.¹¹⁰

During our fieldwork, we did not see or hear of purchases at this scale taking place. We think the likeliest explanation is that this line item absorbs much of the fake cash that Huishan generates.

In our opinion, Huishan is hiding an approximately RMB 1.5 billion fair value loss on its biological assets.

We believe that by reporting its internal raw milk sales price was 14% higher than the external sales price in 1H17, Huishan is hiding an approximately RMB 1.5 billion loss on the fair value of its milkable cows. In the past, the price difference has not been greater than 1% through FY15.¹¹¹ Huishan's claimed significant spike in realized raw milk prices seems to us completely unwarranted.



Source: Huishan 2016/2017 Interim Results Presentation, p. 19

The dramatic increase in average selling price is due to the higher relative price of milk sold internally. In other words, the internal sales price is much higher than that of the external (market) price. By inflating future cash flow expectations built into its Level 3 valuation model, Huishan can maintain the fair value of its milkable cows and hide a massive loss.

Table 1: Raw Milk ASP Comparison						
<i>RMB 000/ton</i>	FY13	FY14	FY15	1H FY16	FY16	1H FY17
External Sales	4,495	5,042	4,856	4,450	4,346	3,761
Internal Supplies	4,530	5,001	4,884	4,500	4,446	4,301
Price Difference	35	-41	28	50	100	540
% Difference	0.8%	0.8%	0.6%	1.1%	2.3%	14.4%

¹¹⁰ <http://www.dairylivestockservices.com.au/stock-for-sale/>

¹¹¹ In FY16, Huishan apparently began to use an inflated yield number in its fair value calculation: Huishan used a yield rate range of 8.9 to 9.6 in its fair value calculation while the actual claimed yield rate was only 8.6.

Huishan shows the various components it uses for fair value calculation—lactation period, raw milk ASP, yield rate, culling rate—in its prospectus and annual reports.¹¹²¹¹³ Although the yield rate and the raw milk price dropped significantly since FY2015, Huishan reported increasing fair value.

Management has consistently reported initiatives to reduce their feed costs to sustain margin on raw milk, which we question in section in this report. As the impact of the feed cost adjustments are reducing yields, the marginal impact on profit is negative, so the impact on the fair value is negative.¹¹⁴

The Company previously reported an organic growth rate of 10%. As the total herd size reported a first ever decline in 1H17, we conclude that a dramatically increased rate of culling (perhaps 2x the historical rate) should be a major factor reducing the herd's valuation.

Table 2: Fair Value per Milkable Cow		3/31/13	3/31/14	3/31/15	3/31/16	9/30/16
Milkable cows	RMB/head	33,886	37,679	38,779	39,223	41,584
Yield rate	Ton/head	9.1	9	9.1	8.6	7.8
External Raw Milk ASP	RMB/ton	4,495	5,042	4,856	4,346	3,761

¹¹² Huishan Prospectus, p.247

¹¹³ For example, Huishan FY16 Annual Report, pp. 163-165

¹¹⁴ Huishan FY16 AR, p. 28



Huishan’s expectation of rising prices appears to be at odds with that of their competitor Yili, which is also its largest external customer for raw milk.¹¹⁵¹¹⁶ According to Yili’s 1H 2016 results call at the end of August 2016, the Yili’s management did not yet see the turning point in milk prices, and even considered some minor declines still possible.¹¹⁷

¹¹⁵ Huishan claims at the end of the 1H17 interim report p. 64 that “currently, the global milk industry is recovering, [and] the domestic raw milk prices started to rebound” and points to new contracts signed with “several large scale dairy product enterprises” at a higher price as evidence of that.

¹¹⁶ Huishan 2015/16 Annual Results Announcement, June 2016, slide 15

¹¹⁷ Yili, 1H2016 results, Notes on Conference Q&A (8-28-2016)

问题二十二：低产牛退出速度较快，去产能速度是不是已经让国内价格已经变化的拐点？是否已经到来，或者什么时候会到？是否有可靠数据？

上游牧场确实压力很大，后面估计不会进一步恶化，可能小幅下降而已。明年有好转，但也很难明显好转。去产能一个是推动上游研制水平提升过程中提高单产，淘汰低产牛，提高生产效率。12-14年各种机构投资上游牧场，投资数量也比较大了，现在造成牛奶过剩。

产能没有减少，牛的头数有减少。

Q: The speed with which low milk producing cows was taken off, did the speed of cutting excess capacity lead to a turning point in the domestic price (of raw milk)? Has that point already arrived, or when it will be reached? Is there any reliable data?

A: The up-stream farms are under a lot of pressure. It won't continue to incrementally worsen the future, but may still slightly decline. Next year will be better, but it won't be an obvious turn around. Capacity cuts are part of the push to improve the upstream development process and increase the production per head, eliminating low production cows, and improving production efficiency. Many entities invested in dairy farms from 2012 to 2014, these investments were quite large, resulting in an excess of dairy cows.

The overall production capacity did not decline, but the number of cows decreased.

We believe Huishan should take a fair value loss on its milkable cow herd because their income dropped due to the lower yield rate and raw milk price. Holding other factors constant, the drop of income from each milkable cow would reduce the future cash flow directly. The average revenue per milkable cow declined from FY15, the last period in which the selected production yield rate is within the range used for fair value calculated. There is a 34% drop in the annual income associated with milkable cows. Thus, there should also be a corresponding decline in the fair value of a milkable cow.¹¹⁸ Based on a fair value reduction of 38% (Table 4), we calculate the fair value loss is RMB 1.5 billion (Table 5).

Table 4: Fair Value Adjustment for Fair Value Milkable cows as of 9/30/2016			
Fair value as of 3/31/2015	RMB/head	38,779	a
% Fair value reduction		34%	b
Fair value reduction as of 9/30/2016	RMB/head	25,670	c=a*b
FY as of 9/30/2016 as reported	RMB/head	41,584	d
% Fair value reduction		38%	e=1-e/d

Table 5: Estimated Fair Value Loss for Milkable Cows as of 30 September, 2016		
	<i>RMB millions</i>	
Fair value of milkable cows*	3,954	a
Implied fair value loss	-38%	b
Likely loss of fair value of milkable cows	-1,513	c=a*b

**Huishan 1H17 Interim Report, 29 November 2016, p. 24*

¹¹⁸ The impact of the decline in marginal profit per head from the Company's feed adjustment initiative should further decrease future cash flows and increase the fair value loss.

Large Probable Share Pledges Present Substantial Risk to Equity Holders

We believe that a substantial amount of Huishan's shares are pledged to lenders. If we are correct, this presents a risk to long holders because the borrower(s) could have their positions liquidated in a disorderly fashion if they are unable to meet a margin call.

We analyzed data from Hong Kong's Central Clearing and Automated Settlement System ("CCASS"), which houses data for all settled trades on the Hong Kong Stock Exchange that indicate large numbers of Huishan shares have been pledged, most likely as collateral for personal loans. CCASS data includes the date the holding last changed, the holdings of each participant across the market, the net daily movements of holdings in each stock and of holdings by each participant, as well as the time series of holdings by one participant in one stock. In the case of brokers, this gives one a clearer idea of what stocks they deal in most, and if one has a margin account, what the pool of collateral might include. This collateral pool is often pledged to lenders, and if its value falls suddenly then it can trigger a brokerage collapse.

Types of CCASS Participants are brokers, custodians, pledgees, clearing houses and Investor Participants (IPs). The CCASS IDs of brokers are prefixed "B". Broker participants may also be pledgees, and custodians may hold pledged stock. Except for investor participants, CCASS Participants may or may not have beneficial interests in the shares they hold in CCASS, so it can't be used as a guide to beneficial ownership.

We see that an increasing number of Huishan shares were moved into CCASS from September 2013 through August 2016:

CCASS holdings on 2013-09-30

2013-09-30 ☐ Show former holders

Hit the stake to see the history.

Summary

Type of holder	Holding	Stake
Custodians	2,830,178,860	19.64%
Brokers	1,513,862,140	10.51%
Other intermediaries	0	0.00%
Intermediaries	4,344,041,000	30.15%
Named investors	0	0.00%
Unnamed investors	1,250,000	0.01%
Total in CCASS	4,345,291,000	30.16%
Securities not in CCASS	10,062,497,000	69.84%
Issued securities	14,407,788,000	100.00%

CCASS holdings on 2014-08-19


2014-08-19 ☐ Show former holders

Hit the stake to see the history.

Summary

Type of holder	Holding	Stake
Custodians	4,303,854,619	29.87%
Brokers	1,658,501,885	11.51%
Other intermediaries	0	0.00%
Intermediaries	5,962,356,504	41.38%
Named investors	280,000	0.00%
Unnamed investors	15,647,000	0.11%
Total in CCASS	5,978,283,504	41.49%
Securities not in CCASS	8,429,504,496	58.51%
Issued securities	14,407,788,000	100.00%

CCASS holdings on 2015-08-19


2015-08-19  ☐ Show former holders

Hit the stake to see the history.

Summary

Type of holder	Holding	Stake
Custodians	2,654,437,078	19.01%
Brokers	9,429,039,886	67.53%
Other intermediaries	593,092,000	4.25%
Intermediaries	12,676,568,964	90.79%
Named investors	0	0.00%
Unnamed investors	7,136,000	0.05%
Total in CCASS	12,683,704,964	90.84%
Securities not in CCASS	1,279,329,036	9.16%
Issued securities	13,963,034,000	100.00%

CCASS holdings on 2016-08-19

2016-08-19  ☐ Show former holders

Hit the stake to see the history.

Summary

Type of holder	Holding	Stake
Custodians	1,220,625,395	9.06%
Brokers	11,190,737,519	83.04%
Other intermediaries	673,488,000	5.00%
Intermediaries	13,084,850,914	97.09%
Named investors	0	0.00%
Unnamed investors	1,015,000	0.01%
Total in CCASS	13,085,865,914	97.10%
Securities not in CCASS	390,621,086	2.90%
Issued securities	13,476,487,000	100.00%

While the CCASS data is inconclusive as to the exact number of shares pledged the significant movement of shares into the CCASS clearing system gives a strong indication that a significant amount of Huishan shares is pledged.

Appendix 1: China Dairy Farm Construction Costs per Industry Expert

Budgets for 2,500 head dairy (milking) farms		High	Medium	Low
Buildings	Cow Barns	¥20,000,000	¥18,000,000	¥16,000,000
	Milking Parlor	¥1,500,000	¥1,250,000	¥1,000,000
	Heifer Barns	¥9,000,000	¥7,000,000	¥5,000,000
	Calf Barns	¥500,000	¥300,000	¥240,000
	Office	¥400,000	¥300,000	¥100,000
	Workshop	¥200,000	¥100,000	¥-
	Employee Living Quarter	¥300,000	¥200,000	¥100,000
	Sub-total	¥31,900,000	¥27,150,000	¥22,440,000
Equipment	Freestall Loops	¥840,000	¥600,000	¥500,000
	Headlocks	¥700,000	¥500,000	¥100,000
	Milking Equipment	¥3,600,000	¥2,500,000	¥2,000,000
	Milk Tanks	¥200,000	¥150,000	¥100,000
	Cow Pusher	¥150,000	¥150,000	¥-
	Gates & Fences	¥100,000	¥100,000	¥100,000
	Heat Abatement	¥2,100,000	¥1,500,000	¥500,000
	Alley Scrapers	¥1,600,000	¥1,000,000	¥-
	Waterers	¥144,000	¥144,000	¥144,000
	Generators	¥500,000	¥-	¥-
	Lighting	¥200,000	¥100,000	¥50,000
	Truck Scale	¥100,000	¥100,000	¥100,000
	Water Wells	¥200,000	¥200,000	¥200,000
	Boiler	¥100,000	¥100,000	¥100,000
	Feeding Equipment	¥1,500,000	¥1,000,000	¥800,000
	Trimming Chute	¥400,000	¥200,000	¥100,000
	Loading Chute	¥20,000	¥20,000	¥-
	Sub-total	¥12,454,000	¥8,364,000	¥4,794,000

Waste system	Solid Separator	¥1,000,000	¥1,000,000	¥-
	Lagoon	¥2,000,000	¥1,500,000	¥1,000,000
	Settling Pond	¥200,000	¥200,000	¥200,000
	Methane Digester	¥6,000,000	¥5,000,000	¥-
	Waste Water Treatment	¥10,000,000	¥-	¥-
	Sub-total	¥19,200,000	¥7,700,000	¥1,200,000
Feed Storage	Feed Barns	¥1,440,000	¥1,440,000	¥1,440,000
	Silage Bunkers	¥1,350,000	¥1,350,000	¥1,350,000
	Sub-total	¥2,790,000	¥2,790,000	¥2,790,000
Roads	Paved Roads	¥200,000	¥200,000	¥200,000
	Electrical Service	¥150,000	¥150,000	¥150,000
	Moving Dirt	¥2,000,000	¥1,000,000	¥-
	Sub-total	¥2,350,000	¥1,350,000	¥350,000
Other facilities	Wheel Dip	¥18,000	¥18,000	¥18,000
	Gate House	¥50,000	¥50,000	¥50,000
	Walls around the Farm	¥200,000	¥200,000	¥200,000
	Sub-total	¥268,000	¥268,000	¥268,000
Subtotal		¥68,962,000	¥47,622,000	¥31,842,000
	10% Contingency	¥6,896,200	¥4,762,200	¥3,184,200
Total		¥75,858,200	¥52,384,200	¥35,026,200
Total Cost Per Head		¥30,343	¥20,954	¥14,010