May 8, 2018: Twice in a Lifetime

I was thinking back just five months ago, Christmas/New Year's time, the confluence of events that turned the **Once in a Lifetime** opportunity earlier last year to go LONG #Lithium equities into an exciting across-the-board re-rating**.**

Monkey Throwing Darts. Maturing on Optimism. Elliot Wave 3. Far from Euphoric.

Talking Heads: Once in a Lifetime
https://www.youtube.com/watch?v=5IsSpAOD6K8

…And you may find yourself
Behind the wheel of a large (electric) automobile
And you may find yourself in a beautiful (solar paneled) house
With a beautiful (bi-polar) wife
And you may ask yourself, well
How did I get here?...

Is it possible, just a few months later, that lightning strikes **Twice in a Lifetime**?

July 2017: Consensus Lithium Demand Forecast by 2025: 535,000
April 2018: Consensus Lithium Demand Forecast by 2025: **900,000**

$12-14K ton LCE the long-term, base case NEW NORMAL

This is NOT:

Same as it ever was
Same as it ever was
Same as it ever was

It's MUCH better.

The Talking Heads' David Byrne is playing at **Forest Hills Stadium** this September.

Twitter is filled with many **Lithium Talking Heads.**

An inexhaustive peer group:

ms.latin
@LatLatin

I tweet only about Lithium. This is what I know. My investments are in Lithium companies. DYOR and don't follow my advices. I am not making money with Twitter.

Córdoba, Argentina

Juan Carlos Zuleta
@jczuleta Follows you

Lithium Economics Analyst. Writes extensively on lithium resources, lithium batteries, and electric vehicles on EVWorld.Com and SeekingAlpha.Com.

Bolivia

Emily Hersh
@BiancaFernet

Economist working in finance in Buenos Aires, taking on the mean streets with sarcasm and a pair of stilettos.

Buenos Aires City Region
thebubble.com

Alex Molyneux
@AlexMiningGuy Follows you

Mining investor and executive. CEO of Paladin Energy, Chair of Argosy Minerals, Chair of Azarga Metals and Director of Metalla Royalty

LivioFilice
@LivioFilice Follows you

World-class independent lithium researcher. Developing markets for energy storage, author,writer,global traveler,investor, lecturer, brother, uncle,son

Hamilton, Ontario
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TheLithiumSpot
@TheLithiumSpot

Providing in depth analysis on the #Lithium Market & where to #invest in the space. We report on: #ElectricCars #Batteries #Mining #Stocks #EnergyStorage #LIT

New York, NY
TheLithiumSpot.com

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Analyst, blogger, consultant on small cap natural resource companies. Please visit my website & enter your email for free articles. EpsteinResearch.com

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Author of the #Rabylon & #NewEnergy Almanac series, #lithium / #cobalt investor, & founder of ManifestationMachine.com & NewEnergyNarrative.com.

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Michael Langford
@ML_SuperNinja

Fundamental & highest returning commodity equity investor (no leverage) globally 2002-2018. Busy making money & loving life. DYOR. Zero tolerance for trolling.

Singapore
airguide.sg

Imitation is the sincerest form of flattery. Ninja tweeted the below soon after this publication…

Lithium-ion Bull, November 6, 2017 K.I.S.S.: http://libull.com/2017-11-06_KISS.pdf

…in which **$AVZ** received a **KISS of Death, La Guillotine,** suggesting 50-80% downside from 26 cents.

Am I a Troll?
A Wizard?

A quick read of Wikipedia about **50 Cent** brings to mind my Chris Rock (Rich)/ Blackrock (Wealth) analogy.

> *…Born in the South Jamaica neighborhood of the borough of Queens…selling drugs at age twelve during the 1980s crack epidemic. His first major-label album, Get Rich or Die Tryin'…*

The **DRC Sovereign Risk Noise Meter** has been on a **Spinal Tap "11"** of late…

These Go to 11: https://www.youtube.com/watch?v=KOO5S4vxi0o

…while there's been a certain Twitter **$AVZ** radio silence since April 11.

I can't seem to face up to the facts
I'm tense and nervous and I can't relax
I can't sleep 'cause my bed's on fire
Don't touch me I'm a real live wire
Psycho Killer
Qu'est-ce que c'est
Fa-fa-fa-fa-fa-fa-fa-fa-fa-far better
Run run run run run run run away *oh oh*

Psycho Killer (Talking Heads): https://www.youtube.com/watch?v=galXYbepW_s

Not Investment Advice. Do Your Own Research.

Lithium Equity Market Forecast 2025

900,000 LCE tons * ~$13,000/t = ~$12B Revenue

Assume: 50% Average EBITDA Margins = $6B EBITDA

Assume: 15X Mr. Market EBITDA Multiple = **$90B Market Cap**

Aggregate Equity Market Cap today: ~$40B
Equity Capex Needed: ~$5B

From $45B Market Cap (including equity dilution) to $90B Market Cap in 7 years.

Average IRR for 7 years: 11%

Not bad. But sounds a bit low. Am I missing something?

Perhaps. But perhaps the Lithium market "in Aggregate" may not be that cheap.

And that there are significant valuation disparities to exploit amongst the 30-40 companies that comprise this "Aggregate" number.

Will Global Institutions into **Ganfeng**'s Hong Kong Stock Exchange listing pay the same 25X+ for Ganfeng's EBITDA that Chinese investors on Shenzen Stock Exchange pay, or require a discount?

Also, if you're bullish, like me, there should be **upside to Demand**, **upside to LCE prices and margins**, and **upside to EBITDA multiples** we will witness from Mr. Market.

Piedmont Lithium Announces NASDAQ Trading

Top stories

Piedmont Lithium Commences Trading On NASDAQ

PR Newswire · 2 hours ago

NASDAQ: PLLL

Keith D. Phillips, President and Chief Executive Officer, commented:

"Nasdaq is one of the world's premier venues for growth companies, *and we expect this listing will provide increased liquidity for current investors and will* ***increase Piedmont's exposure to institutional and retail investors in the United States.***

"The Nasdaq listing comes at an important time in our Company's evolution, with a ***maiden Mineral Resource*** *expected* ***next month*** *and a* ***Scoping Study*** *planned for* ***Q3 2018****.*

"We will now be launching aggressive investor outreach across the United States, anchored by presentations next week at the ***New York, Chicago*** *and* ***San Francisco Benchmark Minerals Intelligence*** *events co-sponsored by* ***Bloomberg*** *and* ***Deutsche Bank****."*

As previously announced, Mr. **Jorge M. Beristain** has joined the Board of Directors as an Independent Non-Executive Director, effective with the Nasdaq listing, and Mr. Robert Behets has stepped down from his Non-Executive Director position.

Price Discovery

Second Half 2018 - Lithium Deal Bonanza!

Minerals Resources has more definitively entered the fray announcing the appointment of Macquarie as financial advisors seeking partners and big money for up to 49% interest in their flagship **Wodgina** lithium asset. Galaxy also announced their appointment of JP Morgan for **Sal da Vida.**

Combined with a $5B block in $SQM on sale by Nutrien, and $1B+ offered by Citi via Ganfeng's Hong Kong IPO, and ~$500M offered by FMC for ~19.9% of FMC Lithium, there is a large supply of good companies and projects for institutional and strategic investors to sink their teeth into.

As and when deals hit the tape, we will discover what these assets are perceived to be worth by these smart money Mr. Market investors.

Recall, **SQM** last July paid ~$130M for half of **Kidman**'s Mt. Holland (and providing KDR the right to participate 50% in downstream - likely hydroxide – refinery in Kwinana). This amount was 5X the $25M SQM paid 15 months earlier for 50% of **LAC**'s Cauchari-Olaroz (which by definition provided LAC with 50% of carbonate production).

I expect much bigger price tags for access to these next cabs off the rank, World Class strategic assets.

Which countries? China? Germany? Japan? Korea? America?

Which industries? Chemicals? Auto? Battery? Big Mining? Big Oil? Venture Capital?

Messaging from new Oligopolist - Mineral Resources

I previously compared MIN's **Chris Ellison** to **The Greatest,** Muhammed Ali. And the project I love to mispronounce, **Wodgina, Foxy Lady.**

> **Sidebar:** I've spoken some, but infrequently about **Mineral Resources** (recall the Thrilla in the Pilbara!). But I'm coming to learn that CEO **Chris Ellison** might, in his own non-promotional way, be **The Greatest** in the **Rumble in the Kangaroo Jungle**:

Chris "Muhammed Ali?" Ellison: https://www.youtube.com/watch?v=IMFsUI9CqLI

The Jimi Hendrix Experience - Foxey Lady (Miami Pop 1968)
28,988,605 views

Foxy Lady Wodgina: https://www.youtube.com/watch?v=_PVjcIO4MT4

I’ve never met Mr. Ellison. And I wonder how he feels about these comparisons.

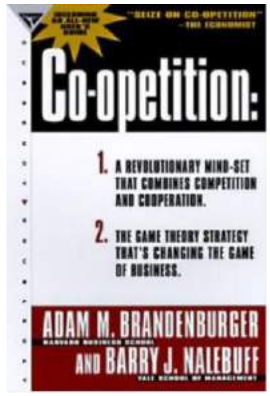
But I know he’s a guy who knows how to extract value:

Pilbara’s USD 1.3B EV should serve as a benchmark for Foxy Lady Wodgina. Excluding potential downstream refinery decision, MIN’s business plan for 750,000 tons of SC6 is larger than PLS Stage One (funded) and Stage Two (unfunded). MIN has the balance sheet, the operating experience and can credibly go it alone if they don’t get what they want. Prospective partners desperate for reliable supply: take note!

And what MIN seems to want, always, first and foremost, is a life-of-mine services agreement:

MIN: Australia’s Premier Mining Services Provider

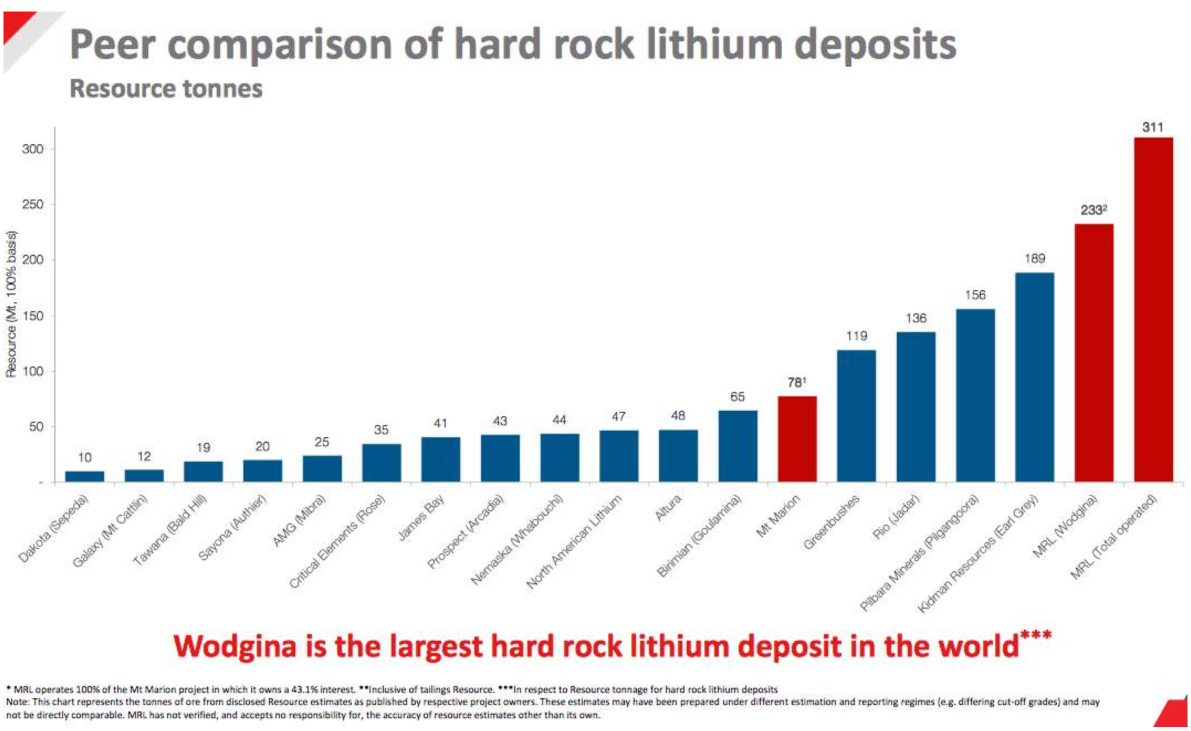
An interesting **Co-Opetition** dynamic exists in this slice of lithium land.



Published, 1996

Ganfeng and **MIN** are strong partners at **Mt. Marion**. MIN is **Pilbara**'s largest shareholder and, through its acquisition of Atlas Iron (AGO) is shipping PLS's DSO. MIN also has the contract to crush PLS ore. Ganfeng also has an equity stake in PLS and off-take relationship. ***Longer term, I see further potential consolidation playing out in the Thrilla in the Pilbara amongst these existing parties.***

MIN Macquarie Conference Presentation:
http://clients3.weblink.com.au/pdf/MIN/01977622.pdf



MIN was on my list of Top 7 for the **Lithium Greatest Hits Album, Screaming Buy**. MIN re-iterated their **guidance for A$500M full year 2018 EBITDA**. At ~A$3B market cap, MIN trades at only ~6X EV/EBITDA.

I surmise when FMC Lithium is spun off, their guided 2018 $200M EBITDA will garner at least a 15X multiple – FMC has caveated the IPO this year by saying "market conditions permitting" and at times in the past have hinted at $3B as their perception of fair value. If Mr. Market is providing much below 15X, FMC could pull the IPO and try again next year. I'm not much worried about this. I believe the FMC Lithium deal will be very well subscribed at perhaps more generous Mr. Market multiples.

Which, if I'm right, makes me question, ***why should Mr. Market pay so much more for FMC's cash flows (or Ganfeng's) than MIN's cash flows?***. ASX mentality toward MIN's multiple is outdated – MIN's future is not significantly tied to iron ore prices. But it is priced as such, with even their biggest sell-side supporters only mustering target prices equating to 6X EV/EBITDA. And MIN offers a healthy 4.5% dividend yield. I don't think it's justified. ***I believe MIN could experience a multiple re-rating to 10-12X+.***

MIN has had a stellar trajectory over its 10-year history and has put together a collection of diverse cash flow streams. It's long-term run-of-mine contracts produce a stable, predictable cash flow, while at the same time offer significant lithium developer upside from a near-term Tier One asset.

DELIVERING A DECADE OF STRONG FINANCIAL OUTCOMES

FINANCIAL SUMMARY ($MILLIONS UNLESS OTHERWISE STATED)	2007	2008	2009	2010	2011	2012(1)	2013	2014	2015(2)	2016	2017
EARNINGS											
REVENUE	147	238	257	313	610	926	1,097	1,899	1,299	1,178	1,458
EBITDA	38	87	74	104	236	294	383	536	238	278	473
NPAT	20	47	44	97	150	177	180	231	78	(26)	201
RETURN ON REVENUE %	14%	20%	17%	31%	25%	19%	16%	12%	6%	(2%)	14%
RETURN ON EQUITY %	26%	41%	31%	20%	24%	19%	18%	20%	7%	(3%)	18%
DILUTED EPS (CENTS/SHARE)	16.90	38.30	35.10	66.90	86.50	95.82	97.37	124.10	41.52	(13.31)	107.66
BALANCE SHEET											
TOTAL ASSETS	158	224	289	845	970	1,436	1,804	1,858	1,592	1,618	1,835
TOTAL EQUITY	76	116	145	486	628	917	1,018	1,139	1,082	1,008	1,132
NET TANGIBLE ASSETS PER SHARE (CENTS/SHARE)	54.36	86.09	108.33	274.78	344.91	454.80	508.04	574.95	543.82	513.18	563.95
CASH GENERATION											
OPERATING CASH FLOW	30	97	46	151	117	243	329	567	52	316	296
NET (DEBT)/CASH	(9)	21	(12)	88	78	(111)	(310)	81	118	188	104
MARKET CAPITALISATION											
NUMBER OF SHARES ON ISSUE	120	123	124	161	169	185	186	187	188	187	187
SHARE PRICE AT 30 JUNE ($/SHARE)	3.41	6.50	4.25	8.10	11.50	8.95	8.25	9.59	6.60	8.31	10.85
MARKET CAPITALISATION	410	799	528	1,306	1,945	1,654	1,534	1,789	1,238	1,553	2,033
RETURNS TO SHAREHOLDERS											
TOTAL SHAREHOLDER RETURN (CUMULATIVE) ($/SHARE)	2.54	5.75	3.71	7.74	11.43	9.31	9.07	11.03	8.44	10.38	13.34
DIVIDENDS DECLARED (CENTS/SHARE)	9.50	19.35	19.35	20.00	42.00	46.00	48.00	62.00	22.50	29.50	54.00

Source: MIN's 2017 Annual Report

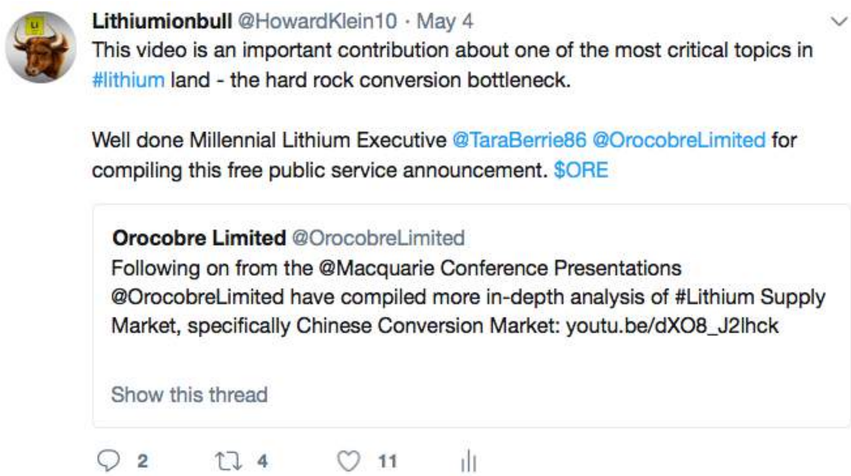
They've pursued a smart strategy of getting substantial equity into quality assets early on, enhancing value through to construction decision, but taking some off the table at that stage as a risk-sharing endeavor with reliable long-term off-take partners, while building in a near-guaranteed recurring life-of-mine service contract which provides sustainable, predictable cash flow.

MIN's downstream aspirations of 50-100K as a strategy of capturing downstream ***carbonate*** converter value-add/margins is a bigger question in my view – chemicals processing is an area outside MIN's historic core competence. Looking at Tianqi and Albemarle's Kwinana and Kemerton ***hydroxide*** plants, these will be quite big capex. And with re-agents and electricity costs in remote Pilbara, I surmise MIN could fall in 2nd or 3rd quartile on the ***carbonate*** opex cost curve.

I wonder if their 49% sell down at Wodgina might not morph into a package financing/JV for the downstream refinery as well. Time will tell.

Messaging from new Oligopolist – Orocobre

The Hard Rock Conversion Bottleneck



https://www.youtube.com/watch?v=dXO8_J2lhck&feature=youtu.be

Orocobre, through one of its executives **Tara Berrie**, has again demonstrated its place as a **Thought Leader** in talking about the lithium market.

Their discussion largely focuses on the next 2-3 years, to 2020. Their "risked" analysis of ~200kt announced conversion capacity suggests only about 33% or 94.5Kt will come on line in time. Unsaid, but implicit in this video, are a few messages to my ears:

1. To those who disparage ORE's struggles to ramp up to name plate capacity/battery grade, bear in mind this long history we have painstakingly researched to show that our woes are the norm, not the exception. So, please continue to cut us some slack.
2. The very slow pace of China Converter capacity is a real bottleneck which will ensure high lithium chemicals prices at least through 2020.
3. The Australia conversion boom in Kwinana (Tianqi & SQM/Kidman), Kemerton (Albermarle) is nothing like that we've ever seen before in the lithium industry and only time will tell if they will have better than historic operational execution.
4. Meantime, if there genuinely is a converter bottleneck, there is a real risk of a spodumene oversupply vis-a-vis conversion capacity.
5. Which leaves the question, will spodumene prices start to fall or will off-takers continue to build large amounts of spodumene concentrate inventory?

I'm in the camp with those who believe there's very limited risk to lithium carbonate and hydroxide prices for 5-7 years. But there is some real risk to spodumene prices for a period in 2020/21. I have a great preference for hard rock producers with defined downstream exposure. And to the extent I would seek spodumene cash flow exposure, the best risk/reward, in my view, is the leader and most diversified, MIN.

Not Investment Advice. Do Your Own Research

Price Discovery - Oligopolist Valuation – FMC IPO

FMC's last quarter showed significant improvement to their operating margins. Yes, lithium prices are better, but they've also lowered their costs quite a bit. Nevertheless, they still only achieve 44% EBITDA margins for 100% brine-based production when SQM's margins (before new CORFO royalty) from Atacama are ~75%.

Lithiumionbull @HowardKlein10 · May 2

Stellar Q1 $FMC Lithium results and upgraded full-year guidance. EBITDA margins continue to grow faster than rapid sales growth. 48% Q1 EBITDA margin. 44% full year EBITDA forecast.

Q4 IPO = Philadelphia Freedom. Rocky, Gonna Fly Now:

libull.com/Mar-27-March-G...

@FMCCorp

FMC Lithium

FMC Lithium reported first quarter segment revenue of $103 million, an increase of 57 percent versus the prior-year quarter. Segment EBITDA nearly doubled year-over-year to $50 million in the quarter. Higher volume from debottlenecking projects in Argentina and the hydroxide expansion in China, higher year-over-year prices on all product categories and lower operating costs were the main contributors to growth.

The outlook for Lithium for the full year has been increased. Segment revenue for the full year of 2018 is in the range of $430 million to $460 million, an increase of nearly 30 percent at the mid-point compared to 2017, while the outlook for full-year segment EBITDA is in the range of $193 million to $203 million. This EBITDA forecast represents an increase of 40 percent at the mid-point compared to the prior year. Second quarter segment EBITDA is expected to be in the range of $47 million to $51 million, which represents an increase of over 75 percent at the mid-point compared to the prior-year quarter.

Lithiumionbull @HowardKlein10 · May 4

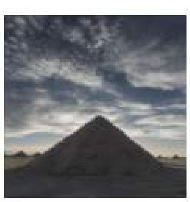
I'll say it again. $FMC Lithium Spinoff @FMCCorp = Philadelphia Freedom = Rocky, Gonna Fly Now, IMO

libull.com/Mar-27-March-G...

Only pure-play lithium producer on US markets.

What multiple will Mr. Market affix to FMC's ~$200M 2018 EBITDA guidance? 15X?= ~$3B?

Not advice, DYOR



Bloomberg Markets @markets

As electric cars multiply, this IPO will test the real value of lithium bloom.bg/2rm8a9w

http://libull.com/Mar-27-March-Gladness-And-Rocky.pdf

Price Discovery - Oligopolist Valuation - Ganfeng Hong Kong Stock Exchange IPO

I just got to reviewing the Feburary Ganfeng red herring prospectus which provides data for the first 9 months of 2017. I plan to do a deeper dive into Ganfeng at some point, but my shallow read suggests **Ganfeng** is currently trading at **28X trailing 2017 EV/EBITDA**. I don't have 2018 EV/EBITDA guidance/forecast.

By my estimations/calculation and using CNY/USD FX rate of 6.3, Ganfeng generated ~USD275M in EBITDA in 2017 and trades at about $7.65B Enterprise Value (USD $7.4B market cap + $275M secured and unsecured debt).

Their 44% Adjusted EBITDA margins are about the same as FMC just reported and guided for 2018.

As Citi builds its Ganfeng book, will global Institutional investors into its Hong Kong Stock Exchange listing pay the same 25X+ for Ganfeng's EBITDA that Chinese investors on Shenzen pay, or require a (significant) discount?

The Ganfeng HKSE Multiple will provide a benchmark for the FMC Lithium Spinoff in October.

	Year ended December 31,		Nine months ended September 30,	
	2015	2016	2016	2017
	RMB'000	RMB'000	RMB'000	RMB'000
Profit for the years/periods	**217,870**	**1,118,061**	**983,126**	**1,431,592**
Adjustments for:				
Income tax expense	25,102	71,093	50,754	142,185
Finance costs	18,742	21,000	17,489	43,289
Bank interest income	(7,845)	(1,147)	(910)	(928)
Depreciation	74,676	83,329	62,497	77,716
Amortization of land use rights	2,005	2,150	1,613	2,844
Amortization of intangible assets	3,246	5,365	4,024	4,417
Impairment loss[1]	26,337	238,413	214,964	24,682
Losses relating to Shenzhen Meibai's fire incidents	–	49,620	49,620	–
Net fair value gains from derivative financial instrument[2]	(92,296)	(630,690)	(685,884)	–
Gain on derivative financial instrument[2]	–	(3,329)	(3,329)	(485,805)
Adjusted EBITDA	**267,837**	**953,865**	**693,964**	**1,239,992**

	Year Ended/As of December 31,		Nine months ended/ As of September 30,
	2015	2016	2017
Profitability:			
Gross margin	22.3%	38.2%	38.5%
Adjusted EBITDA margin(1)	19.9%	36.2%	43.9%
Net profit margin	16.2%	42.5%	50.7%
Rates of return:			
Return on assets(2)	8.4%	26.1%	30.1%
Return on equity(3)	11.2%	37.7%	60.0%
Liquidity:			
Debt to equity ratio(4)	0.1	0.2	0.7
Current ratio(5)	2.3	1.8	1.2
Quick ratio(6)	1.6	1.3	0.9

INDEBTEDNESS

As of December 31, 2017, being the latest practicable date for the purpose of the indebtedness statement below, we had RMB1,480.8 million in indebtedness. The following table sets forth our indebtedness as of the dates indicated:

	As of December 31,		As of September 30,	As of December 31,
	2015	2016	2017	2017
	RMB'000	RMB'000	RMB'000 *(unaudited)*	RMB'000 *(unaudited)*
Indebtedness				
Bank and other borrowings				
— Unsecured	171,697	438,635	1,211,208	803,736
— Secured	113,000	156,000	872,967	677,026
Total	**284,697**	**594,635**	**2,084,175**	**1,480,762**

Disclaimer

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