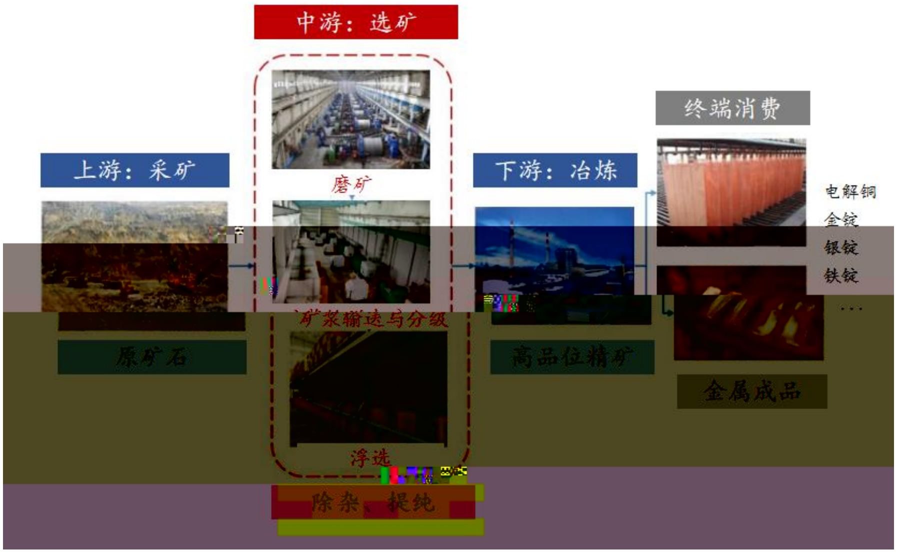
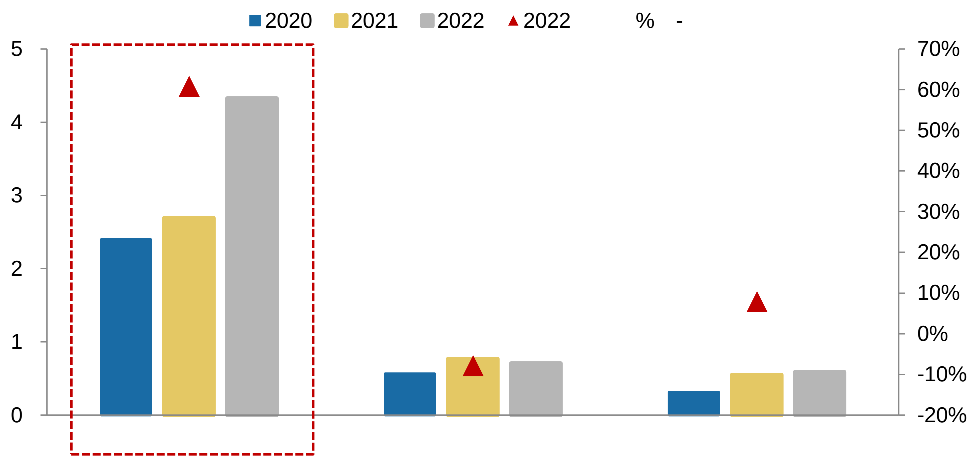
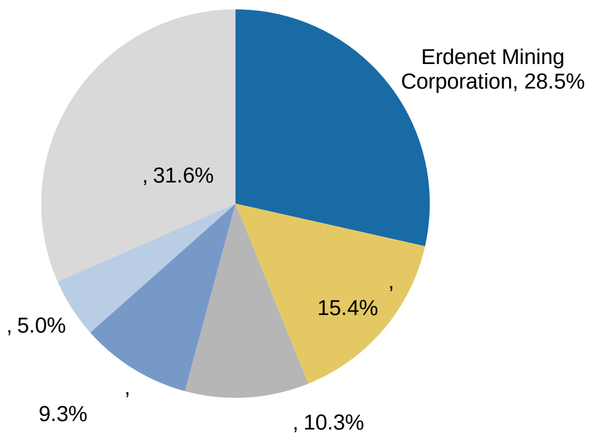
1


中游：选矿
磨矿
终端消费
上游：采矿
下游：冶炼
电解铜
金锭
银锭
铁锭
…
矿浆输送与分级
原矿石
高品位精矿
金属成品
浮选
除杂、提纯

2 **2022**


2020
2021
2022
2022 % -
5
4
3
2
1
0
70%
60%
50%
40%
30%
20%
10%
0%
-10%
-20%

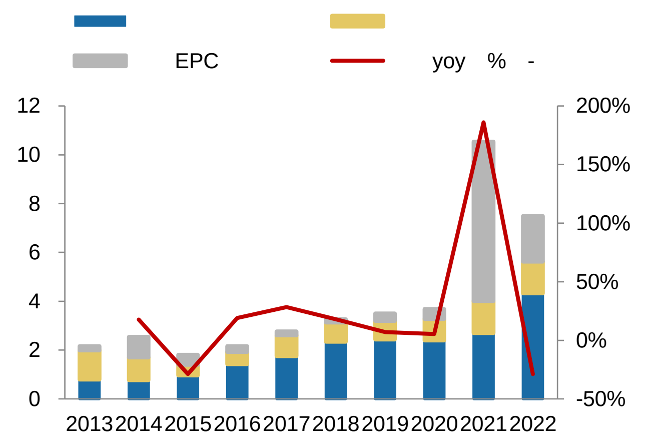
4 2022



2021 2023

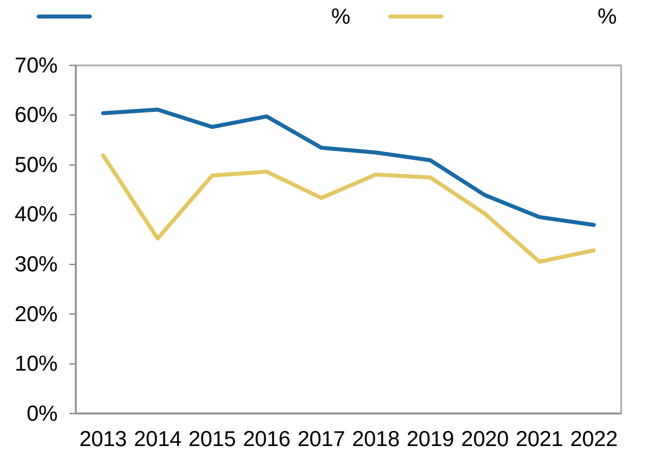
2021 EPC 2021 10 49.9% 2022 60.8% 2013 60.4% 51.9%

5

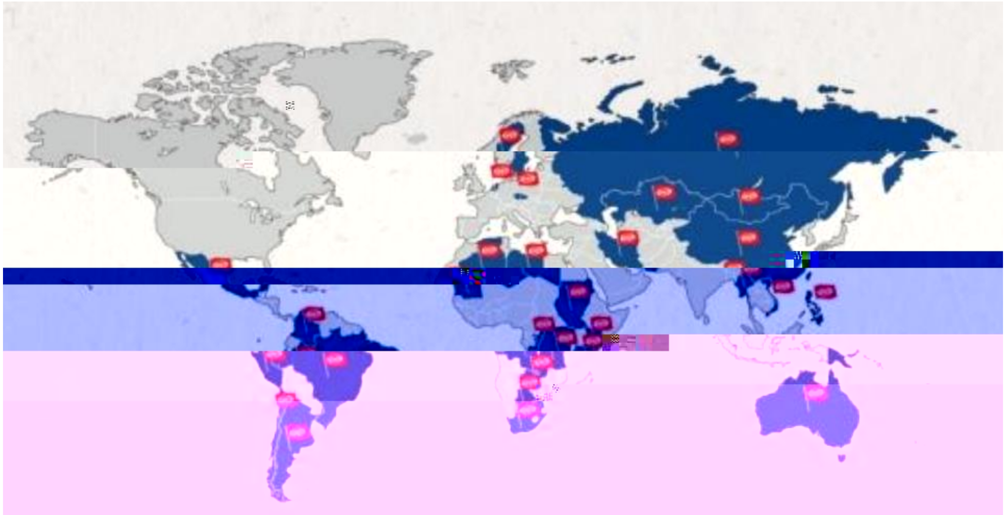


Wind

6



7



2022

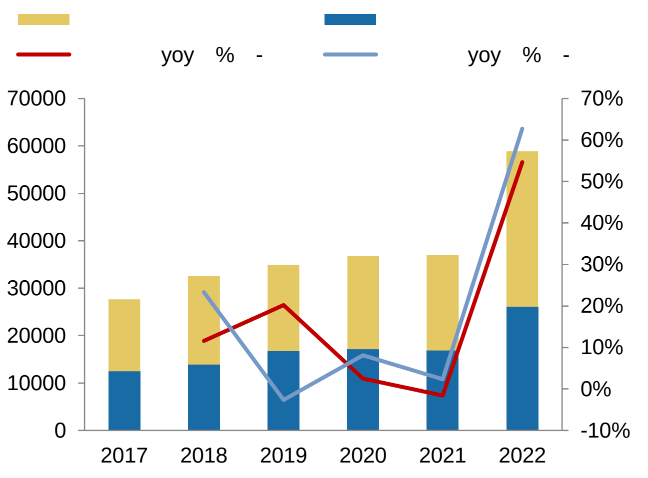
2022 2022

3.28 2.61 62.7% 54.7%

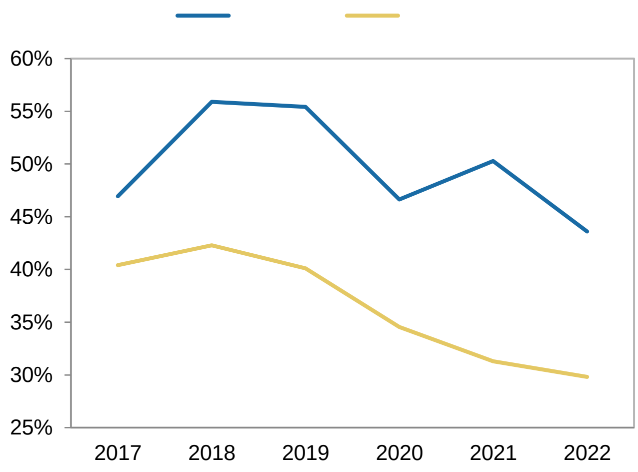
2017

2017 2022 44% 56%

8



9



EPC

EPC

2016 19.7% 2021
12.4% 2022

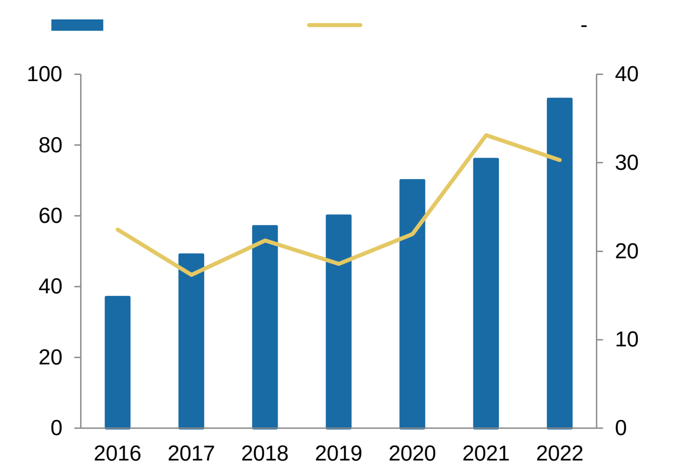
2009

2

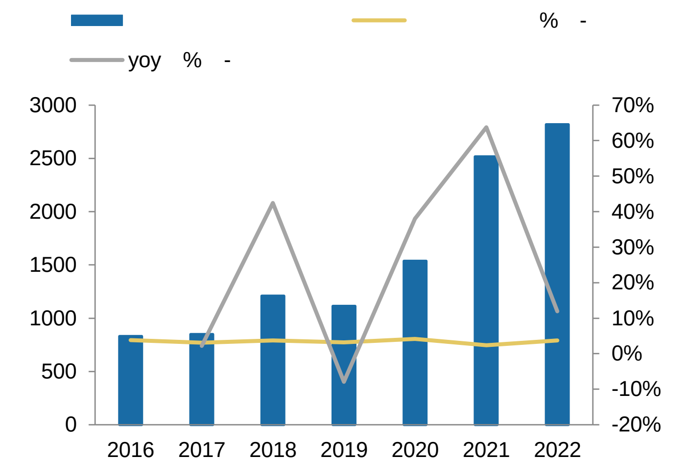
2022 93 2021

2016 2020

12



13



2019 12

2022

2021 2022

15

16

1.6 **2024**

2021 2024 1.6 2022 1.15 4 6.4

17 **2021**

EPC

LME

EPC

19 2003 LME

Wind

ICSG 2021 2565 2149 83.8% 416 16.2% 2005 206 80%

20

Wind ICSG

Resource Capital Fund

1. **2001-2007**

2001 2007 71
339 29.8%

2. **2008-2009** 2008

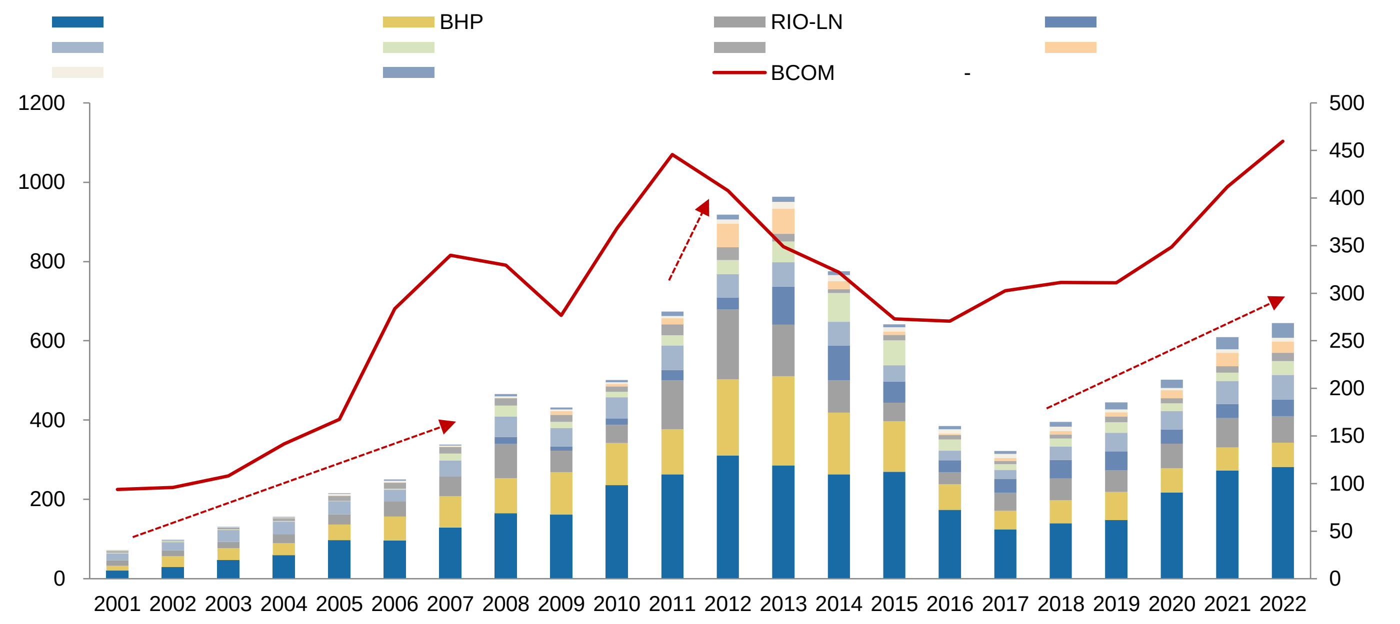
3. **2010-2013**

2011 Bloomberg 445.7
2012 CAPEX
36.3%

4. **2014-2018**

2018-
395 645 CAGR 13.0%
2022 Bloomberg
459.7 2011
2023-2025 **2012**

21 **Bloomberg**



Bloomberg

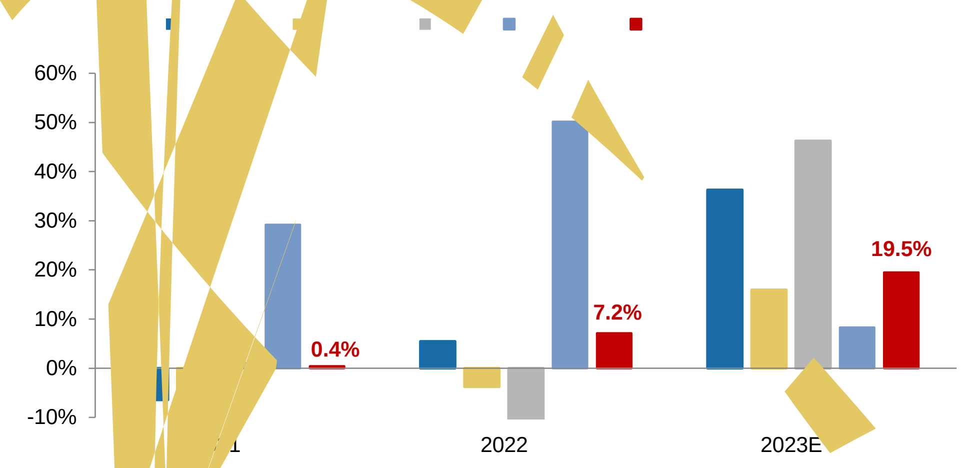
2023 2021

2022

2023

19.5%

3



380

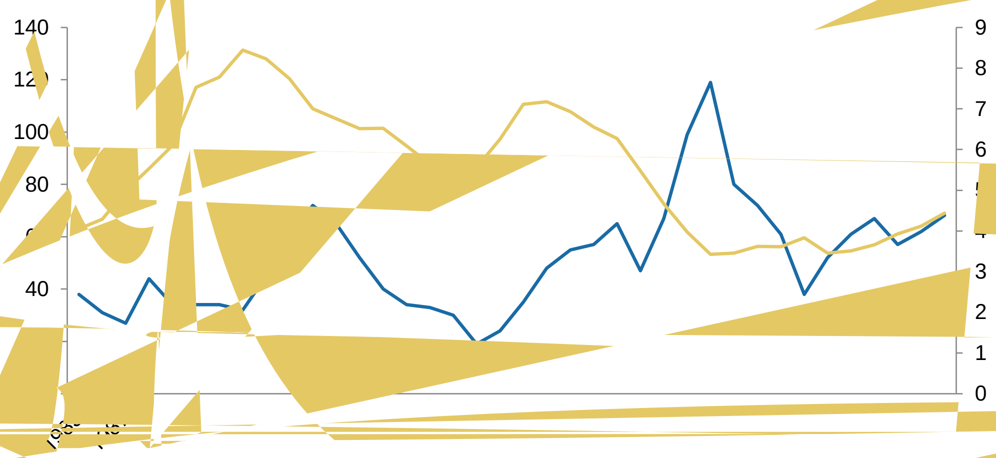
680

1200

198

2023

23



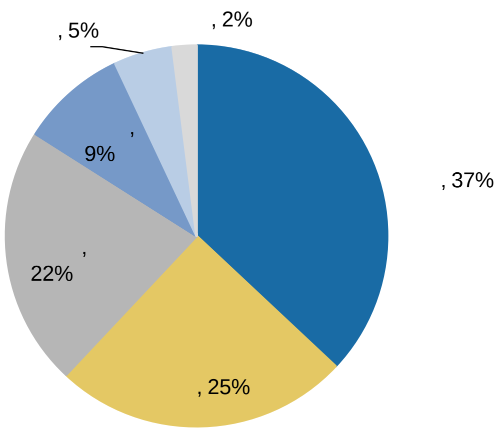
Bloomberg

=

1.

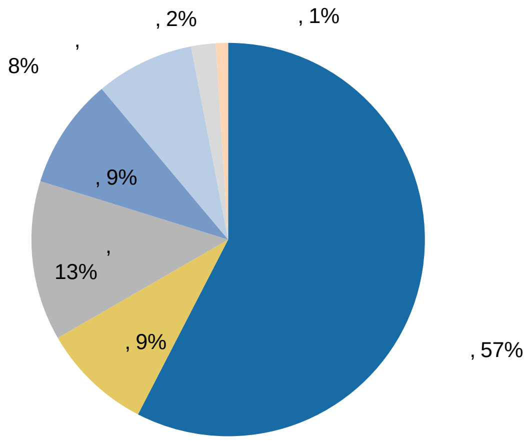
CDA

25 2019



ETIP

26 2050 57%



ETIP

2020 2030

700 800

25%

Eureletric

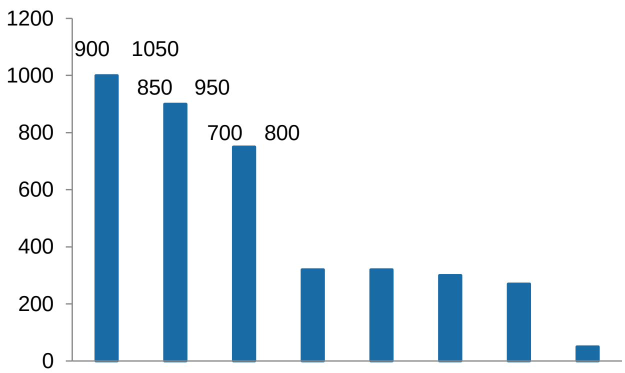
3750 4250

900 1050 850 950

2020

20 40 40% 40

27 2020 2030



Eureletric

28 2020

Eureletric

2022 7208

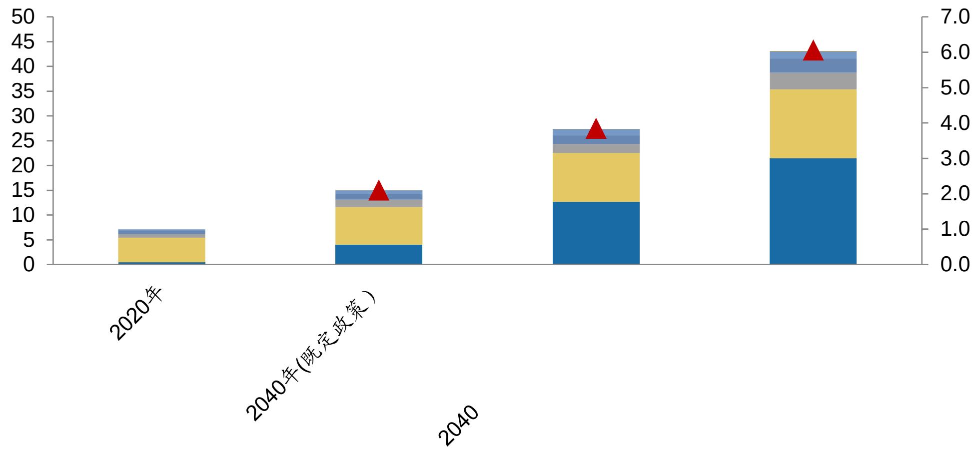
30.3% 5012 1.23%

29

30

Wind

32 2040 / 2020



IEA

IEA

15.4 10.2 6.8 /

33

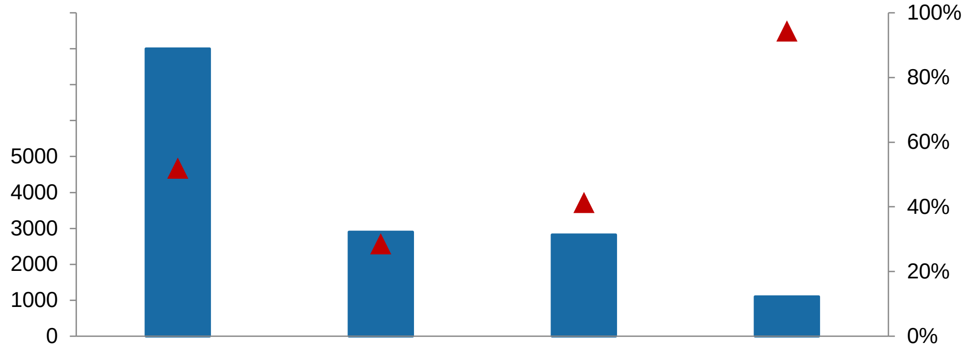
IEA

IEA

8000 2900 2833 52% 29% 41%

1100 94%

34



IEA

IEA
34
200 53.2/39.9/
24.5

35 **/**

IEA

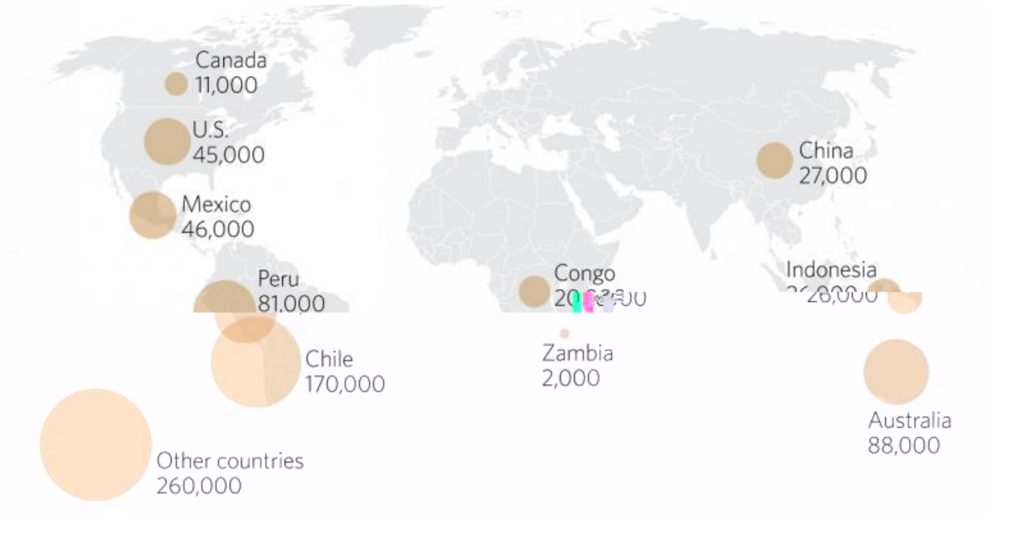
36

IEA

2.

3.5% Stratfor
7.76
1.70 0.88 0.81 43.7% 0.27
3.5%

37



Stratfor

ICSG

2019 2043.8

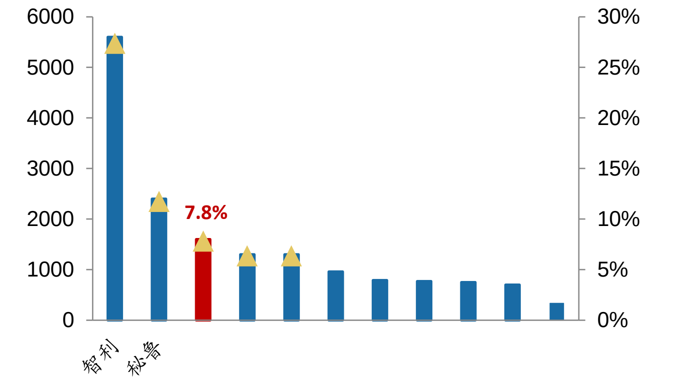
960 47.0%

7.8%

Statista 2021 568.1

38 2019

39 2021



ICSG

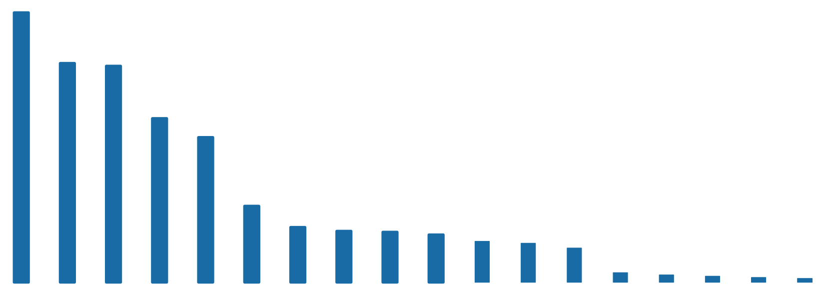
Statista

2.76

18 3.93 4.46

50.6%

40

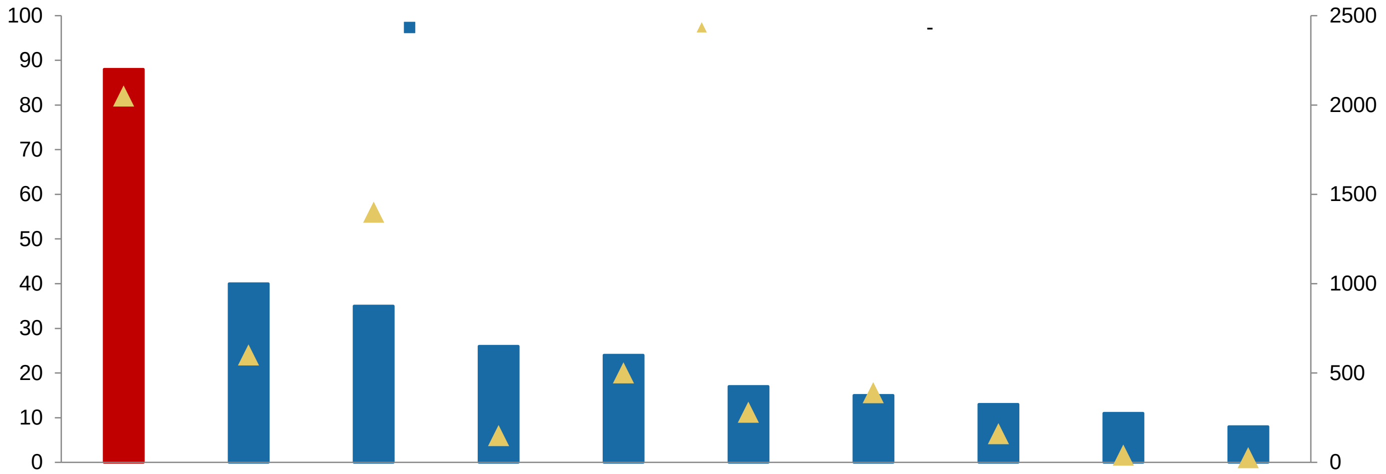


21

6

2021 Engineering
and Mining Journal 2021 880
2050

41 2021



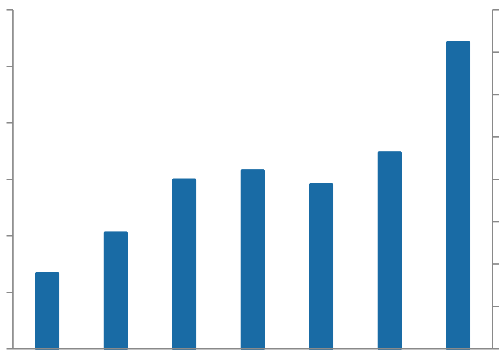
Engineering and Mining Journal

EPC
23-25
23H1 6 26 2023
2023 7.07
3.23 118.89% EPC 2023
5.03 55.73%

+

2022 2022
1.08 56.2% 4.33
60.8%

42



43

2023 5

a. 1.5
3 **b.** 12% **c.**

44

:2023 4 27 -5 4

7

Weir Minerals	
Metso Outotec	

2022

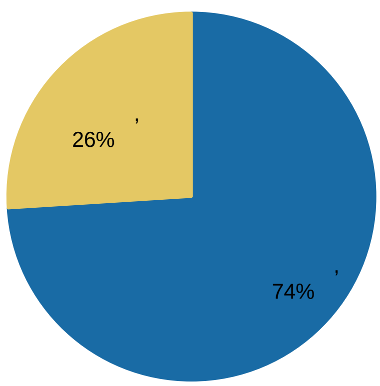
24.7 17.8 72%

4.6/13.2

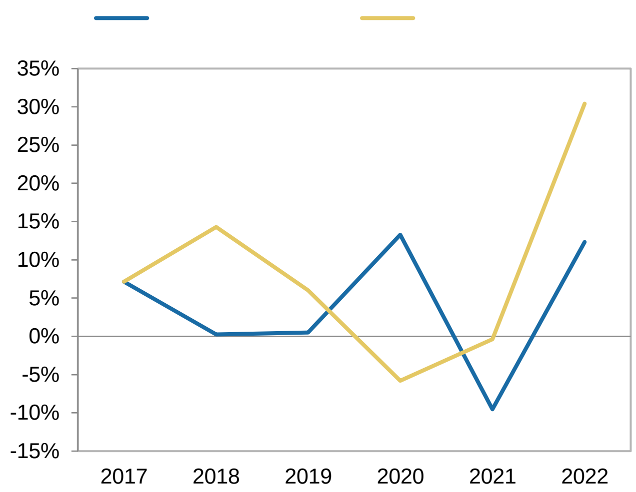
26%/74% 2022

12.3%/30.4%

45 2022



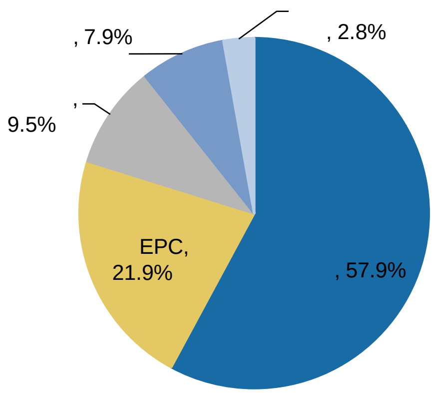
46 2022



2023

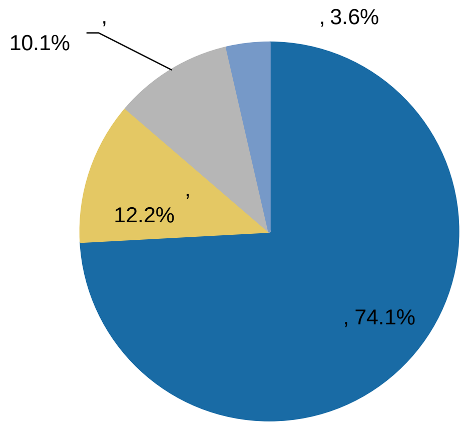
2022 EPC
21.9% EPC
2022
74.1%

51 2022 EPC



2023

52 2022 EPC

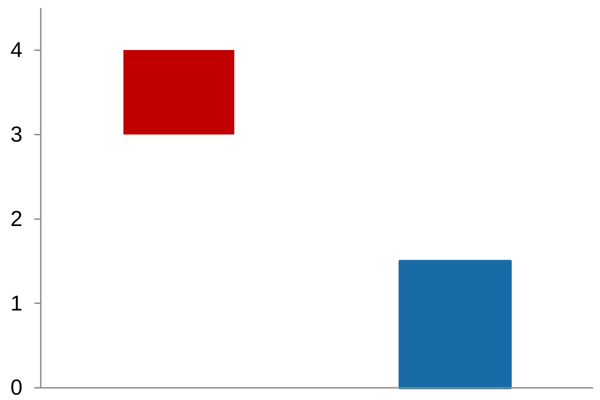


2023

2023 5
3 4
52.1%

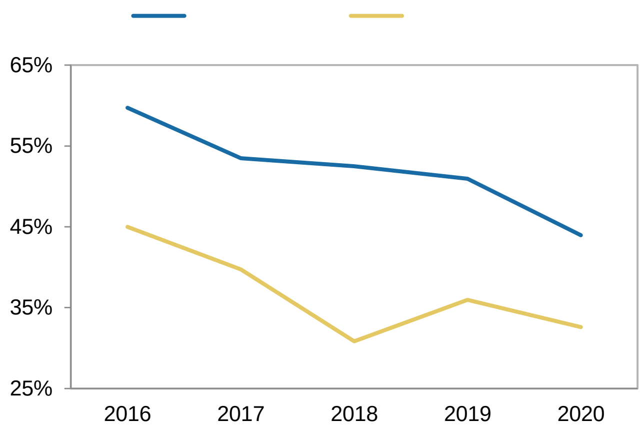
1.5
2016 2020
36.8%

53



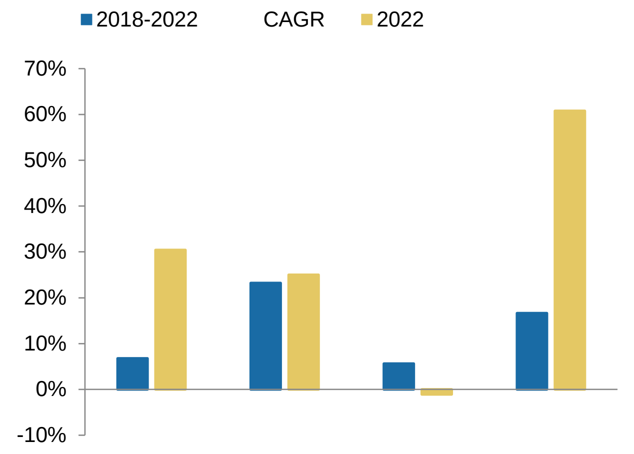
:2023 4 27 -5 4

54

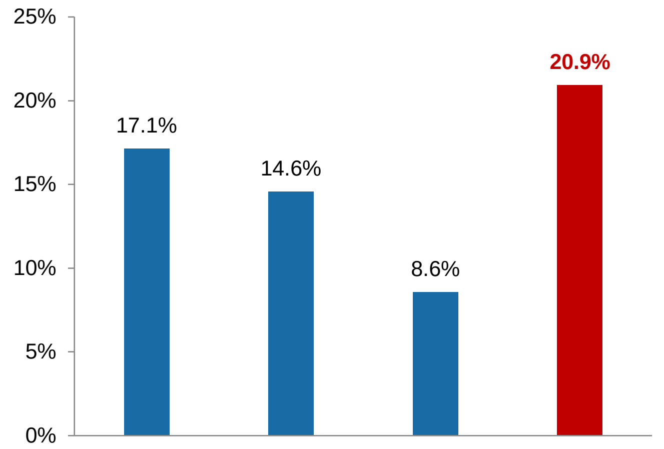


2018 2022 CAGR 16.6%
2022 60.8%
2018-2022
EBITA

55



56 2018-2022 EBITA



2022-2025
1 **2**
3

1.

1
2023-2025
2874.1/2944.6/3026.1 **4.9%/2.5%/2.8%**

2

YS/T 70-2015
Cu97.5-Cu99.4 97.5%-99.4%
95%
32% 25%
30% 30% 3.17
1 3.17

30% Critical minerals supply and demand challenges mining companies face
2020 0.64%
0.6% 50 1
50.0 158.3

2023 2025
45.5/46.6/47.9

2.

1 2023 5
2022 10%

2023-2025 **12%/14%/17%**

5.5/6.5/8.1

2
0.5 0.6 0.55 /
2023 5
1.5 3 2
0.28 **/**

2023-2025 **15.0 17.9 22.4**
25.9% 19.5% 24.8%

3.

0.55 / 2023 2025
0.57/0.59/0.61

2023-2025 **228.3 240.6**
258.5 **6.3% 5.4% 7.4%**

:2023 6 7 -6 9

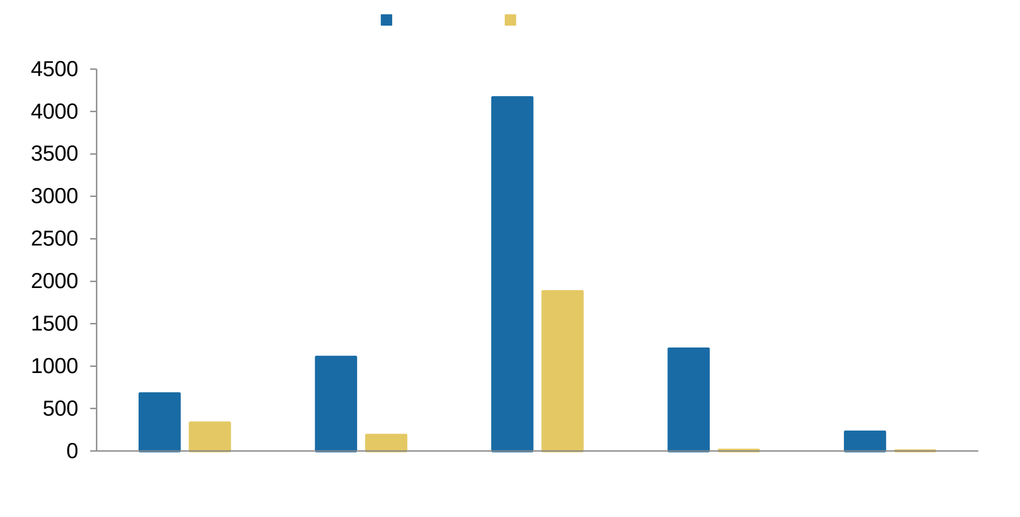
8 2023-2025

		2022A	2023E	2024E	2025E
		2739.5	2874.1	2994.6	3026.1
yoy	%	5.7%	4.9%	2.5%	2.8%
		43.4	45.5	46.6	47.9
	%	10%	12%	14%	17%
		4.3			

57

EY

60 2020 2022



2022

2022 29

40%

21

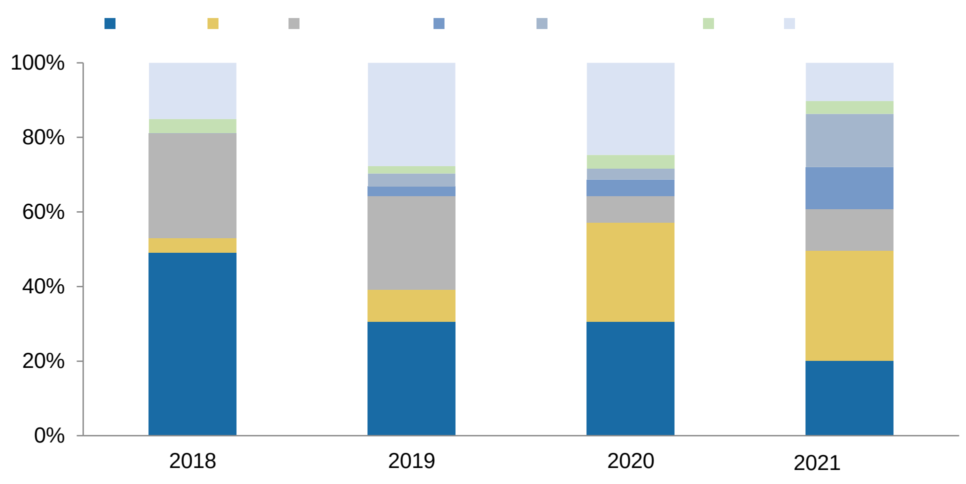
9

		-	44.98%	150,013	150,013
		-	72%	128,233	92,328
		-	100%	111,021	111,021
		-	63%	92,977	58,575
		-	55%	17,098	9,404
		-	69.28%	7.68	5.32
		-	70%	6.46	4.52
		-	100%	5.50	5.50
		-	60%	3.83	2.30
		-	100%	2.73	2.73

2022

77.3%/7.6%　　2022　　45.4%/44.3%

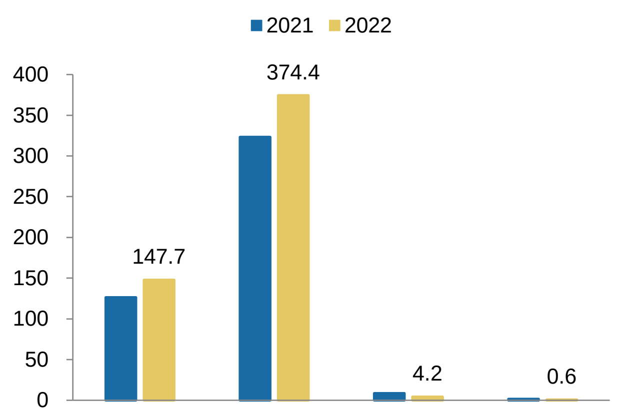
61　2018　　2021



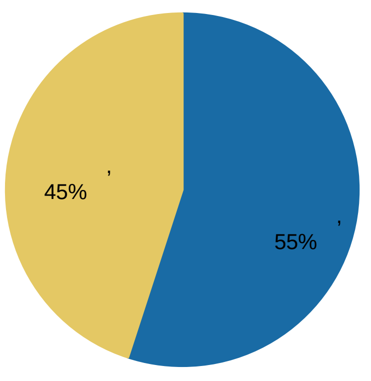
2022

70%　　2022　　45%

62



63　　2022



EPC

1

2021-2022 EPC
2023-2025
37%/36%/36% 32.6%/22.4%/7.1%

2 **/**
EPC

23-25
2023-
2025 1.97/2.2/2.5 180%/10%/15%

2023 2023
2022
10 27
1.17 11
2023 2023 1.05
/ 338%/40% 24-25

3 **2023**
8.7 **54.8%** 6 26 2023
EPC 2023 5.03
55.73% 2023 6 7 -6 9
4 -6

4 **EPC** EPC

EPC
2023-2025 1.5/2.3/2.3 -
21.9%/56.7%/1.2% 1 31
2.04 2023-
2024 2020-2021
2023-2025 EPC

20-25% EPC

2023-2025 **10.2/13.5/16.9**
35.7%/33.1%/24.9% 2023-2025
EPC

2023-2025 **35.0%/35.2%/36.7%**

23-25
23
23 23-25 7.7%/7.3%/6.8%
2023

23-25
14.7%/10.7%/10.2%
23-25 4%
23 23-25
-2.8%/-0.9%/0.13%

23-25 +
2023-2025
0.99/1.6/2.2 **-26.6%/60.7%/39.4%**

2023Q1 EPC
EPC 6 26
2023 2022/2023 EPC
2,998/120 2023 2022
1,188.41 EPC
44.53% 47.25%~94.39%

10

	2022A	2023E	2024E	2025E
yoy				
[redacted]				

601608.SH	
600980.SH	

Wind

wind

12 31	2021A	2022A	2023E	2024E	2025E
	1,124	**1,168**	**1,231**	**1,470**	**1,653**
	484	539	509	649	772
	151	167	202	248	289
	202	241	306	348	343
	287	221	213	225	249
	794	**922**	**1,109**	**1,246**	**1,345**
	40	38	38	38	38
	332	725	896	1,036	1,138
	247	64	80	77	75
	70	55	55	55	55
	106	40	40	40	40
	1,919	**2,090**	**2,339**	**2,716**	**2,998**
	260	**463**	**642**	**860**	**921**
	34	50	63	77	91
	171	287	205	459	403
	55	126	374	324	427
	545	**359**	**359**	**359**	**359**
	30	0	0	0	0
	280	304	304	304	304
	235	55	55	55	55
	805	**822**	**1,000**	**1,218**	**1,280**
	70	70	105	105	105
	353	322	287	287	287
	632	767	837	996	1,217
	1,109	1,260	1,330	1,489	1,710
	5	9	9	9	9
	1,919	**2,090**	**2,339**	**2,716**	**2,998**

12 31	2021A	2022A	2023E	2024E	2025E
	1,053	**749**	**1,016**	**1,352**	**1,689**
	732	503	660	876	1,069
	4	8	11	14	18
	35	50	78	99	115
	46	86	149	144	172
	25	28	41	54	68
	24	16	-28	-12	2
	0	-5	-3	-5	-5
	0	0	0	0	0
	2	4	2	3	3
	217	**157**	**113**	**187**	**260**
	-1	0	0	0	0
	216	**157**	**113**	**187**	**260**
	32	22	15	28	39
	184	**135**	**99**	**159**	**221**
	0	1	0	0	0
	184	**134**	**99**	**159**	**221**
EBITDA	266	130	152	252	346
EPS	2.63	1.92	0.94	1.51	2.10

12 31	2021A	2022A	2023E	2024E	2025E
	-37	**128**	**236**	**336**	**290**
	184	135	99	159	221
	27	49	63	73	81
	-276	14	70	98	-18
	28	-70	5	7	7
	-568	**-106**	**-248**	**-207**	**-177**
	-326	-233	-250	-210	-180
	-244	122	0	0	0
	1	5	2	3	3
	382	**16**	**-18**	**11**	**10**
	64	50	13	14	14
	0	0	0	0	0
	318	-34	-31	-3	-4
	-235	**62**	**-30**	**140**	**123**
	689	**455**	**517**	**487**	**627**
	455	**517**	**487**	**627**	**750**

12 31	2021A	2022A	2023E	2024E	2025E
	186.0%	-28.9%	35.7%	33.1%	24.9%
	328.5%	-27.6%	-27.7%	64.5%	39.4%
	353.3%	-27.1%	-26.6%	60.7%	39.4%
	30.5%	32.8%	35.0%	35.2%	36.7%
	17.5%	18.1%	9.7%	11.7%	13.1%
ROE	16.6%	10.7%	7.4%	10.6%	12.9%
ROIC	13.9%	4.2%	4.4%	7.9%	10.5%
	42.0%	39.3%	42.8%	44.9%	42.7%
	72.3%	64.8%	74.7%	81.4%	74.5%
	4.32	2.52	1.92	1.71	1.79
	3.25	1.58	1.14	1.05	1.15
	0.55	0.36	0.43	0.50	0.56
	10.48	6.22	7.06	7.98	8.69
	5.20	3.11	3.32	3.89	4.93
	2.63	1.92	0.94	1.51	2.10
	-1	2	2	3	3
	15.84	17.99	12.67	14.18	16.28
P/E	18.78	15.21	25.47	15.85	11.37
P/B	3.12	1.62	1.89	1.69	1.47
EV/EBITDA	12.49	14.54	15.89	9.06	6.28

c6 €'gs ¡•BH%¡E1a á%D“ ð º û ±