



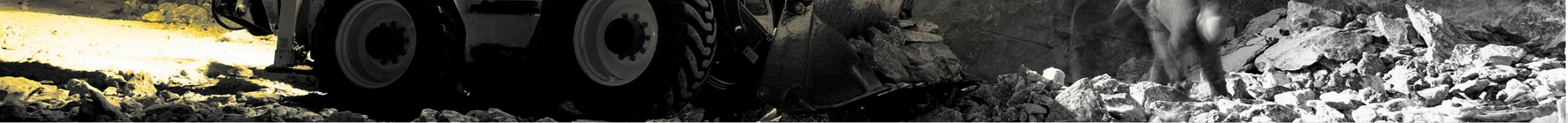
**NOBLE CAPITAL MARKETS NEWSLETTER**

# **METALS AND MINING**

**QUARTERLY REVIEW Q4 2018**

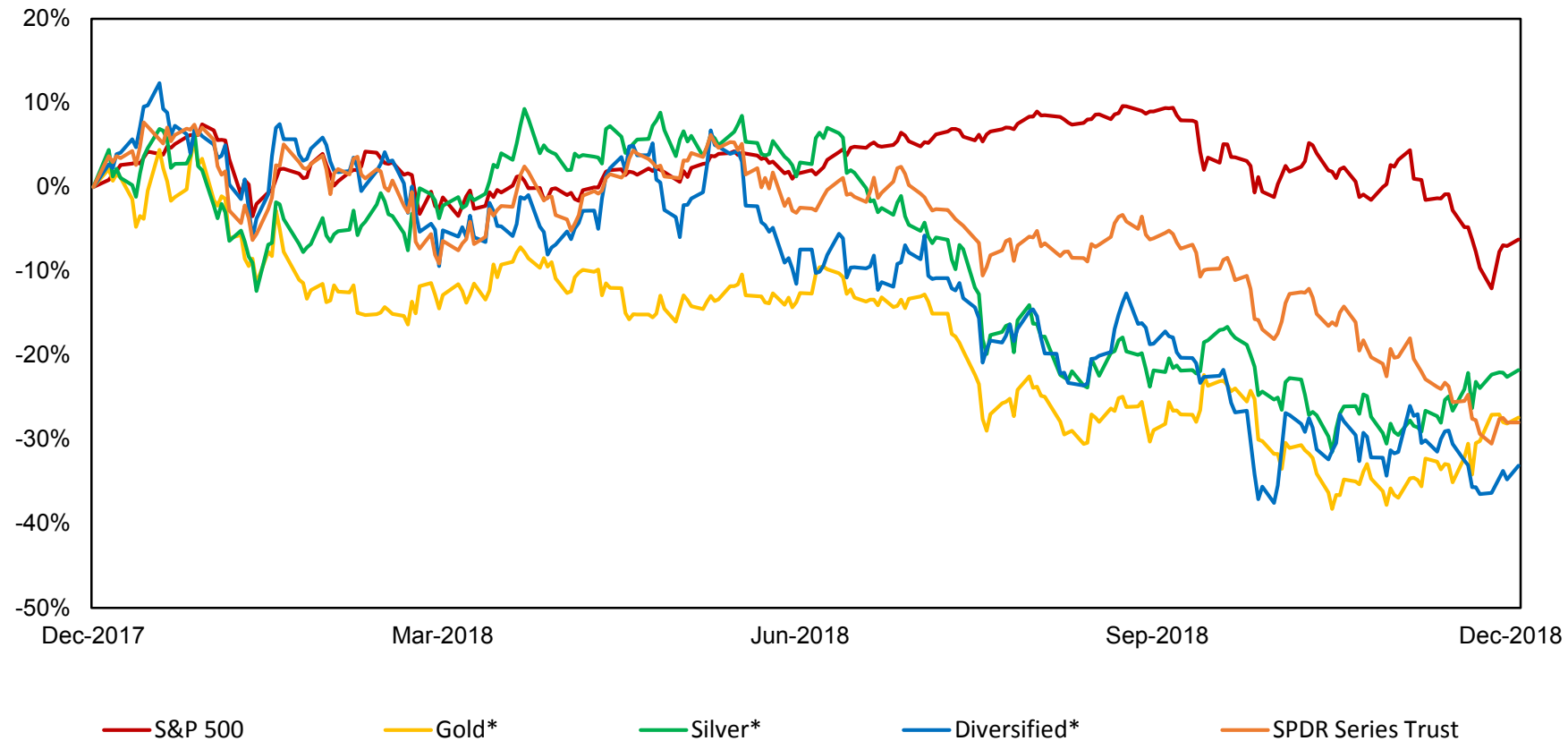
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# MINING SECTOR NEWSLETTER

## MINING SECTOR LTM EQUITY PERFORMANCE



\* Noble Proprietary Sector (index composed of companies in the comparable table)  
 \*\* MINING Select Sector SPDR ETF (refer to disclosure section for more information)

Source: Capital IQ as of 12/31/2018

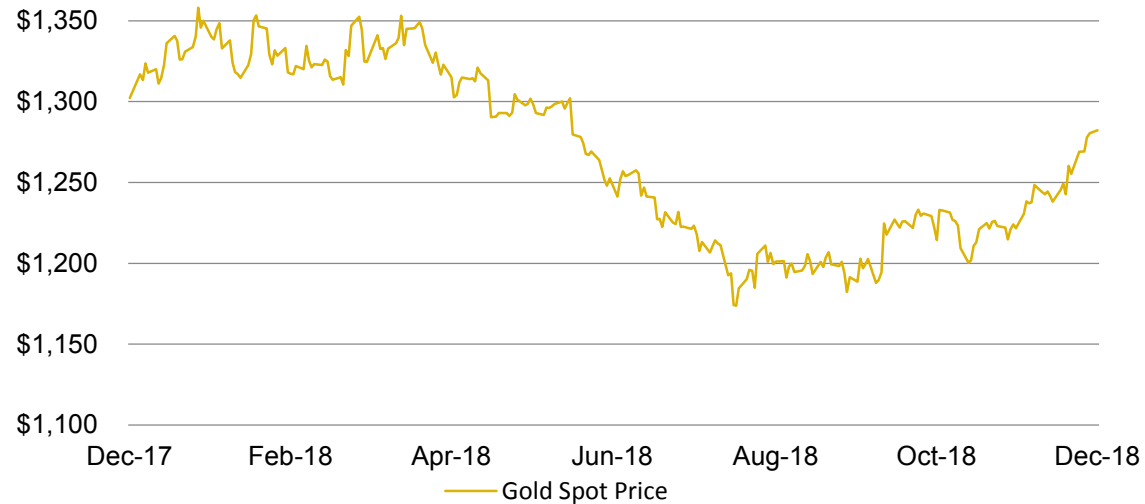
## INSIDE THIS ISSUE

Mining Industry Data	3
Outlook: Mining Industry	4
Gold Mining Comp Tables	5
Gold Mining Market Performance	7
Silver Mining Comp Tables	8
Silver Mining Market Performance	10
Gold and Silver M&A	11
Diversified Mining Comp Tables	12
Diversified Mining Market Performance	14
Diversified Mining M&A	15
Mining Industry M&A Overview	16
Noble Overview	18



# MINING – FUNDAMENTAL DATA

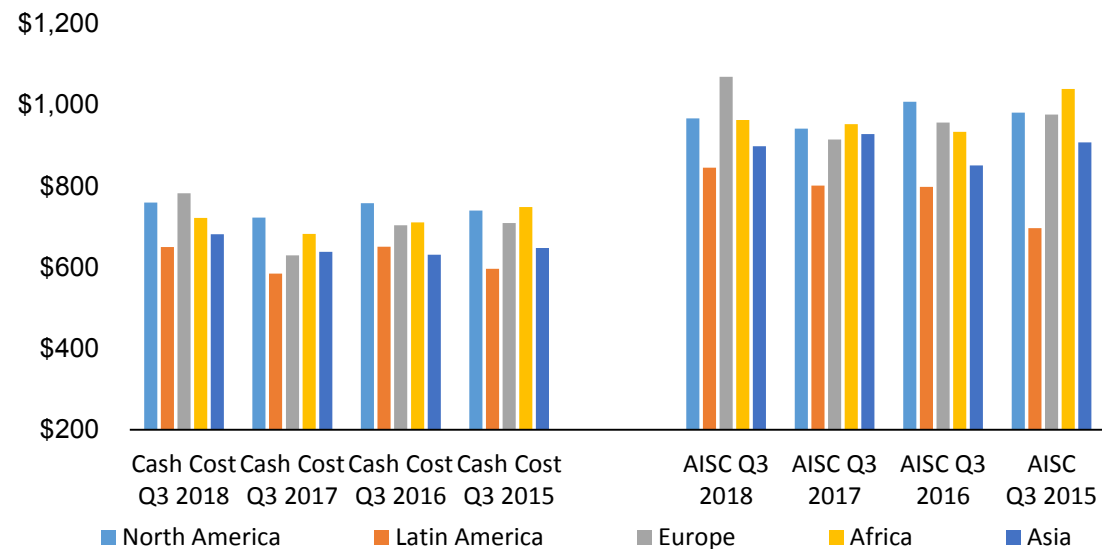
**GOLD SPOT PRICE**



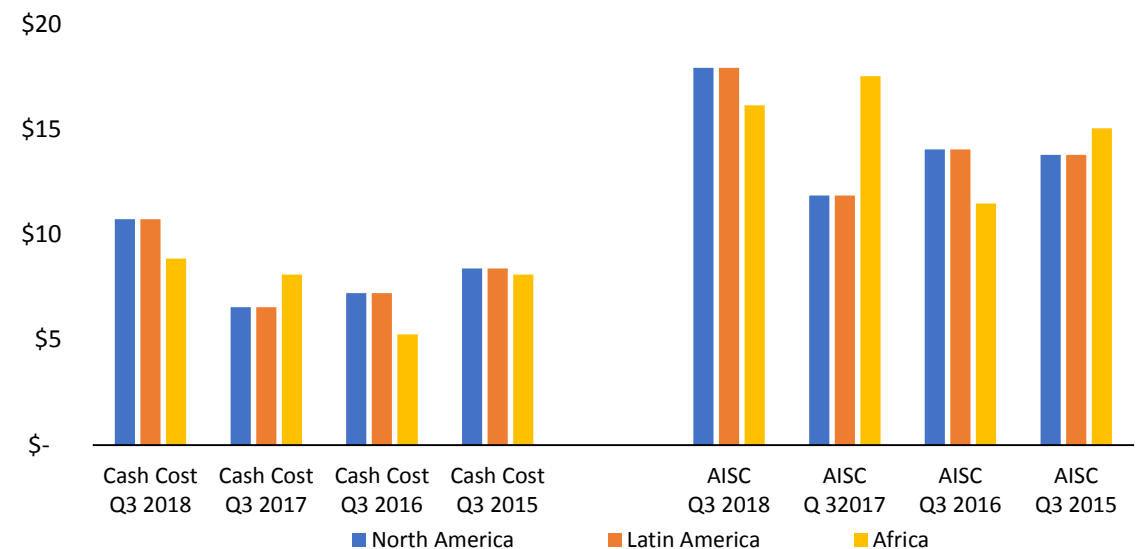
**SILVER SPOT PRICE**



**GOLD CASH COSTS AND AISC BY REGION**



**SILVER CASH COSTS AND AISC BY REGION**



Source: Capital IQ as of 12/31/2018



# METALS AND MINING INDUSTRY OUTLOOK

## METALS AND MINING INDUSTRY OUTLOOK

Mining companies (as measured by the XME) declined 23% during the December quarter versus a 14% decline in the S&P 500 index. However, the price of gold and silver rose 7.6% and 5.6%, respectively. Most of the gains were earned in December when precious metals performed their safe-haven roles amid concerns about economic growth and stock market turmoil. Whether silver and gold can sustain their recent momentum is a question on many investors' minds.

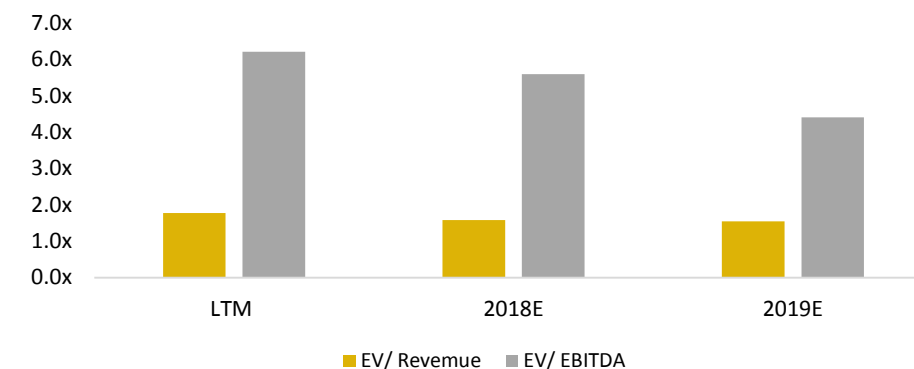
For most of the fourth quarter and the year, the outlook for higher interest rates and issues related to trade were supportive of the U.S. dollar which weighed on precious metals. Gold and silver gained appeal when the market melted up in December and have held their gains into 2019.

The dollar could weaken in 2019 as awareness of increasing U.S. government deficits and debt grows. With the benefits of stimulus fading and U.S. economic growth expected to slow, capital could rotate to regions outside the U.S. if investors view other markets as more attractive. Further, the Federal Reserve appears to have softened its stance toward increasing rates following a December stock market sell-off triggered, in part, by concerns about slowing economic growth and the Fed's perceived inflexibility regarding future rate actions.

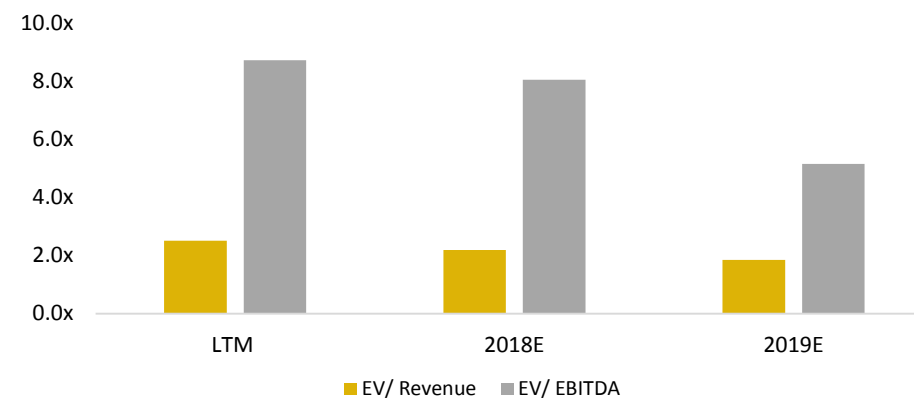
While December offered considerable market volatility, we liken it to fear of a bear sighting and believe precious metals may offer protection for when a bear market finally arrives. Additionally, while the last year has been a challenging one for metals investors, mining companies have coped with weak metals prices by becoming more efficient and high-grading resources. As a result, they offer significant leverage to improving metals prices.

Source: Capital IQ as of 12/31/2018, Mark Reichman

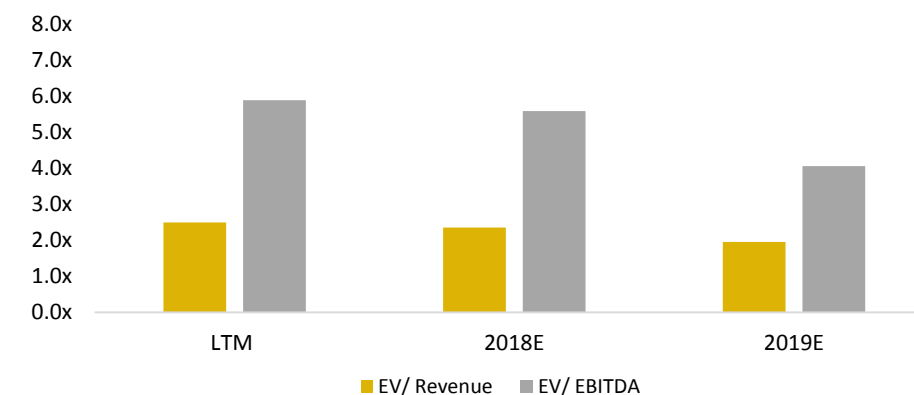
### GOLD



### SILVER



### DIVERSIFIED





# GOLD MINING

## COMPARABLE TABLES

### Major Gold Miner Index

	TICKER	CHANGE IN STOCK PRICE		SHARE PRICE	% OF 52 WEEK HIGH	MARKET CAP (\$M)	TOTAL DEBT (\$M)	ENT. VALUE (\$M)	LTM		EV / REVENUE			EV / EBITDA			EBITDA MARGIN
		3-MONTH	12-MONTH						REVENUES (\$M)	EBITDA (\$M)	LTM	2018E	2019E	LTM	2018E	2019E	
Kinross Gold	TSX:K	(72%)	(25%)	\$3.22	55%	4,031	1,734	5,159	3,236	1,105	1.6x	1.6x	1.7x	4.7x	5.0x	4.8x	34%
B2Gold Corp.	TSX:BTO	7%	(5%)	\$2.92	72%	2,896	747	3,299	1,127	538	2.9x	2.7x	2.7x	6.1x	5.4x	5.8x	48%
Yamana Gold	TSX:YRI	18%	(25%)	\$2.35	50%	2,233	1,819	3,871	1,777	552	2.2x	2.2x	2.2x	7.0x	6.5x	5.2x	31%
Detour Gold	TSX:DGC	(27%)	(28%)	\$8.45	55%	1,481	249	1,569	763	290	2.1x	2.1x	2.1x	5.4x	5.9x	6.3x	38%
Alamos Gold	TSX:AGI	(48%)	(45%)	\$3.60	42%	1,408	5	1,195	650	211	1.8x	1.9x	1.9x	5.7x	5.8x	4.6x	33%
Eldorado Gold	TSX:ELD	(67%)	(60%)	\$2.93	32%	464	602	738	468	61	1.6x	1.6x	1.5x	12.1x	6.4x	4.7x	13%

<b>Mean</b>	2.0x	2.0x	2.0x	6.8x	5.9x	5.3x	33%
<b>Median</b>	1.9x	2.0x	2.0x	5.9x	5.9x	5.0x	33%

### Intermediate Gold Miner Index

	TICKER	CHANGE IN STOCK PRICE		SHARE PRICE	% OF 52 WEEK HIGH	MARKET CAP (\$M)	TOTAL DEBT (\$M)	ENT. VALUE (\$M)	LTM		EV / REVENUE			EV / EBITDA			EBITDA MARGIN
		3-MONTH	12-MONTH						REVENUES (\$M)	EBITDA (\$M)	LTM	2018E	2019E	LTM	2018E	2019E	
Wesdome Gold	TSX:WDO	19%	93%	\$3.25	73%	438	7	422	91	32	4.6x	3.5x	3.1x	13.0x	9.2x	7.6x	36%
Golden Star Resources	TSX:GSC	(13%)	(28%)	\$3.18	56%	346	105	362	298	53	1.2x	1.3x	1.3x	6.8x	6.7x	3.1x	18%
Teranga Gold	TSX:TGZ	7%	24%	\$2.95	52%	318	76	334	325	133	1.0x	1.1x	1.3x	2.5x	3.0x	3.5x	41%
Premier Gold Mines	TSX:PG	(13%)	(59%)	\$1.18	32%	240	-	186	126	18	1.5x	1.2x	1.4x	10.4x	11.3x	5.2x	14%
Corvus Gold Inc.	TSX:KOR	(22%)	46%	\$1.93	57%	206	-	202	-	(7)	NM	NM	NM	NM	NM	NM	NM
Argonaut Gold Inc.	TSX:AR	3%	(40%)	\$1.14	40%	203	8	191	184	54	1.0x	0.9x	0.7x	3.5x	2.7x	1.8x	30%

<b>Mean</b>	1.9x	1.6x	1.6x	7.2x	6.6x	4.2x	28%
<b>Median</b>	1.2x	1.2x	1.3x	6.8x	6.7x	3.5x	30%

Source: Capital IQ as of 12/31/2018



# GOLD MINING

## COMPARABLE TABLES

### Junior Gold Miner Index

	TICKER	CHANGE IN STOCK PRICE		SHARE PRICE	% OF 52 WEEK HIGH	MARKET CAP (\$M)	TOTAL DEBT (\$M)	ENT. VALUE (\$M)	LTM		EV / REVENUE			EV / EBITDA			EBITDA MARGIN
		3-MONTH	12-MONTH						REVENUES (\$M)	EBITDA (\$M)	LTM	2018E	2019E	LTM	2018E	2019E	
Guyana Goldfields Inc.	TSX:GUY	(47%)	(71%)	\$1.17	22%	203	44	158	203	70	0.8x	0.8x	0.6x	2.3x	2.9x	1.5x	34%
Asanko Gold Inc.	TSX:AKG	(19%)	(10%)	\$0.64	36%	144	-	130	212	90	0.6x	0.6x	0.9x	1.4x	1.8x	3.1x	43%
Contango Ore, Inc.	OTCPK:CTGO	(17%)	(4%)	\$17.50	55%	113	-	102	-	-	NM	NM	NM	NM	NM	NM	NM
Pershing Gold	NasdaqGM:PGLC	(12%)	(56%)	\$1.06	41%	36	-	34	-	(14)	NM	NM	0.4x	NM	NM	NM	NM
GoGold Resources Inc.	TSX:GGD	(28%)	(49%)	\$0.18	35%	31	-	24	21	(24)	1.1x	0.7x	0.5x	NM	NM	NM	NM
Mako Mining Corp.	TSXV:MKO	(11%)	(34%)	\$0.12	43%	35	3	36	-	(1)	NM	1.2x	0.8x	NM	NM	NM	NM

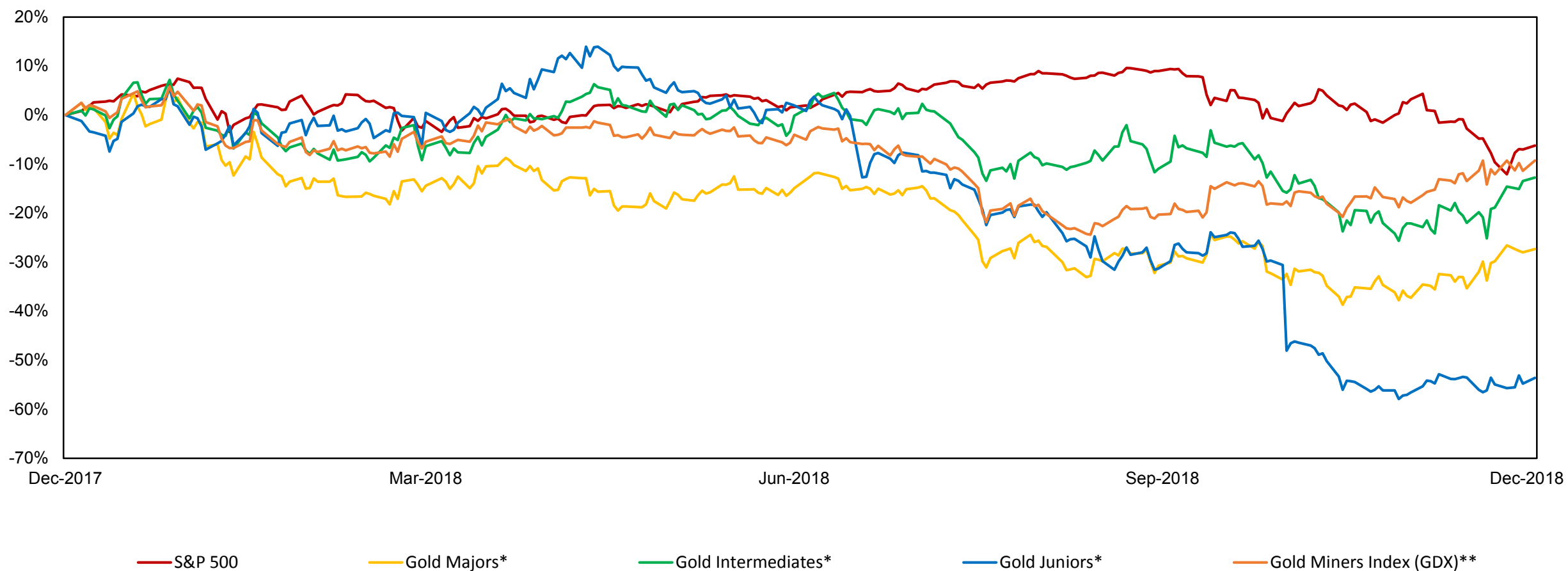
<b>Mean</b>	0.8x	0.8x	0.6x	1.9x	2.3x	2.3x	39%
<b>Median</b>	0.8x	0.8x	0.6x	1.9x	2.3x	2.3x	39%

Source: Capital IQ as of 12/31/2018



# GOLD MINING LTM EQUITY PERFORMANCE

(NOBLE INDEX SELECTION)



\* Noble Proprietary Sector (index composed of companies in the comparable table)  
\*\* SPDR Gold Shares (refer to disclosure section for more information)

Source: Capital IQ as of 12/31/2018



# SILVER MINING

## COMPARABLE TABLES

### Major Silver Miner Index

	TICKER	CHANGE IN STOCK PRICE		SHARE PRICE	% OF 52 WEEK HIGH	MARKET CAP (\$M)	TOTAL DEBT (\$M)	ENT. VALUE (\$M)	LTM		EV / REVENUE			EV / EBITDA			EBITDA MARGIN
		3-MONTH	12-MONTH						REVENUES (\$M)	EBITDA (\$M)	LTM	2018E	2019E	LTM	2018E	2019E	
Pan American Silver	TSX:PAAS	(1%)	(6%)	\$14.61	60%	2,239	29	2,032	837	255	2.4x	2.5x	2.3x	8.0x	8.5x	7.2x	30%
SSR Mining Inc.	TSX:SSRM	39%	37%	\$12.09	73%	1,454	244	1,250	425	126	2.9x	2.2x	1.8x	9.9x	7.0x	5.6x	30%
Tahoe Resources Inc.	TSX:THO	32%	(24%)	\$3.64	50%	1,141	102	1,192	497	101	2.4x	2.3x	1.7x	11.8x	9.4x	4.4x	20%
First Majestic Silver	TSX:FR	4%	(13%)	\$5.88	53%	1,139	153	1,209	288	58	4.2x	2.8x	1.9x	NM	NM	6.7x	20%
Hecla Mining	NYSE:HL	(15%)	(41%)	\$2.36	51%	1,133	549	1,621	591	222	2.7x	2.8x	2.2x	7.3x	9.8x	7.9x	38%
Coeur Mining, Inc.	NYSE:CDE	(16%)	(40%)	\$4.47	50%	909	429	1,233	697	184	1.8x	1.9x	1.6x	6.7x	8.7x	5.9x	26%

<b>Mean</b>	2.7x	2.4x	1.9x	8.7x	8.7x	6.3x	27%
<b>Median</b>	2.6x	2.4x	1.9x	8.0x	8.7x	6.3x	28%

### Intermediate Silver Miner Index

	TICKER	CHANGE IN STOCK PRICE		SHARE PRICE	% OF 52 WEEK HIGH	MARKET CAP (\$M)	TOTAL DEBT (\$M)	ENT. VALUE (\$M)	LTM		EV / REVENUE			EV / EBITDA			EBITDA MARGIN
		3-MONTH	12-MONTH						REVENUES (\$M)	EBITDA (\$M)	LTM	2018E	2019E	LTM	2018E	2019E	
MAG Silver Corp.	TSX:MAG	(9%)	(41%)	\$7.33	46%	627	-	493	-	(7)	NM	NM	NM	NM	NM	NM	NM
Fortuna Silver Mines	TSX:FVI	(16%)	(30%)	\$3.66	47%	586	42	458	279	128	1.6x	1.8x	1.4x	3.6x	4.1x	3.2x	46%
Silvercorp Metals Inc.	TSX:SVM	(15%)	(20%)	\$2.09	52%	352	4	298	176	88	1.7x	1.7x	1.6x	3.4x	3.2x	4.0x	50%
Endeavour Silver Corp.	TSX:EDR	(6%)	(11%)	\$2.15	49%	281	-	254	158	25	1.6x	1.2x	1.1x	10.0x	6.4x	5.2x	16%
Great Panther Silver	TSX:GPR	(17%)	(45%)	\$0.71	38%	120	-	65	63	(4)	1.0x	0.8x	0.7x	NM	NM	NM	NM

<b>Mean</b>	1.5x	1.4x	1.2x	5.7x	4.6x	4.1x	37%
<b>Median</b>	1.6x	1.5x	1.3x	3.6x	4.1x	4.0x	46%

Source: Capital IQ as of 12/31/2018



# SILVER MINING

## COMPARABLE TABLES

### Junior Silver Miner Index

	TICKER	CHANGE IN STOCK PRICE		SHARE PRICE	% OF 52 WEEK HIGH	MARKET CAP (\$M)	TOTAL DEBT (\$M)	ENT. VALUE (\$M)	LTM		EV / REVENUE			EV / EBITDA			EBITDA MARGIN
		3-MONTH	12-MONTH						REVENUES (\$M)	EBITDA (\$M)	LTM	2018E	2019E	LTM	2018E	2019E	
Alexco Resource Corp.	TSX:AXR	(10%)	(41%)	\$0.93	43%	101	-	90	10	(5)	8.6x	7.9x	7.4x	NM	NM	NM	NM
Bear Creek Mining	TSXV:BCM	(26%)	(53%)	\$0.76	29%	79	-	68	-	(12)	NM	NM	NM	NM	NM	NM	NM
Americas Silver	TSX:USA	(31%)	(55%)	\$1.63	28%	71	12	80	62	3	1.3x	0.8x	0.6x	NM	9.8x	3.9x	5%
Excellon Resources Inc.	TSX:EXN	(32%)	(66%)	\$0.51	24%	50	1	41	25	(2)	1.6x	1.1x	0.6x	NM	NM	NM	NM
Avino Silver & Gold	TSX:ASM	(1%)	(55%)	\$0.62	31%	39	10	42	35	7	1.2x	0.9x	0.7x	5.8x	3.3x	2.7x	21%
Kootenay Silver Inc	TSXV:KTN	2%	(39%)	\$0.10	40%	19	-	17	-	(2)	NM	NM	NM	NM	NM	NM	NM

<b>Mean</b>	3.2x	2.7x	2.3x	5.8x	6.5x	3.3x	13%
<b>Median</b>	1.4x	1.0x	0.7x	5.8x	6.5x	3.3x	13%

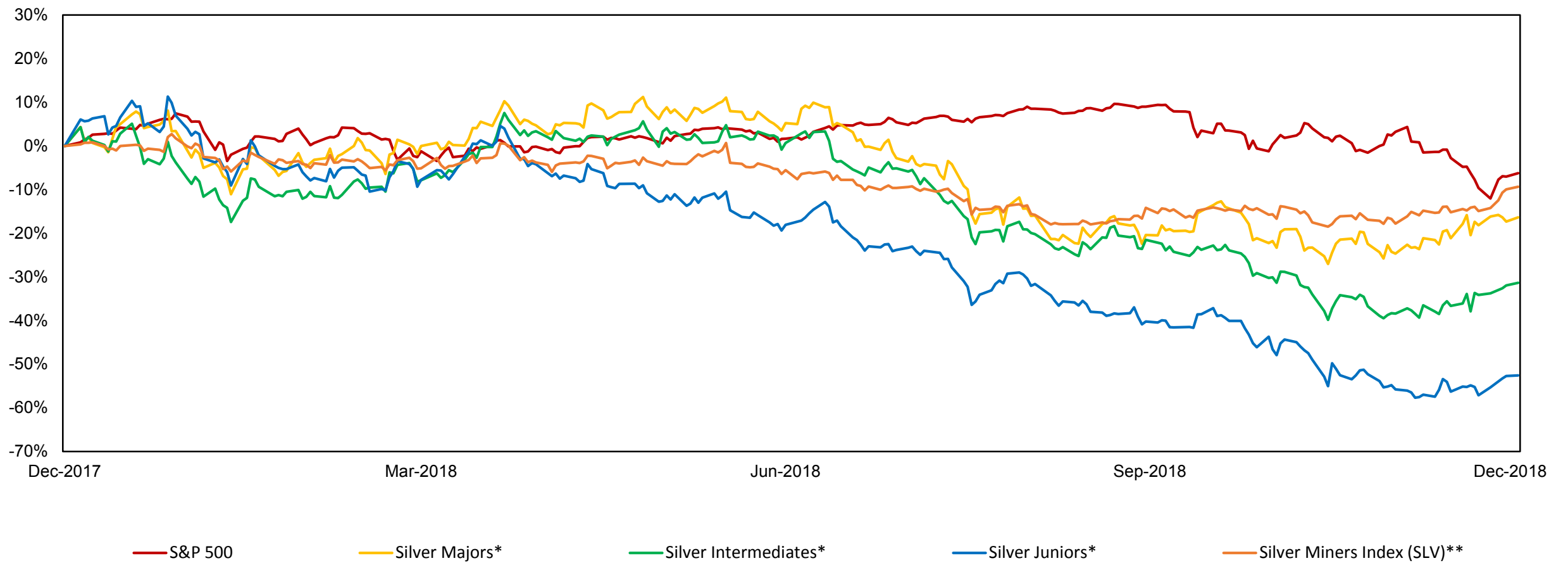
Source: Capital IQ as of 12/31/2018



# SILVER MINING

## LTM EQUITY PERFORMANCE

(NOBLE INDEX SELECTION)



\* Noble Proprietary Sector (index composed of companies in the comparable table)  
\*\* SPDR Gold Shares (refer to disclosure section for more information)

Source: Capital IQ as of 12/31/2018



## GOLD & SILVER LTM GLOBAL M&A ACTIVITY

Date	Buyer	Seller	Transaction Value (\$MM's)	EV/Revenue	EV/EBITDA
12/04/2018	Combined Success Investments Limited	Tongguan Tongjin Mining Co. Ltd./Shaanxi Dujin Mining Co. Ltd.	45.5	-	-
11/22/2018	A.V.O.D. Kurutulmus Gida ve Tarim Urunleri A.S.	Avod Altin Madencilik Enerji Ins.San.ve Tic. A.S.	10.4	-	-
10/25/2018	KG Mining (Bald Mountain) Inc.	The Bald Mountain Exploration Joint Venture	15.5	-	-
10/12/2018	OZD Asia Pte Ltd.	Boroo Gold LLC/Centerra Gold Mongolia LLC	35.0	-	-
09/24/2018	Barrick Gold Corporation	Randgold Resources Limited	6,515.5	5.0x	10.3x
09/04/2018	BHP Group Plc	SolGold plc	35.2	-	-
08/09/2018	PT Danusa Tambang Nusantara	PT Agincourt Resources	1,140.0	-	-
08/02/2018	Coeur Mining, Inc.	Northern Empire Resources Corp.	80.8	-	-
07/17/2018	Inca One Gold Corp.	Anthem United Inc.	7.2	0.3x	-
07/05/2018	Goldcorp Inc.	Gold Standard Ventures Corp	9.7	-	-
06/25/2018	Bardoc Gold Limited	Excelsior Gold Limited	25.2	0.9x	2.8x
06/18/2018	Bonterra Resources Inc.	Metanor Resources Inc.	57.7	2.3x	-
06/04/2018	Consolidated Mining & Civil Pty Ltd	Benagerie Gold Pty Ltd	10.3	-	-
05/15/2018	Mako Mining Corp.	Marlin Gold Mining Ltd.	80.1	2.1x	-
05/14/2018	Rio2 Limited	Atacama Pacific Gold Corporation	63.8	-	-
05/10/2018	Kirkland Lake Gold Ltd.	Novo Resources Corp.	15.6	-	-
05/10/2018	Metalla Royalty & Streaming Ltd.	ValGold Resources Ltd.	6.5	-	-
05/05/2018	Joint-Stock Company AK Altynalmas	Aktogai Mys LLC	33.5	-	-
04/20/2018	Dallaglio Investments (Pvt) Ltd	Delta Gold Zimbabwe (Pvt) Ltd	6.3	-	-
03/26/2018	Titan Minerals Limited	Andina Resources Limited	15.2	-	-
03/19/2018	Hecla Mining Company	Klondex Mines Ltd.	468.5	1.7x	8.5x
03/19/2018	Alio Gold Inc.	Rye Patch Gold Corp.	153.6	12.1x	-
03/02/2018	Red Eagle Mining Corporation	Red Eagle Exploration Limited	9.8	-	-
02/21/2018	PAO VOLGA Capital (Public Joint Stock Company)	OJSC Novosibirsk Refinery	7.2	-	-
02/20/2018	Hgm Resources Pty Ltd	Primary Gold Limited	26.1	-	-
02/13/2018	Westgold Resources Limited	Polar Metals Pty Ltd	7.2	-	-
02/02/2018	APAC Resources Limited	Tanami Gold NL	16.0	-	-
01/30/2018	Minera Alamos Inc.	Corex Gold Corporation	22.6	-	-
01/23/2018	Leagold Mining Corporation	Brio Gold Inc.	362.3	1.6x	13.1x
01/12/2018	First Majestic Silver Corp.	Primero Mining Corp.	126.8	1.2x	15.5x
		<b>Mean</b>		<b>3.0x</b>	<b>10.1x</b>
		<b>Median</b>		<b>1.7x</b>	<b>10.3x</b>

Source: Capital IQ as of 12/31/2018

# DIVERSIFIED MINING

## COMPARABLE TABLES

### Major Diversified Miner Index

	TICKER	CHANGE IN STOCK PRICE		SHARE PRICE	% OF 52 WEEK HIGH	MARKET CAP (\$M)	TOTAL DEBT (\$M)	ENT. VALUE (\$M)	LTM		EV / REVENUE			EV / EBITDA			EBITDA MARGIN
		3-MONTH	12-MONTH						REVENUES (\$M)	EBITDA (\$M)	LTM	2018E	2019E	LTM	2018E	2019E	
Teck Resources Limited	TSX:TECK.B	(11%)	(18%)	\$21.54	55%	12,383	4,050	15,226	9,756	3,976	1.6x	1.2x	1.2x	3.8x	2.6x	2.8x	41%
First Quantum Minerals	TSX:FM	(29%)	(42%)	\$8.09	35%	5,578	7,341	12,508	3,797	1,599	3.3x	3.2x	2.6x	7.8x	7.2x	5.7x	42%
Turquoise Hill Resources	TSX:TRQ	(22%)	(52%)	\$1.65	36%	3,318	4,174	4,976	1,086	376	4.6x	4.4x	4.0x	13.2x	NM	NM	35%
Lundin Mining	TSX:LUN	(22%)	(38%)	\$4.13	45%	3,032	433	2,522	1,851	800	1.4x	1.4x	1.3x	3.2x	3.9x	3.4x	43%
Nevsun Resources Ltd.	TSX:NSU	(1%)	80%	\$4.39	73%	1,328	-	1,377	335	36	4.1x	3.9x	3.5x	NM	NM	11.1x	11%
Hudbay Minerals Inc.	TSX:HBM	(6%)	(47%)	\$4.73	37%	1,237	1,055	1,795	1,505	649	1.2x	1.3x	1.4x	2.8x	3.0x	3.4x	43%

<b>Mean</b>	2.7x	2.6x	2.3x	6.2x	4.2x	5.3x	36%
<b>Median</b>	2.4x	2.3x	2.0x	3.8x	3.5x	3.4x	41%

### Intermediate Diversified Miner Index

	TICKER	CHANGE IN STOCK PRICE		SHARE PRICE	% OF 52 WEEK HIGH	MARKET CAP (\$M)	TOTAL DEBT (\$M)	ENT. VALUE (\$M)	LTM		EV / REVENUE			EV / EBITDA			EBITDA MARGIN
		3-MONTH	12-MONTH						REVENUES (\$M)	EBITDA (\$M)	LTM	2018E	2019E	LTM	2018E	2019E	
Sierra Metals Inc.	AMEX:SMTS	(30%)	(29%)	\$1.76	59%	290	60	347	229	87	1.5x	1.1x	1.0x	4.0x	2.9x	2.9x	38%
Energy Fuels Inc.	TSX:EFR	(13%)	57%	\$2.84	53%	258	17	238	33	(15)	7.3x	4.6x	6.6x	NM	NM	NM	NM
Capstone Mining	TSX:CS	(27%)	(61%)	\$0.45	28%	179	232	452	556	167	0.8x	1.1x	1.0x	2.7x	3.3x	3.2x	30%
Imperial Metals	TSX:III	(25%)	(58%)	\$1.14	33%	137	676	772	316	49	2.4x	2.1x	1.6x	15.7x	NM	6.1x	16%
Panoramic Resources	ASX:PAN	(34%)	(18%)	\$0.26	39%	131	-	118	1	(7)	NM	3.8x	1.0x	NM	NM	2.7x	NM

<b>Mean</b>	3.0x	2.5x	2.3x	7.5x	3.1x	3.7x	28%
<b>Median</b>	2.0x	2.1x	1.0x	4.0x	3.1x	3.0x	30%

Source: Capital IQ as of 12/31/2018



# DIVERSIFIED MINING

## COMPARABLE TABLES

### Junior Diversified Miner Index

	TICKER	CHANGE IN STOCK PRICE		SHARE PRICE	% OF 52 WEEK HIGH	MARKET CAP (\$M)	TOTAL DEBT (\$M)	ENT. VALUE (\$M)	LTM		EV / REVENUE			EV / EBITDA			EBITDA MARGIN
		3-MONTH	12-MONTH						REVENUES (\$M)	EBITDA (\$M)	LTM	2018E	2019E	LTM	2018E	2019E	
Taseko Mines Limited	TSX:TKO	(40%)	(80%)	\$0.48	16%	109	264	324	254	72	1.3x	0.9x	0.8x	4.5x	3.3x	2.6x	28%
Tinka Resources Limited	TSXV:TK	(16%)	(58%)	\$0.24	31%	64	-	51	-	(2)	NM	NM	NM	NM	NM	NM	NM
Western Copper & Gold	TSX:WRN	(33%)	(55%)	\$0.45	34%	46	-	42	-	-	NM	NM	NM	NM	NM	NM	NM
Falco Resources Ltd.	TSXV:FPC	(31%)	(69%)	\$0.21	19%	43	15	55	-	(5)	NM	NM	NM	NM	NM	NM	NM
Tasman Resources Ltd	ASX:TAS	45%	(38%)	\$0.04	33%	21	1	26	1	(8)	NM	NM	NM	NM	NM	NM	NM
Atico Mining	TSXV:ATY	(32%)	(65%)	\$0.21	26%	21	5	26	56	20	0.5x	0.3x	0.3x	1.3x	1.0x	1.0x	35%

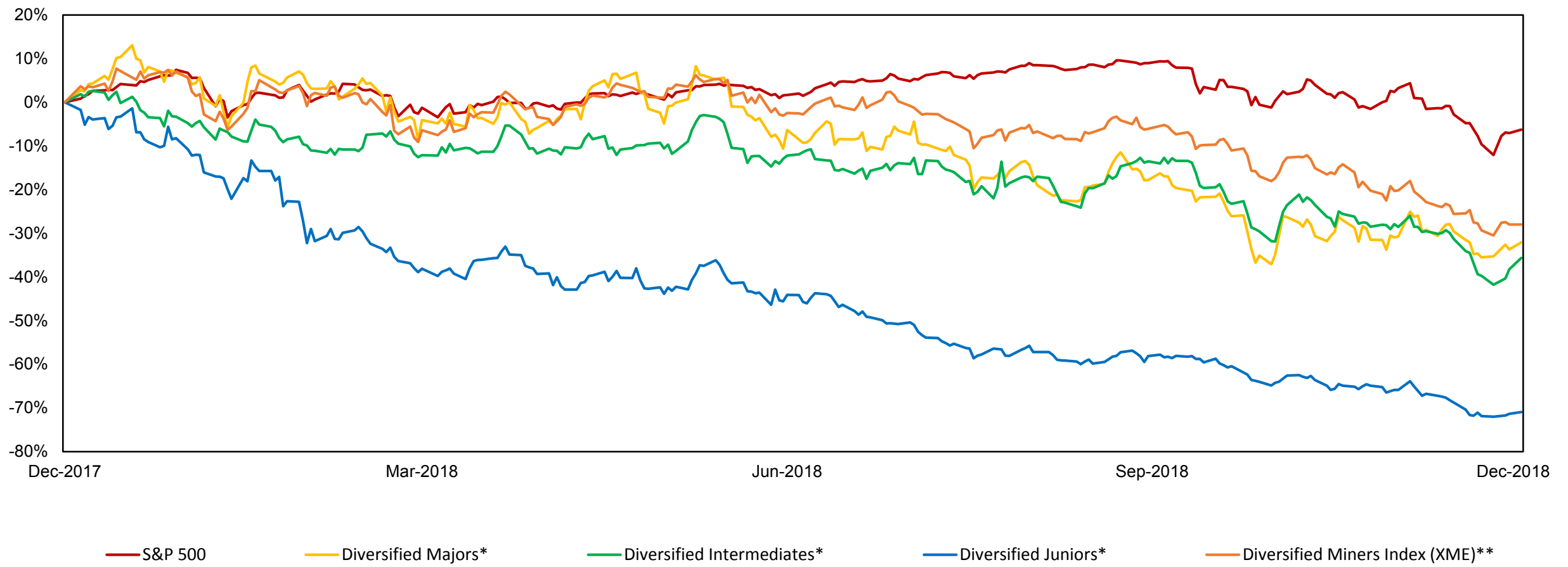
<b>Mean</b>	0.9x	0.6x	0.6x	2.9x	2.2x	1.8x	32%
<b>Median</b>	0.9x	0.6x	0.6x	2.9x	2.2x	1.8x	32%

Source: Capital IQ as of 12/31/2018



# DIVERSIFIED MINING LTM EQUITY PERFORMANCE

(NOBLE INDEX SELECTION)



\* Noble Proprietary Sector (index composed of companies in the comparable table)  
\*\* SPDR Gold Shares (refer to disclosure section for more information)  
Source: Capital IQ as of 12/31/2018



## DIVERSIFIED MINING LTM GLOBAL M&A ACTIVITY

Date	Buyer	Seller	Transaction Value (\$MM's)	EV/Revenue	EV/EBITDA
12/20/2018	Teck Resources Limited	Sun Metals Corp.	2.6	-	-
12/07/2018	Delrey Metals Corp.	BC Vanadium Corp.	1.5	-	-
10/29/2018	Pelangio Exploration Inc.	2522962 Ontario Inc.	0.7	-	-
10/10/2018	Not Disclosed	Largo Resources Ltd.	28.8	3.7x	5.2x
09/19/2018	Virtus Mining Ltd.	Aldridge Minerals Inc.	4.8	-	-
09/19/2018	Not Disclosed	Aldridge Minerals Inc.	0.6	-	-
09/13/2018	Bushveld Minerals Limited	Strategic Minerals Corporation	17.5	-	-
09/13/2018	Osisko Gold Royalties Ltd	Osisko Metals Incorporated	2.3	-	-
08/28/2018	Virtus Mining Ltd.	Aldridge Minerals Inc.	45.1	-	-
08/14/2018	Osisko Mining Inc.	Beaufield Resources Inc.	9.6	-	-
08/01/2018	Ascendant Resources Inc.	Redcorp Empreendimentos Mineiros Unipessoal, Lda	2.5	-	-
07/26/2018	Not Disclosed	Advantage Lithium Corp.	5.1	-	-
07/02/2018	Not Disclosed	Vedanta Resources Limited	1,011.1	1.3x	4.8x
06/29/2018	Sims Metal Management Limited	Sims Pacific Metals Limited	28.5	-	-
06/27/2018	Public Joint Stock Company Dorogobuzh	CJSC Verkhnekamsk Potash Company	250.5	-	-
06/18/2018	South32 Limited (ASX:S32)	Arizona Mining Inc.	1,341.8	-	-
05/30/2018	2625312 Ontario Inc.	FAX Capital Corp. (	1.2	-	-
04/27/2018	ERAMET S.A. (ENXTPA:ERA)	Mineral Deposits Limited	245.2	-	-
04/26/2018	Quebec Precious Metals Corporation	Matamec Explorations Inc.	0.7	-	-
04/24/2018	The Electrum Group LLC	Trilogy Metals Inc.	5.8	-	-
04/05/2018	Alliance Mineral Assets Limited	Tawana Resources NL	168.2	-	-
03/14/2018	First Cobalt Corp. (TSXV:FCC)	US Cobalt Inc.	105.5	-	-
03/14/2018	Not Disclosed	Songtao Kingray Mining Development Co., Ltd.	1.9	-	-
02/16/2018	Not Disclosed	Zara Resources Inc.	0.7	-	-
02/08/2018	Lanstead III LLC	Metminco Limited	0.3	-	-
02/07/2018	Guangdong Dowstone Technology Co., Ltd.	Guangdong Jiana Energy Technology Co.,Ltd.	406.1	-	-
02/06/2018	Whenzou Liten Dreamwork Investment	Ultra Lithium Inc	7.6	-	-
02/05/2018	Weatherly International plc	China Africa Resources Namibia (Pty) Ltd	0.6	-	-
01/16/2018	Not Disclosed	Wanguo International Mining Group Limited	7.2	3.6x	8.6x
01/10/2018	O3 Investments Inc.	Beaufield Resources Inc.	1.9	-	-
		<b>Mean</b>		2.9x	6.2x
		<b>Median</b>		3.6x	5.2x

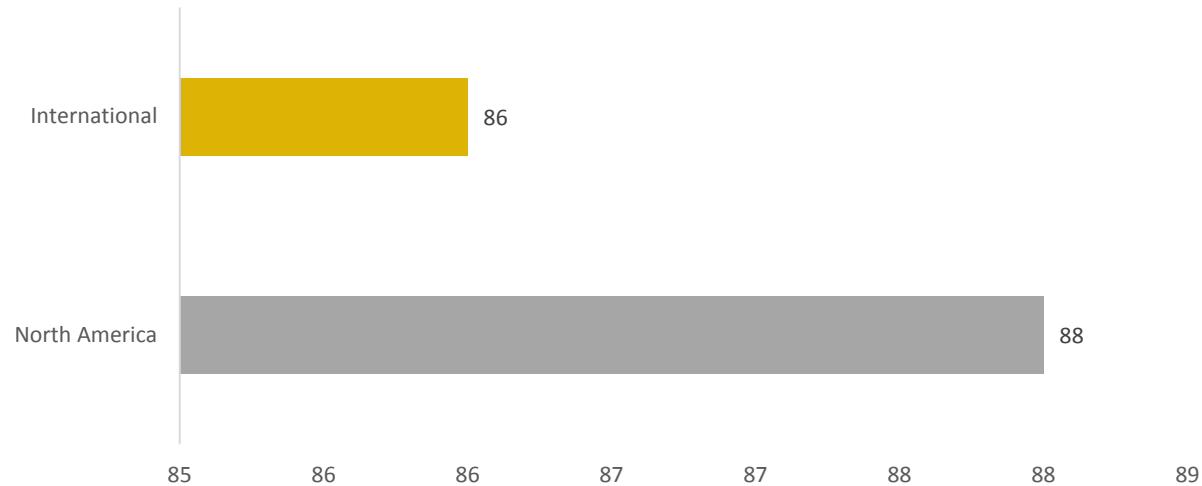
Source: Capital IQ as of 12/31/2018



# LTM MINING INDUSTRY M&A SUMMARY

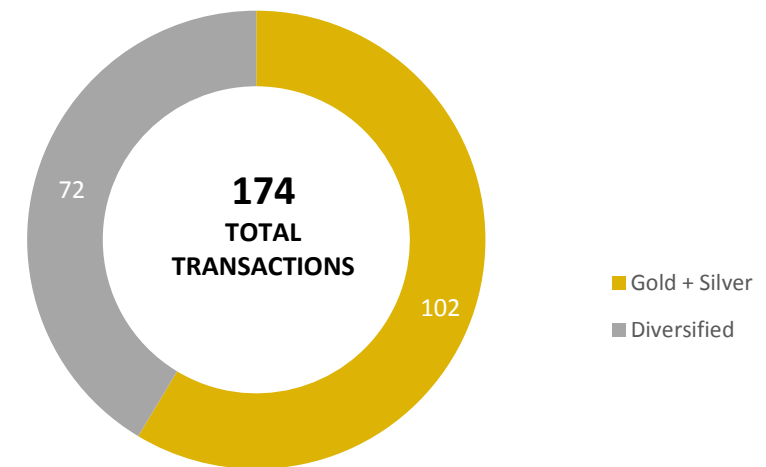
## NORTH AMERICA VS INTERNATIONAL

### TOTAL TRANSACTIONS (Number of transactions)



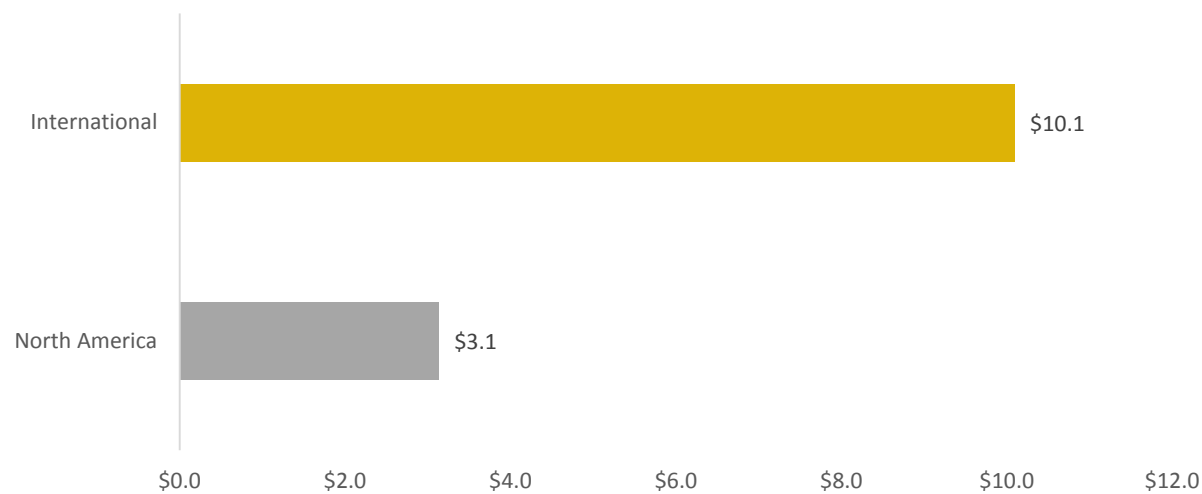
## DEAL VALUE PER SECTOR

### (Number of transactions)



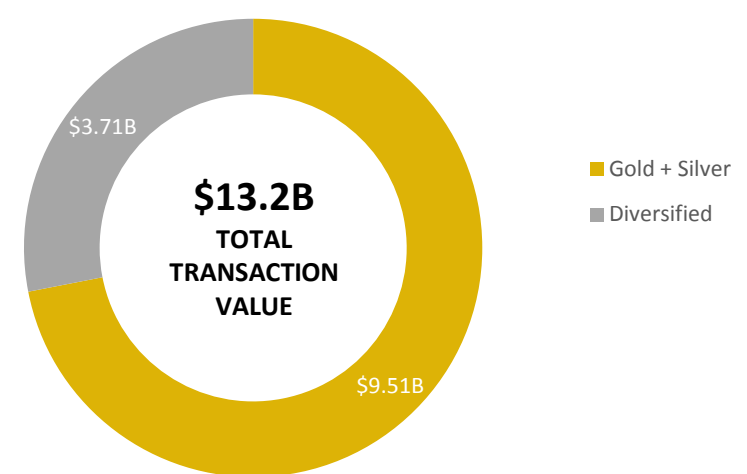
## NORTH AMERICA VS INTERNATIONAL

### TOTAL TRANSACTIONS (Values in \$B)



## TOTAL TRANSACTION VALUE

### (Values in \$B)



Source: Capital IQ as of 12/31/2018





## NOBLE QUARTERLY HIGHLIGHTS

### Wealth Minerals Ltd. (TSXV:WML)

#### Industry: Metals and Mining – Lithium

Wealth Minerals is a mineral resource company with interests in Canada, Mexico, Peru and Chile. The Company’s main focus is the acquisition of lithium projects in South America. To date, the Company has positioned itself to develop the Aguas Calientes Norte and Quisquiro Salars in Chile (the Trinity Project), as well as to work alongside existing producers in the prolific Atacama Salar, in addition to the Laguna Verde lithium project acquisition.

#### 4<sup>th</sup> Quarter News Highlight: 12/04/2018:

Wealth announces that the Company has entered into two LOIs with respect to the acquisition of interests in two Chilean copper projects, which will be held by a newly formed subsidiary of Wealth. Wealth intends to spin-out the subsidiary to shareholders of Wealth, with the intent of listing the subsidiary on the TSX-V. The spin-out is being undertaken to allow Wealth shareholders to benefit from Wealth’s exposure to Chilean mining deals and operational expertise. Wealth will continue to remain focused on its Chilean lithium assets.



### SilverCrest Metals Inc. (TSXV:SIL)

#### Industry: Metals and Mining – Silver and Gold

SilverCrest Metals is a Canadian precious metals exploration company headquartered in Vancouver, BC, that is focused on new discoveries, value-added acquisitions and targeting production in Mexico’s historic precious metal districts. SilverCrest is the first company to drill test the historic, high grade Las Chispas Silver-Gold project, which is a past precious metals producer.

#### 4<sup>th</sup> Quarter News Highlight: 12/13/2018:

SilverCrest is pleased to announce further Phase III in-fill drill results for the Las Chispas Property. All 12 newly reported in-fill core holes in this release were targeting mineralization in the Area 51 zone. The weighted average of today’s in-fill holes is 3.4 metres grading 12.39 gpt gold and 795.7 gpt silver, or 1,725 gpt silver equivalent. For comparison, in the September 13, 2018 resource estimate, Area 51 had an estimated weighted average true width of 2.7 metres, grading 7.13 gpt gold and 614 gpt silver or 1,148 gpt AgEq.



### Kintavar Exploration Inc. (TSXV:KTR)

#### Industry: Metals and Mining – Precious Metals and Minerals

Kintavar Exploration is a natural resources corporation principally engaged in the exploration and development of precious metals and base metals properties located in Quebec with access to infrastructures. It seeks to identify, investigate, evaluate and acquire under explored properties located in both traditional and non-traditional geologically favourable environment.

#### 4<sup>th</sup> Quarter News Highlight: 12/12/2018:

Kintavar Exploration is pleased to announce the completion of the final drilling program on the Mitchi project for 2018. A total of 10 holes and 1,600m were recently drilled with the main objective being to focus on the mineralized extensions of the Sherlock area and the recently discovered Conan area. All the drilling samples have been sent to the laboratory and assays are expected toward the end of January 2019.



Source: Company Press Releases

$$R + (e^2 + p^2) = \text{NF}$$

# NOBLE CAPITAL MARKETS

## NOBLE CAPITAL MARKETS

NOBLE CAPITAL MARKETS is a research-driven investment and merchant bank focused on small cap, emerging growth companies in the healthcare, technology, media and natural resources sectors. That's what we are. Who we are is what makes us different.

Our people are talented, dedicated, experienced professionals who come together with a common cause; advising on long-term client solutions by employing innovative, collaborative and responsive strategies. We're passionate and personable. We approach things from our clients' perspective.

We know that developing lasting relationships is reliant upon putting our clients' interests before ours. We understand the impact of our services. Insightful advisory and effective capital procurement can change lives. Empowering our clients to create employment, engineer technological and medical breakthroughs, producing products and services that lay the foundation for the future. For more than 30 years these have been our guiding principles. While much has changed over the three decades since we began, these core values and our reputation have not. Our clients must know what to expect from us. Then we can strive to exceed expectations.

## A SIMPLE FORMULA OUR VALUE PROPOSITION.

It starts with research with a fundamental belief that information guides the management process, NOBLE understands that there is no short-path to success. With this as a solid foundation, apply experience and execution delivered by people with passion. This is our formula to add value to your creation.

Research + Experience & Execution + People with Passion = Value

### FULL-SERVICE INVESTMENT BANK

- Established 1984.
- Private firm, employee owned.
- Built on commitment to provide value and support for our clients.

### FOCUSED INSTITUTIONAL SALES AND TRADING

- Seasoned sales and sales trading team.
- Long standing relationships with premier growth- focused investors.

### INVESTMENT BANKING COMMITMENT

- Proven track record.
- Senior level attention to every client and transaction.
- Ability to deliver complete "mind share" of NOBLE on all transactions.

### RESEARCH DRIVEN CAPITAL MARKETS PLATFORM

- Experience team of Research Analysts covering approximately 100 companies.
- Focus on Technology, Media, Healthcare and Natural Resources.
- Strong Institutional Sponsorship.



$$R + (e^2 + p^2) = \text{TR}$$

## INVESTMENT BANKING

Our investment banking team, together with our well-recognized equity research analysts and the equity capital markets group, provide our clients with fundamental capital markets advisory and support - prior, during and most importantly, after a transaction. NOBLE's investment banking team works closely with the management and Board of our corporate clients in order to fully understand operational and financial objectives. With this knowledge our banking team will develop an efficient and effective advisory program which offers a variety of services including:

### EQUITY CAPITAL MARKETS

- Secondary and Follow-on Offerings
- Registered Direct Offerings
- Initial Public Offerings
- At the market Offerings (ATM's)
- PIPEs/Private Sale Offerings

### DEBT CAPITAL MARKETS

- Senior Debt
- Mezzanine
- Convertible Debt
- Bridge Financings

### ADVISORY SERVICES

- Merger & Acquisitions
- Fairness Opinions
- Valuation Services

## SELECT NATURAL RESOURCES TRANSACTIONS

 <b>SAILFISH</b> <small>ROYALTY CORP.</small> (TSX-V: FISH)	 <b>ORCHLIGHT</b> <small>ENERGY</small> (TRCH)	 <b>SIERRA</b> <small>METALS</small>	 <b>MARLIN</b> <small>GOLD MINING LTD.</small> (MLN)	 <b>SES</b> <small>SYNTHESIS ENERGY SYSTEMS</small> (SYMX)	 <b>AVINO SILVER &amp; GOLD MINES LTD.</b> (ASM)	 <b>PETROSHARE</b> (PRHR)
<b>Restructuring Advisory</b>	<b>Advisory</b>	<b>\$55,000,000</b>	<b>Advisory</b>	<b>Advisory</b>	<b>\$800,000</b>	<b>\$4,600,000</b>
Fairness Opinion	Corporate Advisory	At-The-Market Offering (ATM) Agent	Corporate Advisory	Corporate Advisory	Private Placement of Registered Securities Sole Placement Agent	Initial Public Offering (IPO) Lead Underwriter
 August 2018	 March 2018	 October 2017	 February 2017	 January 2017	 March 2016	 November 2015

$$R + (e^2 + p^2) = \pi$$

## VALUATION SERVICES

NOBLE's Valuation and Advisory Services team specializes in providing business and intangible asset valuations, fairness opinions, financial and strategic analysis, and transaction support services covering a broad spectrum of industries and situations from early stage, middle market and Fortune 500 companies and capital market constituents. NOBLE's team is made up of professionals with numerous accreditations and bring excellence in accounting, taxation, and financial due diligence to provide companies with valuation advice for a multitude of purposes.

**Valuation** – NOBLE's professionals have significant experience in the valuation of privately owned and public businesses across a wide range of industries. We perform an extensive analysis of the business as well as evaluate industry trends and various other factors in order to inform our clients as to the likely range of value they can expect. Our services are characterized by intellectual and analytical rigor and our conclusions are backed by thorough documentation.

Chief Accounting Officers, Corporate Controllers, CFOs, and Corporate Boards rely on Noble's experienced valuation professionals to produce sophisticated, supportable, and timely valuations to assist in complying with financial reporting requirements, including:

- Purchase price allocation and fresh start accounting
- Goodwill and long-lived asset impairment testing
- Tangible asset valuation
- Fair Value measurement of financial assets & liabilities

**Opinions** - Whether our clients are looking to fulfill their fiduciary duties, mitigate risk or determine corporate value, we are there throughout the transaction process to offer objective advice based on rigorous analysis. We work on behalf of boards of directors, investors, trustees and other corporate leaders to advise and provide opinions on a wide range of transactions.

We have advised Corporate Boards, special transaction committees, independent trustees, management and other fiduciaries of middle market public and private companies on the financial aspects of a transaction. Our independent advice withstands scrutiny from shareholders, bondholders, the SEC, IRS, or counterparties to a transaction

## MERCHANT BANKING

Our Principal Investment focus is primarily on private and small-cap public (\$10mill to \$50mill market caps) companies in industries within NOBLE's research verticals. Investments are made directly by NOBLE and its affiliates and may also involve syndicate participants. We work to identify those companies with game-changing or superior products and technologies that have management teams with proven track-records of success. NOBLE structures investments to meet a company's capital needs whether its growth capital, liquidity or debt repayment. Capital commitment ranges from \$200k to \$2million principal and \$2million above with syndicate.

The scope of our Merchant Banking activities includes:

- Targeting domestic companies within our areas of focus and expertise
- Analyzing a company's opportunities and assessing its risks within their respective industry
- Structuring, negotiating and executing the transaction
- Work in assessing the appropriate time and manner in which to harvest the investment

NOBLE's Merchant Banking Team works continuously with our portfolio companies to assist the management team and Board of Directors to create value and grow their businesses to facilitate long-term shareholder value. Through our extensive sector research coverage, institutional investor non-deal road shows, equity conferences and market making, we blend a powerful mix of capital markets acumen to procure success.



$$R + (e^2 + p^2) = \pi$$

## INVESTMENT BANKING TEAM

### Richard Giles, Managing Director

rgiles@noblecapitalmarkets.com – 617.692.9346

- Joined NOBLE in 2010 as Head of the Technology, Media & Telecommunications Investment Banking Group
- 25 years of investment banking experience.
- Executed more than 100 M&A and capital raising transactions totaling \$10+ billion
- Former head of Stifel Nicolaus' Technology Group.
- Former head of A.G. Edwards' Emerging Growth Group and member of Investment Committee for A.G. Edwards Capital
- A.B. Harvard College; M.B.A., Harvard Business School

### Francisco Penafiel, Managing Director

fpenafiel@noblecapitalmarkets.com – 561.994.5740

- Executed M&A and capital raising transactions totaling over \$1 billion dollars in value
- 7 years of sell side equity research experience, covering enterprise & infrastructure software, business services, media, communications, and banks
- 6 years of portfolio managing experience
- Manage the business development efforts in LATAM for NOBLE
- Engineering, IT & Statistics, Escuela Superior Politecnica (Guayaquil, Ecuador); M.S. Economics, Florida Atlantic University

### Juan Arvelo, Director

jarvelo@noblecapitalmarkets.com – 561.994.5731

- More than 18 years of corporate finance and capital markets experience, with a special focus on M&A, restructuring and capital raising transactions.
- Previous Director at Enkeros Investments and Activa Capital Markets
- Former CFO of LS Energia
- Main focus in the QSR, financial institutions and energy sectors
- Managed corporate finance and recoveries division at PricewaterhouseCoopers (PwC)
- B.S. Economics UCAB; M.S. Finance IESA; MBA Babson College

### Joseph Hain - Director

Jhain@noblecapitalmarkets.com – 561.999.2265

- Prior experience holding senior positions at Robotti & Company, Wynston Hill Capital, SternAegis Ventures, WestPark Capital, and Tejas Securities
- Experience working with institutional, retail and HNW clients
- B.S. SUNY Albany with concentration in Biology, Chemistry, and Physics
- Holds various FINRA licenses

### Brittnee Fatigate, Analyst

bfatigate@noblecapitalmarkets.com – 561.999.2264

- Joined Noble Capital Markets in January 2017
- Has completed multiple M&A and capital raising assignments, accounting for nearly \$150 million+ of transaction value
- Held previous position as an accounting assistant at a privately held manufacturing company
- B.S. Finance, Florida Atlantic University

### Austin Shircliff, Analyst

ashircliff@noblecapitalmarkets.com – 561.997.7028

- Joined Noble Capital Markets in 2018
- Previously worked in Noble Capital Markets' Institutional Equity Sales department
- B.S. Investment Management, Lynn University

$$R + (e^2 + p^2) = \pi$$

## SALES & TRADING

**Dan Pollitt**  
**Head of Institutional Equity Trading**  
dpollitt@noblecapitalmarkets.com – 561.998.5483

**Vincent Gioeni**  
**Director of Institutional Sales**  
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