

# Fundamental

## Research Corp.

*Investment Analysis for Intelligent Investors*

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May 15, 2018

### Golden Arrow Resources Corporation (TSXV: GRG / FSE: GAC / OTCQB: GARWF) - Initiating Coverage – Production and Exploration Projects Focused on Silver in Argentina

Sector/Industry: Junior Resource

www.goldenarrowresources.com

#### Market Data (as of May 15, 2018)

Current Price	C\$0.49
Fair Value	C\$0.98
Rating*	BUY
Risk*	4
52 Week Range	C\$0.37 - C\$0.75
Shares O/S	98,676,154
Market Cap	C\$48.35 mm
Current Yield	N/A
P/E (forward)	N/A
P/B	N/A
YoY Return	-18.3%
YoY TSXV	-3.0%

\*see back of report for rating and risk definitions.

\* All figures in US\$ unless otherwise specified.



#### Investment Highlights

- Golden Arrow Resources Corporation (“company”, “GRG”) holds a 25% interest in Puna Operations Inc. (“Puna”), which is currently in the final stages of production at the Pirquitas mine - one of the largest primary silver mines in the world. GRG’s partner, and 75% holder of Puna, is SSR Mining Inc. (Nasdaq / TSX: SSRM – market capitalization of \$1.6 billion).
- Puna expects to commence production at the Chinchillas silver project (located 45 km from Pirquitas) in the second half of this year. Ore from Chinchillas will be trucked to Pirquitas for processing.
- **SSRM (the operator of Puna) estimates total production of 3 Moz to 4.4 Moz in 2018. GRG will receive a 25% share of the net profit.**
- A Pre-Feasibility Study (“PFS”) conducted on Chinchillas in 2017 showed a 8 year mine life (open pit operation) with an after-tax Net Present Value (“NPV”) at 5% of \$183 million, and an even more attractive after-tax Internal Rate of Return (“IRR”) of 29.5%, based on a silver price of \$17.5/oz, zinc price of \$1.5/lb, and lead price of \$1.15/lb. Measured and indicated resources total 140 Moz and inferred resources total 63 Moz silver equivalent.
- GRG also holds an exploration package covering over 200,000 hectares (“ha”) in Argentina. The company recently commenced drilling on one of the projects. Results are expected in the coming weeks.
- The company’s management has a solid track record in Argentina, including three major discoveries.
- **We estimate that GRG’s shares are currently trading at an Enterprise Value (“EV”) to resource ratio of C\$0.71 per oz versus the comparables average of C\$2.29 per silver equivalent oz.**
- We are initiating coverage on GRG with a fair value estimate of \$0.98 per share.

#### Risks

- The value of the company is highly dependent on silver prices.
- Delay in commencement of production at Chinchillas.
- Actual results may vary from the inputs / assumptions used in the PFS.
- Exposure to exploratory risks associated with New Gold Explorations.
- Access to capital and potential share dilution.
- Exposure to exchange rate risks.

#### Key Financial Data (FYE - Dec 31)

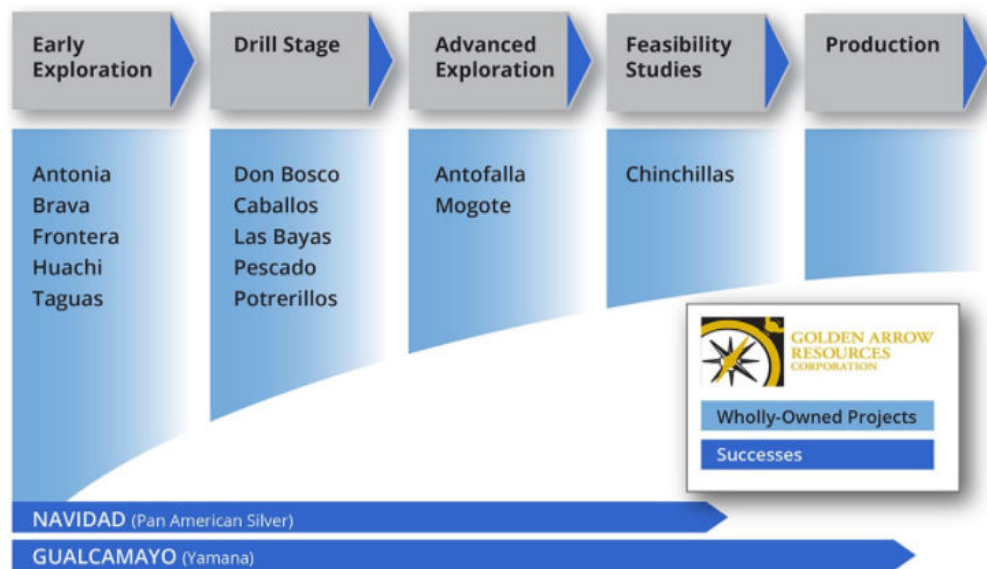
(C\$)	2016	2017
Cash	\$8,732,161	\$16,190,601
Investments	\$601,853	\$312,378
Working Capital	\$9,410,304	\$16,352,161
Investment in POI + Mineral Assets	\$880,683	\$34,257,624
Total Assets	\$11,524,725	\$54,080,782
Loss from operating activities	-\$5,887,671	-\$9,337,452
EPS	-\$0.08	-\$0.09

## Background

The company, formed in 2004, is part of the Grosso Group Management Ltd. - a private management company founded in 1993, with a strong track record of mineral exploration in South America. The team is headed by founder, Joseph Grosso, who was named the "Exploration Man of the Year" by the Argentinean Mining Association Panorama Minero in 2005. The Grosso Group has been **involved with three significant discoveries to date** – the Gualcamayo Gold Mine (located in San Juan, Argentina and currently held by Yamana / TSX: YRI), the Navidad silver-lead project (located in Chubut, Argentina and currently held by Panamerican Silver / TSX: PAAS) and the Chinchillas project (currently held by SSR Mining and GRG). The Gualcamayo Gold Mine produced 154 Koz gold in 2017, and currently has 2.3 Moz in reserves. In 2012, GRG sold its 1% NSR on Gualcamayo for \$17.75 million.

GRG's current portfolio includes a **25% interest in Puna Operations Inc.** (a producer, with a remaining life of at least 8 years), and a 100% interest in a subsidiary, New Golden Explorations Inc., which is **exploring land packages totaling over 200,000 ha** in Argentina. Management's goal is to take New Golden Explorations public (GRG will retain a significant interest) and/or spin out projects within the portfolio.

The following chart shows the projects by stage.

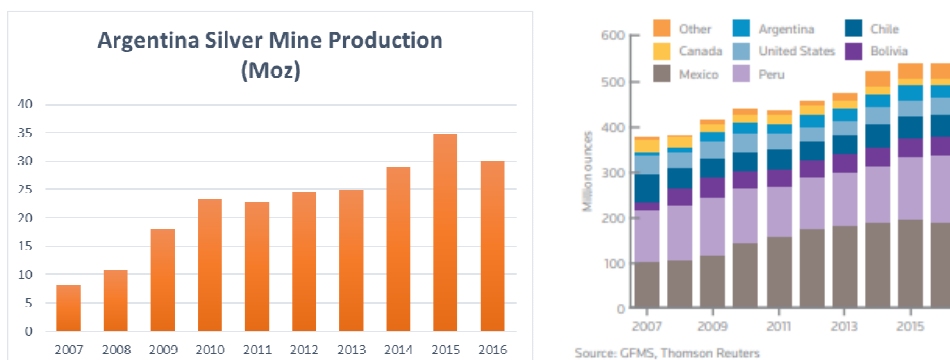


Source: Company

## Argentina

With a population of 43.85 million, and 2016 gross domestic product ("GDP") per capita of US\$12,440, Argentina ranks as one of the more developed states in the Latin America and Caribbean region, according to the World Bank. According to the World Bank, mineral rents made up only 0.37% of the nation's GDP in 2016, which was reported at US\$545.48 billion. Mineral rent refers to the difference between the values of produced minerals, net of costs of production. Common mining products found in Argentina include aluminum, lead, zinc, copper, silver, and gold. According to the Silver Institute, silver production in Argentina shrunk to 30 Moz in 2016, from 34.7 Moz in 2015. **However, Argentina still remains one**

of the larger producers of silver in the Americas. Silver production between 2007 and 2016, as reported in the World Silver Survey 2017 (published by the Silver Institute), is shown in the chart below:



Source: Silver Institute

The Silver Institute reports that Argentina ranked 10<sup>th</sup> in the top 20 global producers of silver in 2016. In the list of top 15 producing silver mines in the world, Argentina houses two ranked mines – Pirquitas (owned by Puna) and San Jose.

### Leading Global Silver Mines

Rank	Mine Name	Country	Company	2015 Moz	2016 Moz
1	Saucito	Mexico	Fresnillo plc.	22.0	21.9
2	Escobal	Guatemala	Tahoe Resources Inc.	20.4	21.2
3	Dukat	Russia	Polymetal International plc. <sup>1</sup>	22.3	19.8
4	Cannington	Australia	South 32 Ltd. <sup>2</sup>	22.2	18.2
5	Uchucchacua	Peru	Compañía de Minas Buenaventura S.A.A.	13.9	16.2
6	Fresnillo Mine	Mexico	Fresnillo plc.	15.6	15.9
7	Pirquitas	Argentina	Silver Standard Resources	10.3	10.4
8	Greens Creek	United States	Hecla Mining Company	8.5	9.3
9	Imiter	Morocco	Société Métallurgique d'Imiter	6.7	7.1
10	San José	Argentina	Hochschild Mining plc./ McEwen Mining Inc.	6.7	6.7
11	Arcata	Peru	Hochschild Mining plc.	5.6	6.3
12	San Jose	Mexico	Fortuna Silver Mines Inc. <sup>3</sup>	4.9	6.1
13	La Colorada	Mexico	Pan American Silver Corp.	5.3	5.8
14	Lunnoye	Russia	Polymetal International plc.	5.0	5.6
15	Ying Mining District	China	Silvercorp Metals Inc. <sup>4</sup>	4.4	5.5

<sup>1</sup> Including Goltsovo; <sup>2</sup> reported payable metal in concentrate; <sup>3</sup> estimate; <sup>4</sup> Ying Mining District includes mines: SCX, TLP, HPG, LM, BCG and H2G

Source: Silver Institute

A few of Argentina's key producing silver mines are shown below:

*Puna Operations Inc.*

Major Silver Producers (Argentina)	Company	Stage	Ag Production (Moz)
Piriquitas Stockpile	SSR Mining	Production	5-6 (2017 Guidance)
Piriquitas UG	SSR Mining	Production	6.2 (2017)
Chinchillas	SSR Mining	Near-Term Production	
Cerro Negro Mine	Gold Corp.	Production	3.5 (2017)
Casposo Mine	Austral Gold Limited.	Production	1.7 (2017)
Manatial Espejo Project	Pan-American Silver Corp.	Production	3.1 (2017)
Cerro Vanguardia Mine	Anglo-Gold Ashanti	Production	5.2 (2016)
San Jose Mine	Hochschild Mining (51%) McEwen Mining (49%)	Production	6.4 (2017)

*Source: FRC, Public Disclosures*

**GRG made a discovery on its then 100% owned Chinchillas silver project in 2012.** The discovery was followed by three years of aggressive drill campaigns, and in 2015, the company entered into an agreement with SSRM to evaluate the feasibility of developing Chinchillas as a satellite deposit to extend the mine life of SSRM's Piriquitas silver mine. GRG received a \$2 million payment for granting SSR the rights to potentially form a partnership. A joint venture was officially formed in March 2017, which combined the two assets (Piriquitas and Chinchillas) into a single new entity named Puna Operations Inc. Puna is owned 75% by SSRM (also the operator) and 25% by GRG. **In 2017, GRG received payments totaling \$17.8 million as its 25% share of profits from the production at Piriquitas from October 2015 to May 2017.**

Piriquitas and Chinchillas are located in the Puna region of northwestern Argentina, in the province of Jujuy. They are approximately 250 km from the provincial capital of San Salvador.

**Location**



*Source: Company*



*Pirquitas*

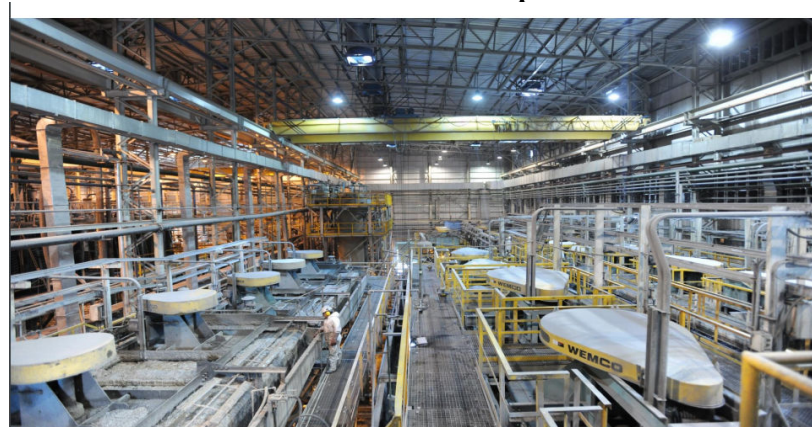
**Glencore's (LSE: GLEN) Aguilar zinc-lead mine, also in Jujuy, is approximately 90 km southeast of Chinchillas. Aguilar has been in production for over 80 years.**

SSRM acquired the project (7,500 ha) in 2002 – 2004. Pirquitas was historically mined intermittently between 1930 and 1995, for total production of approximately 25 Moz silver and 18,200 tons of tin. SSRM advanced the project to production in 2009 (CAPEX - \$230 million). **Mining from the San Miguel open pit ran from 2009 until January 2017, resulting in total production of 60.8 Moz of silver and 87.8 Mlbs of zinc.** Silver concentrates produced on site (through flotation) are shipped to third party smelters.

**Mill Facility at Pirquitas**



**Flotation Plant at Pirquitas**



*Source: Company*

**In 2017, SSRM started processing stockpiled ore.** Production at Pirquitas was 6.2 Moz of silver in 2017, versus 10.4 Moz in 2016, when open pit mining was still ongoing. The project generated \$4.60 million in net income from operations, at a cash cost of \$13.07/oz, in 2017. The cash cost in 2016 was \$9/oz (open pit operations). SSRM's production guidance is 1.6 Moz from stockpiles in the first half of 2018. In Q1-2018, 0.94 Moz was produced versus 1.17 Moz in Q4-2017, and 1.54 Moz in Q3-2017. Grade and production will continue to drop QoQ as the company is now processing lower-grade stockpile. However, production will likely pick up again once Chinchillas commences production (discussed later).

### Production at Pirquitas

	2016	2017	Q1-2018
Ore Mined (Kt)	1,774	1,798	373
Silver Grade (gpt)	235	152	115
Silver Recovery	77.80%	70.30%	67.70%
<b>Silver Produced (Moz)</b>	<b>10.42</b>	<b>6.18</b>	<b>0.938</b>
Silver Sold (Moz)	11.40	5.99	1.06
Cash Cost (\$/oz)	\$9.00	\$13.07	
Revenues (\$M)	\$169.34	\$30.95	
<b>Income (\$M)</b>	<b>\$65.13</b>	<b>\$4.60</b>	

Data Source: SSRM

Pirquitas has remaining measured and indicated resource of approximately 21.6 Moz silver, and inferred resources of 7.2 Moz, including stockpile and underground material. Notice the significantly higher grade of the underground material included in the estimate.

### Reserve / Resource Estimate

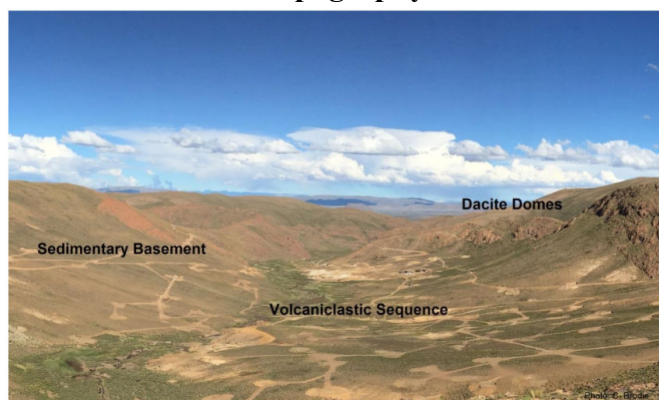
Category	Tonnes (millions)	Silver (g/t)	Lead (%)	Zinc (%)	SSRM 75% Interest Silver (Millions oz)	GRG 25% Interest Silver (Million oz)
MINERAL RESERVES						
Proven						
Proven & Probable						
Pirquitas Stockpile	1.05	90		0.69	2.3	0.8
Total P&P					2.3	0.8
Measured & Indicated ( Inclusive of Reserves)						
Pirquitas UG	2.63	292		4.46	18.6	6.2
Pirquitas Stockpile	1.05	90		0.69	2.3	0.8
Total M&I					20.9	7
Inferred						
Pirquitas UG	1.08	207		7.45	5.4	1.8
Total Inferred					5.4	1.8

Data Source: Company

### Advancing Chinchillas to Production

The Chinchillas project, composed of three contiguous claims, totaling 2,043 hectares, is located 45 km east of Pirquitas by road. A gravel road that connects the two properties needs upgrading. Ore from Chinchillas will be trucked to Pirquitas. Concentrate shipments from Pirquitas are currently trucked to Susques, Jujuy, and from there, to Buenos Aires. There are three small communities (total population under 200) close to the project. The topography is generally large rounded hills surrounding an elliptical depression.

## Topography



Source: Company

The mine site will be powered by diesel generators.

## Geology and History

As Pirquitas, the Chinchillas property area was also subject to intermittent small-scale mining. Prior to GRG taking over the property in 2012, 14 holes were drilled – seven in 1994, and seven in 2007 – 2008. GRG drilled 284 holes, totaling 45,803 m from 2012 to 2016. Subsequently, SSRM and GRG drilled another 44 holes totaling 8,945 m in 2016.

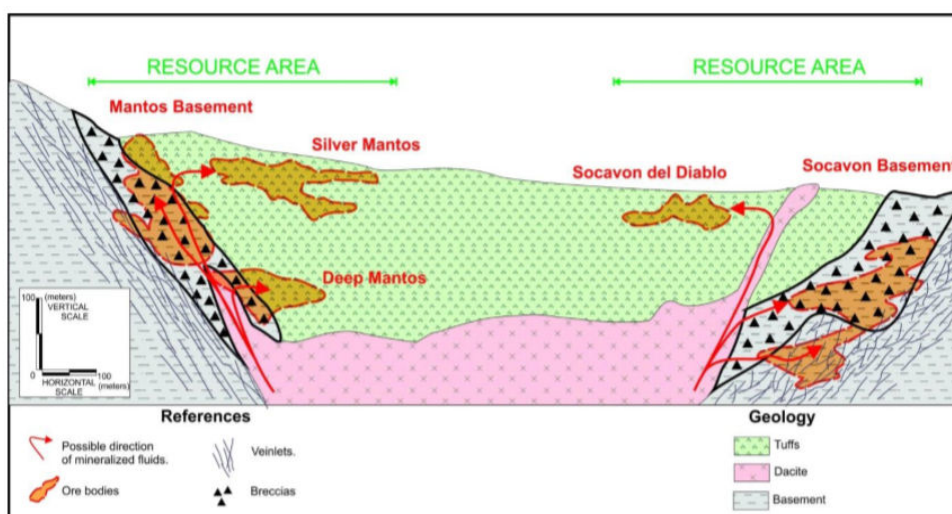
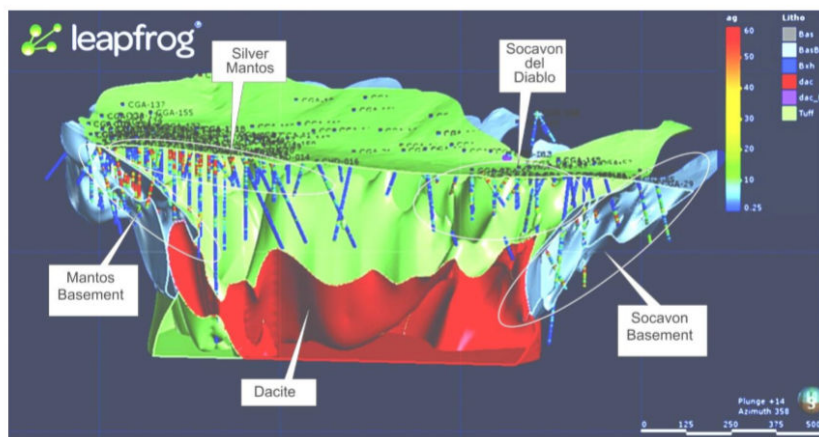
Drill Program	Year	Holes	Metres drilled
Aranlee Resources (1994)	1994	7	782
Silex Argentine S.A. (2007/8)	2007-2008	7	2,220
Golden Arrow-Phase I	2012	27	3,225
Golden Arrow-Phase II	2012-2013	49	7,278
Golden Arrow-Phase III	2014	38	8,985
Golden Arrow-Phase IV	2014-2015	55	11,175
Golden Arrow-Phase V	2015-2016	115	15,142
Golden Arrow/Silver Standard-Phase VI	2016	34	7,188
Golden Arrow/Silver Standard-Phase VII	2016	10	1,757
<b>Total</b>		<b>342</b>	<b>57,750</b>

Source: Company

Seven technical reports were completed on the property from 2013 to 2017, including an initial resource estimate in 2013, shortly followed by a Preliminary Economic Assessment (PEA), and a PFS in 2017.

The Chinchillas property holds a conventional epithermal silver-lead-zinc deposit, dominated by silver. Mineralization occurs primarily in four main zones, namely the Silver Mantos zone (700 metres by 450 metres) and the Mantos Basement zone (600 metres by 210 metres) towards the west, and the Socavon del Diablo and Socavon Basement zones towards the east.

### Mineralization Across Four Zones



Source: Company

### Reserve / Resource Estimates

The project has reserves of approximately 80 Moz silver equivalent.

#### Reserve Estimate

Summary Mineral Reserve Estimate, Chinchillas Project, Argentina, December 31, 2016								
Category	Quantity	Grade			Content			Ag Equiv.
		Ag	Pb	Zn	Ag	Pb	Zn	
	Mtonnes	g/t	%	%	Moz	Mlbs	Mlbs	Moz
Proven	1.64	180	0.75	0.42	9.44	27.01	15.11	11.62
Probable	10.07	150	1.27	0.5	48.44	282.48	111.48	68.70
Proven and Probable	11.71	154	1.2	0.49	57.88	309.49	126.59	80.32

Source: Company

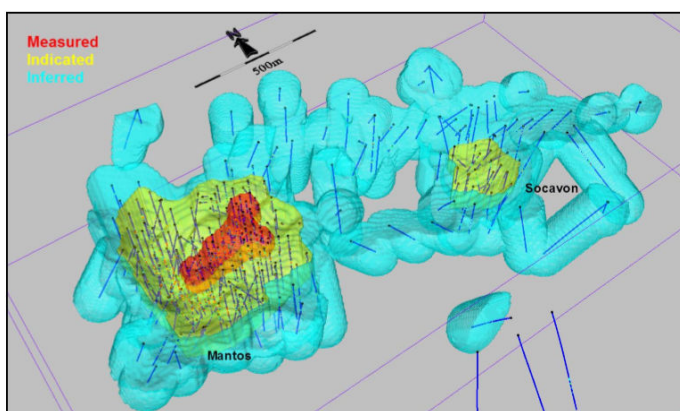
Measured and indicated resources total 140 Moz and inferred resources total 63 Moz silver equivalent.



### Resource Estimate

Type	Mtonnes	AgEq (g/t)	Ag (g/t)	Pb (%)	Zn (%)	AgEq (Moz)	Ag (Moz)	Pb (Mlbs)	Zn (Mlbs)
<b>Measured and Indicated</b>									
Silver Mantos	12.6	135	93	0.69	0.63	55	38	190	176
Mantos Basement	12.8	176	130	1.2	0.28	73	54	340	78
Socavon	3.8	103	33	0.6	1.56	13	4	50	132
<b>ALL</b>	<b>29.3</b>	<b>149</b>	<b>101</b>	<b>0.90</b>	<b>0.60</b>	<b>140</b>	<b>96</b>	<b>581</b>	<b>386</b>
<b>Inferred</b>									
Silver Mantos	3.2	118	62	0.87	0.89	12	6	61	63
Mantos Basement	1.3	113	86	0.7	0.15	5	4	20	4
Socavon	3.8	93	43	0.45	1.07	11	5	38	89
Socavon Basemen	12.6	87	46	0.47	0.79	35	19	130	218
<b>ALL</b>	<b>20.9</b>	<b>94</b>	<b>50</b>	<b>0.54</b>	<b>0.81</b>	<b>63</b>	<b>34</b>	<b>250</b>	<b>374</b>

### Location of the Resources



Source: Company

The sensitivity of the resource to various cut-off grades is shown below:

Sensitivity of Mineral Resources to Cut-off Grade									
Cut-off AgEq (g/t)	Mtonnes	AgEq (g/t)	Ag (g/t)	Pb (%)	Zn (%)	AgEq (Moz)	Ag (Moz)	Pb (Mlbs)	Zn (Mlbs)
<b>Measured and Indicated</b>									
30	37.4	126	85	0.77	0.54	152	102	631	37.4
<b>60</b>	<b>29.3</b>	<b>149</b>	<b>101</b>	<b>0.90</b>	<b>0.60</b>	<b>140</b>	<b>96</b>	<b>581</b>	<b>29.3</b>
90	21.3	177	124	1.07	0.60	121	85	500	21.3
120	14.8	209	151	1.24	0.58	99	72	405	14.8
150	10.3	242	180	1.42	0.55	80	59	321	10.3
<b>Inferred</b>									
30	34	76	39	0.43	0.69	83	43	324	518
<b>60</b>	<b>20.9</b>	<b>94</b>	<b>50</b>	<b>0.54</b>	<b>0.81</b>	<b>63</b>	<b>34</b>	<b>250</b>	<b>374</b>
90	8.4	126	72	0.74	0.92	34	19	137	169
120	3.4	159	95	1.02	0.97	18	11	78	73
150	1.5	193	117	1.40	0.99	9	6	46	32

Source: Company

### 2017 PFS

The PFS was based on an 8-year open pit mining operation consisting of a large pit in the west, and a smaller pit to the east. Mined ore will be trucked to Pirquitas' existing mill and concentrator facility, where two flotation concentrates (lead/silver and zinc) will be

produced. According to the PFS, only minor changes are required to modify the existing circuit at Pirquitas.

PFS 2017					
Mine Life (years)	8				
Tonnage (Mt)	66.6				
Throughput (tpd)	4,000				
Strip Ratio	4.7				
Annual Production		Recovery		Commodity Price	
Silver (Moz)	6.1	Silver	83% to 90%	Silver (\$/oz)	\$19.50
Lead (Mlbs)	35	Lead	93% to 97%	Lead (\$/lb)	\$0.95
Zinc (Mlbs)	12.3	Zinc	85%	Zinc (\$/lb)	\$1.00
Silver Equiv (Moz)	8.4				
Total Production (LOM)					
Silver (Moz)	51				
Silver Equiv (Moz)	71				
Operating Cost (\$/t milled)	\$45.34				
Cash Cost (\$/oz Silver)	\$7.40				
AISC (\$/oz Silver)	\$9.75				
Initial CAPEX (\$, M)	\$81				
After-Tax NPV @ 5% (\$, M)	\$178				
After-Tax NPV @ 10% (\$, M)	\$115				
After-Tax IRR	29.1				
After-Tax Payback Period	3.5				

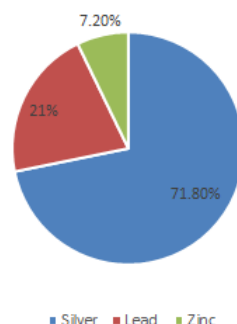
*Data Source: PFS*

The initial CAPEX is estimated to be \$81.2 million, which includes a 20% contingency. Based on a 4,000 tpd operation, the PFS estimated annual silver equivalent production of 8.4 Moz, at an attractive cash cost of \$7.4/oz.

**At a silver price of \$19.5/oz, lead price of \$0.95/lb, and zinc price of \$1/lb, the PFS estimated an after-tax NPV at 5% of \$178 million, a highly robust after-tax IRR of 29.1%, and a payback period of 3.5 years.**

Approximately 72% of revenues are expected to come from silver, 21% from lead, and the remaining 7% from zinc.

Revenue Distribution



Data Source: PFS

The following table shows the after-tax NPV and IRR's sensitivity to commodity prices.

		After-Tax NPV (5%) (\$M)				
		Silver Price (\$/oz)				
Lead Price (\$/lb)	\$0.85	\$16.00	\$18.00	\$19.50	\$22.00	\$25.00
	\$0.95	57	119	162	229	307
	\$1.05	75	136	178	244	321
	\$1.15	93	152	194	259	336
	\$1.25	110	169	209	274	351
	\$1.25	128	185	225	289	366

		After-Tax IRR				
		Silver Price (\$/oz)				
Lead Price (\$/lb)	\$0.85	\$16.00	\$18.00	\$19.50	\$22.00	\$25.00
	\$0.95	13%	22%	27%	36%	45%
	\$1.05	16%	24%	29%	38%	47%
	\$1.15	18%	26%	31%	39%	49%
	\$1.25	20%	28%	33%	41%	50%
	\$1.25	22%	30%	35%	43%	52%

Data Source: PFS

At a silver price of \$17.5/oz, zinc price of \$1.5/lb, lead at \$1.15/lb, which are more reflective of current prices, the after-tax NPV at 5% is \$183 million, and the after-tax IRR is 29.5%.

Chinchillas received a final Environmental Impact Assessment (EIA) in December 2017. Construction and development activities are ongoing and management expects production to commence in the second half of 2018. Of the estimated CAPEX of \$81 million, approximately \$70 million is yet to be spent. GRG will contribute its 25% share of \$17.5 million. **GRG's strong cash position, plus the expected share of net profits from the current operations at Pirquitas, we believe, will allow the company to comfortably meet the cash requirement.** At the end of 2017, the company had cash of C\$16.19 million.

**SSRM estimates total production of 3 Moz to 4.4 Moz in 2018, including 1.6 Moz from stockpiles in the first half, and 1.4 Moz to 2.8 Moz from Chinchillas in the second half.**

*New Gold Explorations Inc.*

**Our Discounted Cash Flow (DCF) / Net Asset Value (NAV) estimates are presented in the valuation section later in this report.**

GRG’s 100% owned subsidiary, New Gold Explorations Inc., holds a number of early stage exploration projects covering over 200,000 ha. Management’s objective is to either take New Gold public (while retaining a significant carried interest), and/or individually spin-out or joint venture projects in the portfolio. The following map shows the key target areas within Argentina.



*Source: Company*

A brief description of the key projects are shown in the table below:



### Portfolio Summary – Key Projects

Property	Ownership	Size (ha)	Province	Comments
Antofalla	option to earn 100%	8,760	Catamarca	strong geologic similarities to Chinchillas
Pescado Au-Ag	100% owned	19,784	San Juan	10km south of the Guacamayo Mine
Potrerillos Au-Ag	100% owned	5,748	San Juan	8km east of the Veladero mine, within the El Indio Gold-Silver Belt
Mogote Cu-Au-Ag	100% owned	8,800	San Juan	Several well-known mines/projects in the region, including El Indio-Tambo, Pascua-Lama-Veladero, Marte-Lobo, Filo del Sol Project, etc.
Don Bosco Copper-Gold		9,300	La Rioja	same sedimentary belt as Gualcamayo / multiple copper, gold and silver targets identified
Caballos Copper-Gold		20,000	La Rioja	copper-gold porphyry target discovered in 2012/ several well known projects in the area

Source: Company

We estimate GRG had spent a total of approximately \$6 million on its exploration projects as of December 31, 2018. A key common aspect of most of the projects in the current portfolio is their high altitude. Therefore, exploratory work is more capital intensive and are restricted during certain periods of a year.

**In March 2018, the company started the first diamond drill program at its Antofalla project.** The 3,000 m drill program is focused on multiple targets delineated in surface exploration and trenching programs conducted in 2017. GRG had entered in to an option to acquire the project in 2016. The company has to make payments totaling \$1.5 million over 5 years.

Antofalla is considered to have strong geologic similarities to Chinchillas. Best results from the project to date are listed below:

- 18 m at 128 g/t Ag, 0.23 g/t Au, 0.88% Pb from historic drilling
- 14.9 m at 271 g/t Ag, 1% Pb from channel sampling
- 2 m at 9.2 Au g/t, 52 Ag g/t, 5 % Pb from trenches

Results are expected to be announced shortly. **Our discussions with management indicated that they are also actively evaluating several new exploration-stage projects for addition to its portfolio.**

### Management

Management and board members combined hold 4.93 million shares, or 5% of the total.

### Share Ownership

Name	Director since	Shares	% of Total
Joseph Gross / Chairman, CEO and President	2004	3,994,592	4.05%
Nikolaos Cacos, Director	2004	40,040	0.04%
Dr. David Terry, Independent Director	2004	715,200	0.72%
Dr. John Gammon, Independent Director	2007	180,000	0.18%
Louis P. Salley, Independent Director	2013	0%	-
Alf Hills, Independent Director	2017	0%	-
<b>Total</b>		<b>4,929,832</b>	<b>5.00%</b>

*Source: Management Information Circular*

Brief biographies of the management team and board members, as provided by the company, follow:

#### **Joseph Grosso – Executive Chairman, CEO and President**

Mr. Grosso became one of the early pioneers of the mining sector in Argentina in 1993 when mining was opened to foreign investment, and was named Argentina's 'Mining Man of The Year' in 2005. His knowledge of Argentina was instrumental in attracting a premier team which led to the acquisition of key properties in Golden Arrow's portfolio. He has successfully formed strategic alliances and negotiated with mining industry majors such as Barrick, Teck, Newmont, Viceroy (now Yamana Gold) and Vale S.A., and government officials at all levels. Mr. Grosso's specialty is financing, negotiations, corporate and marketing strategy, and he was an early and passionate adopter of best practices in environmental protection and socio-economic development through mineral exploration. He is the founder and president of Grosso Group Management Ltd.

#### **Darren C. Urquhart, C.A. – CFO and Corporate Secretary**

Mr. Urquhart is a Chartered Accountant with more than 10 years of experience working in both public practice and industry. Mr. Urquhart is presently engaged in public practice accounting offering CFO and accounting services to TSX Venture Exchange listed exploration companies in the Vancouver area. Mr. Urquhart began his career working as an audit accountant with Grant Thornton LLP, then later worked as a senior tax accountant with Lohn Caulder Chartered Accountants and more recently served as a consultant to an international private equity company. Mr. Urquhart obtained his Chartered Accountant designation in 2001 and is a member of the Institute of Chartered Accountants of British Columbia. In 1995, Mr. Urquhart obtained his B.A.Sc. (Electrical Engineering) from the University of British Columbia.

#### **Brian McEwen PGeol. - VP Exploration and Development**

Mr. McEwen is a professional geologist with more than 30 years of exploration and production experience in open-pit and underground mining projects and operations. The

extent of his experience is global in managing numerous projects in Canada, US, Europe, Asia, Africa and throughout Latin America. Mr. McEwen's previous roles include more than a decade with MRDI (AMEC Peru) where he was responsible for project management, economic resource and reserve calculations for various precious and base metal companies worldwide, including BHP Billiton, CM Antamina, Teck, Hochschild and Phelps Dodge among others.

**Nikolaos Cacos, M.I.M. – Director and VP – Corporate Development**

Mr. Cacos brings 25 years of management expertise in the mineral exploration industry. He has extensive experience in providing strategic planning to and administration of public companies. Mr. Cacos serves as a director and officer of several publicly traded companies. He holds a Master of International Management degree from Heidelberg, Germany and a Bachelor of Science degree from the University of British Columbia.

**Dr. David Terry, Ph.D. P.Geo. – Independent Director**

Dr. Terry's has more than 20 years of experience focused on exploration for a wide spectrum of precious and base metal deposits throughout North and South America. He has held numerous senior positions with both major and junior mining companies, including Boliden Limited, Westmin Resources Limited, Hemlo Gold Mines Inc., Cominco Limited and Gold Fields Mining Corporation. He holds a BSc and PhD from the University of Western Ontario.

**Dr. John B. Gammon – Independent Director**

Dr. Gammon has 40 years of experience in mineral exploration and management, including international positions with Falconbridge, Assistant Deputy Minister Mines and Minerals with the Government of Ontario and, since his retirement, as ADM as a consultant working with industry, governments and universities. In addition to Dr. Gammon's mineral exploration experience he has also spent a significant amount of time on aboriginal community and environmental issues. His knowledge of the Spanish language and South American culture and societies brings a depth, in addition to his industry experience, that can assist the Company with the advancement of its South American projects in Peru and Argentina.

**Louis P. Salley– Independent Director**

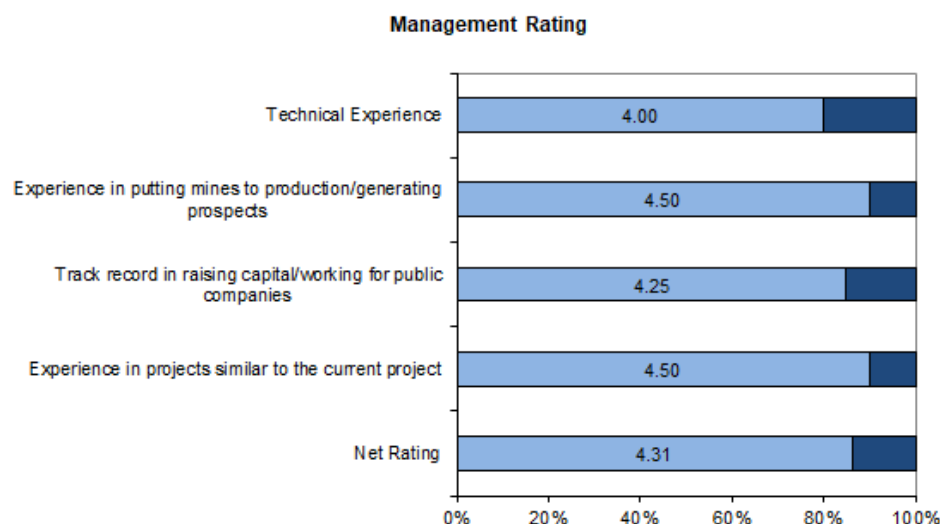
Mr. Salley has over 30 years of Canadian and international experience as a corporate securities lawyer specializing in corporate finance matters for small cap companies, and has served as a director with a number of public companies. Mr. Salley is a founding partner of Salley Bowes Harwardt LLP, a Vancouver law firm, focusing on resource companies and has extensive experience with all aspects of prospectus financings, private placements, mergers and acquisitions in the public markets. Mr. Salley holds a Bachelor of Arts degree and a Bachelor of Laws degree from the University of Alberta.

**Alf Hills – Independent Director**

Alf Hills has over 35 years of international mine evaluation, development and operational experience. From 2006 to 2013, he was the CEO and a director of Kobex Minerals Inc. and its predecessor company, International Barytex Resources. Prior to that he spent 26 years

with the Placer Dome group. He was involved in the development of the CIM Best Practice Guidelines for Mineral Resource and Mineral Reserve Estimates. Mr. Hills is registered as a Professional Engineer and is a graduate of the University of British Columbia in Mining and Mineral Process Engineering.

**Our net rating on the management team is 4.3 out of 5.0 (see below).**



Source: FRC

**The company's board has six members, of which, three are independent.** We believe that the Board of Directors of a company should include independent or unrelated directors who are free of any relationships or business that could materially interfere with the director's ability to act in the best interest of the company. An unrelated/independent director can be a shareholder. The following table shows our analysis on the strength of GRG's board.

Strength of Board		
	Poor	Average
Four out of six directors are independent		X
Four directors hold shares of the company		X
The Audit committee is composed of three board members, two are independent		X
The Compensation committee is composed of three board members, two are independent		X

Source: FRC



## Financials

At the end of 2017, the company had cash and working capital of C\$16.19 million and C\$16.35 million, respectively. We estimate the company had a burn rate (cash spent on operating and investing activities) of C\$1.04 million per month in 2017. Salaries, general and administrative expenses accounted for approximately \$550k per month, which we believe is on the higher side relative to comparable juniors. The following table summarizes the company's liquidity position:

(in C\$)	2016	2017
Cash	\$8,732,161	\$16,190,601
Working Capital	\$9,410,304	\$16,352,161
Current Ratio	8.83	53.40
Debt	\$0	\$0
Monthly Burn Rate (incl. investing activities)	\$442,332	\$1,044,647
Cash from Financing Activities	\$12,339,698	\$19,373,281

## Stock Options and Warrants

The company currently has 9.19 million options outstanding (weighted average exercise price of C\$0.54 per share) and 8.13 million warrants (weighted average exercise price of C\$0.69 per share) outstanding. **At this time, 3.45 million options and 3.62 million warrants are in-the-money.** The company can raise up to C\$2.31 million if all the in-the-money options and warrants are exercised.

## Valuation and Rating

Golden Arrow's shares are currently trading at an Enterprise Value ("EV") to resource ratio of C\$0.71 per oz versus the comparables average of C\$2.29 per silver equivalent oz.

Company	Ticker	Location	Net Resource	Enterprise Value (C\$,M)	EV / Resource	Stage
Excellon Resources Inc.	TSX: EXN	Mexico	17,393,000	\$123.68	\$7.11	Production
Endeavour Silver	TSX: EDR	Mexico	89,085,500	\$449.70	\$5.05	Production
Defiance Silver Corp.	TSXV: DEF	Mexico	8,958,500	\$39.15	\$4.37	Resource
Pan-American Silver Corp.	TSX: PAAS	South America, US	869,280,500	\$3,040.70	\$3.50	Production
Santa Cruz Silver Mining	TSXV: SCZ	Mexico	8,171,228	\$27.20	\$3.33	Production
MAG Silver Corp.	TSX: MAG	Mexico	435,926,250	\$1,025.17	\$2.35	Production
Hochschild Mining	LSE: HOC	South America	1,046,428,500	\$2,184.90	\$2.09	Production
Avino Silver	TSX: ASM	Mexico	59,100,000	\$106.55	\$1.80	Production
Austral Gold Limited.	TSXV: AGLD	South America	67,366,000	\$117.50	\$1.74	Production
Alexco Resource Corp.	TSX: AXR	Canada	120,532,862	\$182.62	\$1.52	PEA
Aurcana Corp.	TSXV: AUN	Texas	14,314,500	\$19.37	\$1.35	PEA
SSR Mining	TSX: SSR	South America, US, Canada	1,213,950,000	\$1,158.10	\$0.95	Production
Golden Arrow	TSXV: GRG	Argentina	50,775,000	\$36.18	\$0.71	Production
Integra Resources Corp.	TSXV: ITR	Idaho	127,926,000	\$41.76	\$0.33	Resource
Southern Silver	TSXV: SSV	Mexico	84,000,000	\$19.68	\$0.23	Resource
Silver Predator Corp.	TSXV: SPD	Nevada	18,790,500	\$2.50	\$0.13	Resource
Average					\$2.29	

Source: FRC / Various Company Websites and Technical Reports

Based on the average multiple of \$2.29/oz, we estimate that GRG's fair value, based on comparables, is \$1.27 per share.

Our long-term silver price forecast is US\$20/oz, which is based on our long-term gold price forecast of US\$1,300/oz and an average gold : silver ratio of 65x (shown below):

### Gold / Silver Ratio



*Source: Denver Gold Group*

Our Discounted Cash Flow value on GRG's 25% interest in Puna is \$0.70 per share. The following table shows our key assumptions / inputs. Our CAPEX and operating cost estimates are in line with the PFS, however, we used a 12 year mine life to account for some upside from Chinchillas' resource estimate as well as the remaining resources at Pirquitas. The PFS' 8 year mine life estimate was solely based on Chinchillas' reserve estimate.

<b>DCF Valuation</b>	<b>4,000 tpd</b>
Operating Life (years)	12
Tonnage	16,800,000
Annual Silver Production (Moz)	5.8
Annual Lead Production (Mlb)	36.4
Annual Zinc Production (Mlb)	14.3
Average Silver Equiv Production (Moz)	8.4
Average Price of Ag (\$/oz)	\$20.00
Average Price of Pb (\$/lb)	\$1.00
Average Price of Zn (\$/lb)	\$1.10
LT avg. exchange rate (US\$:C\$)	1.10
Operating Cost (LOM) in \$/t	\$45.34
Remaining Initial Capital Cost (M\$)	\$70
Discount Rate	10%
<b>After-Tax Net Asset Value (C\$)</b>	<b>\$232,688,597</b>
Golden Arrow's 25% Interest	\$58,172,149
Working Capital - Debt (C\$)	\$12,173,573
<b>Fair Value of GRG (C\$)</b>	<b>\$70,345,723</b>
No. of Shares *	101,041,957
<b>Fair Value per Share (C\$)</b>	<b>\$0.70</b>

\* calculated based on the treasury stock method

Source: FRC

The sensitivity of our valuation to key inputs is shown below:

C\$, millions		Silver Price (US\$ / oz)				
		\$16.00	\$18.00	\$20.00	\$22.00	\$24.00
<b>Exchange Rate (US\$:C\$)</b>	\$1.00	\$0.43	\$0.54	\$0.64	\$0.75	\$0.86
	\$1.05	\$0.44	\$0.56	\$0.67	\$0.78	\$0.90
	\$1.10	\$0.46	\$0.58	<b>\$0.70</b>	\$0.82	\$0.93
	\$1.20	\$0.49	\$0.62	\$0.75	\$0.88	\$1.01
	\$1.30	\$0.52	\$0.66	\$0.80	\$0.94	\$1.08

Fair Value (C\$, millions)		Silver Price (\$/oz)				
C\$:US\$ - 1.1		\$16.00	\$18.00	\$20.00	\$22.00	\$24.00
<b>Discount Rate</b>	5.0%	\$0.63	\$0.79	\$0.95	\$1.11	\$1.27
	8.0%	\$0.52	\$0.65	\$0.79	\$0.92	\$1.05
	10.0%	\$0.46	\$0.58	<b>\$0.70</b>	\$0.82	\$0.93
	15.0%	\$0.35	\$0.44	\$0.53	\$0.62	\$0.71
	20.0%	\$0.27	\$0.34	\$0.41	\$0.49	\$0.56

Fair Value (C\$, millions)		Lead Price (\$/lb)				
C\$:US\$ - 1.1		\$0.80	\$0.90	\$1.00	\$1.10	\$1.20
<b>Zinc Price (\$/lb)</b>	\$0.80	\$0.58	\$0.61	\$0.65	\$0.69	\$0.73
	\$0.95	\$0.60	\$0.64	\$0.67	\$0.71	\$0.75
	\$1.10	\$0.62	\$0.66	<b>\$0.70</b>	\$0.73	\$0.77
	\$1.25	\$0.64	\$0.68	\$0.72	\$0.76	\$0.79
	\$1.50	\$0.68	\$0.72	\$0.76	\$0.79	\$0.83

Source: FRC

We are initiating coverage on GRG with a BUY rating and a fair value of \$0.98 per share, which is the average of our DCF and comparables valuations.

Valuation Summary (C\$)	Fair Value (FV)	FV per Share
DCF	\$70,345,723	\$0.70
Comparables	\$128,448,323	\$1.27
<b>Fair Value Estimate</b>	<b>\$99,397,023</b>	<b>\$0.98</b>

Source: FRC

## Risks

We believe the company is exposed to the following key risks (not exhaustive):

- The value of the company is highly dependent on silver prices.
- Delay in commencement of production at Chinchillas.



- Actual results may vary from the inputs / assumptions used in the PFS.
- Exposure to exploratory risks associated with New Gold Explorations.
- Access to capital and potential share dilution.
- Exposure to exchange rate risks.

**We rate GRG's shares a risk of 4 (Speculative).**

#### Fundamental Research Corp. Equity Rating Scale:

**Buy** – Annual expected rate of return exceeds 12% or the expected return is commensurate with risk

**Hold** – Annual expected rate of return is between 5% and 12%

**Sell** – Annual expected rate of return is below 5% or the expected return is not commensurate with risk

**Suspended or Rating N/A**— Coverage and ratings suspended until more information can be obtained from the company regarding recent events.

#### Fundamental Research Corp. Risk Rating Scale:

**1 (Low Risk)** - The company operates in an industry where it has a strong position (for example a monopoly, high market share etc.) or operates in a regulated industry. The future outlook is stable or positive for the industry. The company generates positive free cash flow and has a history of profitability. The capital structure is conservative with little or no debt.

**2 (Below Average Risk)** - The company operates in an industry where the fundamentals and outlook are positive. The industry and company are relatively less sensitive to systematic risk than companies with a Risk Rating of 3. The company has a history of profitability and has demonstrated its ability to generate positive free cash flows (though current free cash flow may be negative due to capital investment). The company's capital structure is conservative with little to modest use of debt.

**3 (Average Risk)** - The company operates in an industry that has average sensitivity to systematic risk. The industry may be cyclical. Profits and cash flow are sensitive to economic factors although the company has demonstrated its ability to generate positive earnings and cash flow. Debt use is in line with industry averages, and coverage ratios are sufficient.

**4 (Speculative)** - The company has little or no history of generating earnings or cash flow. Debt use is higher. These companies may be in start-up mode or in a turnaround situation. These companies should be considered speculative.

**5 (Highly Speculative)** - The company has no history of generating earnings or cash flow. They may operate in a new industry with new, and unproven products. Products may be at the development stage, testing, or seeking regulatory approval. These companies may run into liquidity issues, and may rely on external funding. These stocks are considered highly speculative.

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