Back of the napkin analysis of Sandstorm Gold by John Chew

Sandstrom ("Sand") is a **royalty and streaming** company. Essentially, it is a capital allocation business where management must have the technical expertise to analyze the asset/property, the mining team, and its financial strength to be assured of a decent return on its capital. If the asset has problems like lower grades than expected, higher capital costs and/or management of the company that owns the asset fails to operate or be able to finance (other than Sand's royalty/stream), then returns fall or vanish for Sand.

I look at Sandstorm as a **senior-secured bond with variability and optionality** because of the possibility of exploration upside on its properties. Even if a company owns the property/asset where Sandstorm has a royalty claim fails, SAND's royalty claim does not go away.

What is the company worth?

I split the company into two parts: currently cash flowing assets and development assets that won't produce for at least four years. I checked with the IR person to segment the assets that will not produce within the next four years.

Below is my estimate of the non-income producing assets (at least four years until production)

Non-income producing assets	in mils.	Discount	Value
Cash (from 9/30/17)	6	1	6
Cash rec. from sale of Luna secs. to R. Beatty	18.2	1	18.2
ST Securities	12.1	1	12.1
Equity investments	67	0.5	33.5
Core non-producing streams (Hot Maden+)	94.3	0.66	62.238
TOTAL	**197.6**		**132.038**
Per Sh. 188 FD w/ BB			$0.70

If I deduct the 70 cents from the current price of $5.25 as of **Jan. 16th 2018**, then I would be paying **$4.55** for the cash producing assets. I will give **zero value to the 100** or more exploration properties that Sandstorm has. I consider them "free" options since I have no way of valuing them other than seeing what Sandstorm paid—which can be difficult to even assess since many purchases come in combined packages of cash, warrants and stock.

What is the cash flow? This is fairly simple:

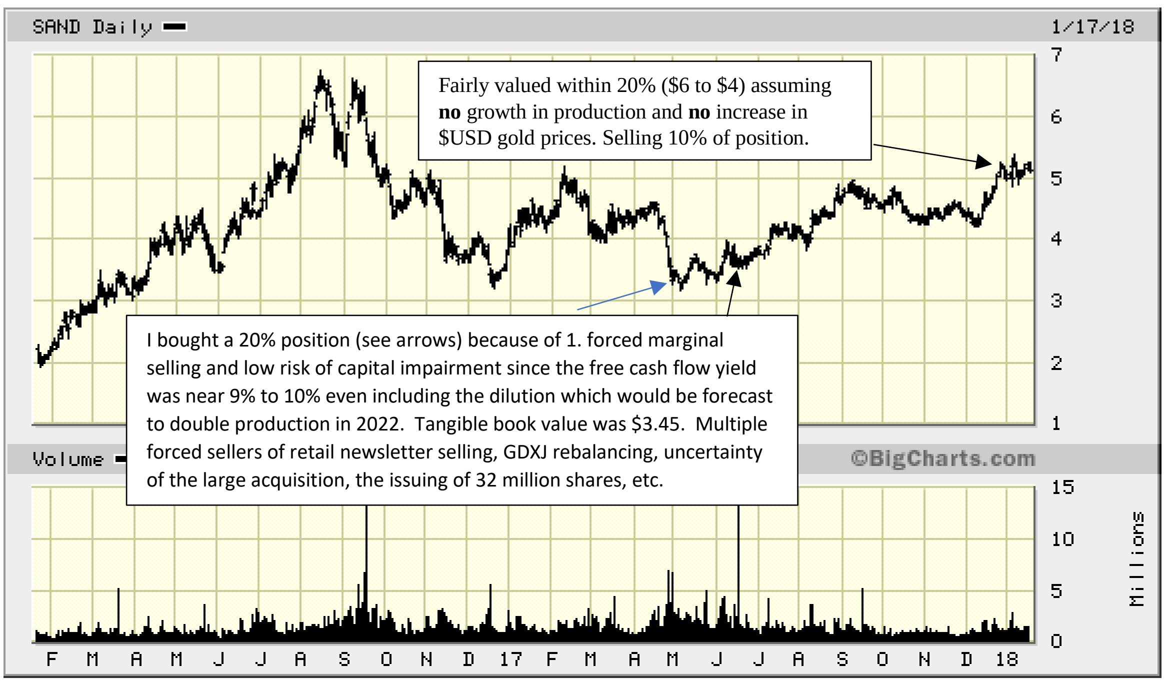
Gold Ozs.	Avg. Cash Costs	Current Gold Price	Op. CF
55,000 in 2017	$255	1320	$58,575,000
		SG&A	-6,000,000
		FCF pre-tax	$52,575,000

In the future, the average cash costs will rise to $280 per ounce but current/expected cash flows are like this (see company presentation):

	2016	**2019**	**2022**
OCF after-tax	60	71	106
SG&A	-6	-6.5	-7.5
FCF in mils.	**54**	**64.5**	**98.5**

Assuming no increases in production on Sandstorm's properties, then over the next twelve months I estimate about $55 million in FCF or **$0.29 cents per share** ($55 mil/188 mil. In FD outstanding shares.) The company has about 191 fully-diluted shares but is buying back about 3.5 million shares. The greater cash flows in 2019 and 2022 are expected increases from current and new properties coming on-line. Let's not expect that—I assume no growth.

The price today (1/16/2018) If I was paying **$5.25** is the current market price <u>minus</u> the estimated value of the non-producing assets or **$0.70** equals **$4.55** so my free cash flow yield is 29 cents/$4.55 = 6.33% yield which beats the yield on most bonds. The average price I paid last year was about $3.75 for a 9% free cash flow yield. However, mining is a difficult business, so I would demand higher returns than 6%.



6% is <u>not</u> enticing enough for me to buy Sandstorm now if I am not expecting a rise in production and/or an increase in gold prices. However, the optionality in Sandstrom seems interesting and therefore, I maintain my position except for 10% (I have sold 10% of my position for rebalancing). If we assume the US dollar price of gold rises 8 percent a year for the next four years or the average since 1971, then **WITHOUT** any unexpected increased in production above the company's plan for 2022, then

Production	**Avg. Cash Costs**	**Gold Price**	**Op. CF**

130,000	$280	$1,768	$193,440,000
Year 2022		SG&A in 2022	-7,000,000
		FCF pre-tax	$186,440,000
		per share	$0.99
		Multiple 15	$14.88

The 15 multiple is somewhat arbitrary, but the highest quality royalty company Franco-Nevada trades at a 20-to-25 times multiple to cash flows. The cash flow multiples have ranges from 12 to 25 times for royalty companies like SAND, SLW, FNV, RGLD, OSISKO over the past five years—see presentation from RGLD, FNV, etc. The multiples on quality royalty companies are high because of the strong counter parties, diversified cash flow streams, and the current low interest rates.

How convenient that I show a past/current success. But I did purchase Golden Queen (GQMNF) on forced selling—a newsletter writer suggested dumping the stock—at $27 cents and now it is 16 cents. I do have to make you aware of my biases and be transparent as possible. NEVER follow me or anyone blindly. Do thy own work! At worst, if you lose, you gain some wisdom.

Should I hold?

If I take MY expected **worse case** value of $2.40 or Book Value of $3.4 minus $1 per share for a total write-off of Hot Maden, that would be a 55% loss on paying $5.25 today. I give this bad outcome about a 15% chance of occurring (QUITE HIGH to be conservative) or

- a 15% times a loss of ($2.40 - $5.25) or -$2.85 times 15% = -43 cent loss (expected pay-out) over the next four years.
- A 20% chance of a decline to $4 or a loss of $1.25 or a -25 cents loss
- A 20% of a rise to $6.50 or a gain of $1.30 or a 26 cent pay-off
- A 25% of a rise to $10 or a gain of $4.75 or a $1.19 pay-off
- A 20% of a rise to $15 or a gain of 9.75 or a $1.95 pay-off

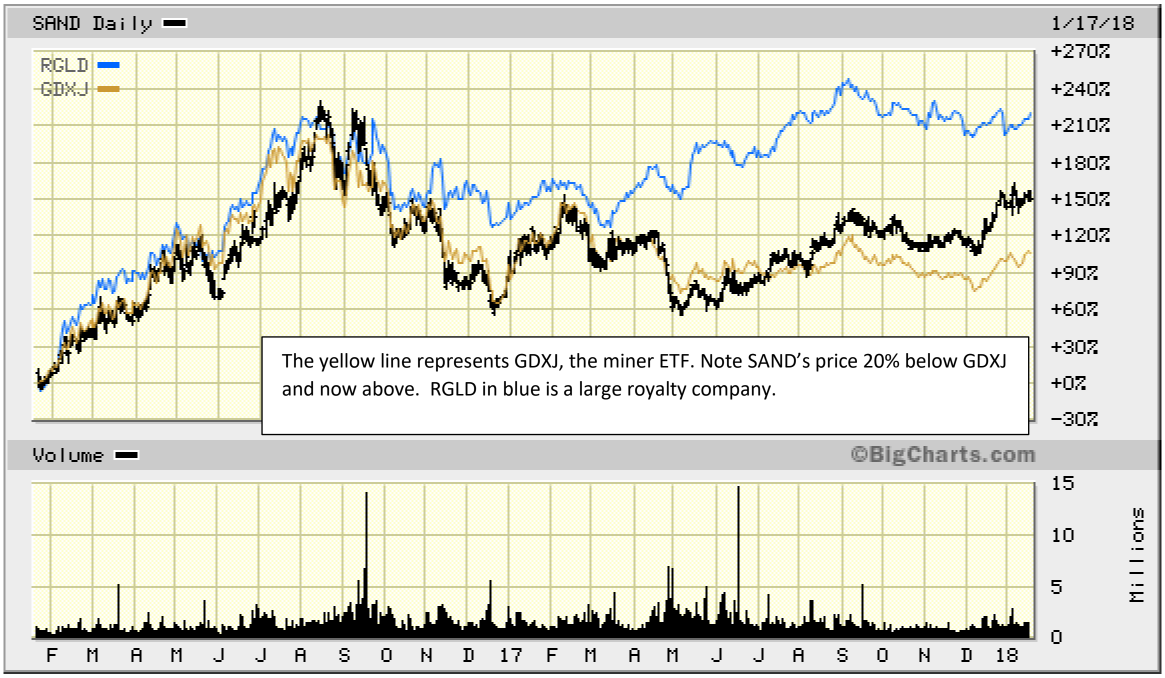
Total pay-off is $2.72 or a $2.72/$5.25 = 52% return on capital outlay per share of Sandstorm. That is about a 10% yearly return over four years. OK, not great, but the key is limited downside **(I presume)** vs. the optionality for higher gold prices and greater production/exploration success. If gold declines to $1,000, then

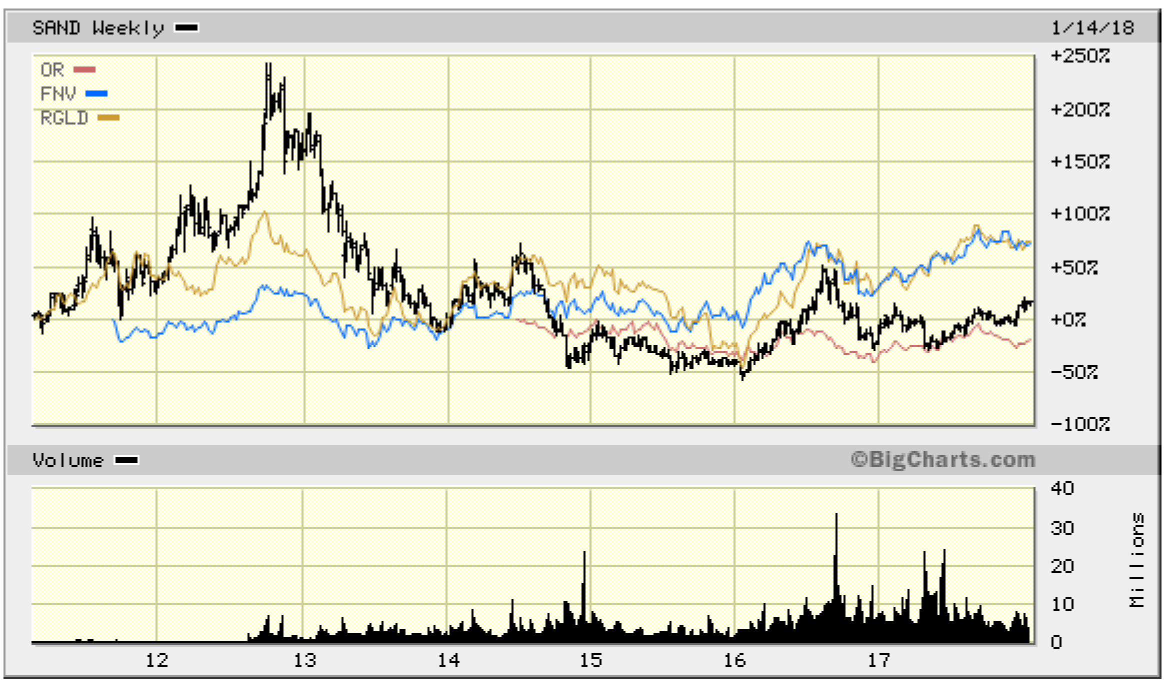
Gold Ozs.	Avg. Cash Costs		Current Gold Price		Op. CF
55,000		$280		1000	$39,600,000
			SG&A		-7,000,000
			FCF pre-tax		$32,600,000
			per share		$0.17
			Multiple 15 or less		$2.60

Coupled with almost no increase in production–extremely unlikely! Then you face at least a 50% loss.

My margin of safety is giving zero value to exploration upside and the arbitrage between the current perception of Sandstorm as a streamer to weakly-financed Junior resource producers and its growing list of quality majors. I expect over the next four years that Sandstorm's cost of capital will move towards but not equal the majors like FNV and RGLD.

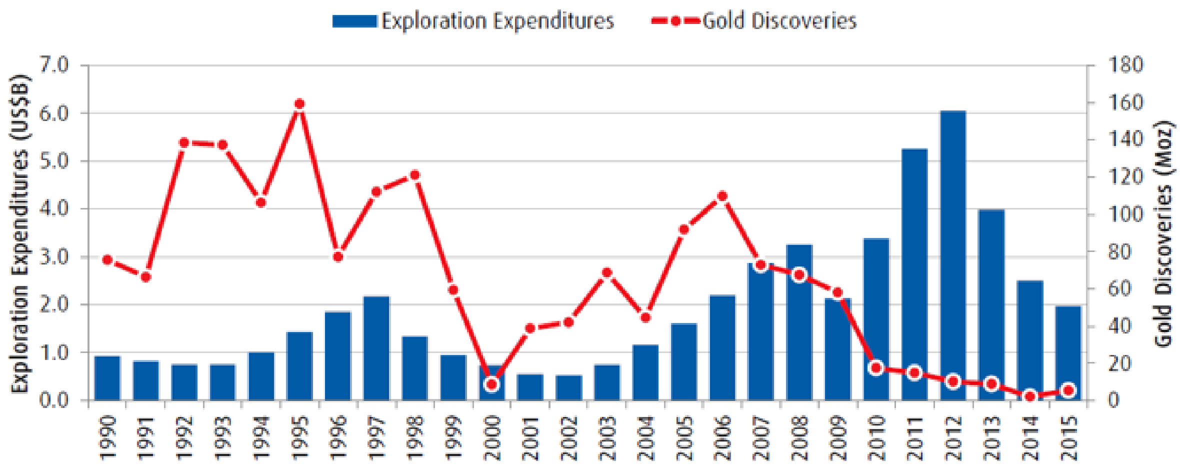
Already you see the snap-back from the panic of 9 months ago.





Sandstrom has a way to go before matching the quality and diversity of RGLD and FNV's streams but it is moving in that direction.

IF some of Sandstorm's royalties pay-off like Hot Maden, then the returns could be huge—note the slide below from Royal Gold's 2018 presentation. Where are the discoveries!



If you don't grasp the importance of the above slide and its possible effect upon RESERVATION DEMAND or the demand curve of the sellers—see www.acting-man.com/?p=38713, then SAND is not your cup of tea.   In a sharply rising gold price, SAND will underperform high cost, highly leveraged miners, but in a price downturn, SAND will be protected somewhat by its future acquisitions and contractual cash flows and clean balance sheet.

I know some believe Gold to $700.

https://harrydent.com/exclusives_new/harvard-economist-warns-700-gold-by-2018/?z=795768

https://www.themaven.net/mishtalk/economics/harry-dent-warns-of-700-gold-by-2018-Y7odSvrMfE2dMrFqXFiljA

I try to keep things simple, but AFTER having read many years of annual reports from SAND, RGLD, FNV, etc.

I have run out of napkins………