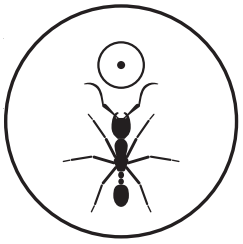


Myrmikan Performance

December 2017

Daniel Oliver
Myrmikan Capital, LLC
doliver@myrmikan.com
(646) 797-3134

Colonel Lawrence, at the beginning of *Lawrence of Arabia*, extinguishes the match that lights his cigarette by very slowly closing his finger and thumb upon the flame. A young corporal, copying the trick, exclaims: "Ow! It damn well 'urts!"

"Certainly it hurts," responds Lawrence.

"Well what's the trick then?"

"The trick, William Potter, is not minding if it hurts."

This scene sprang to mind at the end of December, which saw Myrmikan plunge over 10% in the first week and finish up more than 8% by month's end. Volatility hurts. Given two investments with the same expected gain, investors should always prefer the more stable one, financial theory and common sense tell us. Yet Myrmikan pursues an investment strategy that embraces volatility. Insurance contracts that have unlikely outcomes but very high payouts are by their nature volatile—in a way it is their purpose—and Myrmikan's strategy is designed to act as insurance against the failure of central bank central planning. The only difference between Myrmikan's strategy and a normal insurance contract is that, as these pages have argued for nearly eight years, in Myrmikan's case the payoff is certain. The timing and precise dynamics may be uncertain, but five thousand years of financial history confirm modern Austrian economic theory that a credit bubble can have only one resolution: liquidation. Liquidation of capital and capitalists, of land, of labor, of markets, of currencies, of governments, of empires.

Gold is the only asset sure to rise in a thorough liquidation, yet few are able to stomach the percentage holding that history and theory suggest is prudent. Since the Federal Reserve began operations in 1914, for example, annually rebalancing a portfolio to consist of 20% gold (as recommended by the storied Swiss private banks of old) and 80% S&P 500 boosted overall returns by 8.2% compared with the S&P 500 alone while reducing the annual standard deviation of returns by 15%.[1] The math and theory are clear, but how many current market participants maintain 20% of their assets in gold bullion?

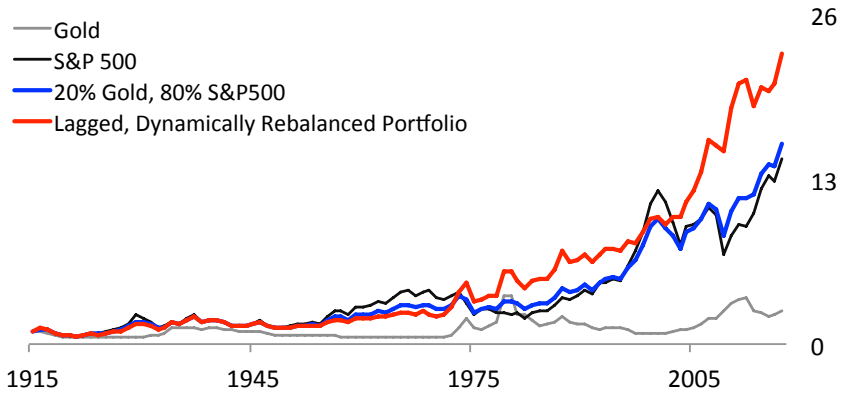
1 Myrmikan's May letter gave an optimal figure of 26%, but this ignored S&P 500 dividends. The figures presented here include the addition of dividends taxed at the highest marginal rate then in effect. Assuming the tax rate on dividends had been consistently 37% (the current top marginal rate) a rebalanced portfolio including 14% gold would have outperformed by 5.7%. At the top "qualified dividend tax rate" of 15% (a scheme introduced in 2003), the optimal gold holding would have been 11%, which would have outperformed the straight portfolio by 3.4% and reduced annual volatility by 13%.

At the request of one of Myrmikan's readers, we looked at whether there might be a way to time the allocation. There is. As long-time readers know, Myrmikan looks at gold not through the prism of its nominal price in dollars but in terms of the percentage that the gold on the Federal Reserve's balance sheet backs its liabilities and advocates buying gold when that ratio is low and selling gold when the ratio is high.

For example, in 1940, by the time the roaring '20s had been fully liquidated, the Fed's gold backed its liabilities by 88%. There was very little credit in the dollar system, which made it a good time to own stocks. By the top of the 1960s bubble, the Fed had monetized so many government bonds that, at the pegged and London market price of $35 per ounce, gold backed the Fed's liabilities by just 12%. That was a great time to own gold (had it been legal for Americans to do so). On January 21, 1980, the spot price of gold hit a peak of $875, which meant that the gold on the Fed's balance sheet backed its liabilities by 133%—in order words, its liabilities were overbacked by 33%. That was not a good time to own gold.

Running the rebalancing analysis again adjusting for the gold percentage of the Fed's balance sheet dramatically increased returns. Setting the annual gold allocation at 60% of the non-gold portion of the Fed's balance sheet, for example, made the rebalanced portfolio beat the S&P 500 by 52% instead of only 8% and with a 14% decrease in volatility.[2]

Looking at the numbers, however, there was a visible problem: credit bubbles grow over long periods of time and, as a result of dynamic rebalancing, the model portfolio kept buying more gold and selling the market at the beginning of the cycle, fighting the bubble instead of riding it. And similarly, in a crash, the formula sells gold and buys the market too soon. Lagging the rebalancing by two years (in other words, applying the formula not against the previous year Fed position, but by the position two years prior) boosted the return to a 57% increase over the straight S&P 500 portfolio.[3] This formula would today produce a gold allocation of 56%.



2 In other words, for example, in 1915, gold backed the Fed's liabilities by 77%, the balance of which is 23%, 60% of which makes 13.8% gold and 86.2% S&P 500 for the following year.

3 Assuming a consistent dividend tax rate of 15% instead of the highest marginal rate then in effect produces an excess return of 47% with a 4.2% decrease in annual volatility.

This lag adjustment has its own problems: it makes the theoretical portfolio have a full position during the 1981 crash, for example, even though common sense would dictate not to have owned any gold at that moment.

The lesson, perhaps, is not that there is some ideal formula waiting for the MIT scientists at the big banks to discover, but the intuitive realization that credit bubbles run in cycles and inevitably come to an end. Armed with this insight, we tried a very stark formula that had the rebalanced portfolio at 0% gold whenever the Fed's balance sheet was above 20% gold two years previously and 100% gold when it was below that figure, which produced an excess return of an astounding 760%. The problem with this analysis is that no one is so sure of himself as to go 100% weighting to anything, so it is inactionable.

But, the lessons of this loose study remain: first, now is a very good time to have a large overweighting in gold; second, few investors have the stomach to hold the proper allocation of gold, be it 20%, 60%, or 100%. Certainly no manager could take the career risk of advocating such a weighting.

Myrmikan approaches the gold mining sector as a mitigation to investors' reluctance to maintain a proper allocation to gold bullion. Gold mining shares may be much more volatile than gold bullion, but as Mark Spitznagel tirelessly points out, adding a vastly underperforming and volatile asset can increase the return of a rebalanced portfolio as long as it is anti-correlated. The Barrons Gold Mining Index since 1915, for example, has lagged the S&P 500 by a staggering 87%, and its performance has had twice the volatility; yet a 29% rebalanced allocation since 1915 has resulted in an overall increased return of 72% and with lower volatility compared to the S&P 500 by itself.[4]

The proper gold mining allocation remains far too high for most investors, even if split between bullion and miners, so Myrmikan's strategy is to make it easier by embracing the insurance dynamics of the sector by focusing on the shares of the most marginal gold mining firms. This increase in counter-cyclical volatility should decrease the optimal weighting to make the exposure more palatable. And, as pointed out in Myrmikan's April 2016 letter, gold mining is the only industry that has negative economies of scale, making a portfolio of well-selected junior companies superior to the indices and funds comprised of large companies. Myrmikan has demonstrated this proposition by returning a gain of 10.7% since inception versus the GDXJ's 61.5% loss and the BGMI's 56.6% loss over the same time period.

In a better world, there would be no need for Myrmikan's strategy. It is legal tender laws that are solely responsible for the business cycle, for credit booms and crashes. Even granting legal tender laws, the absence of central banks keeps credit cycles within tolerable amplitudes. But, under the political omnipotence of our Keynesian overlords, the bubble has breached all bounds to the upside and will similarly probe uncharted depths once it pops.

Managing a junior gold fund does not grant immunity from the emotional pain of riding the volatility roller coaster. The trick, we constantly remind ourselves, is confidence in the thesis, of its place within a broader portfolio, and not minding that it can sometimes hurt.

4 We ignored dividends in this analysis since there is no available data series for gold stock dividends, but they do pay them, and countercyclically, so the after-tax affect is likely to be negligible.

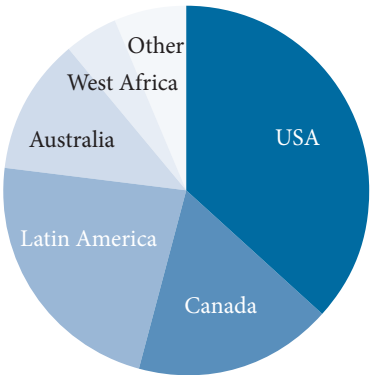
MYRMIKAN CAPITAL LLC

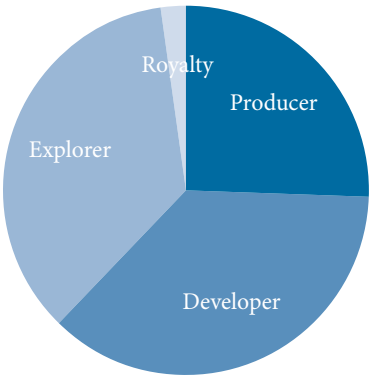
Investment Purpose

Myrmikan Gold Fund is designed to provide insurance against a global credit collapse through speculations in the equity of operationally levered gold mining companies. Any investment should be considered a premium, the value of which decays over time until and unless the insured event occurs. Investors should be prepared to lose substantially all of their investment should the insured event not occur. Please see the Confidential Offering Memorandum for additional details.

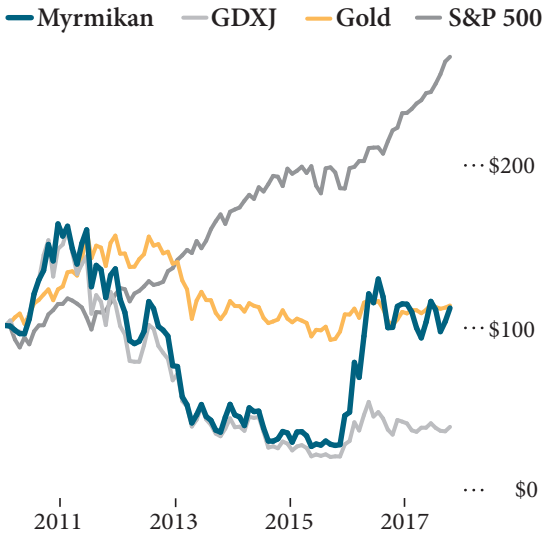
Annualized	3-Year	5-Year	ITD	Alpha	(Annual)	Beta	Sharpe	Positions	Largest	Top 10
Myrmikan	45.9%	-3.3%	1.3%				0.28	34	10.2%	61.9%
GDXJ	9.3%	-20.4%	-11.6%	1.68	22.2%	1.11		71	4.3%	37.9%
S&P 500	12.5%	18.2%	13.3%	0.61	7.6%	0.50		505	3.8%	20.0%

Portfolio Holdings





Net Return of $100



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD	ITD
2010				-0.3%	-2.5%	-2.2%	-0.1%	9.5%	14.7%	7.1%	4.5%	11.8%	**49.3%**	**49.3%**
2011	-6.7%	16.2%	-4.6%	3.9%	-8.5%	-6.4%	9.2%	5.5%	-21.9%	10.5%	-1.9%	-12.7%	**-21.6%**	**17.1%**
2012	11.6%	2.3%	-13.8%	-6.7%	-15.8%	-2.1%	1.5%	6.4%	18.9%	-3.8%	-9.78%	-2.3%	**-16.7%**	**-2.8%**
2013	-3.7%	-19.2%	-0.7%	-24.5%	-8.6%	-21.2%	11.9%	13.8%	-14.1%	-5.1%	-14.1%	-3.42%	**-63.8%**	**-64.8%**
2014	25.6%	17.9%	-12.3%	-2.9%	-11.6%	27.5%	-4.6%	0.6%	-21.3%	-21.2%	6.5%	-2.2%	**-11.6%**	**-68.9%**
2015	14.4%	-2.6%	-15.9%	21.2%	0.5%	-7.2%	-19.6%	5.6%	-2.6%	9.3%	-12.8%	-2.4%	**-18.5%**	**-74.6%**
2016	1.9%	74.8%	9.1%	57.2%	-11.8%	36.6%	27.6%	-4.6%	12.6%	-8.4%	-16.0%	0.2%	**289.4%**	**-1.1%**
2017	13.0%	1.3%	-0.1%	-4.2%	-8.9%	-6.0%	10.2%	12.3%	-4.4%	-12.2%	6.3%	8.1%	**11.9%**	**10.7%**

Performance data presented is as of December 31, 2017, is unaudited, represents past performance, and does not guarantee future performance. The investment return and principal value of an investment will fluctuate and the member's interest, when withdrawn, may be worth more or less than original cost. The current performance may be lower or higher than the performance data quoted. The GDXJ represents the Market Vectors Junior Gold Miners ETF, which is marketed as a low-fee way for investors to gain exposure to junior gold mining equities. The S&P 500 acts as a benchmark for many investors.