Low Rates are Here to Stay

By Anne Faivre

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Sovereign bond yields have fallen again since the beginning of 2019 to all-time lows in the euro zone, with a 30-year rate in Germany returning below 0 percent. It is thus nearly 25 percent of the European sovereign debt that offers a negative return but also 15 percent of the private company euro zone debt. Are these interest rate levels the result of a bubble on financial assets created and supported by the central banks? Or are they instead a reflection of a new balance that is likely to continue?

In the face of these very low returns, several voices, particularly among bank economists, have come forward to denounce their negative impact on the economy and the cost associated to banks and the ones with savings or fixed income. The theory goes like this—since rates were below nominal growth, financing conditions were very (if not too) accommodating and the maintenance of negative rates in Europe weakened European banks.

INTEREST RATE AT EQUILIBRIUM

The underlying question is whether a real interest rate equilibrium can remain negative in the long run. For some, if the real interest rate represents the rate of return on capital, negative interest rate is impossible by nature. Indeed, no company would accept to invest at a loss.

The theory explains that, under perfect competition and at equilibrium, the interest rate is the long-term growth rate. According to Solow's definition, a balanced growth is one in which the investment rate equals the savings rate with full employment of the factors of production. According to the economic literature, there would be an interest rate that would balance supply and demand for loanable funds and keep the economy at full employment without generating inflationary pressures: this is the "natural" or "equilibrium" interest rate. In theory, this natural interest rate is closely linked to the trend growth rate of the economy (Cecchetti and Schoenholtz, 2015). The underlying idea is that an increase in growth leads to higher real returns on investment.

According to Ramsey's rule, the natural interest rate is equal to the sum of population growth and technical progress. The rate will thus depend on the incentive to save today to consume tomorrow in order to maximize its social welfare. The neutral rate can be defined as the rate at which growth is neither stimulated nor restricted by monetary policy. Thus, in the context of a balanced long-term growth model, the market rate should oscillate around the neutral rate over the cycle. The variation around the target would depend on the difference between the level of activity from its potential and inflation from its target.

However, the existence of a natural rate exists only in neo-classical growth models. Several economists, from K. Wicksell in the 19th century to researchers like Hamilton & Harris (2014), question the idea of a long-term value towards which the real interest rate should converge. They also reject the hypothesis of a stable relationship between the level of growth and the interest

Table 1
Average Real Interest Rates and Inflation by Century

Century	13th	14th	15th	16th	17th	18th	19th	20th
Nominal rate (%)	7.3%	11.2%	7.8%	5.4%	4.1%	3.5%	5.0%	3.5%
Inflation	2.2%	2.1%	1.7%	0.8%	0.6%	0.0%	3.1%	2.2%
Real rate	5.1%	9.1%	6.1%	4.6%	3.5%	3.5%	1.9%	1.3%

Source: P.Schmelzing (2018)

rate level, pointing out the impact of demographics, inflation trends, budgetary policy, asset price variation, but also technical progress and distortions in the income distribution.

Several studies suggest that the recent rate decline is not cyclical but is the consequence of the secular stagnation regime. According to a recent article by Summers and Rachel, over the past 30 years, real interest rates have declined by 300 basis points, reflecting a change in the balance between savings and investment, as a result of private sector transformations and rising public debt. While the rise in public debt, the rise in the cost of pensions and social security apply an upward pressure on interest rates, the decline in the need for investment in a regime of secular stagnation applied a higher downward pressure.

Noteworthy, the debates in the 1980s was on the historically high level of rates compared to the 1950–1970 era of great moderation, which had increased simultaneously in all developed countries. The rise in yields was then justified by the crowding out of private capital by the public debt, which would have discouraged private savings. The rise in interest rates would also have resulted from a drift in inflationary expectations (OFCE, 1986). At the time, Blanchard and Summers[1] rejected the explanation for the rise in U.S. budget deficits, considering that at the world level there was compensation for the expansionist policy of the United States by a tax contraction of their partners. However, they pointed to the upward revision of the profit forecasts of the companies to explain the concomitant rise in shares and rates.

LONG-TERM TREND TO LOWER RATES

In fact, rates have been raised only temporarily. Long-term historical analyses such as that of P. Schmelzing show that the fall in interest rates is not a characteristic of the post-crisis era, but instead is a secular trend. One of the explanations is the increasing integration of money markets with a lowering of the cost of liquidity. (See Table 1)

The neutral rate is, by nature, unobservable. Central banks, which have made it an essential tool of their monetary policy, periodically try to estimate it. The Fed has revalued downward its neutral rate between 2.25 percent and 2.50 percent. This assumes, given an inflation targeting around 2 percent, that the real neutral rate is now below 0.5 percent, well below the potential growth of the U.S. economy (still estimated around 2 percent). According to a recent paper by the ECB,[2] whose purpose is to review the various methods of estimating the neutral rate, the conclusion is that the neutral rate has been continuously declining since the 1980s in the wake of slowdown in growth and aging populations. Risk aversion and security seeking are additional factors. Estimates of European rates show a neutral rate in negative territory regardless of which model is considered.

These estimates are consistent with the studies on secular stagnation, which consider that the natural rate used to balance savings and investments, is negative[3]. The assumption of secular stagnation rests on the breaking of the approximate long-run equality between the growth rate and the real interest rate when inflation is permanently low. The Fed of New York believes over the long term that the term premium, the compensation required by the investor for long-term investment, is what allows long market rates and anticipated short rates to equalize.

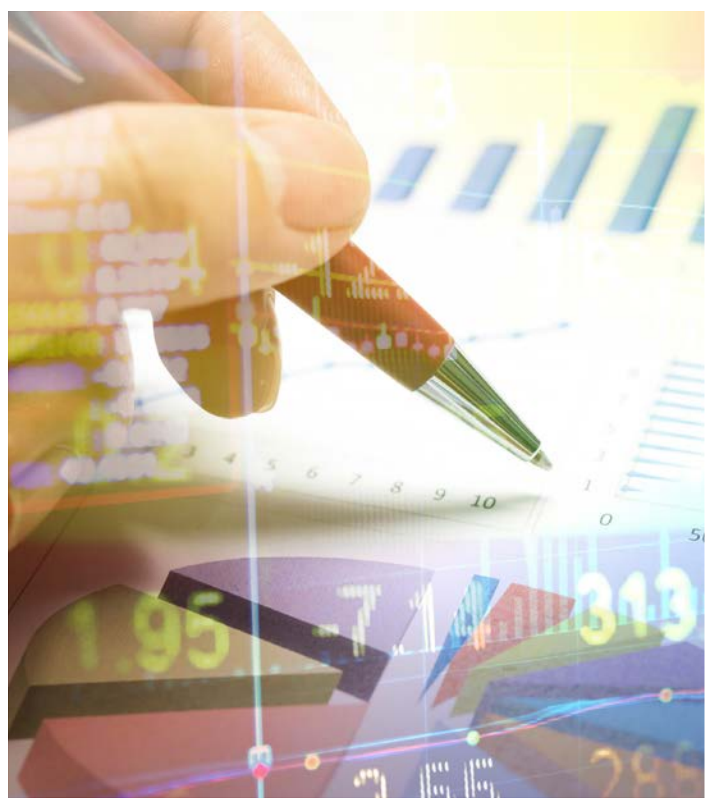
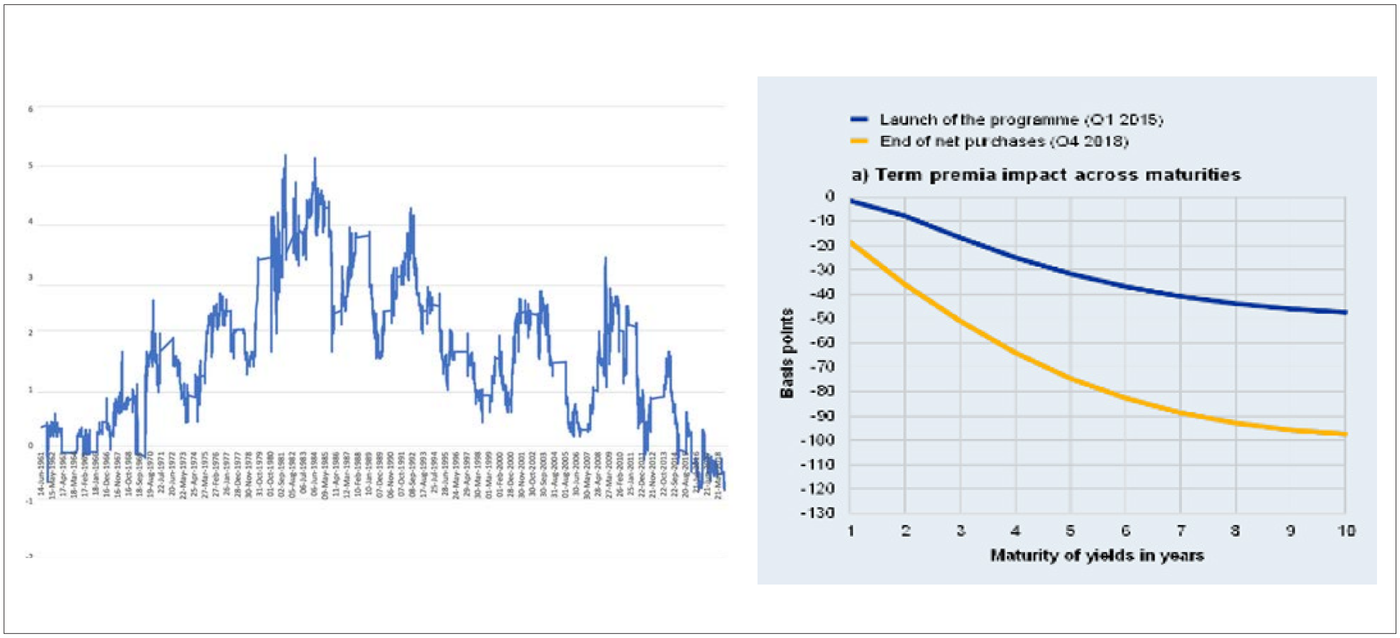


Chart 1
Term Premium



Sources: New York Federal Reserve Bank (left)/ BCE, January 2019 monthly bulletin (right)

This term premium has been steadily declining since the mid-1970s and has become negative since 2012. (See Chart 1)

Similar analyses conducted by the Bank of Japan or the ECB lead to widely comparable estimates with negative term premiums and close to -100 bps over 10 years. This clearly highlights the excess demand for savings in the face of investment needs in a society where overcapacity and waste are plentiful.

THE NATURAL RATE

In the short term, the natural rate of interest is supposed to serve as a reference for central banks when they set their key rate. For the medium/long-term analysis, it is the rate at which production is at its potential level (production gaps close to zero implying low changes in inflation), or the one observed when the economy evolves on its potential growth path. For central banks, accepting that the neutral equilibrium rate is negative, makes it essential to anchor expectations of positive inflation. Otherwise, the risk is that monetary policy will be durably restrictive.

THE JAPANESE EXPERIENCE

The Japanese example, which experienced a demographic shock and a decline in potential growth earlier than the euro area, is very instructive. Despite a massive injection of money by the central bank into the financial system, liquidity has made little progress in the real economy with weak credit demand and, above all, inflation expectations have remained sluggish. Underlying inflation has indeed fallen from 3 percent to 0 percent between 1990 and today, having only very temporarily reached 2 percent in 2013 following a VAT increase. It should be noted that per capita wages have fallen by an absolute 15 percent since 1997 despite rising productivity, rising employment rates and unemployment among the lowest in the developed world. The USA experiences very low unemployment, but sees only a moderate wage increase, which puzzles a few economists, including J. Powell. Thus, contrary to the theory, the reduction of the labor supply does not lead to a rise in wages and the constraints on the rate of use of the factors of production do not generate inflation. Hence inflation expectations are anchored at 0 percent

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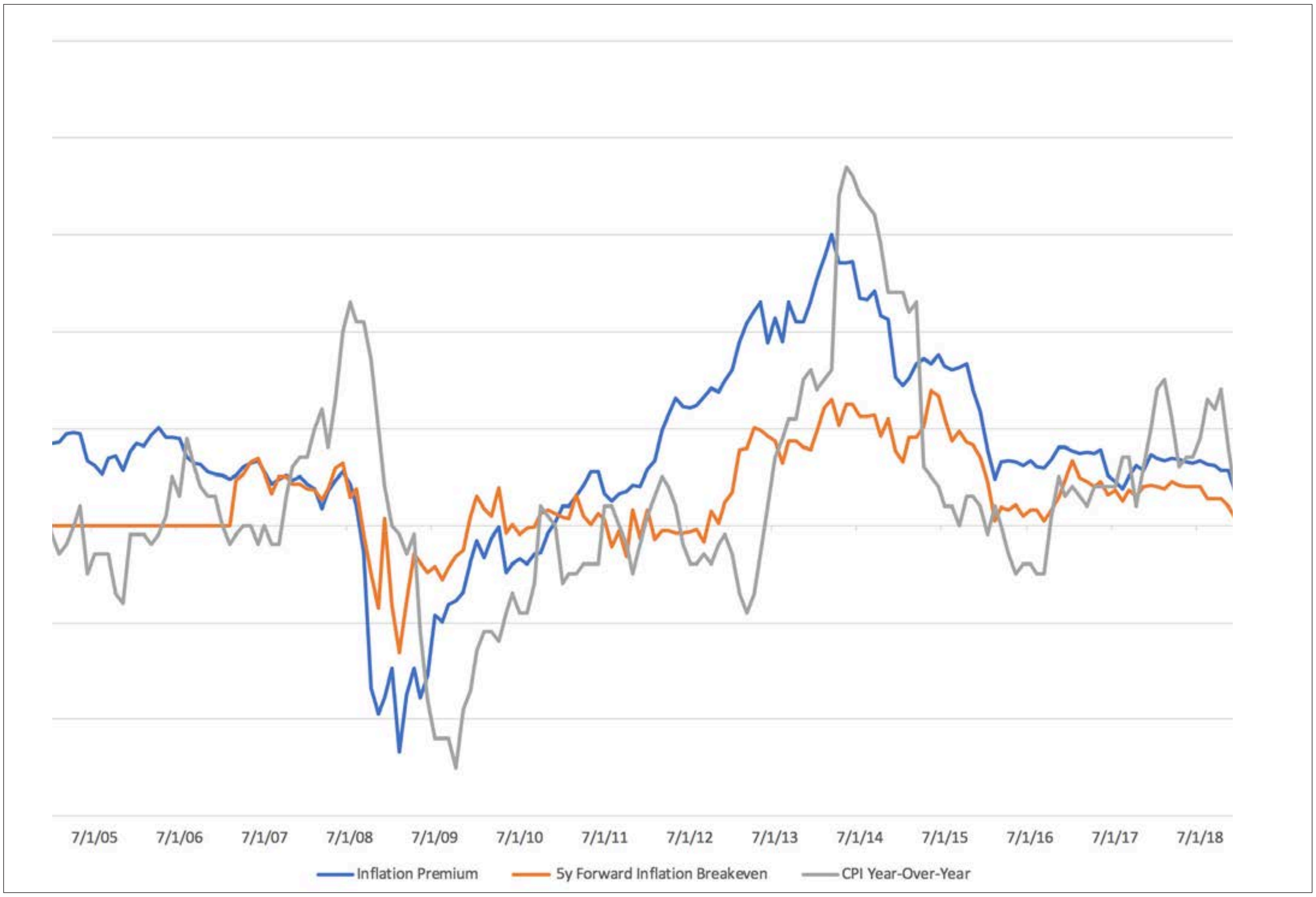
Chart 2
Inflation Premium on Japanese Market



Source : Bloomberg, calcul CDC

and real rates are substantially above their equilibrium level. (See Chart 2)

If for the time being there is still no "unlocking" of inflation expectations in the euro zone or in the United States, the risk is real. Whereas inflation premiums in the euro zone are now close to their historical low and the ECB has stated that inflation will remain under its target over the horizon of its forecast. In the case of unlocking of inflation expectations, the monetary policy would lose any impact of economic cycle and the risk of a deflationary spiral will increase.

Given the factors behind secular stagnation and the structural imbalance between savings and investments, it appears that monetary policy is relatively inefficient. The fact that central banks abound in liquidity savings despite the sharp rise in public spending shows that they themselves do not believe a rise in inflation will happen because several factors (value creation redistributed amongst agents, globalization, segmentation of the labor market) will structurally reduce it. The rise of savings is not only a consequence of low rates, but also due to a decrease of potential growth and an ageing population.

If low rates encourage debt and higher asset prices, central banks are forced to maintain this situation to prevent financial institutions from suffering significant losses, and therefore a resurgence of the financial crisis.

It is therefore necessary that financial institutions acknowledge the low-rate environment and thus gradually change their time horizon toward long term. It also involves reviewing most allocation models and yield requirements. In particular, insurers need to acknowledge that the low rate environment has secular drivers that can persist longer than they can stay solvent. A transition through regulation is required. ■

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ENDNOTES

1 Pourquoi les taux d'intérêt sont-ils aussi élevés ? Annales d'Economie et de statistiques N3 – 1986, O. Blanchard et L.H.Summers

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3 Transformer le régime de croissance», Rapport collectif pour l'institut CDC pour la recherche, octobre 2018

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A Golden Opportunity For Investment Portfolios

By Steve Scoles

Editor's note: This article is for informational purposes and not investment advice.

It appears now is the time to take a very hard look at the value of adding gold, and even gold mining stocks, to investment portfolios.

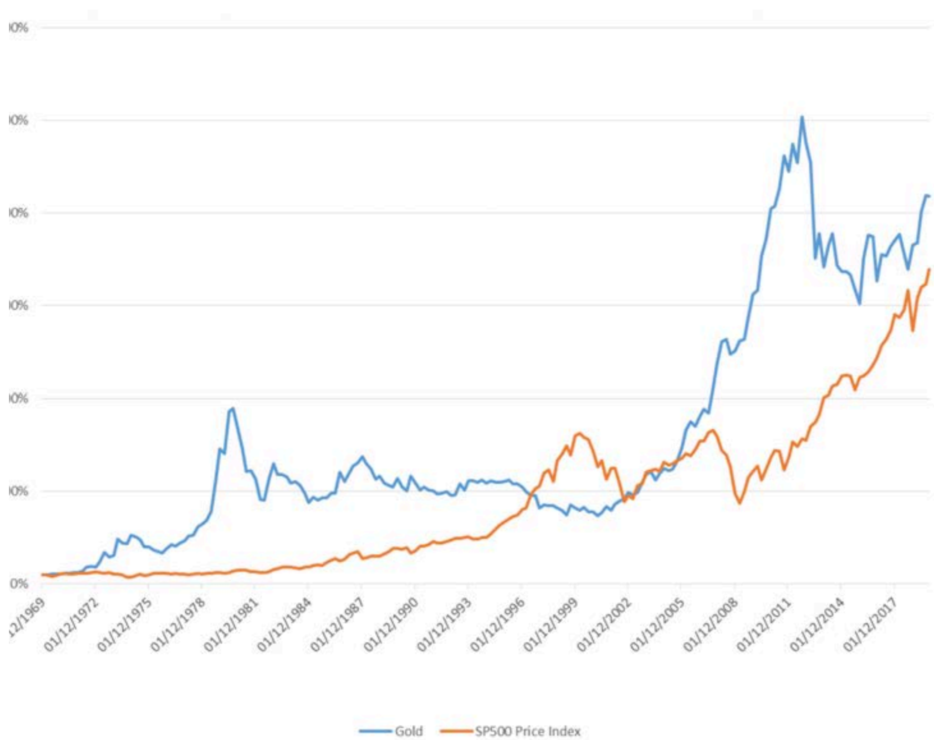
The benefit of adding gold to portfolios is its significant historical diversification benefits. The benefit of adding gold to a portfolio **right now** is the decent potential for a large increase in its price due to current low gold mining industry sentiment and possible central bank actions in the coming years. Furthermore, an interesting aspect of gold mining stocks is that they can act like a long-term call option on the price of gold.

Let's look at each of these factors one by one.

DIVERSIFICATION BENEFITS OF GOLD

While I could show a mean-variance analysis of gold and its correlation (or lack thereof) with stocks, I think the following chart of the performance of gold versus U.S. stocks (SP500 Price Index) over the last 50 years really illustrates how gold can perform very different from stocks. (See Chart 1)

Chart 1
Percent Change—Gold Price Versus SP500 Price Index—Last 50 Years



Source: Bloomberg

Table 1

Gold	Time Period	Gold return	S&P 500 Price return
Boom	1970 to Jan. 1980 peak	+2317%	+24%
Bust	1980 to 1999 low	-70%	+1057%
Boom	1999 to 2011 peak	+649%	-14%
Bust	2011 to Nov. 15, 2018	-23%	+176%

Source: Bloomberg

Furthermore, I have divided the last 50 years into four periods of boom and bust for gold and how it has done versus the SP500 Price Index in those periods. (See Table 1)

As shown in the chart and table, the price of gold can often move in very different ways from stocks. Also, the table shows gold can have medium-term periods of very high returns and also long periods of no or negative returns.

At the time of writing this article, the S&P500 has just set all-time highs above 3100. Modestly diversifying into something uncorrelated with stocks seems like a reasonable thing to consider at this point in time.

GOLD MINING INDUSTRY SENTIMENT

I grew up in a mining town in Northern Canada and got to see first-hand the big booms and big busts of commodity mining and prices. What typically happens is that high commodity prices cause a lot of expansion of mining operations and exploration for new sources of supply. After a few years of this excitement by the entire mining industry, the large expansion of supply comes online leading to prices then rapidly falling. The lower prices lead to a significant curtailing of mining operations with cutbacks, layoffs, and a focus on cutting costs often through mergers as weaker players can no longer continue to exist with low prices. After several years of this despair, the reduction of supply leads to prices then rapidly rising leading to a renewal of the boom/bust cycle.

You would think that mining companies would learn from this, but it seems that the reality is that it is hard to get people to finance or invest in mines until **after** the commodity price has risen. This dynamic not only leads to cycles in the various mining industries, but it also really **amplifies** the cycles to create very large booms and vary large busts.

The current sentiment in the gold mining industry, eight years after the 2011 all-time high in the price of gold, is one of cutting costs, mergers to consolidate administration, and many years of reduced exploration. For example, one of the most prominent gold mining companies, Barrick Gold, has recently made it clear that it is focused on cutting costs and not on increasing production. In addition, several large gold mining company investors

have also put pressure on these companies to focus on large administrative cost cuts and reduce growth efforts.

Furthermore, a recent report from McKinsey Consulting highlighted that in recent years there has been a "70 percent reduction in exploration expenditure as companies sought to preserve cash."

The massive efforts to reduce costs in the gold mining industry and the significant reduction in exploration are actually a sign of the bust getting closer to an end. This long period of retrenchment sets the stage for possible supply shortfalls, and thus increases the potential for a boom and a rise in the price of gold in the coming years.

POSSIBLE CENTRAL BANK ACTIONS—THE "NEXT STEP"

There is a lot of focus right now on low and even negative government bond interest rates and the decisions of central banks on their short-term policy interest rates. But I think it's the central banks' possible next steps not related to interest rates that could significantly impact the price of gold in the coming decade.

In one of the most important central bank speeches of all time, Ben Bernanke, past head of the U.S. Federal Reserve, in 2002, laid out how his research showed how central banks should deal with deflation caused by a large reduction in consumer demand. The initial steps of cutting the policy rate to zero and then central bank purchases of assets to bring long-term interest rates down have played out (again and again) over the last 13 years. The "next step," according to Bernanke's speech, if needed in a significant downturn, is some sort of coordinated money printing, tax cuts, and giving money directly to consumers to spend. (Technically, the U.S. Federal Reserve cannot print money, but rather, it could coordinate with the federal government to buy very large amounts of the government's debt that is used to allow the government to finance large tax cuts, or even to dispense cash directly to citizens to spend.)

There is no certainty that this "next step" has to happen, but let's look at a few factors that may cause this to happen sooner rather than later.

First, the U.S. Federal Reserve is already lowering its short-term policy interest rate and it currently sits at under 2 percent. This is at a time when things are economically pretty good—the U.S. stock market is at an all-time high, long-term interest rates are at historic lows, and U.S. employment is very good. There is very little room for the U.S. Federal Reserve to adjust interest rates (short-term or long-term) if there was a significant downturn. This puts the "next step" much closer than it has been before.

Second, the European central bank has tested negative policy interest rates. The evidence is suggesting that this is not actually stimulating the economy as much as desired. Furthermore, the head of the U.S. Federal Reserve recently stated that negative interest rates are not something the U.S. central bank would pursue. Again, the "next step" seems to be reasonably possible in the next several years.

What does this mean for the price of gold? If this next step were to occur, it's reasonable to think that investors (individual and institutional) and countries that hold U.S. currency in reserve to stabilize their economies will question the value of holding that asset and will look for an alternative tangible store of wealth. Furthermore, it's reasonable to think that other countries with their own currencies will follow the lead of the U.S. One alternative to currency, that is limited in supply and is tangible, is gold.

Even a small amount of uncertainty around the value of currencies could lead to a large increase in the demand for gold. An increase in the demand for gold at the same time supply is diminishing due to cutbacks and poor sentiment in the gold mining industry could be the recipe for a very large increase in the price of gold.

WHY GOLD MINING STOCKS ACT LIKE A LONG-TERM CALL OPTION ON THE PRICE OF GOLD

There is no guarantee that the price of gold will rise in the coming years. But I have tried to show that the potential for a large rise is there. One way to take advantage of that potential, but also limit downside is through some sort of long-term call option on the price of gold. Interestingly, at this point in time, many gold mining companies through their efforts to reduce costs and be more efficient, have effectively turned their stocks into something like a long-term call option on the price of gold. Let's look at an example to show how a gold mining stock can act like a call option on the price of gold: First, imagine a gold mining company is currently surviving on a gold price of $1400 per ounce and say making a profit of $400 per ounce. Then, imagine what would happen if the price of gold, say, increased by 50 percent to $2100 over the next several years. That could, all other things being equal, increase profit margins from $400 to $900 per ounce. In other words, gold mining stocks have the potential to see their profits increase by several multiples of the percentage increase in the price of gold. This increase in profit margins can lead to a much higher price for gold mining stocks. Hence, gold mining stocks can have a very asymmetric risk/reward relationship with an increase in the price of gold very much like a long-term call option on gold.

Importantly, picking **individual** gold mining stocks is fraught with danger. For example, Mark Twain has been credited with saying "a gold mine is a hole in the ground with a liar on top." So, instead, a broadly diversified approach to investing in gold mining stocks is usually much better—such as ETFs or well-managed mutual funds. In addition, there is a spectrum of risk and reward when looking at large mining companies, smaller companies or companies that focus on exploring.

This current situation allows portfolios to get significant diversification and potential return benefits from allocating only a

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relatively small percentage to a diversified mix of gold mining stocks—say 5 percent to 10 percent of an investment portfolio.

CONCLUSION

The diversification benefits of gold are easy to see. The current potential return benefits are harder to see, but the ingredients seem to be in place. Even a small allocation to gold and gold mining stocks could be enough to significantly benefit investment portfolios over the coming years. It appears to be a good time to take a hard look at this asset class.

But even if gold does not perform well, I can say it is still one asset class that can make your portfolio truly shine. ■

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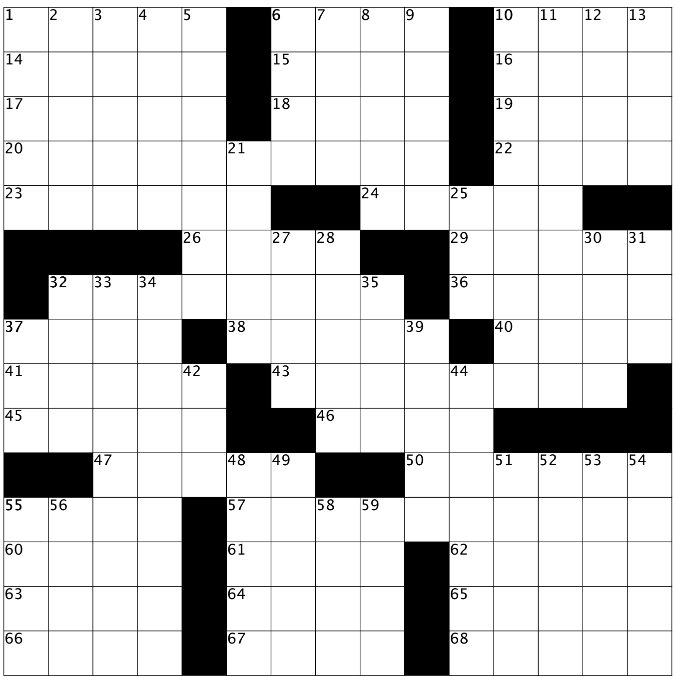
Crossword Puzzle: Very Interesting

By Warren Manners



Across

1 Birds do it
6 Big Bang remnant (abbr)
10 Beige
14 Ring event
15 Hamlet, for one
16 Prized
17 Present times?
18 Aphrodite's son
19 Chest protector
20 See 33 down
22 Helm positions briefly
23 Flesh
24 Crawls?
26 Capital of Yemen
29 Ecru
32 Ephemeral
36 They're killers
37 Acid type
38 Flute and trombone
40 Powerful D.C. lobby
41 Kitchen topper
43 Spiny-leaved plant
45 Largest known toads
46 Arrest
47 In other words, in other words
50 Saint Ignatius follower
55 Carpenter's groove
57 a.k.a. Waiting theory
60 Arab ruler
61 Chinese dynasty
62 Stop at
63 Duty list
64 One of the bad forms of chol.
65 Like some advice
66 Uzbek currency
67 Plasma alternative
68 Curl

Down

1 Place of rest
2 Muslim beauty
3 Lounges
4 Atoll features
5 A person who habitually pretends to be something she is not
6 Saskatchewan native
7 Eve's counterpart
8 Cartels
9 Alter
10 Evanescent
11 a.k.a. Real Theory
12 Artifice
13 Diamond quartet
21 Lariat
25 Nigerian tribe
27 Rocker Lofgren
28 Pot contents
30 Indiana city on Lake Michigan
31 Uncommon sense
32 Throat trouble
33 a.k.a. Biased Expectations Theory (with 20 across)
34 Native of a South American country
35 Messi or Gretzky or Jordan
37 Marathoner Pippig
39 Japanese screen
42 Language suffix
44 Most candid
48 Fusillade
49 One maturing quickly
51 Caballero
52 Gratuitous
53 Messi and Gretzky and Jordan
54 Inclines
55 Scurry
56 Fukien port
58 Last name in cruelty
59 Apprised

The solution will be provided in the next issue of *Risks & Rewards* along with the names of those who were able to successfully complete it. Submissions should be made to *sphillips@soa.org* by June 1, 2020. ■

PBR Solution From October 2019

R	E	P		O	C	K	H	A	M		C	R	A	M
O	A	R		S	O	M	A	L	I		A	U	R	A
O	T	O		S	C	H	O	O	L	L	U	N	C	H
F	A	B	R	I	C		S	T	E	A	D	I	E	D
S	T	O	I	C	A	L				M	A	N	S	I
		W	A	L	L	E	T		B	B	L			
M	I	L	N	E		V	I	A	L	S		N	A	Y
S	T	E	T		D	E	L	F	T		A	O	N	E
G	E	R		A	A	L	I	I		M	R	N	A	S
			T	S	P		A	S	L	E	E	P		
A	C	T	A	S				R	O	S	A	R	I	O
C	H	E	M	U	L	P	O		A	S	S	O	R	T
C	E	N	T	R	A	L	B	A	N	K		F	A	T
R	A	N	A		T	A	I	P	E	I		I	K	E
A	T	O	M		I	N	S	E	R	T		T	I	R

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