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Banking<sup>3</sup>

0.8 points)

Savings

## The Cost of Price Inflation

*E* conomists contend that preferences among individuals are wide-ranging and that, generally, people should be able to make decisions freely. We are skeptical of policies that distort peoples' choices because a cost is incurred when someone feels compelled to make a choice that differs from his or her preference.

Price inflation distorts our choices. During the hyperinflation of the Weimar Republic, workers rushed to cash their paychecks, only to waste time standing in line, before rushing to spend it as their purchasing power plummeted. Surely no one chose this frenetic behavior. But less severe inflation distorts behavior too. For example, as prices and interest rates trend higher, people who normally would prefer to rent an apartment on a short-term basis might feel compelled to enter a long-term lease or even assume a mortgage.

When it comes to investing, inflation distorts the risk-return tradeoff investors confront. Stocks have generally provided strong returns over long periods, even after accounting for inflation. Bonds, on the other hand, have not (see chart below). When inflation expectations are high, risk averse investors who prefer the relative stability of bond returns might nonetheless feel forced to load up on stocks. In effect, when forced to choose between a loss of future purchasing power and market volatility, these individuals often accept the latter, however reluctantly.

Our parent organization, AIER, has long championed sound money and inveighed against fiat currency regimes, in which money can be created "at the stroke of a pen." We follow suit by urging investors to form robust portfolios designed to withstand expected as well as unexpected inflation. Our advice has not wavered. We are confident our long-term readers are well prepared.



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## HOW TO THINK ABOUT INFLATION

*E*verything old is new again: Inflation plagues the US economy. The Consumer Price Index is up 7.9 percent from a year ago. The Personal Consumptions Expenditures index is up 6.1 percent from a year ago. We haven't seen price pressures like these in 40 years.<sup>1</sup>

If we want to understand inflation, we need a framework to organize our thoughts. Economies are fiendishly complex; without a model that helps us focus on the relevant details, we're lost in the woods.

Inflation means a general increase in prices. Equivalently, it means the dollar is losing purchasing power. Economists distinguish general price changes from relative price changes. The latter come from the forces of supply and demand operating in specific markets. The former are common to all markets.

We frequently use the concepts of *aggregate* demand and *aggregate* supply to analyze inflation. But despite the similarity in names, these concepts aren't the same as microeconomic supply and demand. Aggregate demand refers to total nominal spending in the economy. Aggregate supply means general productive conditions.

We measure inflation by tracking changes in a price index. There are many price indexes, each focusing on a subset of the economy, such as consumers' goods or producers' goods. Also, some price indexes that cover the same area are calculated differently. For example, the above-mentioned CPI and PCEPI are both snapshots of prices for consumers' goods. But what's under the hood is somewhat different.

Usually, inflation is caused by expanding aggregate demand. When aggregate demand (also called total spending or nominal gross domestic product) increases, prices for everything rise. Prices don't rise uniformly, of course. Inflation always has some distributional effects. But these are typically small compared to the general phenomenon.

Expanding the money supply is the easiest way to boost aggregate demand. As we saw, the Fed printed tons of money when COVID-19 threatened the economy. Importantly, money demand rose, too. That blunts the inflationary effects of increasing the money supply.

Increased government spending doesn't usually cause inflation. There's a possible exception, however: If the government takes on so much new debt that the public expects money printing to bridge the fiscal gap, holders of dollars might want to unload them before they lose their value. Of course, when everyone thinks this way, the dollar depreciates! This hasn't been an issue for the United States in recent history, but the government took on an awful lot of debt to fight COVID-19. It could be the case now.

Action on the supply side can also cause inflation. When aggregate supply decreases (or grows more slowly than before), everything gets more expensive. The key here is productivity. If it gets harder to turn inputs into outputs, prices go up. This too contributes to inflation. We've heard a lot about the various logistics problems with global transportation, as well as a dearth of important producers' goods like semiconductors. Energy prices are markedly rising, due in no small part to the Russia-Ukraine conflict. All of these factors make production *in general* harder. In economics, harder means costlier. For a given amount of aggregate demand, diminished aggregate supply can only result in inflation.

Not all observed price hikes are inflationary. The price of cars, especially used cars, has risen faster than prices in general. There's undoubtedly an inflationary aspect, because it's common to all markets. But there's also specific supply and demand changes in the car market that are causing higher-than-average price increases for cars. We distinguish between the *relative* price of cars increasing (microeconomics; supply and demand) and prices *in general*, including for cars, increasing (macroeconomics; aggregate supply and aggregate demand).

Just because we use different concepts to analyze relative and general price changes doesn't mean we can pinpoint how much of each is going on. Our price index measurements frequently pick up both. Economists have various statistical tools to sort out relative from general price changes. For us, what matters is the conceptual difference. Don't confuse what's common to all markets for what's particular to one market.

1. By Alexander Salter, Senior Fellow, Sound Money and Banking, AIER. This article was reprinted in its entirety, it first appeared in AIER articles, March 13, 2022

## A REALITY CHECK: THE FED AND INTEREST RATES

I he news has been chockfull of stories regarding the war in Ukraine, gas prices, and inflation in general. Outlets are racing to tell us how these events will influence the Fed and whether it might soon "increase interest rates." A sampling of headlines from a simple internet search includes:

Why the Fed Raises Interest Rates to Combat Inflation -- CNBC Feb 15, 2022

The Federal Reserve is ready to raise interest rates soon despite the war in Ukraine -- NPR March 2, 2022 How Much Will the Fed Increase Interest Rates in 2022? -- Bankrate.com March 9, 2022

These are just three articles among more than *300 million* generated by our simple internet search. But such headlines are nothing new. The financial press has for decades pushed a simplistic narrative that invariably overstates the Fed's ability to influence interest rates.

Investors should take care not to overestimate the Fed's ability to control interest rates. In this article we explain that while the central bank can certainly influence the cost of borrowing and lending, it hardly has the capability to set rates unilaterally. The Fed, despite its awesome power to affect the money supply, cannot dictate market forces.

#### The Fed's Tool Kit

The Fed's mandate is to pursue maximum employment, maintain stable prices, and moderate long-term interest rates. Stable prices and moderate interest rates go hand in hand. Rising price levels reduce the real interest rate earned by lenders and paid by debtors. In turn, lenders will demand a higher nominal interest rate when prices rise unexpectedly. The Fed therefore can moderate interest rates by convincing the public



that inflation is stable. Employment, too, benefits under a steadily growing economy.

The Federal Reserve Open Market Committee (FOMC) has a stated target for the federal funds rate, or the rate at which member banks lend and borrow overnight funds to maintain required reserve balances held at the Fed. While the Fed does not dictate this rate, it controls it very effectively, by two means. First, the central bank pays interest on member banks' reserves that it holds. A higher (lower) reserve rate reduces (increases) banks' incentive to lend. Second, the Fed intervenes through open market operations by buying or selling securities, thus influencing the money supply. Economists remain divided, even within the Fed, regarding which tool is more effective.

Targeting the federal funds rate is the primary means by which the Fed pursues monetary policy. If the Fed is concerned with rising inflation, it can limit the money supply by raising the target rate. Conversely, if it is worried about economic stagnation, it can increase the money supply by reducing the target rate, to stimulate growth.

The Fed has another tool, the discount rate, at its disposal. This is the rate at which member banks can borrow directly from the Fed. The Fed can set this rate as it pleases. The discount rate is a secondary policy tool. It is typically set higher than the federal funds target to encourage banks to borrow at the federal funds rate. While these tools afford the Fed substantial influence over very short-term rates, its influence over the rest of the yield curve is both indirect and limited. Short, and intermediate to long term interest rates are not "set" by fiat. Rather they are determined by ongoing transactions between borrowers and lenders. These rates depend upon underlying supply and demand for capital, which can change for any number of reasons.

One can think of interest rates (yield to maturity) on U.S. Treasuries as being comprised of a risk free, real rate of return and an additional return, or premium, to compensate investors for the risk of future inflation. "Risk free" describes the relative security of Treasury securities, which are backed by the full faith and credit of the U.S. Treasury and carry the lowest credit risk available. Real return simply refers to the theoretical return earned if prices remain constant until a treasury bond matures, that is, a scenario in which the investor would suffer no loss of purchasing power. The inflation premium is the return investors demand to accommodate anticipated prices for goods and services.

The Fed's ability to impact longer term interest rates depends to a large extent on its ability to affect inflationary expectations. Market expectations regarding changes in the money supply drive corresponding changes in inflationary expectations. It is this dynamic that affects interest rates and compels the financial media to speculate regarding Fed policy. The Fed seeks to "anchor" inflationary expectations of market participants. When lenders and borrowers have faith that the Fed can achieve its inflation target, they are less likely to react in the face of economic contraction, or a shock such as war or an oil price spike. This makes it easier for the Fed to meet its target and therefore fulfill its mandates.

But price inflation is affected by variables beyond the money supply. Aggregate price changes are determined not only by the level of money in circulation, but also by the amount of goods and services available for purchase, and the rate at which money is exchanged.<sup>1</sup> Both actual and expected inflation are impacted by myriad factors that are well beyond the Fed's influence.

*Real* interest rates, moreover, reflect the fundamental time preference for current consumption over future consumption. Real rates are affected by many variables including consumers preferences, demographic trends, and of course shocks such as pandemics and wars, of which we are all too familiar. These are just a few of the seemingly limitless factors that are beyond the control of the Fed.

In August 2020, the Fed announced that it would begin to use its various policy tools to target an average rate of inflation of two percent per year. The adoption of an *average* target provided the flexibility to allow inflation to rise above the two percent target in some years and fall below the target in other years. The Fed made the change primarily because low interest rates had prevailed for several years. Rates were so low that the Fed was concerned it would have no room to reduce rates to avoid recession.

How times have changed. Only 19 months later, the Fed is confronting an annual inflation rate of 7.9 percent, which is nearly four times its stated target, and sharply higher inflation expectations (see Chart 1). The threat of higher interest rates across the yield curve looms large. This brief period demonstrates the difficulty the Fed faces in controlling inflation expectations and moderating long term interest rates.

(continued next page)

<sup>1.</sup> More formally: the equation of exchange is expressed as MV = PQ, where M = the money supply, (currency in circulation), V = velocity (the average number of times currency is exchanged), P = the average price level of goods, and Q = an index of the real value of total transactions.

#### The Fed's Balance Sheet

Since 2007, the Fed's role in credit markets has gone well beyond the exercise of its traditional monetary tools. The Fed expanded its balance sheet dramatically following the subprime crisis that began in 2008, and again in 2020 following the government mandated economic shutdown when Covid-19 emerged (see Chart 2). Both episodes of Quantitative Easing (QE) involved massive purchases of longer-term bonds. The bank further departed from tradition by purchasing not only treasuries, but mortgage-backed securities (MBSs) as well.

In both cases, by purchasing massive quantities of outstanding debt, the Fed vastly expanded the money supply. These purchases certainly impacted bond markets by keeping interest rates low, as intended, in order to mitigate the effects of economic contraction. Despite the Fed's interventions in 2009, price inflation and nominal interest rates remained moderate for the next 12 years.

It has been a different story since early 2020, when the Fed intervened after the economy was brought to a standstill. As the economy recovered, inflation has increased sharply. This inflation surge has been attributed to three sources. To some extent prices have simply rebounded from their recessionary trough. Ephemeral complications, such as supply chain bottlenecks and labor shortages have contributed as well. But as every passing month brings new highs in year over year inflation, it becomes more difficult to ignore the vast expansion of money in circulation. Now, with war in Europe and oil prices surging the Fed's challenge has grown further.

As actual inflation continues to surge, the bond market's confidence in the Fed's ability to moderate inflation may be weakening. As we have explained previously, the ten-year breakeven rate derived from the treasury market serves as an implicit bond market forecast of annual inflation over the next



ten years. As of March 15, that rate stood at 3.4 percent, the highest since this data series became available in 2003.

#### What Now?

This month the FOMC increased its federal funds target range to 0.25 - 0.50 percent, with future increases expected.

As far as its balance sheet goes, many in the press have reported that the Fed would soon pursue quantitative tightening and even begin selling bonds in its portfolio. But in fact the central bank only began to <u>reduce the rate at</u> <u>which it was purchasing bonds</u> in November 2021.

Rather than leap to Quantitative Tightening (QT), it is far more likely the Fed will first halt the expansion of its balance sheet by reinvesting maturing bonds such that both the dollar value and duration of its bond portfolio remain constant. In the next phase, the Fed would likely exercise "passive tightening" by allowing its balance sheet to shrink, but only by refraining from new bond purchases as existing bonds mature. It remains unclear whether the Fed might begin selling bonds before maturity ("active tightening"), though such measures are unlikely until at least year-end.

## **Investors' Options**

<u>Recently released research</u> analyzed global government bond data from 1984–2021. This study revealed no reliable relation between past changes in the federal funds rate and either future bond excess return over cash or future term premiums.

The fact is, neither investors nor the Fed can control interest rates. But investors have several options for managing interest rate risk.

We counsel all investors first and foremost to "know thyself." If you are fearful of unexpected inflation, consider broadening your fixed income investments to include Treasury Inflation Protected Securities (TIPS), and/or keep the average duration of your bond holdings short. Older investors may have greater exposure to bonds, and therefore bear greater interest rate risk than younger investors. In that case diversification beyond the U.S. bond market might be prudent. The back page lists global bond funds (hedged to the dollar), that include exposure to developed markets.

We appreciate the comments and suggestions of Thomas Hogan, PhD., Senior Researcher, AIER.

## ERRATA

Last month's published tables contained two errors. The *Comparative Hypothetical Total Returns and Volatility* table (Page 14) and the *Recent Market Returns* table (page 15) were each dated January 31, **2021**. These should have read January 31, **2022**.

In addition, last month's "Markets and Global Crises" article referred to Lehman Brothers' 2008 bankruptcy as Black Monday. Black Monday occurred on October 19, 1987, when the Dow dropped by 22.6 percent.

We regret these errors.

## **NEGATIVE RETURNS IN STOCKS AND BONDS**

Central to our investment approach is the notion that most investors stand to benefit by holding several "uncorrelated" asset classes. The idea is that when one asset class falls in value, there is a good chance that another held in the portfolio is falling by less or rising in value. The smoothed returns of a diversified portfolio are more tolerable – and easier to embrace – compared with the volatile pattern of returns provided by a single asset class.

The two primary components of any diversified portfolio are stocks and bonds. Historically, when stocks have suffered a period of losses, bond returns have mitigated the losses. However, this inverse correlation is not a guarantee. In the first quarter of 2022, we have again seen the unusual scenario where both stocks and bonds have declined in value. The last time this happened for any meaningful length of time was in the first quarter of 2018.

As of this writing, the stock market (Russell 3000 Index) was down almost 8 percent year-to-date. An aggregate bond fund is down about 6 percent year-todate. This article attempts to put the first quarter in perspective by considering the history of simultaneous losses in stocks and bonds over short time periods.

## Monthly and Quarterly Returns

We looked at monthly data beginning January 1979 through February 2022, a total of 518 months. We use the Russell 3000 Index as a proxy for stock returns, and the Bloomberg U.S. Aggregate Bond Index as a proxy for bond returns.

During these months, stocks had negative returns, or just over one in every three months (see Table 1). More often than not bond returns were positive during these months. But months such as this January and February, when stock and bond returns were both negative, are not unprecedented. Historically, this has happened almost twice a year on average. Roughly one in seven months in

Table 2. Rolling 3-month stock and bond returns	Number of 3- month periods (rolling)	Percentage of 12- month periods
All (Jan. 1979 - Feb. 2022)	516	100.0%
With negative stock returns	143	27.7%
With negative bond returns	116	22.5%
With negative stock and bond returns	41	7.9%

Table 3. Rolling 12-month stock and bond returns	Number of 12- month periods (rolling)	Percentage of 12- month periods
All (Jan. 1979 - Feb. 2022)	507	100.0%
With negative stock returns	93	18.3%
With negative bond returns	56	11.0%
With negative stock and bond returns	3	0.6%

the historical data had negative returns in both stocks and bonds.

It appears that stock and bond returns will both be negative through the first quarter of 2022, barring a significant rally in the closing days. Historically, it has been unusual to observe a threemonth period in which both stock and bond returns were negative. Across 516 possible 3-month periods, around 8 percent provided negative returns in both asset classes (see Table 2). If past is prologue, investors can expect threemonth spans with negative returns on both stocks and bonds about once per year, on average.

## **Rolling 12-Month Returns**

These data show that occurrences of negative returns in both stocks and bonds over short spans are rare but far from unprecedented. Seasoned investors realize that over the short term, relative returns are unpredictable. We looked next at what has happened over one-year periods. Specifically, we wanted to know how often stock and bond returns were both negative over 12-month periods.

Of 507 rolling 12-month periods, there have been 93 periods with negative stock market returns (see Table 3). This is

Table 1. Monthly stock and bond	Number of	Percentage of
returns	months	months
All (Jan. 1979 - Feb. 2022)	518	100.0%
With negative stock returns	180	34.7%
With negative bond returns	169	32.6%
With negative stock and bond returns	72	13.9%

to say that a hypothetical investor who invested during any random 12-month period had a roughly one in five chance realizing negative stock market returns.

However, in over 40 years of data, there have been only *three* 12-month periods in which stock and bond returns were *both* negative (See Table 3). Based on history, while there is a reasonable chance that an investor might experience a month or a quarter when stocks and bonds turn in losses, this outcome becomes far less likely when the time frame is extended to a year.

## Hardly a Catastrophe

The three 12-month periods with negative returns in both stocks and bonds were mild in terms of magnitude. During the most recent episode, which ended in January 2016, stock market returns were -2.48 percent while bond market returns were -0.16 percent. Losses during the two other instances were similarly modest. Between October 1980 and September 1981, stocks returned -3.57 percent while bonds returned -2.62 percent. Between February 1994 and January 1995 stocks returned -0.61 percent while bonds returned -2.31 percent.

While bonds cannot always be expected to offset losses in stocks for a single month or quarter, they have done so quite reliably over longer periods. Moreover, in instances when returns were negative for both stocks and bonds the magnitude of losses has been small.

### THE HIGH-YIELD DOW INVESTMENT STRATEGY

## **HYD Model Portfolio**

As of March 15, 2022					Percen	t of Portfolio
	Rank	Yield (%)	Price (\$)	Status	Value (%)	No. Shares (%) <sup>1</sup>
IBM	1	5.22	125.64	Holding**	21.56	14.12
Verizon	2	4.85	52.76	Buying	18.97	29.58
Dow, Inc.	3	4.76	58.87	Holding**	22.20	31.02
3M Company	4	4.13	144.31	Buying	1.53	0.87
Walgreen Boots	5	3.97	48.17	Selling	3.42	5.85
Chevron	6	3.59	158.28	Selling	32.06	16.67
Kyndryl	N/A	N/A	11.35	Selling	0.26	1.90
Cash (6-mo. T-Bill)	N/A	N/A			0.01	N/A
Totals					100	100

\*\*Currently indicated purchases approximately equal to indicated purchases 18 months ago. <sup>1</sup>Because the percentage of each issue in the portfolio by value reflects the prices shown in the table (closing prices on the date indicated), we are also showing the number of shares of each stock as a percentage of the total number of shares in the entire portfolio. **Subscribers can find a full description of the strategy and methodology in the "Subscribers Only" (Log in required) section of our website: www.americaninvestment.com.** 

## Comparative Hypothetical Total Returns (%) and Volatility

The data presented in the table and chart below represent total returns generated by a hypothetical HYD portfolio and by benchmark indexes for periods ending February 28, 2022\*. Returns for the 5-,10- and 20-year periods and since 1979 are annualized, as is the volatility (standard deviation) of returns.

							Volatility
	<u>1 mo</u> .	<u>1 yr.</u>	<u>5 yrs</u> .	<u>10 yrs</u> .	<u>20 yrs.</u>	<u>since Jan 79</u>	<u>since 1979</u>
HYD Strategy	0.95	18.30	7.88	11.93	8.77	14.16	17.48
Russell 1000 Value Index	-1.16	14.99	9.45	11.71	8.18	11.93	14.77
S&P 500 Index	-2.99	16.39	15.17	14.59	9.25	12.21	15.02
Dow Jones Industrial Average	-3.29	11.59	12.71	12.74	8.84	12.47	14.90



\*Data assume all purchases and sales at mid-month prices (+/-\$0.125 per share commissions), reinvestment of all dividends and interest, and no taxes. Model HYD calculations are based on hypothetical trades following a very exacting stock-selection strategy. They do not reflect returns on actual investments or previous recommendations of AIS. Past performance may differ from future results. Historical performance results for the Russell 1000 Value Index, the Dow Jones Industrial Average and the S&P 500 Index do not reflect the deduction of transaction and/or custodial charges, or the deduction of an investment-management fee, the incurrence of which would have the effect of decreasing historical performance results. HYD Strategy results reflect the deduction of 1% management fee, the annual rate assessed to a \$500,000 account managed through our Professional Asset Management service.

Unless otherwise specified, returns and data cited within this publication are derived from the following sources: U.S. stock benchmarks: U.S. Marketwide - Russell 3000 Index; U.S. Large Cap Stocks - Russell 1000 Index; U.S. Large Cap Value - Russell 1000 Value Index; U.S. Large Cap Growth - Russell 1000 Growth Index; U.S. Midcap Stocks - Russell Midcap Index; U.S. Small Cap Stocks - Russell 2000 Index; U.S. Small Cap Value - Russell 2000 Value Index; U.S. Small Cap Growth - Russell 2000 Growth Index; U.S. Microcaps - Russell Microcap Index. Fixed income benchmarks: Cash & Equivalents - ICE BofAML US 3-Month Treasury Bill Index; U.S. 1-Year Treasury Notes - ICE BofA 1-Year US Treasury Note Index; U.S. Short-Term Investment Grade - Bloomberg US Government/Credit Bonds Index 1-5 Years; U.S. Bonds - Bloomberg US Aggregate Bond Index; U.S. Government Bonds - Bloomberg US Government Bond Index; TIPS - Bloomberg US TIPS Index; Municipal Bonds - Bloomberg Municipal Bond Index 5 Years; Foreign Bonds (hedged) - FTSE Non-USD World Government Bond Index; 1-5 Years (hedged to USD). Foreign stock benchmarks: All returns in U.S. dollars. Developed Markets - MSCI World ex USA Index (net div.); Developed Markets Value - MSCI World ex USA Value Index (net div.); Developed Markets Growth - MSCI World ex USA Small Cap Index (net div.); Developed Markets Small Cap - MSCI World ex USA Small Cap Index (net div.); Developed Markets Small Cap Growth - MSCI World ex USA Small Gap Index (net div.); Developed Markets Small Cap Growth - MSCI World ex USA Small Gobal REITs - S&P Global REIT Index (net div.); Emerging Markets Value Index (net div.); Emerging Markets Value Index (net div.); Emerging Markets Value Index (net div.); Cold benchmarks: Gold price: LBMA price. All return data from DFA Returns 2.0 program (gold returns based on spot price) and Currency data from St. Louis Federal Reserve. Country performance provided by Dimensional Fund Advisors, based on respective indexes in the MSCI All Country World ex USA IMI Index (for deve

## **RECENT MARKET STATISTICS**

				Prem.
	3/15/22	Mo. Earlier	Yr. Earlier	(%)
Gold, London p.m. fixing	1,913.65	1,848.55	1,723.65	
Silver, London Spot Price	24.64	23.29	26.10	
Crude Oil, W. Texas Int. Spot	103.22	92.07	65.36	
	Coin Price	es (\$)1		
American Eagle (1.00)	1,995	1,927	1,797	4.25
Austrian 100-Corona (0.9802)	1,876	1,812	1,690	0.00
British Sovereign (0.2354)	450	435	406	0.00
Canadian Maple Leaf (1.00)	1,959	1,894	1,769	2.35
Mexican 50-Peso (1.2057)	2,307	2,229	2,078	0.00
Mexican Ounce (1.00)	1,932	1,867	1,742	0.94
S. African Krugerrand (1.00)	1,959	1,894	1,769	2.35
U.S. Double Eagle-\$20 (0.967	75)			
St. Gaudens (MS-60)	1,865	1,865	1,801	n/a
Liberty (Type II-AU50)	1,886	1,886	1,815	n/a
Liberty (Type III-AU50)	1,866	1,866	1,790	n/a
U.S. Silver Coins (\$1,000 face	e value, circula	ated)		
90% Silver Circ. (715 oz.)	21,307	21,307	19,704	n/a
40% Silver Circ. (295 oz.)	7,142	7,142	7,321	n/a

<sup>1</sup>Note: Premium reflects percentage difference between coin price and value of metal in a coin. The weight in troy ounces of the precious metal in coins is indicated in parentheses. Premiums will vary; these indicated premiums are provided in The CDN Monthly Greysheet.

		Data thro	ough Febi	uary 28,	2022		
	U.S. Stocks (Mktwd)	Foreign Dev. Stocks	Foreign Emerg. Stocks	Global REITs	U.S. Bonds	Foreign Bonds (hedged)	Gold
1-month	-2.52%	-1.56%	-2.99%	-2.33%	-1.12%	-0.29%	6.22%
		-					
3-month	-4.64%	-1.12%	-3.04%	-2.05%	-3.49%	-0.86%	7.58%
	+	+	+	+		+	
	10.000/	1 160/	10 (00)	16 6204	0.6.404	0 700/	-
l year	12.29%	4.46%	-10.69%	16.63%	-2.64%	-0./3%	10.09%
	T	T	•	T	•	•	T
5 year	14.68%	7.43%	6.99%	5.60%	2.71%	1.64%	8.87%
(annualized)						<b>•</b>	
15 vear	9 94%	3 19%	4 22%	3.08%	3 75%	2 30%	7 20%
(annualized)	<b>→</b>	<b>→</b>	1.22 /0	<b>→</b>	<b>•</b>	<b>1</b> .50 %	↑.207,0
D				2001	■ 5.1. 202	•	-
Best and V	vorst one	-year ret	urns, Jan	. 2001 - 1	reb. 202	2	
Best	62.5%	57.2%	91.6%	85.7%	13.8%	7.1%	54.6%
During:	04/2020-	04/2003-	03/2009-	04/2009-	11/2008-	07/2008-	06/2005-
During.	03/2021	03/2004	02/2010	03/2010	10/2009	06/2009	05/2006
Worst	-43.5%	-50.3%	-56.6%	-59.5%	-3.0%	-0.7%	-28.0%
During	03/2008-	03/2008-	12/2007-	03/2008-	02/2021-	03/2021-	12/2012-
During:	02/2009	02/2009	11/2008	02/2009	01/2022	02/2022	11/2013

**Recent Market Returns** 

## THE DOW JONES INDUSTRIALS RANKED BY YIELD\*

							L	atest Divide	nd	Indica	ted
	Ticker	M	arket Price	s (\$)	12-Ma	onth (\$)	Amount	Record	Payable	Annual	Yieldt
	Symbol	3/15/22	2/15/22	3/15/21	High	Low	(\$)	Date	Ďate	Dividend (	(\$) (%)
IBM	IBM	125.64	129.94	128.58	146.12	114.56	1.640	2/11/22	3/10/22	6.560	5.22
Verizon	VZ	52.76	53.36	55.64	59.85	49.69	0.640	4/8/22	5/2/22	2.560	4.85
Dow Chemical	DOW	58.87	61.86	62.90	71.38	52.07	0.700	2/28/22	3/11/22	2.800	4.76
3M Company	MMM	144.31	157.34	189.48	208.95	139.74	1.490	2/18/22	3/12/22	5.960	4.13
Walgreen's	WBA	48.17	48.30	55.05	57.05	43.62	0.478	2/18/22	3/11/22	1.910	3.97
Chevron	CVX	158.28	134.26	110.25	174.76	92.86	1.420	2/16/22	3/10/22	5.680	3.59
Merck	MRK	78.64	77.81	76.23	91.40	69.51	0.690	3/15/22	4/7/22	2.760	3.51
Amgen	AMGN	231.56	223.94	235.96	261.00	198.64	1.940	5/17/22	6/8/22	7.760	3.35
Intel Corp	INTC	44.81	48.44	63.79	68.49	43.63	0.365	2/7/22	3/1/22	1.460	3.26
J P Morgan	JPM	132.48	154.72	155.37	172.96	127.27	1.000	4/6/22	4/30/22	4.000	3.02
Coca-Cola	KO	59.62	60.91	51.03	63.02	50.83	0.440	3/15/22	4/1/22	1.760	2.95
Cisco	CSCO	55.60	54.27	49.41	64.29	49.62	0.380	4/6/22	4/27/22	1.520	2.73
Goldman Sachs	GS	329.16	363.94	346.05	426.16	317.72	2.000	3/2/22	3/30/22	8.000	2.43
Johnson & Johnson	JNJ	176.14	167.31	160.42	179.92	155.72	1.060	2/22/22	3/8/22	4.240	2.41
McDonald's	MCD	232.57	253.81	220.46	271.15	217.68	1.380	3/1/22	3/15/22	5.520	2.37
Proctor and Gamble	PG	150.27	156.82	128.56	165.35	129.99	0.870	1/21/22	2/15/22	3.480	2.32
Home Depot, Inc.	HD	328.54	353.26	278.54	420.61	288.94	1.900	3/10/22	3/24/22	7.600	2.31
Honeywell	HON	187.79	189.53	216.20	236.86	174.42	0.980	2/25/22	3/11/22	3.920	2.09
Caterpillar	CAT	216.46	203.41	230.74	246.69	179.67	1.110	1/20/22	2/18/22	4.440	2.05
Travelers	TRV	180.19	171.60	157.34	184.35	144.44	0.880	3/10/22	3/31/22	3.520	1.95
Wal-Mart Stores	WMT	145.78	134.37	133.43	152.57	131.63	0.560	5/6/22	5/31/22	2.240	1.54
American Express	AXP	176.04	197.98	146.99	199.55	135.13	0.520	4/8/22	5/10/22	2.080	1.18
Unitedhealth Group	UNH	497.91	478.23	353.88	513.00	360.55	1.450	3/14/22	3/22/22	5.800	1.16
Nike	NKE	119.40	145.58	144.94	179.10	116.75	0.305	3/7/22	4/1/22	1.220	1.02
Microsoft Corp.	MSFT	287.15	300.47	234.81	349.67	231.10	0.620	5/19/22	6/9/22	2.480	0.86
Visa Inc.	V	206.14	227.82	223.27	252.67	186.67	0.375	2/11/22	3/1/22	1.500	0.73
Apple	AAPL	155.09	172.79	123.99	182.94	118.86	0.220	2/7/22	2/10/22	0.880	0.57
Walt Disney	DIS	134.25	154.72	196.76	192.34	128.38	0.000	No divider	nd	0.000	0.00
Salesforce	CRM	196.14	214.25	212.80	311.75	184.44	0.000	No divider	nd	0.000	0.00
Boeing † Based on indicated di	BA vidends and ma	179.89 arket price as of 3	217.73 3/15/22. Extra	265.63 a dividends ar	260.48 e not include	167.58 d in annual y	0.000 yields.	No divider	nd	0.000	0.00

All data adjusted for splits and spin-offs. 12-month data begins 3/15/21.

									I	Annual	ized Returr	IS (%)	
Data as of March 21	, 2022	Security Sym	bol(s) (1)	Avg. Market Cap / Avg. Maturity	Number of Holdings	Expense Ratio (%)	Turnover (%)	Price-to- Book Ratio	Trailing 12-Mo. Yield (%)	3-Year	5-Year	10-Year	Tax Cost Ratio - 3 Years (%) (3)
Fixed Income		Mutual Fund	ETF										
Short-Term Bonds	Vanguard Short-Term Bond Adm	VBIRX	BSV	2.90 yrs	2596 1170	0.07	37		1.13	1.29	1.43	1.33	0.70
Short-Term Bonds	SEDA FOLUOIO SHORL FERIL COID DU ETF iShares 1-3 Year Treasury Bond ETF		SHY	siy 16.1	76	0.04	00 26		0.22	0.88	0.98	0.75	0./ 0 0.43
Interm-Term	Vanguard Total Bond Market Adm	VBTLX	BND	8.90 yrs	18198	0.05	69		1.95	1.93	2.15	2.22	0.94
Interm-lerm	Ishares Core US Aggregate Bond ETF		ALL		10149	0.04	6/I		1.80	1.84	7.11	2.20	0.89
lax-Exempt Tax Exempt	Vanguard Ltd-Term Tax-Exempt Inv SDDP Nimmon Blinkin Barchane ST Minned ETE	VMLIX	SHM	2 06 Vire	9334 1187	0.17	37		1.18 0.75	1.28 0.62	1.55 0 00	1.37 0 00	0.00
iax-exempt Tax-Exempt	or DN Nurveen bining barciays of Nunibu Err Vanguard Interm-Term Tx-Ex Inv	VWITX	WI IC	siy 06.2	13805	0.17	18		2.11	2.07 2.07	0. <i>5</i> 0 2.63	0.90 2.74	0.01
Inflation-Protected	iShares TIPS Bond ETF		TIP		50	0.19	34		4.70	6.44	4.54	2.64	1.03
Inflation-Protected	Vanguard Inflation-Protected Securities Inv	VIPSX		7.90 yrs	47	0.20	24		5.08	6.46	4.46	2.60	1.14
International	Vanguard Total International Bond Adm	VTABX	BNDX	9.50 yrs	6583	0.11	25		3.09	0.84	2.20	n/a	1.03
Real Estate (REITs,													
U.S. REITS U.S. REITS	Vanguard REIT Adm SPDR Dow Iones REIT	VGSLX	VNQ RWR	21.96 B 19.03 B	170 117	0.12	8 9	2.68 2.34	2.89 3.09	10.60 8.82	9.35 8.28	9.50 8.71	1.41 1.46
					002		1 (	- 10		10.0			
Int'l REITs	variguard Grobal ex-US near Estate Adm (2) iShares International Developed Property	ערארא	WPS	0.16 B	411	0.48	/ 16	0.92 0.92	0.70 4.59	1.56	4.13	5.73	1.01
Global (incl. U.S.)	SPDR Dow Jones Global Real Estate ETF		RWO	13.43 B	279	0.50	9	1.65	3.06	5.64	6.24	6.84	1.45
U.S. Stocks													
Large Cap (blend)	Vanguard S&P 500 Adm	VFIAX	000	207.29 B	510	0.04	7 1	3.70	1.34	18.00	15.78	14.47	0.41
Large Cap (blend)	iShares Russell 1000 ETF		IWB	158.18B	1028	0.15	Ŋ	3.60	1.19	17.66	15.52	14.25	0.54
Large Cap Value	Vanguard Value Adm	VVIAX	VTV	103.49 B	352	0.05	6	2.40	2.18	13.69	12.04	12.69	0.63
Large Cap Value	iShares Russell 1000 Value		DWI	76.68 B	856	0.19	18	2.24	1.68	12.42	10.16	11.47	0.83
Small Cap (blend)	iShares Core S&P Small-Cap ETF		IJR	2.23 B	607	0.06	20	1.78	1.63	13.32	11.65	12.67	0.57
Small Cap (blend)	DFA US Small Cap	DFSTX	DFAS	2.76 B	2063	0.27	12	1.90	1.00	13.89	10.63	11.75	0.92
Small Cap Value	Vanguard Small Cap Value Adm	VSIAX	VBR	5.73 B	1000	0.07	16	1.71	1.80	12.94	10.12	n/a	0.54
Small Cap Value	iShares Micro-Cap		IWC	0.59 B 3 36 B	1788	0.60	35	1.52	0.86	12.13 16.10	10.63 10.66	11.12	0.41
				а ос.с а стотт	0/01		<u>r</u> .	00.1	(C. 1	0.01	06.01	0.11	07:1
Marketwide Marketwide	vanguard lotal Stock Market Adm DFA US Core Equity Market ETF	VISAX DFEOX	VII DFAU	75.56 B	40/3 2489	0.04 0.14	4 4	3.37 3.07	1.31	17.00	13.26 14.58	14.11	0.40 0.74
Foreign Stocks													
Developed Markets	Vanguard FTSE Developed Markets Adm	VTMGX	VEA	29.24 B 17.06 P	4142 5750	0.07	~ °	1.48	3.35	8.01	7.22	6.65 6 70	0.77
nevelopeu ivialitels		UTIEN	2	0 06.71	0676	0.24	D	/0.1	c1.c	00.0	70. /	67.0	/0.0/
Emerging Markets Emerging Markets	Vanguard Emerging Markets Stock Adm DEA Emerging Markets Core Equity	VEMAX Decex	VWO DFAF	25.05 B 14 83 B	4442 6498	0.14	9	1.58 1.39	2.68 2.66	4.81 6.40	5.44	3.16 3.96	0.87 0.81
Gold-Related Fun	discrete and a second se						2	-		0			
Gold ETFs	SPDR Gold Minishares		GLDM			0.10			0.00	13.74	n/a	n/a	0.00
Gold ETFs	GraniteShares Gold Trust		BAR			0.17			0.00	13.71	n/a	n/a	0.00
Data provided by the fun. Adm indicates the Admir. that results from income t	ds and Morningstar. (1) Some funds are available as mutual al share class is shown; Inv indicates the Investor share cla taxes. The calculation assumes investors pay the maximum	funds and ETFs, ir ss is shown. (2) V( federal rate on ca	r which case k GRLX include pital gains and	ooth symbols are s a 0.25% fee on d ordinary incom	shown. In these purchases and r e. The calculatic	cases, data repre edemptions, wh n comes directly	sent the mutu ich are paid c from Mornir	al fund. The ETF lirectly to the fu gstar.	: may offer a lowe nd. (3) This repres	r expense rati ents the perc	io and returns entage-point	may deviate reduction in	. For Vanguard funds, an annualized return

**ASSET CLASS INVESTMENT VEHICLES** 

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