WEALTH ARCHITECTS

Investment Newsletter – April 2022

MARKET REVIEW

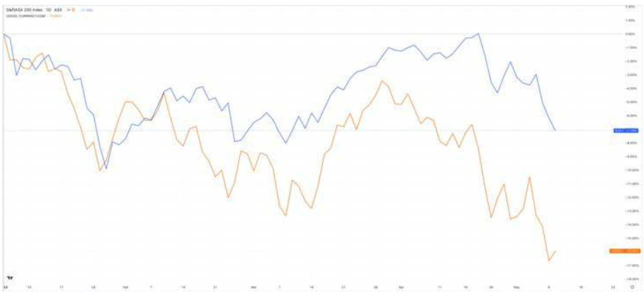
The past four weeks have been very much about investors' concern over the outlook for inflation (cost of living) and how much interest rates will rise in the near term. We saw Australia's central bank (RBA) raise its interest rate last week to 0.35% and Federal Reserve in the US do the same but a little harder than the RBA. It needs to be said here that while rising interest rates reduce the outlook for economic growth in the near term, ***moderately higher interest rates are not expected to impact long term economic growth*** as businesses and consumers eventually adjust to different levels of inflation and interest rates through gradual price increases and nominal wages growth. ***Over the long term its innovation and productivity that drive growth in stock prices.***

Where markets tend to get nervous is with the near-term economic risks of adjusting to higher levels of inflation which could lead to short term impact on profit margins, higher unemployment, and short term pull backs or even downturns in equity markets. Long term investors with the outlook of over 5 years, and certainly over 10 years, should ignore these periods of economic adjustments as markets inevitably tend to find their way back to the path of positive returns. ***Please refer to Appendix A*** which illustrates the above point that, over the past century, despite economic setbacks and adjustments to different inflationary regimes the monthly index level of S&P500 (a broad basket of stocks) in the US still managed to grow from one decade to the next. This is because the collective will and desire of the government, businesses, innovators, and consumers to improve their condition, expand, and seek growth is a force bigger than any negative economic shocks or adjustments! We have used US stocks as an example here as you can assume similar patterns of behaviour of the Australian share market and economy.

Appendix B illustrates for you different inflationary periods over the past century. It is clear that inflation can run high or low over many years but equity markets still tend to deliver positive annual returns more often than not. A word of caution for long term investors here is that the market's recovery period after a pull back or downturn (peak to trough) could be short and swift (e.g. Covid-19 led sell off and recovery in 2020) or take a number of years (e.g. stagflation years from 1973 to 1980), so investors are required to be patient. To soften the impact of stock market volatility on long term investors' portfolios they should be cost averaging into the market from one year to the next as part of their ongoing savings and investment strategy.

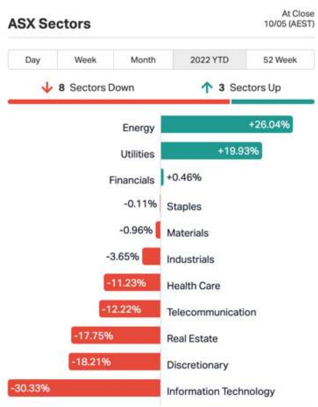
Speaking of short-term pullbacks in markets, chart 1 (above right) illustrates the decline in Australian shares of about -7% (blue line) from roughly the market peak at the beginning of 2022 to now. In comparison, the US market is down -15% (orange line) so far, over the same period. In fact, Australian stocks are holdings up much better than the rest of the world. For context, 6% pullback in the Australian share market index (ASX200) is not significant given we have had two much more significant pull backs over the past ten years. The first one was over thirteen months following April 2011 which saw ASX200 decline by -15% amidst the then short-term deflation of the commodities price bubble. The second market downturn of -17% happened over the 10-month period following Mar 2015 and at that time the market was expecting interest rate increases and tightening of the stimulus policies adopted by central banks since the GFC in 2008. The conclusion of both of these relatively recent pull backs was that the market eventually looked through these uncertainties. It is quite possible that 2022 ends up seeing further market correction near-term due to uncertainties of the outcome of the federal election here in Australia (could be a hung parliament which may lead to inertia in economic policy implementation) and the US is set to have its mid-term elections in November; in a mid-term US election year, historically, market returns are weighed down in that year only to be followed by positive returns after the mid-terms (please see ***Appendix C*** for some stats).

Chart 1: ASX 200 vs S&P500 – Calendar year-to-date returns



Drilling down to Australian equity market's sector performance so far this calendar year (Chart 2 below), you can see that energy stocks, utilities, banks, consumer staples, and materials have actually fared reasonably well. Mainly because these sectors mostly have companies that are able to pass on higher prices to their customers. Where the market has felt the pain is in consumer discretionary sectors which will likely see representative companies experience a fall in demand in 2022 as consumers cut spending in preparation for higher mortgage repayments. The experience of the market so far re-enforces the need for investors to have diversified portfolios investing in companies that are sector leaders and where the positive returning stocks pacify the impact of the negative returning stocks.

Chart 2: ASX 200 Sectors – Calendar year-to-date returns



GLOBAL MARKETS OVERVIEW

	Units	Month End Value	Price Performance (% Chg) 1-day	1-mth	6-mths	1-year
Developed Markets Equities						
ASX 200	AUD	7,435	1.06%	-0.86%	1.52%	5.82%
ASX 200 Futures	AUD	7,409	1.02%	-0.94%	3.03%	8.67%
Dow Jones	USD	32,977	-2.77%	-4.91%	-7.94%	-2.65%
S&P 500	USD	4,132	-3.63%	-8.80%	-10.28%	-1.18%
Stoxx Europe 600	EUR	450	0.74%	-1.20%	-5.28%	2.97%
FTSE 100 (UK)	GBP	7,545	0.47%	0.38%	4.24%	8.25%
DAX (Germany)	EUR	14,098	0.84%	-2.20%	-10.14%	-6.86%
CAC (France)	EUR	6,534	0.39%	-1.89%	-4.34%	4.22%
Nikkei 225	JPY	26,848	0.00%	-3.50%	-7.08%	-6.82%
Emerging Markets Equities						
MSCI Emerging Markets	USD	1,076	2.12%	-5.75%	-14.91%	-20.14%
Shanghai Composite	CNY	3,047	2.41%	-6.31%	-14.10%	-11.60%
South Korea	KRW	2,695	1.03%	-2.27%	-9.28%	-14.38%
Taiwan	TWD	16,592	1.05%	-6.22%	-2.33%	-5.55%
Brazil	BRL	107,876	-1.86%	-10.10%	4.23%	-9.27%
South Africa	ZAR	65,476	1.43%	-4.43%	7.68%	7.17%
Foreign Exchange						
AUDUSD	Currency	0.7061	-0.51%	-5.63%	-6.08%	-8.49%
AUDGBP	Currency	0.5616	-1.43%	-1.39%	2.24%	0.60%
AUDEUR	Currency	0.6697	-0.92%	-0.96%	2.95%	4.40%
AUDCNY	Currency	4.69	-0.24%	-1.41%	-2.46%	-6.00%
Commodities						
LME ALUMINUM 3MO ($)	USD/mt	3,053	0.69%	-12.56%	12.37%	27.35%
LME COPPER 3MO ($)	USD/mt	9,770	0.75%	-5.84%	2.88%	-0.56%
LME NICKEL 3MO ($)	USD/mt	31,771	-3.66%	-1.05%	63.36%	79.76%
SILVER FUTURE Jul22	USD/oz	23.09	-0.41%	-8.40%	-3.89%	-11.34%
ICE Newc Coal Fut Aug22	USD/mt	280.05	-4.63%	20.19%	152.30%	223.57%
62% Import Fine Ore in USD	USD/t	130.43	0.00%	-8.46%	18.27%	-29.19%
Gold Spot $/Oz	USD/oz	1,897	0.13%	-2.09%	6.37%	7.22%
WTI Oil	USD/bbl	104.69	-0.64%	6.26%	38.81%	78.87%
Henry Hub	USD/mmBtu	6.84	0.60%	24.51%	26.12%	138.17%
Corn	USD/Bu	818.25	0.28%	9.28%	43.99%	10.57%
Wheat	USD/Bu	1,043.75	-2.82%	3.75%	35.07%	40.57%
Fixed Interest						
10-Yr Bond Yield						
Australia	AUD	3.13%	+0.04%	+0.29%	+1.04%	+1.38%
US	USD	2.93%	+0.11%	+0.60%	+1.38%	+1.31%
Germany	EUR	0.94%	+0.04%	+0.39%	+1.04%	+1.14%
Japan	JPY	0.23%	+0.00%	+0.01%	+0.13%	+0.13%
Italy	EUR	2.77%	+0.06%	+0.74%	+1.60%	+1.87%
Australian Rates						
Cash Rate	AUD	0.10%	+0.00%	+0.00%	+0.00%	+0.00%
90-Day BBSW	AUD	0.70%	+0.03%	+0.48%	+0.63%	+0.66%
180-Day BBSW	AUD	1.44%	+0.03%	+0.73%	+1.22%	+1.34%
CBOE Options						
CBOE VIX (Volatility Index)	Index	33.40	11.37%	62.45%	105.41%	79.47%

Data as of 31 April 2022

ECONOMIC NEWS

• **The Reserve Bank of Australia (RBA)** raised its cash interest rate by 0.25% to 0.35% in May, and warned borrowers to be prepared for interest rates to rise more quickly than anticipated.

• **The International Monetary Fund (IMF)** slashed its world growth forecast by the most since the early months of the Covid-19 pandemic, downgrading 2022 global GDP growth by -0.80% to 3.6% with advanced economies growth downgraded by -0.60% to 3.3% (euro area downgraded by -1.10% to 2.8% and U.S. downgraded by -0.30% to 3.7%) and emerging economies downgraded by -0.10% to 3.8% (China downgraded by -0.40% to 4.4% and India downgraded by -0.80% to 8.2%),

• **The World Bank** cut its forecast for global economic expansion in 2022 to 3.2%, spurred by a cut in the outlook for Europe and central Asia on Russia's invasion of Ukraine and announced plans to mobilize a new 15-month crisis-response package of about $170billion to cover April 2022 through June 2023, with about $50billion of this amount to be deployed in the next three months.

• **World Trade Organisation** (WTO) downgraded world GDP forecast for 2022 by to +2.8% as it lowered its projection for growth in merchandise trade to +3%, and predicted GDP should pick up to +3.2% in 2023, close to the average rate of 3% in the decade before the pandemic with trade growth of +3.4%.

• **U.S. Economy shrank** for the first time since 2020, with March Quarter 2022 GDP falling at a -1.4% annualized rate. U.S. composite Purchasing Manager's Index (PMI) declined in April as an advance in manufacturing PMI was more than offset by a decline in services PMI as persistent supply constraints limited capacity and inflation dampened consumers' willingness to spend. However, another measure of prices received by manufacturers and service providers increased.

• In China, the March quarter GDP grew +4.8% p.a. with fixed asset investment increasing +9.3% p.a. However, economic activity contracted sharply in April with both manufacturing and non-manufacturing PMI contracting to lowest in more than two years, which saw China's central bank (PBOC) reducing the reserve requirement ratio for most banks by -0.25% and dropping it by -0.50% for smaller banks, unleashing about 530billion yuan of long-term liquidity into the economy. However, the bank kept its one-year policy interest rate unchanged.

• **Australia inflation**, as measured by the Consumer Prices Index (CPI), rose +2.1% in March quarter (and +5.1% p.a.).

• **In Europe,** Economic expansion in the euro zone began 2022 on a weak footing with GDP growing by +5% p.a. in March Quarter 2022. However, inflation continued to surge, climbing to a fresh all-time high in April, with CPI up +7.5% p.a.

• **In Japan, Bank of Japan** (BOJ) kept its main yield curve control settings and the scale of its asset purchases unchanged, announcing to buy an unlimited amount of bonds at a fixed rate every business day. However, BOJ raised 2022 CPI forecast by +0.80% to 1.9%, reflecting soaring energy prices, which saw Japan's prime minister unveil 6.2 trillion yen of spending.

• **In Germany,** March Quarter 2022 GDP grew +4%p.a. However, inflation unexpectedly accelerated to the fastest in April since records began in the early 1990s with CPI rising +7.4% p.a. This resulted in the government cutting its 2022 GDP growth forecast by -1.40% to 2.2% and increase inflation forecast by +2.80% to 6.1%.

• **In India,** the Reserve Bank of India (RBI) raised its inflation forecast for 2022 by +1.20% to 5.7% while downgrading GDP forecast by -0.60% to 7.2% and signalled that an increase in borrowing costs may happen as early as June.

In political news:

Geopolitical tensions surrounding Russia-Ukraine war continued to simmer, with UN General Assembly voting to suspend Russia from the Human Rights Council, U.S. Senate passing bill to strip Russia of most-favoured-nation trade status, EU countries agreeing to ban coal imports from Russia and President Joe Biden announcing a new $800m package of military assistance for Ukraine, leading to Russia retaliating by cutting off natural gas shipments to Poland and Bulgaria.

THE LONG READ

The inflation we need to have

A shrinking global labour pool will demand better wages and conditions, pushing up prices

This month I want to address a common question being asked by investors i.e. how long could high and higher prices last. The short answer is that a very, very long time. But there may be a silver lining here.

Over the past 30 years the world economic system has experienced an unprecedented positive shock to the supply of global labour pool. The effective labour supply for the world's advanced economy trading system, more than doubled over the 27 years, from 1991 to 2018. But the future is unlikely to be like the past!

So where did this doubling of the labour pool come from and what impact did it have?

Well, there are a few reasons for this doubling, let's take one at a time. Firstly, the rise of China and its integration into the global economy and global manufacturing complex meant China more than doubled the available labour supply for the production of tradeable products among advanced economies. Supply and demand economics suggest that when supply doubles price is the adjusting factor i.e. prices of products ex China have continued to fall.

China has continued to add new supply of labour and production capacity to the world economy as more and more people from its rural areas got attracted to its urban economic powerhouses supplying the world's voracious demand for ever cheaper and wider range of exported products. The impact of excess supply of cheap labour from China can also be read in the US' labour participation rate which declined by 4% over the past thirty years.

Thus, China has been a deflationary force for a long time and attempts by central banks of advanced economies to push up inflation through very low interest rates failed to inflate the imported prices from China. But these deflationary benefits are set to reverse as China's labour supply is set to shrink, a reflection of its ageing population.

The second source of increases to the global labour pool was the re-integration of Eastern Europe's work force into the global economy after the collapse of the USSR in 1989.

However, China and Eastern Europe are not the only factors leading to a dramatic rise in the labour pool. There were other domestic demographic features in advanced economies at play, namely, the dependency ratio (measured as the population of children under 14 plus retirees over 65 divided by working age population of 15-64 years). The dependency ratio declined in Australia from 1960 to 2009, roughly, from 64% to 48%. The dependency ratio bottomed in 2009 and has since been rising and is projected to continue rising for the remainder of this century, not just in Australia but also in all corners of the world except Africa.

Falls in the dependency ratio due to lower birth rates allowed women to enter the work force in greater numbers. As the dependency ratio is now decidedly reversing with retirees and older age population set to rise (baby boomers exiting the workforce), this will subtract from the available labour pool.

The persistent decline in birth rates in advanced economies (due to wealth effect and one child policy in China) is set to bring about a sharp decline in the growth of the labour force in many countries like Japan, China, continental Europe such as Germany, Italy, Spain, and Poland. Meanwhile, dependency ratios are set to increase rapidly in all of these countries and regions. This will likely lead to significant increases in demand for shrinking labour pool and drive up labour's bargaining power for working conditions and pay increases.

When you combine the crunch in the supply of labour pool while more and more advanced economies pivot to services-based economies (including China), you really have a strong case for wage inflation ahead.

All of this means that higher labour cost will eventually push up general prices in the economy and reverse the long-term deflationary dividend that we have much enjoyed in advanced economies.

Moreover, the political schism currently developing between China, Russia and their allies in the east versus the western economies led by US is also a significant ongoing risk to reversing of the globalisation trend. This will further raise the cost of doing business which will be passed on to consumers through higher inflation.

We may have entered the next long multi-year episode of higher inflation, perhaps 5% p.a. give and take. The period of adjusting to a higher inflation is best played through participating in nominal growth through equities and being underweight the long duration bonds as interest rates rise.

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Appendix A
Source: Stock Trader's Almanac 2022, Wiley

STANDARD & POOR'S 500 MONTHLY CLOSING PRICES SINCE 1950

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1950	17.05	17.22	17.29	18.07	18.78	17.69	17.84	18.42	19.45	19.53	19.51	20.41
1951	21.66	21.80	21.40	22.43	21.52	20.96	22.40	23.28	23.26	22.94	22.88	23.77
1952	24.14	23.26	24.37	23.32	23.86	24.96	25.40	25.03	24.54	24.52	25.66	26.57
1953	26.38	25.90	25.29	24.62	24.54	24.14	24.75	23.32	23.35	24.54	24.76	24.81
1954	26.08	26.15	26.94	28.26	29.19	29.21	30.88	29.83	32.31	31.68	34.24	35.98
1955	36.63	36.76	36.58	37.96	37.91	41.03	43.52	43.18	43.67	42.34	45.51	45.48
1956	43.82	45.34	48.48	48.38	45.20	46.97	49.39	47.51	45.35	45.58	45.08	46.67
1957	44.72	43.26	44.11	45.74	47.43	47.37	47.91	45.22	42.42	41.06	41.72	39.99
1958	41.70	40.84	42.10	43.44	44.09	45.24	47.19	47.75	50.06	51.33	52.48	55.21
1959	55.42	55.41	55.44	57.59	58.68	58.47	60.51	59.60	56.88	57.52	58.28	59.89
1960	55.61	56.12	55.34	54.37	55.83	56.92	55.51	56.96	53.52	53.39	55.54	58.11
1961	61.78	63.44	65.06	65.31	66.56	64.64	66.76	68.07	66.73	68.62	71.32	71.55
1962	68.84	69.96	69.55	65.24	59.63	54.75	58.23	59.12	56.27	56.52	62.26	63.10
1963	66.20	64.29	66.57	69.80	70.80	69.37	69.13	72.50	71.70	74.01	73.23	75.02
1964	77.04	77.80	78.98	79.46	80.37	81.69	83.18	81.83	84.18	84.86	84.42	84.75
1965	87.56	87.43	86.16	89.11	88.42	84.12	85.25	87.17	89.96	92.42	91.61	92.43
1966	92.88	91.22	89.23	91.06	86.13	84.74	83.60	77.10	76.56	80.20	80.45	80.33
1967	86.61	86.78	90.20	94.01	89.08	90.64	94.75	93.64	96.71	93.90	94.00	96.47
1968	92.24	89.36	90.20	97.59	98.68	99.58	97.74	98.86	102.67	103.41	108.37	103.86
1969	103.01	98.13	101.51	103.69	103.46	97.71	91.83	95.51	93.12	97.24	93.81	92.06
1970	85.02	89.50	89.63	81.52	76.55	72.72	78.05	81.52	84.21	83.25	87.20	92.15
1971	95.88	96.75	100.31	103.95	99.63	99.70	95.58	99.03	98.34	94.23	93.99	102.09
1972	103.94	106.57	107.20	107.67	109.53	107.14	107.39	111.09	110.55	111.58	116.67	118.05
1973	116.03	111.68	111.52	106.97	104.95	104.26	108.22	104.25	108.43	108.29	95.96	97.55
1974	96.57	96.22	93.98	90.31	87.28	86.00	79.31	72.15	63.54	73.90	69.97	68.56
1975	76.98	81.59	83.36	87.30	91.15	95.19	88.75	86.88	83.87	89.04	91.24	90.19
1976	100.86	99.71	102.77	101.64	100.18	104.28	103.44	102.91	105.24	102.90	102.10	107.46
1977	102.03	99.82	98.42	98.44	96.12	100.48	98.85	96.77	96.53	92.34	94.83	95.10
1978	89.25	87.04	89.21	96.83	97.24	95.53	100.68	103.29	102.54	93.15	94.70	96.11
1979	99.93	96.28	101.59	101.76	99.08	102.91	103.81	109.32	109.32	101.82	106.16	107.94
1980	114.16	113.66	102.09	106.29	111.24	114.24	121.67	122.38	125.46	127.47	140.52	135.76
1981	129.55	131.27	136.00	132.81	132.59	131.21	130.92	122.79	116.18	121.89	126.35	122.55
1982	120.40	113.11	111.96	116.44	111.88	109.61	107.09	119.51	120.42	133.71	138.54	140.64
1983	145.30	148.06	152.96	164.42	162.39	168.11	162.56	164.40	166.07	163.55	166.40	164.93
1984	163.41	157.06	159.18	160.05	150.55	153.18	150.66	166.68	166.10	166.09	163.58	167.24
1985	179.63	181.18	180.66	179.83	189.55	191.85	190.92	188.63	182.08	189.82	202.17	211.28

continued

STANDARD & POOR'S 500 MONTHLY CLOSING PRICES SINCE 1950 (continued)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1986	211.78	226.92	238.90	235.52	247.35	250.84	236.12	252.93	231.32	243.98	249.22	242.17
1987	274.08	284.20	291.70	288.36	290.10	304.00	318.66	329.80	321.83	251.79	230.30	247.08
1988	257.07	267.82	258.89	261.33	262.16	273.50	272.02	261.52	271.91	278.97	273.70	277.72
1989	297.47	288.86	294.87	309.64	320.52	317.98	346.08	351.45	349.15	340.36	345.99	353.40
1990	329.08	331.89	339.94	330.80	361.23	358.02	356.15	322.56	306.05	304.00	322.22	330.22
1991	343.93	367.07	375.22	375.35	389.83	371.16	387.81	395.43	387.86	392.46	375.22	417.09
1992	408.79	412.70	403.69	414.95	415.35	408.14	424.21	414.03	417.80	418.68	431.35	435.71
1993	438.78	443.38	451.67	440.19	450.19	450.53	448.13	463.56	458.93	467.83	461.79	466.45
1994	481.61	467.14	445.77	450.91	456.50	444.27	458.26	475.49	462.69	472.35	453.69	459.27
1995	470.42	487.39	500.71	514.71	533.40	544.75	562.06	561.88	584.41	581.50	605.37	615.93
1996	636.02	640.43	645.50	654.17	669.12	670.63	639.95	651.99	687.31	705.27	757.02	740.74
1997	786.16	790.82	757.12	801.34	848.28	885.14	954.29	899.47	947.28	914.62	955.40	970.43
1998	980.28	1049.34	1101.75	1111.75	1090.82	1133.84	1120.67	957.28	1017.01	1098.67	1163.63	1229.23
1999	1279.64	1238.33	1286.37	1335.18	1301.84	1372.71	1328.72	1320.41	1282.71	1362.93	1388.91	1469.25
2000	1394.46	1366.42	1498.58	1452.43	1420.60	1454.60	1430.83	1517.68	1436.51	1429.40	1314.95	1320.28
2001	1366.01	1239.94	1160.33	1249.46	1255.82	1224.42	1211.23	1133.58	1040.94	1059.78	1139.45	1148.08
2002	1130.20	1106.73	1147.39	1076.92	1067.14	989.82	911.62	916.07	815.28	885.76	936.31	879.82
2003	855.70	841.15	849.18	916.92	963.59	974.50	990.31	1008.01	995.97	1050.71	1058.20	1111.92
2004	1131.13	1144.94	1126.21	1107.30	1120.68	1140.84	1101.72	1104.24	1114.58	1130.20	1173.82	1211.92
2005	1181.27	1203.60	1180.59	1156.85	1191.50	1191.33	1234.18	1220.33	1228.81	1207.01	1249.48	1248.29
2006	1280.08	1280.66	1294.83	1310.61	1270.09	1270.20	1276.66	1303.82	1335.85	1377.94	1400.63	1418.30
2007	1438.24	1406.82	1420.86	1482.37	1530.62	1503.35	1455.27	1473.99	1526.75	1549.38	1481.14	1468.36
2008	1378.55	1330.63	1322.70	1385.59	1400.38	1280.00	1267.38	1282.83	1166.36	968.75	896.24	903.25
2009	825.88	735.09	797.87	872.81	919.14	919.32	987.48	1020.62	1057.08	1036.19	1095.63	1115.10
2010	1073.87	1104.49	1169.43	1186.69	1089.41	1030.71	1101.60	1049.33	1141.20	1183.26	1180.55	1257.64
2011	1286.12	1327.22	1325.83	1363.61	1345.20	1320.64	1292.28	1218.89	1131.42	1253.30	1246.96	1257.60
2012	1312.41	1365.68	1408.47	1397.91	1310.33	1362.16	1379.32	1406.58	1440.67	1412.16	1416.18	1426.19
2013	1498.11	1514.68	1569.19	1597.57	1630.74	1606.28	1685.73	1632.97	1681.55	1756.54	1805.81	1848.36
2014	1782.59	1859.45	1872.34	1883.95	1923.57	1960.23	1930.67	2003.37	1972.29	2018.05	2067.56	2058.90
2015	1994.99	2104.50	2067.89	2085.51	2107.39	2063.11	2103.84	1972.18	1920.03	2079.36	2080.41	2043.94
2016	1940.24	1932.23	2059.74	2065.30	2096.96	2098.86	2173.60	2170.95	2168.27	2126.15	2198.81	2238.83
2017	2278.87	2363.64	2362.72	2384.20	2411.80	2423.41	2470.30	2471.65	2519.36	2575.26	2647.58	2673.61
2018	2823.81	2713.83	2640.87	2648.05	2705.27	2718.37	2816.29	2901.52	2913.98	2711.74	2760.16	2506.85
2019	2704.10	2784.49	2834.40	2945.83	2752.06	2941.76	2980.38	2926.46	2976.74	3037.56	3140.98	3230.78
2020	3225.52	2954.22	2584.59	2912.43	3044.31	3100.29	3271.12	3500.31	3363.00	3269.96	3621.63	3756.07
2021	3714.24	3811.15	3972.89	4181.17	4204.11							

Appendix B
Source: Banyantree Investment Group

Low & High Inflationary periods & equity returns

Inflation over the past century

1930 – 1950 - Period of world wars – major events

Year	Unemployment Rate (December)	Annual GDP Growth	Inflation (December, YOY)	Notable Events	S&P500 Annual %
1929	3.2%	NA	0.6%	Market crash	-11.91
1930	8.7%	-8.5%	-6.4%	Smoot-Hawley	-28.5
1931	15.9%	-6.4%	-9.3%	Dust Bowl	-47.1
1932	23.6%	-12.9%	-10.3%	Hoover's tax hikes	-15.1
1933	24.9%	-1.2%	0.8%	FDR's New Deal	46.6
1934	21.7%	10.8%	1.5%	Depression eased, thanks to New Deal	-5.9
1935	20.1%	8.9%	3.0%		41.3
1936	16.9%	12.9%	1.4%		27.9
1937	14.3%	5.1%	2.9%	Spending cuts	-38
1938	19.0%	-3.3%	-2.8%	FLSA starts minimum wage	25
1939	17.2%	8.0%	0%	Drought ended	-5
1940	14.6%	8.8%	0.7%	U.S. draft World War II	-15.3
1941	9.9%	17.7%	9.9%	Pearl Harbor	-17.8
1942	4.7%	18.9%	9.0%	Defense spending tripled	12.4
1943	1.9%	17.0%	3.0%	Germany surrendered at Stalingrad	19.4
1944	1.2%	8.0%	2.3%	Bretton Woods	13.8
1945	1.9%	-1.0%	2.2%	War ends. Min wage $0.40	30.7
1946	3.9%	-11.6%	18.1%	Employment Act	-11.9
1947	3.6%	-1.1%	8.8%	Marshall Plan negotiated	0
1948	4.0%	4.1%	3.0%	Truman re-elected	-0.65
1949	6.6%	-0.6%	-2.1%	Fair Deal; NATO	-10.2
1950	4.3%	8.7%	5.9%	Korean War; Min wage $0.75	21.78

1950s-60s Low inflation 15yrs

Year	Unemployment Rate (December)	Annual GDP Growth	Inflation (December, YOY)	Notable Events	S&P500 Annual %
1951	3.1%	8.0%	6.0%	Expansion	16.5
1952	2.7%	4.1%	0.8%	Expansion	11.8
1953	4.5%	4.7%	0.7%	Korean War ended	-6.6
1954	5.0%	-0.6%	-0.7%	Dow returned to 1929 level	45.0
1955	4.2%	7.1%	0.4%	Unemployment fell	26.40
1956	4.2%	2.1%	3.0%	Minimum wage $1.00	2.6
1957	5.2%	2.1%	2.9%	Recession	-14.3
1958	6.2%	-0.7%	1.8%		38.1
1959	5.3%	6.9%	1.7%	Expansion	8.9
1960	6.6%	2.6%	1.4%	Recession	-3.0
1961	6.0%	2.6%	0.7%	JFK; Min wage $1.15	23.1
1962	5.5%	6.1%	1.3%	Cuban Missile Crisis	-11.8
1963	5.5%	4.4%	1.6%	LBJ; Min wage $1.25	18.9
1964	5.0% Vietnam War start	5.8%	1.0%	Tax cut	12.9
1965	4.0%	6.5%	1.9%	U.S. enters Vietnam War	9.1
1966	3.8%	6.6%	3.5%	Expansion	-13.1
1967	3.8%	2.7%	3.0%	Min wage $1.40	20.1
1968	3.4%	4.9%	4.7%	Min wage $1.60	7.7
1969	3.5%	3.1%	6.2%	Nixon took office	-11.4
1970	6.1%	0.2%	5.6%	Recession	0.1

1970s-80s High inflation over 25 yrs

Year	Unemployment Rate (December)	Annual GDP Growth	Inflation (December, YOY)	Notable Events	S&P500 Annual %
1971	6.0%	3.3%	3.3%	Emergency Employment Act; Wage-price controls	10.8
1972	5.2%	5.3%	3.4%	Ongoing Stagflation; Watergate break-in	15.6
1973	4.9% Oil embargo	5.6%	8.7%	CETA ; Gold standard ; Vietnam War ended	-17.7
1974	7.2%	-0.5%	12.3%	Nixon resigns; Min. wage $2.00	-29
1975	8.2%	-0.2%	6.9%	Recession ended	31.6
1976	7.8%	5.4%	4.9%	Expansion	19.2
1977	6.4%	4.6%	6.7%	Carter took office	-11.5
1978	6.0%	5.5%	9.0%	Fed raised rate to 20% to stop inflation	1.06
1979	6.0% Iran Revolution (oil)	3.2%	13.3%		12.3
1980	7.2%	-0.3%	12.5%	Recession	25.7
1981	8.5%	2.5%	8.9%	Reagan tax cuts; Min. wage $3.35	-9.7
1982	10.8%	-1.8%	3.8%	Job Training Partnership Act; Garn-St.Germain Act	14.8
1983	8.3%	4.6%	3.8%	Reagan increased military spending	17.3
1984	7.3%	7.2%	3.9%		1.4
1985	7.0%	4.2%	3.8%	Expansion	26.3
1986	6.6%	3.5%	1.1%	Tax cuts	14.6
1987	5.7%	3.5%	4.4%	Black Monday	2.0
1988	5.3%	4.2%	4.4%	Fed raised rate	12.4
1989	5.4%	3.7%	4.6%	Reforms made to address S&L Crisis	27.3
1990	6.3%	1.9%	6.1%	Recession	-6.6

All inflation is transitionary

Inflation over the past century

1990s-2010s - Low inflation over 30 years

	Year	Unemployment Rate (December)	Annual GDP Growth	Inflation (December, YOY)	Notable Events	S&P500 Annual %
	1991	7.3%	-0.1%	3.1%	Desert Storm; Min. wage $4.25	26.3
	1992	7.4%	3.5%	2.9%	NAFTA drafted	4.5
	1993	6.5%	2.8%	2.7%	Omnibus Budget Reconciliation Act	7.1
	1994	5.5%	4.0%	2.7%	School to Work Act	-1.5
	1995	5.6%	2.7%	2.5%	Expansion	34.1
	1996	5.4%	3.8%	3.3%	Welfare reform	20.3
	1997	4.7%	4.4%	1.7%	Min. wage $5.85	31.0
	1998	4.4%	4.5%	1.6%	LTCM crisis	26.7
	1999	4.0%	4.8%	2.7%	Euro; Serbian airstrike	19.5
	2000	3.9%	4.1%	3.4%	NASDAQ hit record high	-10.1
	2001	5.7%	1.0%	1.6%	Bush tax cuts; 9/11 attacks	-13.0
War starts	2002	6.0%	1.7%	2.4%	War on Terror	-23.4
	2003	5.7%	2.8%	1.9%	JGTRRA	26.4
	2004	5.4%	3.9%	3.3%	Expansion	9.0
	2005	4.9%	3.5%	3.4%	Bankruptcy Abuse Prevention Act; Katrina	3.0
	2006	4.4%	2.8%	2.5%	Expansion	13.6
	2007	5.0%	2.0%	4.1%		3.5
Financial Shock GFC	2008	7.3%	0.1%	0.1%	Min. wage $6.55; Financial crisis	-38.5
	2009	9.9%	-2.6%	2.7%	ARRA; Minimum wage $7.25; Jobless benefits extended	23.5
	2010	9.3%	2.7%	1.5%	Obama tax cuts	12.8

2010s did have inflation but in asset prices

CPI inflation Remained low

	Year	Unemployment Rate (December)	Annual GDP Growth	Inflation (December, YOY)	Notable Events	S&P500 Annual %
	2011	8.5%	1.5%	3.0%	26 months of job losses by July; Debt ceiling crisis; Iraq War ended	0
	2012	7.9%	2.3%	1.7%	QE; 10-year rate at 200-year low; Fiscal cliff	13.4
	2013	6.7%	1.8%	1.5%	Stocks up 30%; Long term = 5% unemployment	29.6
	2014	5.6%	2.3%	0.8%	Unemployment at 2007 levels	11.4
	2015	5.0%	2.7%	0.7%	Natural rate	-0.7
	2016	4.7%	1.7%	2.1%	Presidential race	9.6
	2017	4.1%	2.3%	2.1%	Dollar weakened	19.4
	2018	3.9%	2.9%	1.9%	Trump tax cuts	-6.2
	2019	3.6%	2.3%	2.3%	Goldilocks economy	28.9
	2020	6.7%	-3.4%	1.4%	COVID-19 pandemic and recession	16.3
Pandemic	2021	3.9%	5.7%	7.0%	COVID-19 pandemic and recovery	26.8
War	2022			7.9%	Russia / Ukraine War – energy supply risk	????

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Could 2020's and beyond be a long period of inflation?

Appendix C

Source: Stock Trader's Almanac 2022, Wiley

WHY A 50% GAIN IN THE DOW IS POSSIBLE FROM ITS 2022 LOW TO ITS 2023 HIGH

Normally, major corrections occur sometime in the first or second years following presidential elections. In the last 14 midterm election years, bear markets began or were in progress nine times—we experienced bull years in 1986, 2006, 2010 and 2014, while 1994 was flat. A correction in 2018 ended on Christmas Eve day.

The puniest midterm advance, 14.5% from the 1946 low, was during the industrial contraction after World War II. The next five smallest advances were: 2014 (tepid global growth) 19.1%, 1978 (OPEC–Iran) 21.0%, 1930 (economic collapse) 23.4%, 1966 (Vietnam) 26.7%, and 2018 (Fed interest rate tightening) 31.4%.

Since 1914 the Dow has gained 46.8% on average from its midterm election year low to its subsequent high in the following pre-election year. A swing of such magnitude is equivalent to a move from 20000 to 30000 or from 30000 to 45000.

POST-ELECTION HIGH TO MIDTERM LOW: –20.1%

Conversely, since 1913 the Dow has dropped –20.1% on average from its post-election-year high to its subsequent low in the following midterm year. At press-time the Dow's 2021 post-election year high is 34777.76. A 20.1% decline would put the Dow back at 27787 at the 2022 midterm bottom. Spiking inflation could trigger the Fed to raise rates more quickly than expected which makes a decline to this level possible. Whatever the level, the rally off the 2022 midterm low could be another great buying opportunity.

Pretty impressive seasonality! There is no reason to think the quadrennial Presidential Election/Stock Market Cycle will not continue. Page 132 shows how effectively most presidents "managed" to have much stronger economies in the third and fourth years of their terms than in their first two.

% CHANGE IN DOW JONES INDUSTRIALS BETWEEN THE MIDTERM YEAR LOW AND THE HIGH IN THE FOLLOWING YEAR

	Midterm Year Low				Pre-Election Year High				
	Date of Low			Dow	Date of High			Dow	% Gain
1	Jul	30	1914*	52.32	Dec	27	1915	99.21	89.6%
2	Jan	15	1918**	73.38	Nov	3	1919	119.62	63.0
3	Jan	10	1922**	78.59	Mar	20	1923	105.38	34.1
4	Mar	30	1926*	135.20	Dec	31	1927	202.40	49.7
5	Dec	16	1930*	157.51	Feb	24	1931	194.36	23.4
6	Jul	26	1934*	85.51	Nov	19	1935	148.44	73.6
7	Mar	31	1938*	98.95	Sep	12	1939	155.92	57.6
8	Apr	28	1942*	92.92	Jul	14	1943	145.82	56.9
9	Oct	9	1946	163.12	Jul	24	1947	186.85	14.5
10	Jan	13	1950**	196.81	Sep	13	1951	276.37	40.4
11	Jan	11	1954**	279.87	Dec	30	1955	488.40	74.5
12	Feb	25	1958**	436.89	Dec	31	1959	679.36	55.5
13	Jun	26	1962*	535.74	Dec	18	1963	767.21	43.2
14	Oct	7	1966*	744.32	Sep	25	1967	943.08	26.7
15	May	26	1970*	631.16	Apr	28	1971	950.82	50.6
16	Dec	6	1974*	577.60	Jul	16	1975	881.81	52.7
17	Feb	28	1978*	742.12	Oct	5	1979	897.61	21.0
18	Aug	12	1982*	776.92	Nov	29	1983	1287.20	65.7
19	Jan	22	1986	1502.29	Aug	25	1987	2722.42	81.2
20	Oct	11	1990*	2365.10	Dec	31	1991	3168.84	34.0
21	Apr	4	1994	3593.35	Dec	13	1995	5216.47	45.2
22	Aug	31	1998*	7539.07	Dec	31	1999	11497.12	52.5
23	Oct	9	2002*	7286.27	Dec	31	2003	10453.92	43.5
24	Jan	20	2006	10667.39	Oct	9	2007	14164.53	32.8
25	Jul	2	2010**	9686.48	Apr	29	2011	12810.54	32.3
26	Feb	3	2014	15372.80	May	19	2015	18312.39	19.1
27	Dec	24	2018	21792.20	Dec	27	2019	28645.26	31.4
								Average	46.8%

* Bear Market ended ** Bear previous year

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