ARS INVESTMENT PARTNERS

THE OUTLOOK

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Investors should be focused on U.S. small cap companies which are selling at strikingly attractive valuations relative to larger capitalization companies in the S&P 500.

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As the Pandemic Matures, Different and More Equity Opportunities Emerge

The prospects for common stock investing are more positive than the headlines would lead market participants to believe because the investment opportunities are broadening. The strong equity returns of the past few years should continue in 2022 for investors able to identify strong revenue and earnings growth in a slower growth environment and those undervalued companies that have been previously overlooked due to extreme concentration of investment in a relatively small number of pandemic beneficiaries. Additionally, investment success will require navigating some subtle and some not-so-subtle shifts that are occurring in market leadership as the pandemic wanes. Leading ARS to this more positive view is that the determinants of security valuation, namely the outlook for corporate profits, interest rates and inflation rates remain positive even with the elevated inflationary levels and higher cost of living experienced in the second half of 2021. The world continues to undergo the transformations that ARS introduced to readers in our October 31, 2020 Outlook that define many of the most important investment opportunities. These transformations will continue to shape the future of the global economy.

Table 1. The Six Critical Transformations

The Monetary and Fiscal Transformation	The Geopolitical and Political Transformation	The Digital Transformation
The Social and Societal Transformation	The Climate Transformation	The Educational Transformation

In addition to the impact these six transformations will have on the global economy, the United States' post-pandemic economy will be shaped by the handoff from government spending to corporate and consumer spending as the primary drivers of growth in 2022 and beyond. Against the current economic backdrop, the areas that will attract capital in the new year will continue to be the beneficiaries of these transformations, particularly companies focused on cloud/data management and storage, semiconductor and capital equipment, broadband providers, select commodity producers, defense, biotech, cybersecurity, autonomous vehicles, gaming, and both renewable energy and fossil fuels. ARS also continues to favor those companies with strong managements, steady earnings growth, and strong dividend policies as we project interest rates to remain range-bound near historically low levels for the foreseeable future. Furthermore, investors should be focused on U.S. small cap companies which are selling at strikingly attractive valuations relative to larger capitalization companies in the S&P 500.

Investors must look past the headlines to identify those select companies that are particularly well-positioned to benefit from the secular trends.

This Outlook will address the forces that are creating this favorable environment for equities, the risks that investors should consider for the coming period, and the investment implications with examples of businesses that our research has identified as particularly attractive on an absolute and relative basis. Current conditions suggest that investors must look past the headlines and seek to identify those select companies that are particularly well-positioned to benefit from the secular trends that will drive global growth in a world economy that is undergoing a massive transformation, and one that has little or no historical precedent.

The recent market pullback has created interesting opportunities in companies that are selling for highly attractive valuations.

Why is the ARS view more positive than the headlines are leading investors to believe?

Due to the highly unusual political, economic, and social dynamics present in the world today, the markets have been experiencing elevated levels of volatility. However, the recent market pullback has created interesting opportunities in companies that are selling for highly attractive valuations. A recent report from JPMorgan highlighted the divergences between and within the indices, particularly the Russell 3000 and the NASDAQ. The report stated "*that outside of the Big 10 stocks in the US, equity drawdowns and multiple de-ratings have been severe. Russell 3000 was down only -4% and Nasdaq Composite -7% from 12-month highs, however, the average drawdown for constituents in these indices was -28% and -38%, respectively*." A drawdown is the decline in a stock's price from its recent highs. In addition to the wide spread of returns within the indices, what some investors seem to be missing is how the sequencing of policy action is impacting the economy and markets. For example, the Federal Reserve and other central banks acted in March 2020 to lower interest rates and re-instituted their quantitative easing programs (which increased the money supply) adding massive liquidity into the global system. This in turn fueled the rise in valuations across a variety of assets including stocks, real estate, collectibles, and cryptocurrency. As consumer net worth has increased, this has led to improved consumer confidence which fueled consumer spending. For corporations, the effects of the pandemic and the rise in corporate earnings and cash flows are now fueling the ability to increase capital expenditures to improve productivity. The strength of the economy during the

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pandemic period has resulted in record profits for many companies which will help drive continued earnings and dividend growth and investments in people and productivity.

The massive monetary and fiscal stimulus will continue to provide favorable conditions for the next 18-24 months even after the Federal Reserve completes its tapering.

First, the massive monetary and fiscal stimulus that has been implemented in the past 18 months will continue to provide favorable conditions for the next 18-24 months even after the Federal Reserve completes its tapering and begins to raise short-term interest rates.

Global Monetary and Fiscal Stimulus to Counter COVID-19
February 2020 to May 2021

	Potential Central Bank Liquidity Injection		Potential Fiscal Stimulus		Central Bank Liquidity Injection and Fiscal Stimulus	
Country	($ in trillions)	(% GDP)	($ in trillions)	(% GDP)	($ in trillions)	% GDP
United States***	$6.21	29.0%	$6.09	28.4%	$12.30	57.4%
Eurozone	$2.38	17.9%	$4.51	33.9%	$6.90	51.8%
Japan**	$1.03	20.0%	$2.79	54.1%	$3.82	74.1%
United Kingdom	$0.57	20.7%	$0.69	25.1%	$1.26	45.9%
China****	$1.43	10.0%	$1.22	8.4%	$2.64	18.4%
Other*	$1.05		$2.99		$4.03	
World	**$12.66**	**14.6%**	**$18.29**	**21.1%**	**$30.95**	**35.7%**

Source: Cornerstone Macro
*incl RoW and ADB, IMF, WB ** Japan's ¥117.1 t supplementary budget includes: fiscal measures, an investment loan program, and private sector loans (i.e. guarantees). The total size of measures to fight the coronavirus crisis will reach ¥230 trillion [40% of GDP]" (Jiji, May 27). With BoJ's 20% potential liquidity injection, Japan's total stimulus may be 60% of GDP. ***U.S.: Fed's $6.2T injection incl the $2.5T announced on Apr 9, and the $3.7 facility. ****China CB stimulus incl liq injections and other activities, e.g., re-lending, RRR, direct small biz lending, etc

Corporate profits will continue to hit record levels which will allow many to pay higher wages while investing in productivity.

Second, the U.S. has experienced rapid growth in its money supply since March of 2020, and this has helped foster a surge in consumer net worth which, when combined with higher wages, supports and augments consumer spending and investment. For perspective, the Federal Reserve's balance sheet prior to the 2008 recession was around $975 billion and today is approximately $9 trillion, and other leading central banks also experienced similar increases in their balance sheets. It is completely impractical for market participants to expect a dramatic reduction in central bank balance sheets anytime soon without engendering a huge global shock.

Third, corporate profits will continue to hit record levels which will allow many to pay higher wages while investing in the productivity improvements necessary to increase earnings and remain competitive over the long term as they move to replace human labor with technology.

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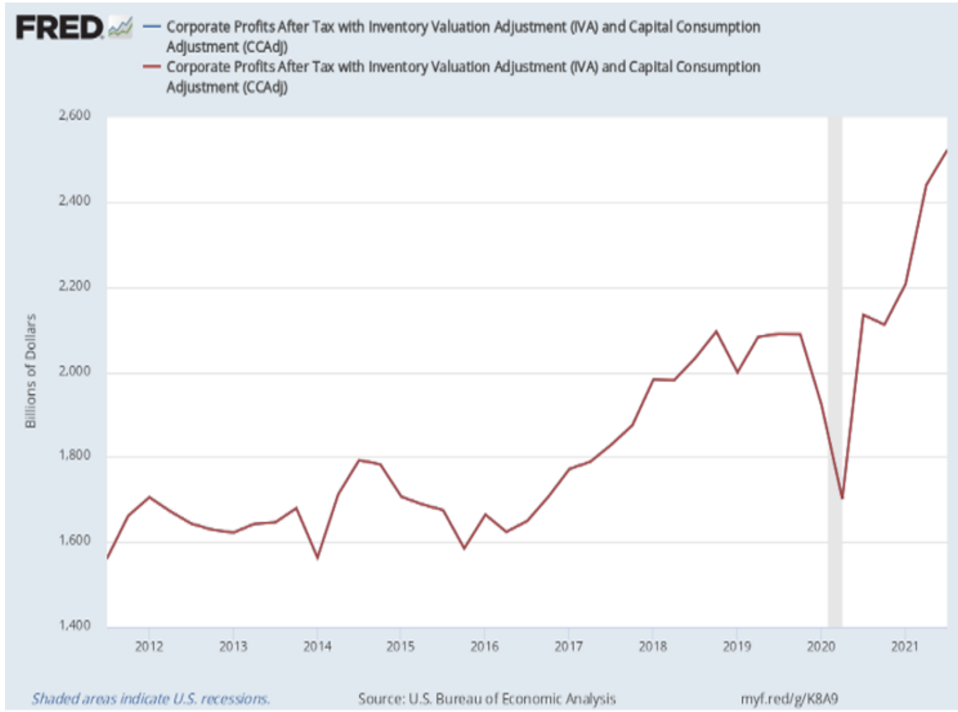

In 2022, the United States should continue to be the primary driver of global economic growth.

Fourth, ARS believes that supply chain problems will continue to ease in 2022 which should reduce inflationary pressures, while onshoring and reshoring will further bolster domestic economic growth.

Finally, the global economy will continue to adjust to the issues related to COVID and should begin to return to more normal pre-pandemic levels as vaccination rates/herd immunity allow for reopening to take hold, barring the development of additional variants. It is the cumulative effect of all these forces that will drive positive returns for equity investors. In 2022, investors should focus on those companies with the ability to increase revenues, those with pricing power, with the ability to invest in improving productivity, and who can effectively manage their overall wage costs. Market participants should be careful about their country exposures as debt, currency and health issues are exacerbating the divergences between the handful of advanced nations that are growing in a more sustainable fashion than the rest of the world. In 2022, the United States should continue to be the primary driver of global economic growth.

What are the risks to the system?

With the rapid spread of the Omicron variant and vaccination challenges in much of the world, the most obvious risks are geopolitical, inflation, debt levels and pandemic-related disruptions including global supply chains. The Scowcroft Center for Strategy and Security recently released a report entitled "The Top 12 Risks and Opportunities for 2022". The areas highlighted in the report are as follows:

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1. *The lack of effective COVID-19 vaccination in developing countries triggers new variants that are potentially more contagious and lethal*. The report states that African nations have vaccinated only about 12% of the population as developed nations have not stepped up to provide sufficient supplies of vaccines.

The U.N. projects over 23 million Afghans faced imminent starvation and its banking system is in an uncertain state.

2. *Russia attacks Ukraine.* This represents one of the biggest threats to global stability next year as Russian President Putin has poked and prodded the European nations over Ukraine and energy security. Mr. Putin has stated that "Russia and Ukraine are one people – a single whole."

3. *As China peaks, its economy sputters – sparking global disruptions.* The Chinese economy hit several speed bumps last year. President Xi is positioning for a third term and as the leader for life, but the Chinese economy is experiencing some growth pains as evidenced by the debt problems of Evergrande and other companies in the real estate sector which represents 29% of the Chinese economy. The government made examples of several companies including Alibaba, Tencent, Didi, and many in the for-profit education sector under its "common prosperity" initiative to address inequality and reinforce the party's control of the nation.

4. *Afghanistan collapses and the U.S. cannot escape the consequences.* This nation faces a humanitarian crisis as the U.N. projects over 23 million Afghans faced imminent starvation and its banking system is in an uncertain state as the international community struggles to navigate prohibitions on aiding the Taliban.

Global carbon emissions have grown 60% since the 1997 Kyoto Protocol was signed.

5. *Developing countries suffer more severe economic troubles and a rash of political instability.* The pandemic has carved out large numbers of the global middle class with more than 131 million more people in poverty. Adding to the problems are widening inequality which fosters more political instability, potentially more civil strife and forced migration. The strength of the U.S. dollar places further strains on developing economies to service high U.S. dollar debts.

6. *Oil tops $100 a barrel.* The clean energy transition is proving more difficult to effect, and fossil fuels will remain a larger portion of global energy supply for longer than hoped after a period of underinvestment. The supply issues combined with stronger than anticipated demand pushes prices higher. The U.S. and other developed nations are in the hands of OPEC and Russia's willingness to accommodate growing demand for fossil fuels.

7. *The world fails to meet its climate goals from the inconclusive Glasgow summit.* Global carbon emissions have grown 60% since the 1997 Kyoto Protocol was signed. The Glasgow summit did little to inspire confidence that the world will achieve the necessary levels of carbon emissions in timely fashion.

8. A bifurcated world emerges, but it's not a repeat of the cold war with Russia. The report highlights the differences in China's political and economic strengths relative to where Russia was in the cold war. China's global aspirations, importance as a growing consumer market, its long-term planning, overall economic strength, and position in the high-tech world are just a few of the differences that need to be considered.

9. *Food security worsens, propelled by COVID-19, climate change and conflict.* The World Food Program estimates that 45 million people are on the brink of famine with higher food and transportation costs creating problems for families and organizations that provide support.

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10. *More countries slip from their current state into failure.* While countries such as Syria, Yemen and Somalia are regularly at the top of the list of "very high risk" nations, these and other nations are moving closer to failed state status, if not there already, as drought, water scarcity, food crises, rising inequality, the pandemic and other healthcare issues are pushing nations to the brink. Two major concerns stemming from this issue are the negative effects on others in the region and migration issues, which pose social, economic, and political issues for other nations, especially European ones.

11. *Western efforts to revive the Iran Nuclear Deal fail.* Iran is demanding that sanctions be lifted even as it continues to develop its nuclear program. As involved nations continue to fight proxy wars and engage in cyber-attacks and other provocations, the probability for political missteps increases as does the potential for armed conflict.

12. *U.S. democracy further decays.* The report suggests that democracy will erode significantly next year in the U.S. which continues a trend that started a decade ago but was made crystal clear during the January 6th attack on Congress, something most Americans never thought they would see in their nation.

In addition to the 12 risks listed above, inflation has become a concern for U.S. policymakers for the first time in decades. In addition to supply chain issues pushing costs up, wages have been rising in the past few quarters with some unions, including workers at Deere and Kellogg, having negotiated big wage gains with cost-of-living adjustments (COLA) being included. These cost-of-living adjustments bear watching as ARS has previously written that our team was more concerned about the wage bill (the total compensation costs for the company) as opposed to wage rate (how much individual workers are paid per hour). Our view was based on the belief that productivity improvements would more than offset the higher hourly wages for many firms. However, the recent union wins on COLA will require investors to be more company-specific about its impact.

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These risks are, for the most part, well known and well understood. However, that does not mean that investors should not take note and invest accordingly as these factors and new ones will determine the appropriate positioning for portfolios. Interestingly, the authors did not list inflation as a top twelve risk. ARS believes that after a period of elevated inflationary pressures, the deflationary tendencies that existed prior to the pandemic will re-emerge in the second half of 2022. The four deflationary forces are globalization, which has been more inflation-prone since the onset of the pandemic, technological advances, which accelerated during the pandemic, debt, which continues to rise globally, and demographics, which continue to worsen.

ARS believes that after a period of elevated inflationary pressures, the deflationary tendencies that existed prior to the pandemic will re-emerge in the second half of 2022.

What are the investment implications of the Outlook?

For all the risks described above and other uncertainties, there are exciting opportunities as the global economy is undergoing a long-term revolution of digitalization and electrification. Technology has been advancing at such a rapid pace that we are witnessing a massive reorientation of economic activity which is being further augmented by the necessity to address climate change with advanced technology that did not exist only a few years ago. The conditions heading into 2022 are positive for equity markets as we expect strong earnings next year and the highly accommodative monetary environment to continue at least through next year. However, investors must be selective as the potential for equity returns will be driven by absolute earnings and revenue growth rather than expectations of future growth, as it has been since the onset of the pandemic. Taken in the aggregate, stronger corporate earnings, low interest rates and the gradual easing of inflationary pressures should continue to create favorable conditions for equity returns in 2022.

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The recently passed infrastructure bill in conjunction with increases in consumer and corporate spending are creating positive longer-term investment opportunities in a number of areas. The following are quotes from an industry leader describing the sector dynamics and an example of an unnamed company in that industry that highlights the unique combination of a high-growth company selling at an attractive valuation.

Semiconductor and Capital Equipment

What the leaders are saying - *"The secular tailwinds around semis, everybody knows what it is. We all get excited about 5G, AI, automotive, all of the things you've heard everybody talk about for the last, I don't know, 6, 9 months, are growing. Semi content is growing on top of that. Capital intensity is growing... And when you look at that, it just sets up to be what I think is a great industry."*

Stock Opportunity – One leading semiconductor company has revenues of $27.7 billion, holds more than 48,000 patents, does business in 17 countries, and has 11 manufacturing sites. It will invest more than $150 billion in leading edge memory manufacturing and research and development over the next

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decade. Total revenues have risen more than 33% year over year. Data center revenues were up more than 70% year over year. The company projects "*that automotive and industrial will be the fastest growing memory and storage markets over the next 10 years. New EVs are becoming like a data center on wheels, and we are already seeing examples of 2022 model year EVs supporting Level 3 autonomous capability with over 140 gigabytes of DRAM and also examples with over 1 terabyte of NAND.*" This company currently sells for less than 9x earnings and generates free cash flow to raise dividends and buy back stock. This is an unusual opportunity when companies with much less growth sell for much higher valuations.

The world is getting increasingly focused on electrification with modern technology, 5G, and artificial intelligence.

Commodity Companies

What the leaders are saying – "*Underlying all of this is the fundamental outlook for copper is incredibly favorable. Copper's role in the economy and as the economy changes with global investments in infrastructure - I know we have a controversy here - but countries around the world are going to build infrastructure. Less developed countries are going to develop. The world is getting increasingly focused on electrification with modern technology, 5G, and artificial intelligence. And then a new major element that people are talking about and recognizing now, for demand that's coming, it's not here in real significance now, is all the investments that people are going to be making to reduce carbon. And across the board, those investments are - result in significant demands for copper. And then you've got - and we'll talk about this more, the commodity really supported by supply factors.*"

Stock Opportunity – One leading company is selling for 10x earnings, an estimated 7.5x cash flow from operations with 27% return on capital and 42% return on equity. The company has operating margins of 44% and a net profit margin of 25% with strong cash flows. The company's earnings and dividends are expected to grow double digits over the next few years.

During the quarter, non-video Internet customers used over 600 gigabytes per month, stable as of late, but more than 30% higher than pre-pandemic levels.

Broadband Industry

What the leaders are saying – "*As expected, we continue to see very high demand for data by our customers. During the quarter, non-video Internet customers used over 600 gigabytes per month, stable as of late, but more than 30% higher than pre-pandemic levels. And today, close to 20% of our nonvideo Internet customers use a terabyte or more of data per month.*"

Stock Opportunity – One leading company is selling for 12x forward cash earnings while growing earnings at 15% per year and spending all of free cash flow to buy back stock. If the stock price were not to rise between now and 2025, the company could buy back 35% of shares outstanding and generate $110 in cash earnings per share on a $650 stock or 6x cash EPS. More realistically, should the multiple stay constant, the stock price should increase by 25-30%/year, in line with the free cash flow per share growth.

Investors should focus on the primary beneficiaries of critical secular themes in this period of significant disruption.

In a world that is rapidly changing, investors must recognize and appreciate the magnitude of the changes that will impact companies for many years. It is easy to get thrown off course from a long-term investment plan by short-term factors, so be careful not to confuse speculation with investing. Businesses that are proactively investing to redefine themselves will have a chance to compete, while those that do not will be left behind. To protect and build capital in this environment, investors should focus on the primary beneficiaries of critical secular themes in this period of significant disruption and avoid the companies that are being disrupted. These secular themes include the continuation of technological advances and the powerful demographic shifts involving aging, automation, and inequality. Climate change has become a more actionable investment theme across all equity strategies. These themes will have profound implications for investment strategy. Successful investing in the coming year will require a high level of conviction and insight at a time when many aspects of our lives could be experiencing significant change.

We wish our clients and readers a happy, healthy and fulfilling New Year.

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