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Views From the Stream

January 31, 2022

The Monthly Letter covers two topics this month. First, we provide Part 2 of our Global Economic Quarterly. The Global Economy continues to bifurcate across multiple economic spheres. With the US reclaiming its growth, other countries that have been able to grow by selling to the US will find their paths more difficult. However, this will not change the fundamental growth shift whereby Emerging Markets continue to outgrow the Developed Economies. For the US, this may not be true, as the various bills passed over the past two years by the US Congress act as a Marshall Plan for America. Second, as always, we close with brief comments of interest to our readers on a variety of current topics relevant to the economy and the markets.

Global Economic Quarterly, Part 2: A Multi-Faceted World, A Continued Shift In Growth, & A Marshall Plan For The United States

The Global Economy continues its evolution into a multi-lateral headed Hydra. While the Chinese head dragged the body forward over the past 20 years as the country made a huge global market share grab, that strategy no longer works. The rest of the world has said enough. However, numerous Emerging Market (EM) economies continue to put in place similar policies to grow their industrial infrastructure to benefit their economies. At some level, this includes imposing tariffs on Chinese goods to ensure their domestic manufacturers do not find themselves undercut by Chinese companies selling below cost. This behavior figures prominently in the policies of countries such as India, Malaysia, and Indonesia. In addition, the Developed Economies, led by the US, now view China as a significant geopolitical rival intent on imposing its view of the world on their economies. As a result, these countries have begun a massive reshoring that should accelerate as the decade progresses. This includes, critically, that the next generation of technology is produced in their countries. With China putting ~$280 billion in subsidies for Electric Vehicles in place to position its industry to grab global share, the rest of the world is responding. Japan will subsidize its auto industry by $140 billion for Electric Vehicles. The US put in place legislation that will provide $300+ billion in subsidies. And Europe is considering $280 billion in subsidies. This stands on top of $300 billion EU countries put in place for the spike in energy prices in 2022 due to the Ukraine war. In addition, these countries no longer will tolerate China's intellectual

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property theft. China's continued actions to invalidate foreign company patents in the Chinese courts appears set to run into a unified global wall. Pyrotechnics will likely ensue as countries ban Chinese goods containing stolen IP. For China, none of these trends bode well. With 25% of its economy tied to Exports, the continued assault on its mercantilist policies will erode this portion of its economy. And with its population shrinking, the 25% of its economy related to real estate will enter secular decline. With an aging population and upside down demographic pyramid, the country's secular growth will slow dramatically over the next few years, likely to a level below that of the United States. And with US growth accelerating on a secular basis, the US should stabilize its global share of GDP while China begins to see its share erode.

With this secular slowing in Chinese growth, other Emerging Markets continue to step up to fill the void. This includes India, Malaysia, Indonesia, Kenya, Tanzania, and many others. And while there will continue the occasional blow-up, such as Pakistan, the collection of these countries stand on the cusp of replacing China as the key growth drivers for the Global Economy. The following Table comparing Indonesia's growth to that of the U.S. is emblematic of these trends:

Year	*GDP Growth Rate Indonesia*	*GDP Growth Rate United States*
2010	*6.2%*	*2.7%*
2011	*6.2%*	*1.5%*
2012	*6.0%*	*2.3%*
2013	*5.6%*	*1.8%*
2014	*5.0%*	*2.3%*
2015	*4.9%*	*2.7%*
2016	*5.0%*	*1.7%*
2017	*5.1%*	*2.2%*
2018	*5.2%*	*2.9%*
2019	*5.0%*	*2.3%*
2020	*-2.1%*	*-2.8%*
2021	*3.7%*	*5.9%*
2022E	*5.3%*	*2.1%*
2023E	*5.0%*	*1.5%*
Cumulative Growth 2010 – 2023E =	*90.3%*	*33.1%*

Data care of IMF and Bureau of Economic Analysis.

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As they do, the world will become more and more A Multi-Faceted World and less of one dominated by China and the US. In such a world, especially as the US moves to produce more of its own goods, global growth will become less aligned and more country specific. And many EM economies will find themselves in a position to grow through slowdowns elsewhere in the world. Thus, the balance of global growth will continue to shift towards EM and away from the traditional DM economies.

Europe stands at risk of becoming one of the big losers in this Global Rebalancing. With China no longer a destination for high end capital goods due to geopolitics, the United States finally reshoring its manufacturing, and Emerging Markets putting in place protectionist policies to boost their economies by building out their industries, Europe's exports could become Ground Zero in Global Rebalancing. In particular, the US legislation to encourage EV auto production in the United States will undermine the plans of Europe to export significant volumes of EVs and EV batteries to the US. It appears quite obvious that the EU's protests over the U.S. Infrastructure Act and the Inflation Reduction Act stems from the clear risk to their export oriented policies.

In contrast to Europe, the United States appears set to recapture growth from the rest of the globe. The difference in growth in the above Table stems from a fundamental underinvestment in Manufacturing over the past 20 years. The United States encouraged companies to move production to China and Asia under the WTO Agreement, which allowed China into the Global Trading System. This led to an explosion in America's trade deficit and to a collapse in the volume of goods manufactured domestically as over 10,000 plants closed in the United States. And with foreign governments offering big subsidies to locate plant abroad, these companies acted to boost the bottom line and moved massive amounts of production overseas, even at the risk of losing control of their critical manufacturing knowhow. This offshoring included critical components and whole supply chains, including in areas such sensitive areas as Semiconductors, Networking Equipment, and Pharmaceutical Ingredients. From a National Security lens, these companies put their interests ahead of that of the United States and undermined the ability of the country to withstand any disruption to global supply chains. As an example of this vulnerability, currently over 70% of all pharmaceutical ingredients utilized in the US for drug production are produced abroad. And, just as worrisome, over 53% of all drugs consumed in the US originate in foreign plants.

To address these issues, especially with the geopolitical rivalry heating up with China, the United States Congress enacted several pieces of legislation over the past few years. In many ways, the U.S. stands late to the party. Existing subsidies in areas like Semiconductors stand as follows:

1. *China – Over $300 billion in subsidies to dominate global semiconductor production by 2025.*
2. *South Korea – K Semiconductor Strategy – Invest $452 billion in Semiconductor production by 2030. Put in place 20% tax credit for new fabs.*

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3. *European Union – European Chips Act with $50 billion in subsidies to double global market share to 20% in semiconductors. In addition, Germany is providing $12 billion in subsidies to locate microelectronics production in that country.*
4. *India – providing $10 billion in subsidies and up to 50% government funding to locate semiconductor fabrication and design in country.*
5. *Taiwan – Invest in Taiwan Initiatives plus 15% R&D Tax Credit, exemptions on duties on foreign technology equipment, exemptions on tariffs, and income tax exemptions.*
6. *Japan – Providing $6.8 billion in Semiconductor subsidies and 50% setup cost subsidy.*

These incentives have led to the following Semiconductor Fabs to be under construction as of February, 2022, according to the Semiconductor Industry Association:

Country	***Fabs Under Construction:***
China	*10*
European Union	*4*
Taiwan	*10*
South Korea	*5*
Singapore	*1*
Japan	*5*
United States	*4*

Please see the following release:
https://www.semiconductors.org/wp-content/uploads/2022/02/Global-Semiconductor-Incentives_2-4-2022.pdf

In other words, 35 Semiconductor Fabs stood under construction globally outside the US with only 4 under construction in the U.S., which represents only 10% of all the fabs under construction globally. In contrast, China represents 25% of the Fabs under construction and Taiwan represents another 25% of the Fabs under construction. The following graph shows the stagnation in US Semiconductor Manufacturing Output over the past decade as other countries moved to build up their technology industries at U.S. expense:

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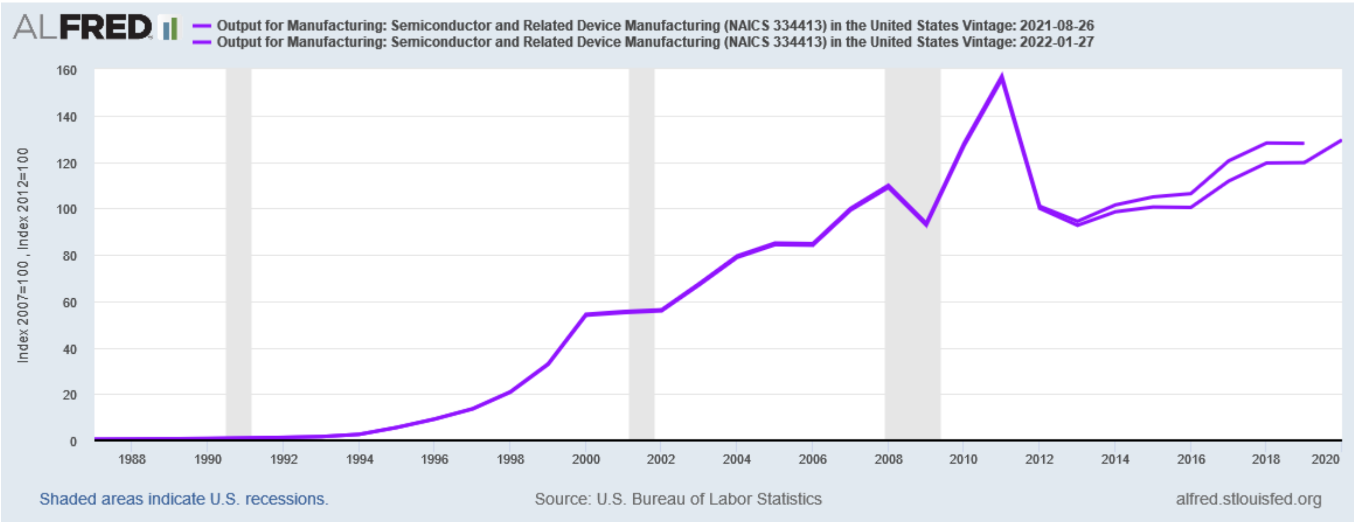

If the U.S. seeks to remain relevant in Semiconductors and other advanced manufacturing, the legislation passed below merely stands a down payment. The U.S. will need to allocate much more capital behind these initiatives, especially for Semiconductors, Advanced Materials, Quantum Computing, 3D Manufacturing and other industries of the future. In addition, the government will likely need to put in place Domestic Content Legislation to ensure that products get manufactured here and not Europe or Japan or South Korea or Malaysia or … where governments continue to put in place large incentives. One need only look at the recent actions by India to incent manufacturing production in that country. For example, India explicitly states that it wants advanced production for aircraft in that country, including advanced fighter jets. For the United States, standing up to efforts like these will become critical over time to preserve its ability to manufacture advanced goods and maintain its global strategic position. The Congressional legislation passed to date includes:

1. *The CHIPS Act of 2022 – Provides $52 billion in manufacturing grants and research incentives. Establishes 25% Investment Tax Credit on Semiconductor manufacturing investment.*
2. *Infrastructure Investment and Jobs Act of 2021 – This act increase government spending on infrastructure from $650 billion over 5 years to $1.2 trillion over 5 years, representing a $550 billion increase in U.S. government spending.*
3. *Inflation Reduction Act of 2022 – Authorizes $369 billion in incentives for Green Energy, including $340 billion in tax credits. In addition, it authorizes $250 billion in lending by the Energy Department to upgrade and replace energy infrastructure. Private estimates of the tax credits indicate they may total $700 billion or more.*

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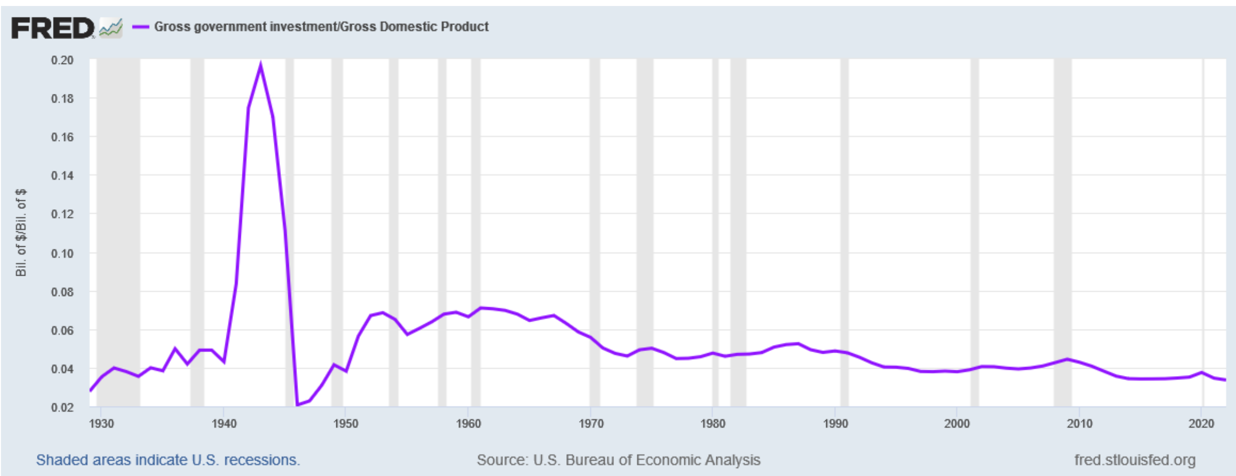
For the United States, this represents $1.3 trillion in spending and incentives for the next five years or ~5.0% of Current GDP. This Marshall Plan for the United States stands just a down payment on what the country needs, at ~1% of GDP per annum. The U.S. will need to vastly increase these numbers to compete with countries like South Korea, which plans to incent $450+ billion in Semiconductor spending by 2030 or to compete with Saudi Arabia which plans to spend $800 billion on investments in its economy by the end of the decade. To size these investments relative to their GDP, South Korea's GDP will reach ~$1.9 trillion in 2023 while Saudi Arabia's GDP exceeded $900 billion in 2022. Thus, these investments represent 22% of GDP and 89% of GDP respectively. To put it simply, countries around the world continue to invest into their economies while the US does not. The following chart demonstrates the lack of investment over the past 30+ years compared to history:



If we go back in time to put this graph in numbers, here is how investment would shake out for the US by decade:

Decade	***Government Investment to GDP***
1960s	*6.5%+*
1970s	*4.5%*
1980s	*5.0%*
1990s	*3.9%*
2000s	*4.1%*
2010s	*3.5%*
2020s	*3.4%*

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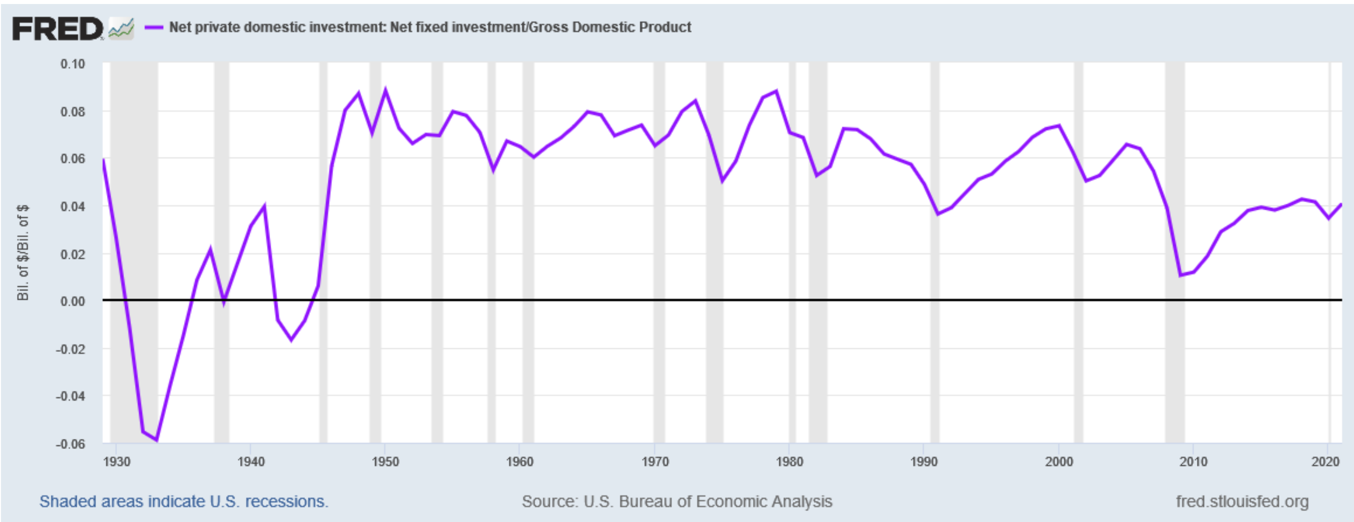
As these three programs add approximately $250 billion in implied government spending per annum and 2022 Nominal GDP reached $26.145 trillion in Q4 2022, according to the BEA, this move by the U.S. Congress should add 0.9%+ to the 3.3% spent in 2022, bringing the investment number back to 4.2%+. The bigger gamble is that these incentives will massively increase private sector spending, which took a real hit once the WTO came into effect in 2000:



Should the Carrot of Incentives, from recently passed legislation, coupled with the Stick of National Security, due to rising geopolitical tensions, succeed, Private Investment could begin to return to its previous levels of 6% - 8% of GDP, held from 1945 – 1988. This compares to today's level of just 4%. This would have multiple salutary impacts on the country. These include:

1. Faster GDP Growth as the U.S. displaces foreign imports and produces itself.
2. Faster Productivity Growth as manufacturing investment sources the vast majority of Productivity Growth.
3. Faster Real Income Growth as Productivity Growth accelerates underpinning sustainable income growth.
4. Faster Income Tax Growth as GDP Growth accelerates and the pie grows faster.

The following graphic demonstrates this positive feedback loop on the country:

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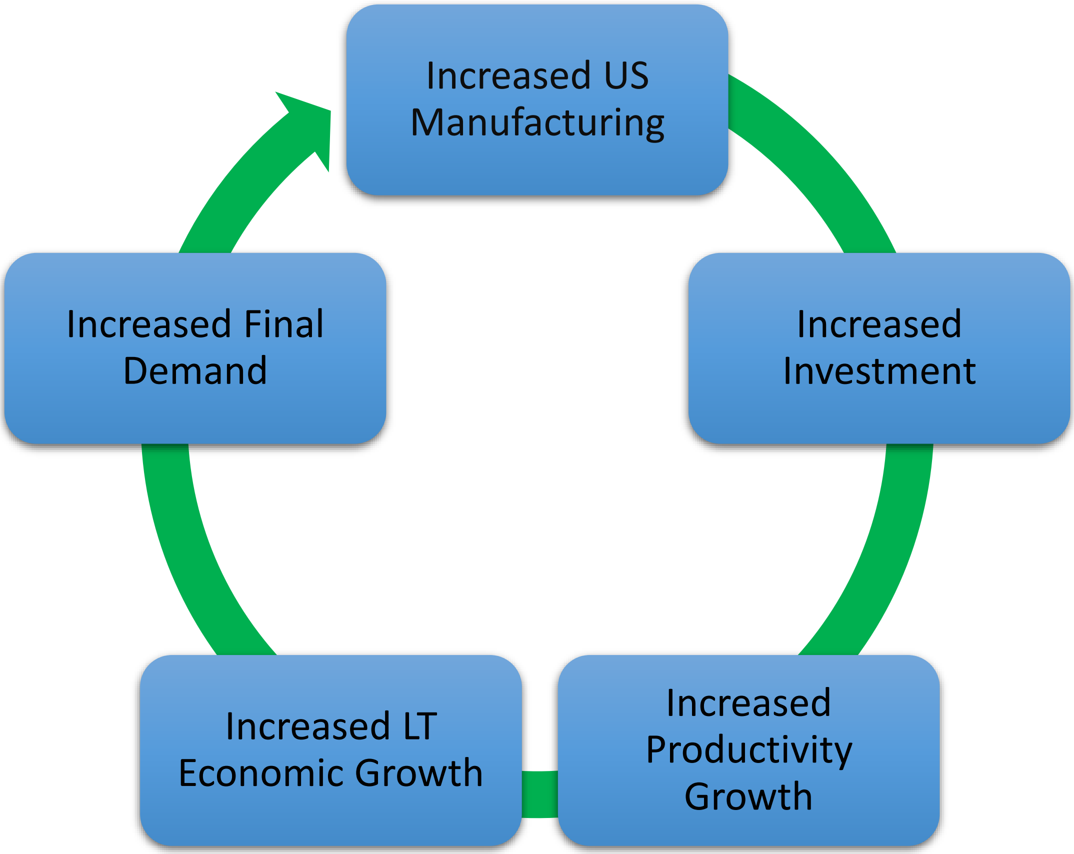

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For the U.S. which produces less than 50% of the goods it consumes, the gamble could pay off in spades as production relocates to the U.S. For the rest of the world, the ability to leverage U.S. consumption to baseload their industrial plant will fade away. Whether Asia or Europe, the entire Global Trading System will need to adjust. And this adjustment will not prove painless as countries and companies end up with stranded plants and capital for which there exists no market for their output.

For the Global Economy, A Multi-Faceted World continues to emerge. It will change how the Global Economy grows, forcing countries to consume a larger portion of their own production. As a result, the Global Economy will undergo A Continued Shift In Growth. Countries that benefitted from export led growth will need to encourage domestic consumption. Else they will find themselves writing off billions of dollars in Investments. Countries that continue to invest, despite massive overcapacity, such as China, will find themselves tariffed and blocked from other countries' markets. With the U.S.

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Congress putting in place A Marshall Plan for the U.S., the U.S. will begin to restore its global manufacturing capacity and edge. Given its abundant cheap energy coupled with efficient logistics, manufacturing costs stand below those of other Developed Economies, such as Germany and Japan. And, as manufacturing capacity finally gets put in place over the next few years, the U.S. should see its trade deficit fall, productivity growth rise, economic growth accelerate, and household incomes rise at a faster rate. And should the U.S. reinvest in its Defense on top of this, as seems likely given the global challenge from China, its growth would further accelerate. In some sense, this would merely return the Global Economy to the 1980s and 1990s, a period of Global Geopolitics dominated by the conflict between the West and the Communist Countries of Russia and China. And with that rivalry reigniting, it seems once more the world stands destined to repeat history.

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Can You Spare Some Nickel?, Crude Awakening, & It's A Total Loss

Finally, we close with brief comments on Can You Spare Some Nickel?, Crude Awakening, & It's A Total Loss. First, the U.S. enacted legislation to encourage EV Battery production in the United States. As a result, over $50 billion in battery value chain plants have been announced. However, as with most things, government put in place incentives to create these plants without considering how they would procure the basic chemicals and metals to build the batteries. One of the key metals stands Nickel Indonesia, which houses 25% of global Nickel reserves, announce in 2019 that only processed Nickel could be exported. In addition, Indonesia plans to become a force in EV Battery production by utilizing its Nickel to produce batteries in the country. While the U.S. possesses significant resources to produce its own Nickel, there stands significant political opposition to mining for any resource in the U.S. As a result, for U.S. EV Battery companies, it might be: Can You Spare Some Nickel? Second, despite the efforts of the environmental movement to stop the consumption of hydrocarbons, such as oil, hydrocarbon consumption continues to move to new heights driven by Emerging Market demand. In fact, according to the latest OPEC Monthly Market Report, oil consumption should reach record levels at 101.9 million barrels per day in 2023, growing by 2.9 million barrels per day this year. It appears that the environmental movement faces a Crude Awakening. And Third, the cost of repairing vehicles in a crash has risen significantly over the past decade. As a result, the percent of those vehicles where the insurance company just writes a check as opposed to repairing them has risen from less than 15% in 2011 to over 20% in 2021. For those involved in an accident, they should not be surprised at all if they hear the words: It's A Total Loss.

In Closing

Should you have any questions on how the above issues or the items discussed in our accompanying cover letter impact your family's financial position or your business's future as well as the potential actions you could take in response, please do not hesitate to contact us. We welcome the opportunity to discuss this with you.

Yours Truly,

Paul

Paul L. Sloate
Chief Executive Officer