

The Opportunity in the US Onshoring Movement



Market observations and key takeaways

Onshoring movement

Recent supply chain disruptions have led to the onshoring movement in the US where many leading semiconductor and advanced manufacturing firms are building new, operationally critical facilities to secure a shorter, stronger and more stable supply chain.

Favorable incentives

It appears, favorable, federal government–led industrial policy and incentives and state-level incentive packages have spurred next-gen semiconductor and advanced manufacturing spending in the US.

Manufacturing momentum

Various industry sources note, momentum in advanced manufacturing has increased, resulting in a significant increase in manufacturing spending and development pipeline.

Blue Owl real estate opportunity

We believe the onshoring movement in the United States presents an outstanding opportunity to deploy capital into projects that are mission critical to major technology companies, US supply chain and our national defense. Significant capital is needed to construct state of the art fabrication facilities to meet the increased demand for chips and other semiconductor products that are integral to our current and future infrastructure. Blue Owl Real Estate is well positioned to act as a strategic partner to highly rated global semiconductor businesses and is one of a very limited number of groups that can execute with speed, scale, and provide flexibility of capital. In addition to the significant capital outlay required to construct or expand production of these facilities, semiconductor firms invest a massive amount of capital to fit facilities with their latest fabrication technology which we strongly feel creates strong alignment between asset owners and tenants. We believe the strategic and national importance of the onshoring movement embodies 'mission criticality', which continues to serve as a key tenant to our strategy.



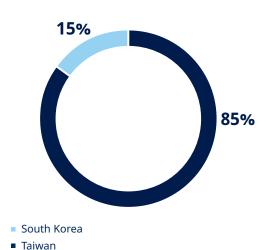
Supply chain disruptions, US in need of chip "fabs"

The US has critically low, minimal chip manufacturing capacity

A powerful onshoring trend has permeated North American markets creating opportunities that embody Blue Owl Real Estate's core investment thesis of "mission criticality." Driven by supply chain disruptions, a concentrated offshore manufacturing base and geopolitical tensions have prompted many global firms to onshore manufacturing to the US. For example, semiconductor firms, for competitive and national security reasons, have sought to onshore and diversify the locations by which they produce products.

Figure 1

Global leading-edge chip production²

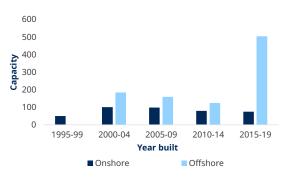


Historically, leading semiconductor and chipmakers have built their semiconductor fabrication facilities or "fabs" outside of the US with a high concentration in Taiwan, China and South Korea. Today, Taiwan dominates the global semiconductor manufacturing market, serving as the world's main producer via an 'outsourced foundry' model where they make chips that are designed by their customers. Until the mid-1980s, most large chipmakers both designed and manufactured their chips in-house. But as chips became more advanced, the cost of building semiconductor fabs escalated.

However, even as a dominant player in the semiconductor space, the US's preeminence is driven largely by US domiciled firms R&D intensive activities such as chip design and development of chip manufacturing equipment, not actual manufacturing. Today, a relatively small percentage of older vintage capacity remains in the United States with the majority of leading-edge, advanced semiconductor manufacturing fabs located in Taiwan and South Korea. ^{2,3}

New technologies and the rise of artificial intelligence (AI), cloud computing infrastructure, automotive technology, financial services, consumer tech devices and common household appliances have driven the demand for leading edge chips. Device manufactures that utilize leading-edge chips have also realized a significant portion of their business is tied to a supply constrained area which furthers their interest in a diversified manufacturing base. Additionally, in the interest of national security, the federal government is expected to procure production capacity for national defense and military purposes.⁴

Figure 2 **Leading US firms - chip capacity**²



Note: Capacity refers to total capacity of Analog Devices, Intel and Micron, thousands of 300mm equivalent of WPM

Moving forward, it is expected that the majority of capital dedicated to new advanced fabs outside the Asia-Pacific region will flow to the US and other favorable markets in North America or Europe. As leaders in the advanced manufacturing space lay the groundwork for expansion across the US we are highly focused on this onshoring trend and innovation surge that represents a significant amount of our investment activity.⁵



Recent incentives have helped fuel US growth

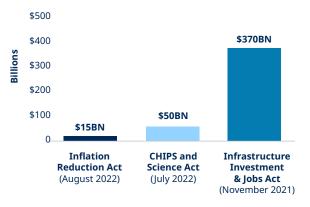
\$435B in advanced manufacturing incentives in last two years

To spur investment in critical areas and strengthen the supply chain, federal incentives and support through the Infrastructure Investment and Jobs Act (IIJA), Inflation Reduction Act (IRA) and CHIPS and Science Act (CHIPS) provide funding for advanced manufacturing. According to Newmark Research, since 2020 and especially since the enactment of the CHIPS Act, over 50 new or expansionary semiconductor projects have been announced with 18 currently underway and automotive/transportation sectors have seen approximately double the number of announcements over the same period.⁶

Figure 3

Federal financial incentives/tax

credits for advanced manufacturing



Source: Newmark Research, White House

In competition for advanced manufacturing facilities, state and localities have assembled record setting, multi-billion-dollar incentive packages for firms they are courting for investment.

With renewed government led industrial policy, major industry players that engage in advanced manufacturing such as, semiconductors, electric vehicles and batteries, pharmaceuticals and energy firms have announced major capital investment projects scattered across the US. Beyond federal incentives, Micron and Intel have secured incentive packages worth \$5.5 and \$2.0 billion from

New York and Ohio, respectively and represent some of the largest state government and corporate investments in history.⁷ It is clear that federal, state and local governments, and the private sector are aligned in securing a stronger supply chain that is of strategic and national importance.

64.7%

Annualized growth of real private manufacturing construction spending, as of June 2023

Corporations have responded with significant investment

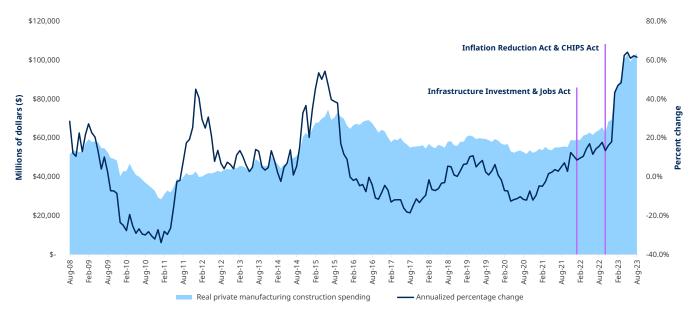
As semiconductor and advanced manufacturing momentum continues, real private manufacturing construction spending has grown substantially at an annualized rate of nearly 65%, as of June 2023. Additionally, manufacturing construction pipeline has reached a muti-decade peak with 58.8 million square feet under construction. Industries with the most development and investment activity are expected to take shape in semiconductors, electric vehicles and battery production, pharmaceuticals, and solar industries. Through 2023, multibillion-dollar semiconductor projects have been announced by Intel, TSMC and Micron, and within the automotive and transportation sector, Ford, Hyundai, and LG have also committed billions to new projects.8



Manufacturing spending hits a new high

Figure 4

Total real private manufacturing construction spending in the US



Note: Seasonally adjusted annualized rate of construction spending deflated by new industrial building PPI Sources: Newmark Research, FRED, U.S. Census Bureau, U.S. BLS

Depending on size and scale, new semiconductor fabrication facility buildouts require extensive capital, ranging from \$1-20 billion and leading-edge facilities costing more than \$30 billion. Recently, publicized semiconductor projects ranged from \$12 billion to \$100 billion over the life of the project and require millions of square feet per project. Major companies such as Intel, Micron, TSMC, Samsung and LG have announced multi-billion-dollar projects in key US markets with favorable dynamics related to land availability, power costs business environment and labor. Since 2020, major manufacturing

announcements have occurred in nearly every state with the strongest concentration in the Midwest through the sunbelt markets. Arizona, Texas, Georgia and North Carolina are the early leaders in attracting a significant share of fresh capital to their states. Arizona and Texas combine for \$120 billion, and Texas, Georgia and North Carolina lead in numbers, with more than 20 investments of \$100 million or more pledged since 2020. Additionally, Ohio and New York have awarded billions in incentives to secure investments from Intel and Micron, respectively. 9,10

Recent companies that announced advanced manufacturing projects

Industry	Primary functions	Manufacturers
Semiconductors	Chip fabrication, processing, memory and sensors for consumer and industrial uses	Intel, Micron, TSMC
Automotive/Transportation	Electric vehicles and batteries	Ford, SK Innovation, LG Energy Solution and Hyundai
Biomanufacturing	Active ingredients, therapeutics, genetics and bulk drug substance production	Lilly, Fujifilm-Diosynth Biotech and Agilent
Energy	Solar cells and panels	Qcells, Enel and Invenergy

Source: Newmark Research, press and media coverage, Blue Owl



Opportunity for Blue Owl real estate investors – filling the capital gap

Onshoring trends represent an opportunity to strategically partner with companies on the leading edge of this movement

While the prevailing winds have shifted in the broader real estate market, we believe there is a massive secular opportunity within the semiconductor and advanced manufacturing sectors that embodies our core investment thesis of "mission criticality". Onshoring trends represent an opportunity to strategically partner with companies on the leading edge of this movement. Today, our onshoring pipeline consists of more

What "Mission Critical" means...

- Focus on operationally essential assets or facilities that are inherently difficult or inordinately expensive to vacate upon expiration of the initial lease term.
- By acquiring mission critical assets, structured with long-term leases and annual net rent escalations, Blue Owl can substantially lower vacancy risk and may provide a more predictable, inflation protected income stream.

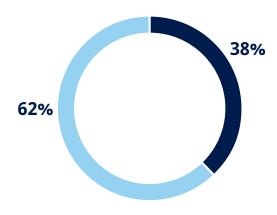
than \$17 billion of advanced manufacturing and semiconductor opportunities and represents 62% and 38%, respectively. Blue Owl has closed on \$192 million of semiconductor and advanced manufacturing investments to date and have an additional \$1.0 billion under contract.

Since inception, our investment philosophy has always been hyper focused on mission criticality, capital preservation, strong yields and long-term NNN leases with investment grade tenants. We believe these key investment criteria may help

mitigate many risks present in today's real estate investment environment. The current CRE market is challenged by many factors including rising expenses, expanding cap rates, limited availability of accretive debt financing, muted capital markets activity, significantly higher interest rates and real questions around rent growth. While we could debate which one of these factors has the greatest impact on value, the reality is, we are entering a period where the true value of real estate is likely to be flushed out over the coming years. However, when viewing the onshoring opportunity and how we approach real estate within the context of the broader investment environment, we believe investing in market leading companies that produce next-generation technology that is critical to virtually every facet of our daily lives presents a great opportunity to deploy capital in an otherwise challenged market.

Figure 5

Blue Owl RE semiconductor and advanced manufacturing pipeline



- Semiconductors
- Advanced Manufacturing

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Grant Palmer is a Principal at Blue Owl and member of the Institutional Business Development Team. In his role, Grant is a product specialist, focusing on Blue Owl's Real Estate strategies.

Before joining Blue Owl, Grant was an Associate Vice President at CIM Group, a real assets investment manager based in Los Angeles. Prior to that, he was an Associate at StepStone Group, a global private markets investment manager and consultant. Grant began his career as an Investment Associate at Glenmede Trust Company.

Grant received his BA in Finance from Cleveland State University.

Sources

- ¹ Source: Medium, Jimmy Ng, The Coming Resurgence in US Semiconductor Manufacturing: https://medium.com/predict/the-coming-resurgence-in-us-semiconductor-manufacturing-e15d797128ba
- ² Source: Will Hunt, "Sustaining U.S. Competitiveness in Semiconductor Manufacturing," Center for Security and Emerging Technology
- ³ Source: McKinsey & Company, "Semiconductor fabs: Construction challenges in the United States": https://www.mckinsey.com/industries/industrials-and-electronics/our-insights/semiconductor-fabs-construction-challenges-in-the-united-states#/
- ⁴ CSIS, "Semiconductors and National Defense: What Are the Stakes?": https://www.csis.org/analysis/semiconductors-and-national-defense-what-are-stakes
- ⁵ Z2data, "9 Key Statistics on new semiconductor fabs being built around the world": https://www.z2data.com/insights/9-statistics-on-new-semiconductor-fabs-being-built
- ^{6,8,9} Source: Newmark, "Manufacturing Momentum: Advanced Manufacturing Ascendancy in North America"
- ⁷ CNBC, States are paying huge sums to lure semiconductor manufacturers, on top of CHIPS Act billions: https://www.cnbc.com/2023/06/28/states-pay-huge-sums-to-lure-chip-makers-on-top-of-federal-billions.html
- ¹⁰ Washington Post, Chipmaker Micron to build \$20 billion N.Y. factory amid semiconductor boom: https://www.washingtonpost.com/technology/2022/10/04/micron-chip-factory-new-york/



Important information

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