

**Vanguard ETF Challenge 2025**

# **Vanguard World Semiconductor ETF (VWS)**

**Epsilon Investments**

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# **Executive Summary and ETF Overview**

# Executive Summary

- Global semiconductor market surging from AI, data centers, EVs, and 5G and upcoming 6G in 2030s.
- Market projected to reach **\$700.9B** in 2025 (+11.2% YoY) with continued strong growth.
- H1 2025 revenue: **\$346B** (+18.9% YoY); high capex signals lasting investment cycle.
- Only semiconductor ETF with intentional **5-segment coverage**: Fabless (**35.5%**), IDMs (**29%**), Equipment (**14%**), Foundries (**14%**), Analog (**7.5%**)



# ETF Overview

- **ETF Name:** Vanguard World Semiconductor (VWS)
- **Objective:** Long-term capital appreciation via investments in core semiconductor companies across the value-chain.
- **Strategy:** Rules-based selection, caps to limit single-name concentration.
- **Target Investors:** Thematic growth investors, advisors, and institutions seeking focused semiconductor exposure.
- **Main risks:** Sector Cyclicity, single-name concentration, & Geopolitical Supply-Chain risk.



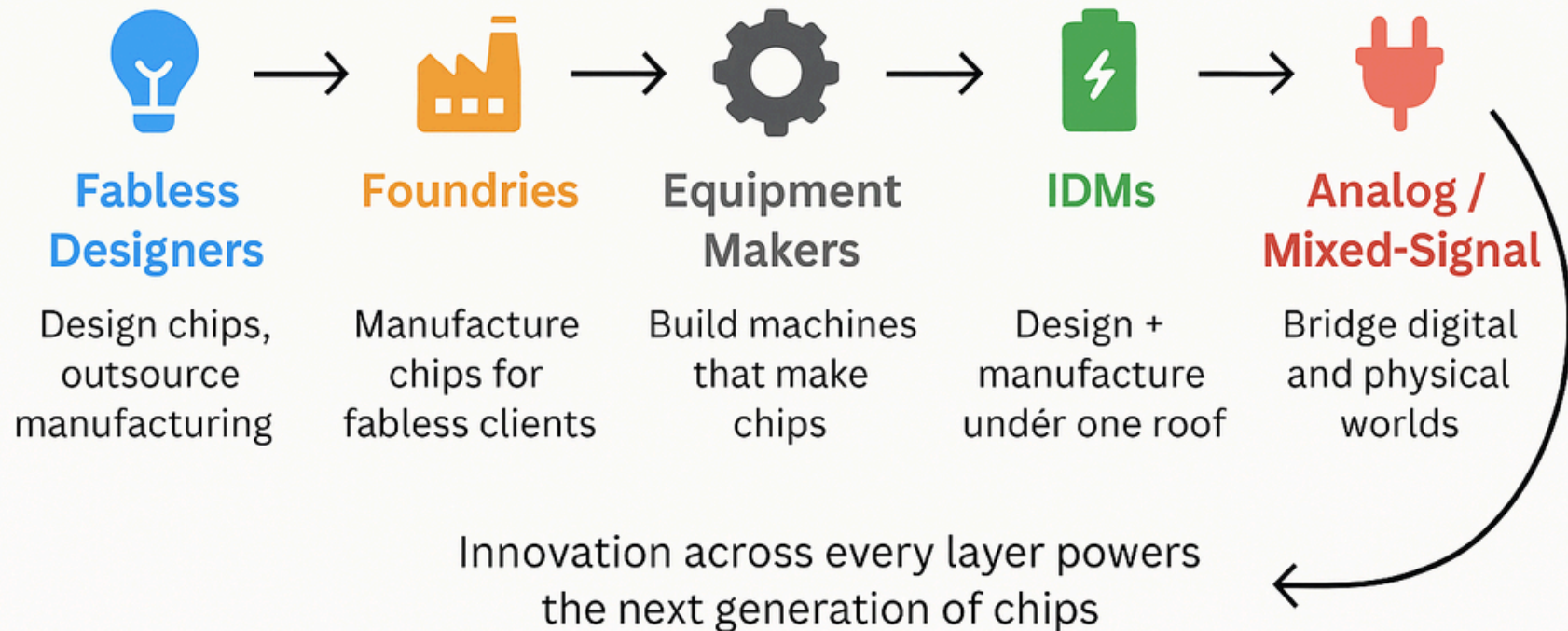
# Market Gap: Why VWS ETF?

| Coverage  | ΣHoldings | Largest Position                 | Top 10 Weight | Value Chain Coverage  | What They Miss   |
|-----------|-----------|----------------------------------|---------------|---|--|
| SMH       | 25-26     | NVDA: 18.7-19%                   | 76.4%         | Partial: Heavy fabless (NVDA, AMD, AVGO), foundry (TSM), equipment (ASML, AMAT, LRCX), minimal analog | <div>✗ Concentration risk (1 stock = 19 %)</div> <div>✗ No dedicated analog segment</div> <div>✗ No mid-cap exposure</div> |
| SOXX      | 30-34     | AVGO: 7.9%<br>or AMD: 10%        | 57.5-60%      | Partial: Balanced fabless/equipment/IDM but incomplete analog coverage                                | <div>✗ Limited foundry exposure</div> <div>✗ No strategic mid-cap layer</div>  |
| XSD(SPDR) | 40-50     | Largest: 2.8-3.1% (equal-weight) | <25%          | Broad but unfocused: Equal-weight across all segments including small-caps                            | <div>✗ Treats leaders = laggards</div> <div>✗ High volatility / weak returns</div>   |
| PSI       | 30        | AVGO: 5.9%                       | ~60%          | Partial: Focus on "manufacturers" - IDMs and some foundries, limited fabless                          | <div>✗ Under-weight fabless &amp; equipment</div> <div>✗ Minimal analog</div>  |
| VWS       | 14        | 7-7.5%                           | 72%           | COMPLETE: Intentional 5-segment coverage  | Fills every gap with capped risk & mid-cap innovation (30 %)   |

# Semiconductor Sectors

## The Semiconductor Value Chain

From Design to Deployment - How Chips Are Made



- The semiconductor ecosystem operates as a tightly linked value chain, from design to manufacturing, equipment, and analog integration.
- Each layer adds unique value, and VWS ETF captures exposure across all five, unlike most existing ETFs that focus on only one or two.

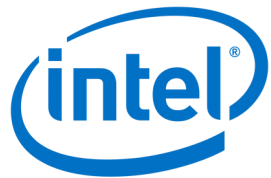
## Fabless Designers



## Fabricators/Foundries



## IDMs



## Equipment and Materials



TOKYO ELECTRON



# Index Design



### **Industry Exposure:**

- **Classified under GICS 4520 (Semiconductors & Semiconductor Equipment) or generates  $\geq 50\%$  revenue from semiconductor activities.**

### **Market Cap:**

- **Market cap  $\geq$  \$1 billion.**

### **Value Chain Alignment:**

- **Company must be categorized into one of the five semiconductor value-chain groups included in the index.**



\*During each semiannual reconstitution, the index re-runs the full selection methodology and refreshes its constituents, replacing any companies that no longer qualify with the top-ranked eligible mega and large- and mid-cap semiconductor leaders for each sector.

## **70% Mega and Large-Cap Holdings**

- **Consists of the Top 10 mega and large-cap companies**
- **Each receives an equal weight of 7%**

## **30% Mid-Cap Holdings**

- **Consists of the Top 4 mid-cap companies**
- **Each receives an equal weight of 7.5%**

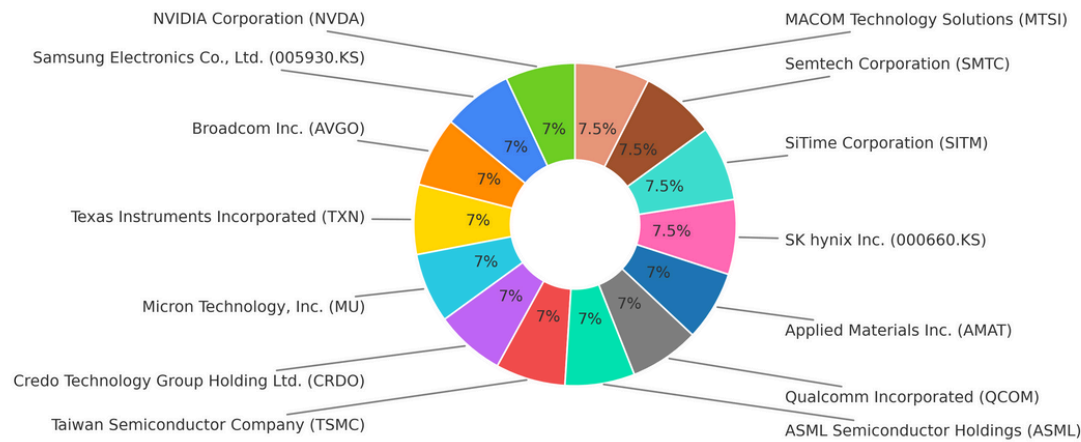
## **Quarterly Rebalance**

- **Reset weights to maintain 70% mega and large-cap / 30% mid-cap structure**
- **Equal weight within each tier (7% / 7.5%)**

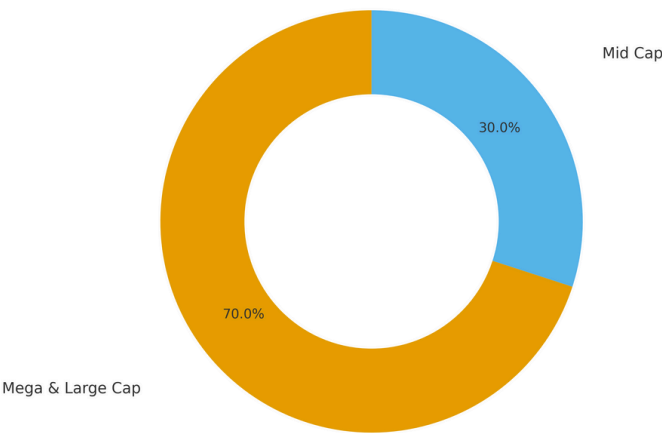
# Portfolio Structure

# Vanguard World Semiconductor ETF (VWS)

Portfolio Allocation by Company



Portfolio Allocation by Market Capitalization



Source: Yahoo Finance  
November 14, 2025

## Portfolio Details

| Mega and Large Cap Holdings |   |
|-----------------------------|---|
| Portfolio Share: 70%        | NVIDIA Corporation, Samsung Electronics Co., Ltd.,      |
|                             | Broadcom Inc., Texas Instruments Incorporated, Micron   |
|                             | Technology, Inc., Credo Technology Group Holding Ltd.,  |
|                             | Taiwan Semiconductor Company, ASML Semiconductor        |
|                             | Holdings, Qualcomm Incorporated, Applied Materials Inc. |
| Mid Cap Holdings            |   |
| Portfolio Share: 30%        | SK Hynix Inc., SiTime Corporation, Semtech Corporation, |
|                             | Macom Technology Solutions                              |

# Vanguard World Semiconductor ETF (VWS)

## ETF Segments

### Fabless – Design-only semiconductor companies

- NVIDIA Corporation (NVDA)
- Broadcom Inc. (AVGO)
- Qualcomm Incorporated (QCOM)
- Credo Technology Group Holding Ltd. (CRDO)
- Semtech Corporation (SMTC)

Total Weight: 35.5%

### Fab (Foundry) – Contract chip manufacturers

- Taiwan Semiconductor Company (TSMC)
- Samsung Electronics Co., Ltd. (005930.KS) (Foundry division)

Total Weight: 14%

### IDM – Integrated Device Manufacturers

- Texas Instruments Incorporated (TXN)
- Micron Technology, Inc. (MU)
- SK hynix Inc. (000660.KS)
- MACOM Technology Solutions (MTSI)

Total Weight: 29%

### Equipment Manufacturing – Semiconductor capital equipment

- ASML Semiconductor Holdings (ASML)
- Applied Materials Inc. (AMAT)

Total Weight: 14%

### Analog – Analog & mixed-signal semiconductor designers

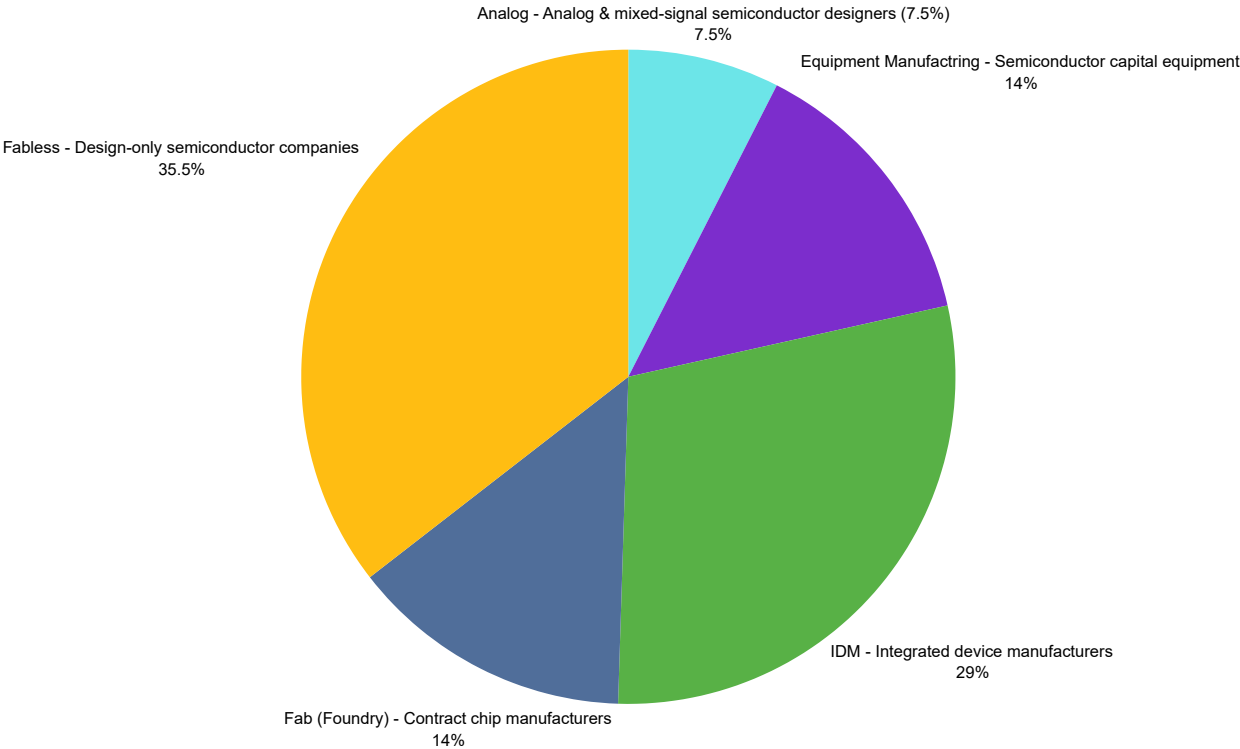
- SiTime Corporation (SITM)

Total Weight: 7.5%

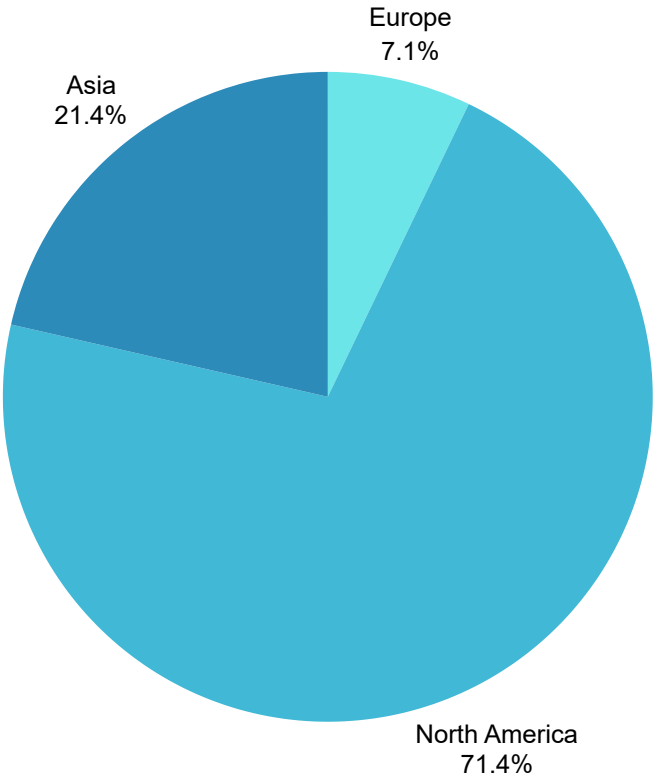
# Vanguard World Semiconductor ETF (VWS)

## Industry and Global Weights

Weights by Industry



Global Representation



# Target Investors



# Vanguard World Semiconductor ETF (VWS)

## Potential Investors

### Narrative Driven ~ Thematic

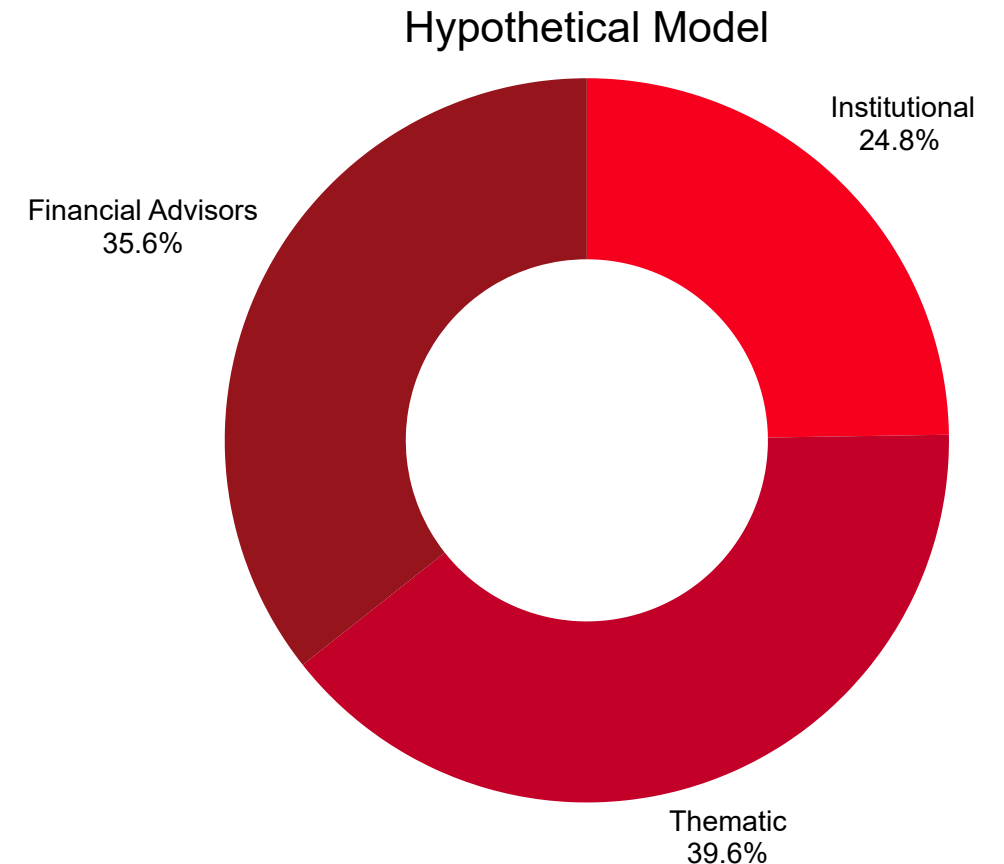
- Trends lead to opportunity
- Global or Market impact
- Long-term holds for profitable exit
- Portfolio build of congruent companies in different sectors
- Attractions to NVIDIA and Qualcomm

### Risk Aware ~ Financial Advisors

- A diverse assortment of ETFs is attractive
- One single company does not rule and create imbalances
- 10% Cap with diversity provides “safeguard” for risk management through ecosystem
- 30% 70% split provides calculated growth with the presence of stability

### High Growth ~ Institutional

- Attraction to the 30% mid-cap growth opportunity
- Multiple desired stocks can be bought with no need for single buys
- Liquid asset allocation with ease and speed
- Asset Managers, Mutual Funds, Hedge Funds, Public Pension



**Thank  
You!**