# An Artificial Intelligence Revolution: The Next Tectonic Shift in the Computing Paradigm

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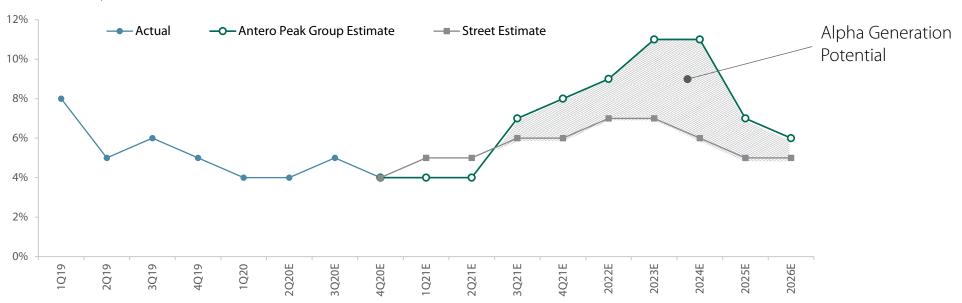
# Differentiated Views Remain the Core of Our Process

# We identify the companies we believe present the greatest differentiation vs. consensus estimates

- Our process emphasizes objectivity, driven by superior bottom analysis and is grounded in empirical observation of history
- We relentlessly focus on finding inflection points that lead to accelerating trends, which are often underappreciated, creating differentiation
- Our process emphasizes sustainable changes in fundamentals that lead to expanding ROICs that can lead to multiple expansion

#### We Search for Inflection Points that Lead to Differentiation

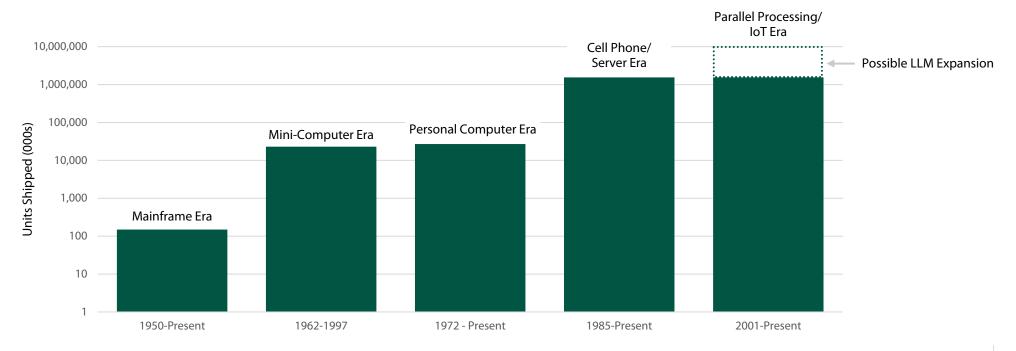
Illustrative Alpha Generation



# New Era of Computing

Over the past 70 years, tectonic shifts have been driven by the emergence of new technology platforms

- Each new computing paradigm has driven roughly a ~10x increase in devices connected to the network
- The key shifts from Mainframes (one to many) to PC (one per household) to Mobile (one per person) to Artificial Intelligence (connection of multiple machines) has corresponded with the emergence of new winners and losers in the stock market
- With the advent of ChatGPT and Generative Al—we have arrived at the next Tectonic Shift



Source: Antero Peak Group estimates. Data as of 31 Dec 2019.

# Generative Al

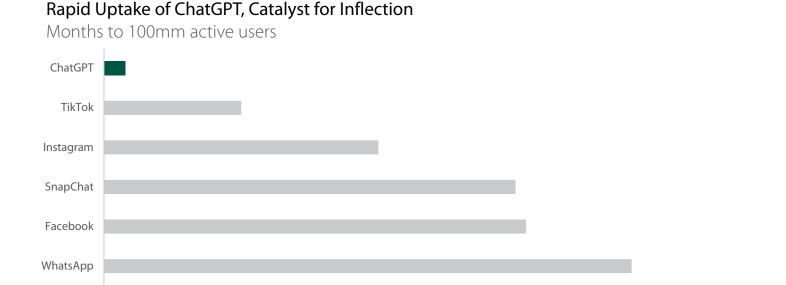
# Computing power controlled by the human language

- ChatGPT is the fastest growing generative Al application in history, reaching 100M active users in less than 2 months since launch
- The innovation is staggering—the app was launched with 1mmX the process power than earlier recognition systems and was trained on 175B parameters.

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• To successfully compete in Generative AI companies will require 3 things: 1) lots of data 2) talent 3) access to supercomputers

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Let's Put Generative AI to the Test

# Impact of Generative Al

#### GENERATIVE ALIS AN IPHONE MOMENT

## \$1 Trillion...

...is the scale of near term global economic disruption due to accelerated innovation

"With Microsoft 365 Copilot, we are giving people more agency and making technology more accessible with advanced Al and the most universal interface: natural language"

—Satya Nadella, Microsoft CEO

"The world is experiencing one of the most profound technological shifts with the rise of generative Al...as companies connect with their customers in more intelligent, automated and personalized ways."

—Marc Benioff, salesforce CEO

"ChatGPT is going to be in everything."

—Scott Miller, General Motors VP

#### BUSINESS MODELS WILL BE CHALLENGED

## Self-Configuring, Autocoding Software...

...will pave the way for new ways of customer engagement and monetization

Microsoft Copilot in PowerApps: Based on a preview launched in October 2022, we see a 50% reduction in time to develop Power Automate workflows when copilot is in use.

"...by 2025, we expect more than 30%—
up from zero today—of new drugs and materials
to be systematically discovered using generative
Al techniques"
—Gartner

"Copilot has dramatically accelerated my coding, it's hard to imagine going back to "manual coding". Still learning to use it but it already writes ~80% of my code, ~80% accuracy. I don't even really code, I prompt. & edit."

—Andrej Karpathy, Former Director of Al at Tesla, and Founding Member of OpenAl

#### MOST COMPANIES WILL NEED TO ADAPT

## Corporate Strategy...

...will have to drastically change to work WITH generative AI, versus AGAINST it

#### Top 20 Occupations Exposed to Al<sup>1</sup>

**Genetic Counselors** 

Financial Examiners

Actuaries

Purchasing Agents, except Wholesale, Retail and Farm

**Products** 

**Budget Analysts** 

Judges, Magistrate Judges and Magistrates

Procurement Clerks

Accountants and Auditors

Mathematicians

Judicial Law Clerks

Education Administrators, Post Secondary

Clinical, Counselling and School Psychologist

#### Financial Managers

Compensation, Benefits, and Job Analysis Specialists

Credit Authorizers, Checkers, Clerks

**History Teachers** 

Geographers

**Epidemiologists** 

Management Analysts

Arbitrators, Mediators and Conciliators

# Generative Al Tech Stack

Generative Al Tech Stack	Select Players		Competitive Dynamics	
APPLICATIONS	<ul><li>Adobe</li><li>Alphabet</li><li>Apple</li></ul>	<ul><li>Microsoft</li><li>Nvidia</li></ul>	Fast topline growth with challenges around retention, margin and high talent costs	
FINE-TUNED MODELS (incl. Custom, Private, Edge Models)  FOUNDATION MODELS	<ul><li>Alphabet</li><li>Cohere</li><li>Meta</li></ul>	<ul><li>Nvidia</li><li>OpenAl</li><li>Stability.Al</li></ul>	Rapidly evolving ecosystem of players that are building vertical and horizontal use cases and experimenting with new modalities (e.g., text, video) but none have achieved any commercial viability that goes beyond the hype	
& ML PLATFORMS  DATA & DATA PLATFORMS  (Private, Public Paid, Public, Shared)	<ul><li>Amazon Neptune</li><li>Bloomberg</li></ul>	<ul><li>Equifax</li><li>Gartner</li></ul>	Emerging area with no clear leader; data incumbents haven't embraced technology and platform incumbents do not yet have	
HYPERSCALE INFRASTRUCTURE (On-premise & Cloud)	<ul><li>Empsight</li><li>Alphabet</li><li>AWS</li></ul>	<ul><li>Snowflake</li><li>Microsoft</li><li>Nvidia</li></ul>	a solution that is trusted, scaled and adopted  Dominated by a few players, many of whom are not yet profitable or have a multi-year technological lead, with no new entrants able	
SILICON  (Training, Inference, Multi-Purpose)	AWS AMD	<ul><li>NVIdia</li><li>Oracle</li><li>TSMC</li></ul>	to meaningfully disrupt	

See Notes and Disclosures pages for portfolio weights.

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# Semiconductors

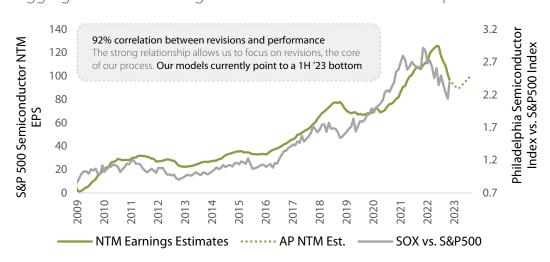
# Cyclicality underpinned by strong secular growth

- Semiconductors present an exciting investment landscape to run our process
- We maintain detailed industry models for key end markets (PCs, smartphones, data centers, autos) that all account for increasing content and complexity
- There are opportunities developing in semiconductors, chips, and capital equipment as we move through the cycle and advanced technology drives supply chains to get reorganized

### Semiconductors Outgrow GDP, Key Subsegments Outgrow >2x GDP Key semiconductor end markets CAGRs

End Markets (\$bn)	2021	2026E	CAGR (21-26E)	
Auto	53.55	98.62	10.0%	
Storage Data Processing	41.65	74.35	7.8%	
Industrial and Military	64.85	98.62	6.6%	
Wired Communications	25.58	39.92	5.4%	Focus Areas
Compute Data Processing	178.49	206.62	2.6%	
AI/ML	34.78	86.08	19.9%	
Consumer	66.04	82.18	2.4%	
Wireless Communications	164.80	182.36	1.3%	
Total Semiconductor Revenue	594.95	782.66	4.1%	

#### Revisions Cycles Present Opportunities to Capture Inflection Points Aggregated NTM earnings estimates for semis vs. relative performance

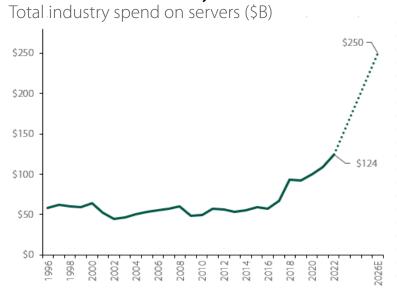


# Semiconductors

## The arms dealer to Generative Al

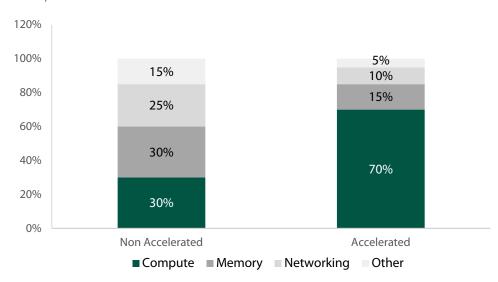
- The data center market started to accelerate in 2017/18 with greater cloud adoption but we see Generative AI compounding accelerated compute
- The accelerator market alone is expected to surpass the CPU industry by 2025 and reach >\$100B of value by 2030
- The economics of the industry are changing—with compute garnering a >2x increase in the value chain in accelerated computing systems this is a foundational change that we believe can be invested behind

#### Generative AI Is the Catalyst to Drive Acceleration



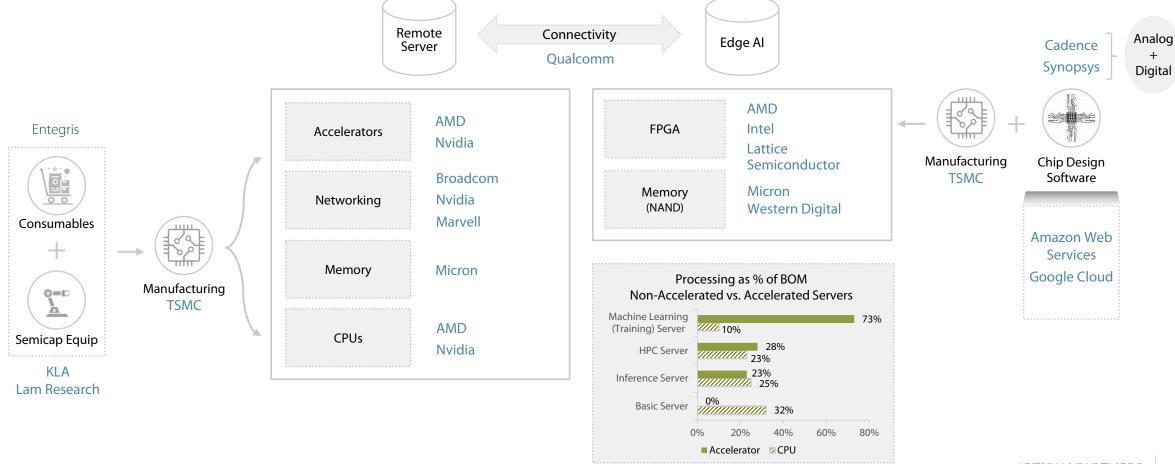
#### Switch to Accelerated Computing a Windfall for Chip Makers

Comparative cost stack of non-accelerated to accelerated server



# AI/ML Compute Infrastructure

Unlocking benefits through proprietary work



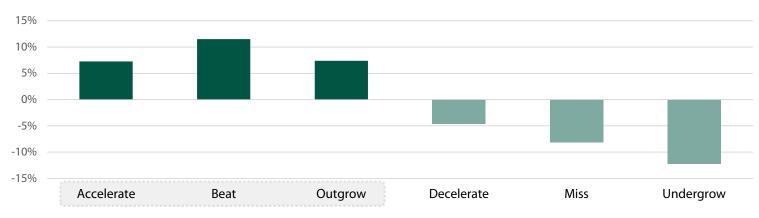
# Empirical Analysis Supports Our Research Focus Areas

# We have a clearly defined game plan

- As we talked about for years, our process is focused on:
  - Inflection points that lead to broad based, often industry wide accelerations and high earnings growth rates
  - Bottom-up, rigorous differentiation that leads to high and sustained upward estimate revisions
  - Rising Return on Invested Capital ("ROIC") that lead to multiple expansion
- There is strong empirical evidence that gives us confidence in our focus areas:

#### S&P Constituents Follow a Reliable Fundamental Pattern

Rolling 10-year median performance of S&P constituents categorized by EPS



# Questions?

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