PANACEA VC

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PORTFOLIO COMMENTARY

INVESTOR RESEARCH NOTE

Beyond the AI Bubble

Why Our Portfolio Is Positioned Differently from Traditional AI Investments

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IN BRIEF

Our companies use AI. They do not sell it. That distinction is the whole of our exposure to an AI bubble.

01

THE VIEW

Executive Summary

Artificial intelligence has become one of the most polarizing investment themes in global markets. Comparisons with the dot-com bubble have become increasingly common as private AI valuations reach unprecedented levels and billions of dollars continue to flow into large language model ("LLM") developers and AI infrastructure.

This has naturally led some investors to ask whether our portfolio, comprising Hologen, Partex, Harbinger Motors, RCB Nanotechnologies, and AllJoined, faces the same risks.

Our view is no.

- They are not investing billions to train general-purpose AI models.
- They are not dependent on selling AI compute.
- They are not competing to build the next ChatGPT.

Instead, AI serves as an enabling technology within businesses built around proprietary assets, industrial capabilities, scientific expertise, or specialized datasets. Their long-term value depends primarily on solving real-world commercial problems rather than winning the race to build the largest AI model.

Consequently, although market sentiment toward AI may fluctuate, we believe these companies are materially less exposed to the factors currently driving concerns about an "AI bubble."

FIGURE 1 · WHY OUR PORTFOLIO IS DIFFERENT FROM TYPICAL "AI BUBBLE" INVESTMENTS

CHARACTERISTIC	FRONTIER AI / LLM COMPANIES	OUR PORTFOLIO COMPANIES
PRIMARY BUSINESS	Build and commercialize foundation models (LLMs)	Use AI to improve products in healthcare, industrials, transportation and neuroscience
ROLE OF AI	AI is the product	AI is an enabling technology
REVENUE SOURCE	API usage, subscriptions, enterprise AI services	Drug discovery, diagnostics, EV manufacturing, industrial recycling, neuroscience tools
COMPETITIVE ADVANTAGE	Scale of computing infrastructure and model performance	Proprietary data, patents, manufacturing, scientific know-how, specialized hardware
CAPITAL REQUIREMENTS	Multi-billion dollar AI training and data-center investments	Capital directed toward laboratories, manufacturing, clinical development and commercialization
EXPOSURE TO AI SPENDING CYCLE	High	Moderate to Low
DEPENDENCE ON AI HYPE	Significant	Limited. Commercial value driven by industry-specific demand
VALUATION DRIVERS	Future AI adoption and market leadership expectations	Technology, IP, commercial partnerships, assets and execution
IF AI SENTIMENT WEAKENS	Valuation multiples could compress materially	Business fundamentals remain tied to underlying end markets
INVESTMENT THESIS	Success depends on becoming a dominant AI platform	Success depends on solving real-world problems in large industries

THE DISTINCTION THAT MATTERS

AI companies

Companies using AI

Every company in the portfolio is the second kind. Its revenue comes from an established end market, not from selling AI itself.

HOLOGEN · PARTEX · HARBINGER · RCB NANOTECHNOLOGIES · ALLJOINED

> *Every transformative technology experiences periods of excessive optimism, and artificial intelligence is unlikely to be different.*

RAILROADS · ELECTRICITY · THE INTERNET · MOBILE PHONES · CLOUD COMPUTING

02

THE DEBATE

The AI Bubble Debate

Today, concerns surrounding an AI bubble generally focus on a relatively narrow group of companies:

- Frontier LLM developers
- AI infrastructure providers
- GPU manufacturers
- Data-center developers
- Companies whose valuations are based primarily on expectations of future AI demand

These businesses require enormous capital expenditure, consume vast computing resources, and often trade at valuations that imply decades of future growth. This is where comparisons with the dot-com era originate.

However, applying this same framework to every company using AI risks oversimplifying an increasingly diverse technology landscape.

03

THE DISTINCTION

“AI Companies” and “Companies Using AI”

One of the biggest misconceptions in today's market is treating AI as a single investment category. It is not. There is a significant distinction between companies whose entire business is building AI models and companies that use AI to improve products or services.

Think of electricity. The companies that built power plants were very different investments from manufacturers that later used electricity to improve production. Likewise, cloud computing created enormous value, but not every successful software company had to own a data center.

Artificial intelligence is following a similar pattern. Our portfolio largely consists of companies that apply AI rather than sell AI itself.

FIGURE 2 · WHERE OUR COMPANIES SIT IN THE AI VALUE CHAIN

FRONTIER AI / LLM LABS

OpenAI · Anthropic · xAI

▼

AI MODELS & COMPUTE INFRASTRUCTURE

▼

AI APPLICATION LAYER

▼

Hologen	Partex	AllJoined	Harbinger	RCB Nano
Healthcare AI	Drug Discovery	Neural Interface	EV, Defense Drones & Generators for AI Data Centers	Advanced Materials

Key message: Our investments are application-layer businesses that leverage AI as a tool, not frontier AI companies whose value depends primarily on developing increasingly larger language models.

04

Why Our Portfolio Is Different

FOUR REASONS

Although each investment operates in a different industry, several common characteristics distinguish them from companies typically associated with AI bubble concerns.

01 AI Is an Enabler, Not the Product

None of these companies generate revenue by selling large language models or AI computing capacity. Instead, AI enhances an existing commercial business. For example: Hologen applies AI to drug discovery and diagnostics. Partex integrates AI into pharmaceutical research. Harbinger leveraged its commercial vehicle manufacturing and autonomy software to enter unmanned defense ground vehicles. The company licenses its autonomy software to third parties too, and is now building generators for data centers re-using its electric motors from commercial vehicles. AllJoined develops neural decoding technology supported by AI algorithms. RCB Nanotechnologies is fundamentally an advanced materials company rather than an AI company.

If AI progress slowed tomorrow, each business would still retain its underlying assets, intellectual property, customer relationships, and commercial opportunities.

02 Proprietary Assets Create Barriers to Entry

Much of today's generative AI ecosystem relies on models that can increasingly be replicated. Our portfolio companies derive competitive advantage from assets that are substantially harder to reproduce. Examples include proprietary clinical datasets, patented industrial processes, manufacturing capabilities, pharmaceutical partnerships, specialized scientific expertise, and unique hardware platforms.

These advantages are accumulated over years rather than purchased through additional computing power.

03 Revenue Comes From Real Industries

Each company serves an established end market: healthcare, pharmaceuticals, transportation, industrial recycling, neuroscience. Demand in these sectors exists independently of investor enthusiasm for AI.

The commercial question is therefore not “Will AI remain popular?” Instead, it is: “Can these businesses create measurable value for customers?” That is a fundamentally different investment proposition.

04 Valuations Reflect Company-Specific Fundamentals

Many of today's highest-profile AI companies command extraordinary valuation multiples because investors expect dominant future market positions. Our portfolio companies were acquired at valuations that we believe better reflect their stage of development. In several cases, investments were made through negotiated secondary transactions rather than highly competitive financing rounds.

While valuation alone never eliminates investment risk, purchasing businesses at more moderate entry prices provides a larger margin of safety than investing after valuations have already expanded dramatically.

FIGURE 3 · WHAT DRIVES THE VALUE OF OUR PORTFOLIO?

COMPANY	CORE INDUSTRY	PRIMARY VALUE DRIVER	ROLE OF AI
HOLOGEN	Healthcare & Biotech	Proprietary NHS clinical data, diagnostics, drug development	Accelerates biological discovery
PARTEX	Drug Discovery	Healthcare datasets, pharma partnerships, IP	Identifies therapeutic opportunities
HARBINGER MOTORS	Commercial EVs, Unmanned Defense Vehicles & Generators for Data Centers	Mission-critical vehicle platforms; picks and shovels manufacturer for the defense technology and defense AI ecosystem	Power for AI data centers, plus Physical AI in defense drones and commercial EVs
RCB NANOTECHNOLOGIES	Circular Economy	Patented recycling technology and industrial process	Minimal; operational optimization
ALLJOINED	Neurotechnology	Brain-computer interface hardware, proprietary datasets	Neural decoding algorithms

"We are not investing in companies whose primary objective is to build larger AI models. We are investing in businesses that use AI to create better medicines, more efficient vehicles, advanced industrial materials, and next-generation neuroscience technologies. Their long-term value will ultimately be determined by commercial execution, not by whether enthusiasm for AI rises or falls."

OUR INVESTMENT PHILOSOPHY

05

Lessons From the Dot-Com Bubble

PRECEDENT

The dot-com bubble is often remembered as proof that technology investing is dangerous. History tells a more nuanced story. Many internet companies failed because they lacked viable business models. Yet the internet itself transformed the global economy. Amazon, Google, Salesforce, and numerous other technology leaders emerged after the bubble burst.

The lesson is not that every technology investment fails. Rather, markets eventually distinguish between businesses built on speculation and businesses built on sustainable economic value. We believe the same distinction will likely emerge within artificial intelligence.

Some AI companies will disappoint. Others will become enduring businesses. Our investment process seeks to identify companies whose value is supported by intellectual property, commercial partnerships, differentiated technology, and industry expertise, not merely excitement surrounding AI.

FIGURE 4 · DOT-COM BUBBLE VS. TODAY'S PORTFOLIO

DOT-COM BUBBLE CHARACTERISTICS (1999 TO 2000)	OUR PORTFOLIO
INTERNET ITSELF WAS THE INVESTMENT THESIS	AI is only one component of the investment thesis
COMPANIES OFTEN HAD LITTLE OR NO REVENUE	Companies are building products for established industries
VALUATIONS DRIVEN PRIMARILY BY INTERNET EXCITEMENT	Investments made at negotiated private-market valuations
LIMITED BARRIERS TO ENTRY	Proprietary IP, scientific expertise and specialized assets
BUSINESS MODELS OFTEN UNPROVEN	Clear commercial applications in healthcare, mobility and industrial technology

06

Conclusion

IN SUM

The current debate surrounding an AI bubble is both understandable and healthy. Markets periodically become overly enthusiastic about transformative technologies, and artificial intelligence is unlikely to be immune.

Nevertheless, we believe it would be inaccurate to view our portfolio through the same lens as frontier AI laboratories or companies whose valuations depend primarily on continued enthusiasm for large language models.

Our investments are concentrated in businesses where AI is a powerful tool, not the sole source of value. Their competitive positions are supported by proprietary assets, industry expertise, intellectual property, commercial relationships, and exposure to large real-world markets. While no early-stage investment is without risk, we believe these characteristics provide a fundamentally different risk profile from the companies most frequently cited in discussions of an AI bubble.

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Set in Playfair Display and Inter. The engine-turned rules and the rosette are hypotrochoids, drawn from the equation a geometric lathe cuts. Printed for private circulation.

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