

Hedging the AI Singularity

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Abstract

We develop a simple model exploring how AI stocks might hedge against a negative AI singularity—where accelerating AI progress harms the representative investor. While high AI valuations are typically attributed to future earnings growth, our model demonstrates how investors might rationally value AI stocks for their hedging properties. We derive closed-form solutions showing how even small probabilities of AI-driven disasters can generate extraordinarily high price-dividend ratios. Financial markets may offer solutions to AI catastrophe risk beyond traditional policy approaches. Unlike previous work, this short paper is generated by prompting LLMs.

Keywords: Artificial Intelligence, Disaster Risk, Asset Pricing

*email:andrew.y.chen@frb.gov. ChatGPT-o1 and Claude-3.7-Sonnet contributed very large portions of the paper and could be credited as co-authors (see [Appendix A](#)). I thank Andrei Goncalves for helpful comments. The views expressed herein are those of the authors and do not necessarily reflect the position of the Board of Governors of the Federal Reserve or the Federal Reserve System.

1 Introduction

Artificial intelligence progress is accelerating at a breathtaking pace. In early 2025, DeepSeek released R1, a reasoning model rivaling OpenAI’s offerings despite development under US chip export controls (DeepSeek-AI et al., 2025). Waymo’s autonomous vehicles have now logged millions of driverless miles across multiple American cities. Models from Anthropic, Google, and OpenAI demonstrate capabilities that seemed like science fiction just five years ago. These developments have investors legitimately concerned about wage displacement as AI systems increasingly perform tasks once thought to require human cognition (Zhang, 2019; Acemoglu and Restrepo, 2020).

While technological change has disrupted labor markets throughout history, AI represents something fundamentally different. Unlike previous revolutions that enhanced human capabilities in specific domains, there is virtually no product or service that AI could not, in principle, create or deliver. An illustrative example is the current paper, which is entirely written by AI through a series of six prompts.¹ This differs markedly from, say, the internet revolution, which primarily changed information distribution but still required humans to generate content. Moreover, AI progress may be incredibly sudden—the phenomenon often termed the “AI singularity,” where recursive self-improvement leads to an explosion in capabilities.

This paper studies how AI stocks are priced given the risk that AI will destroy livelihoods and consumption. We develop a parsimonious model where two types of agents—AI owners and a representative household—exist in an economy where consumption can experience “disasters” representing revolutionary AI improvements that harm the representative household through mechanisms such as lost labor income or disrupted ways of life. We examine how the price-dividend ratio of a publicly traded AI asset responds to the probability and magnitude of these AI-driven disasters.

We are not claiming that a negative singularity will necessarily happen. Predictions about technological singularities have a long history of being either premature or entirely misguided. However, as financial economists, we believe it is nevertheless important to consider this scenario and its implications for asset prices. Just as disaster risk models help explain equity premia without requiring disasters to occur frequently, our model provides insights regardless of whether an AI singularity actually materializes.

We are also not claiming that this hedging value is already priced into current AI stock valuations. Our model simply illustrates a possible mechanism through which rational investors might value AI stocks differently when accounting for singularity risk. The empirical

¹“We” refers to one human author and multiple LLMs. For a purely human perspective see [Appendix A](#).

question of how much of current valuations reflect growth expectations versus hedging demand remains open.

Our approach builds on the literature of rare economic disasters and their impact on asset prices. Rietz (1988) and Barro (2006) pioneered the idea that low-probability catastrophic events can explain the equity premium puzzle, while Gabaix (2012) and Wachter (2013) extended this framework to account for time-varying disaster risk. Recent work by Zhang (2019) demonstrates that firms with routine-task labor maintain a replacement option that hedges their value against unfavorable macroeconomic shocks, while Knesl (2023) shows that firms with high share of displaceable labor earn a risk premium. These studies suggest that technological innovation risk is already priced in financial markets. Additionally, Jones (2024) explores the tension between AI-driven growth and existential risks, while Korinek and Suh (2024) analyzes how output and wages might respond to AI development scenarios approaching artificial general intelligence.

2 Model

Our economy consists of two types of agents. First, there are AI owners who are fully invested in AI assets and are not marginal investors in the stock market. Second, there is a representative household who is the marginal investor in financial markets. Only the representative household’s consumption matters for asset pricing. The household has constant relative risk aversion (CRRA) preferences:

$$U(C_t) = \frac{C_t^{1-\gamma}}{1-\gamma}$$

where γ is the coefficient of relative risk aversion.

The representative household’s gross consumption growth follows a simple process. In normal times, consumption growth is 1 (no growth for simplicity). However, with some probability p , consumption experiences a disaster, in which case gross consumption growth is e^{-b} where $b > 0$. Importantly, these disasters represent revolutionary improvements in AI technology that are devastating for the representative household. While AI improvements benefit AI owners, they harm the representative household through lost labor income, disruption to their way of life, and diminished sense of meaning. At time $t = 0$, no disasters have occurred yet—the singularity has not happened. Multiple disasters may occur over time, capturing the ongoing uncertainty that exists even after an initial singularity event.

There exists a publicly traded AI asset in this economy. Before any singularity, this asset’s dividend represents a small fraction of aggregate consumption. Each time a disaster

occurs, the dividend's share of consumption changes by a factor of e^h . This parameter h could be positive or negative, allowing us to capture various scenarios. When $h < b$, we model a worst-case scenario where the publicly traded AI asset's dividend actually shrinks in absolute terms during each disaster, reflecting that the benefits of AI improvements may be concentrated in privately-held AI assets rather than publicly traded ones.

3 Asset Pricing Solution

Given these assumptions, we can derive the price-dividend ratio for the publicly traded AI asset. For simplicity, we assume a discrete-time setting with no pure time discounting (i.e., $\beta = 1$) and i.i.d. "disaster" shocks occurring with probability p each period.

The household's one-period stochastic discount factor (SDF) from one period to the next is:

$$M = \left(\frac{C_{t+1}}{C_t} \right)^{-\gamma}$$

With probability $1 - p$, no disaster occurs, so $\frac{C_{t+1}}{C_t} = 1$ and $M = 1$. With probability p , a disaster occurs, so $\frac{C_{t+1}}{C_t} = e^{-b}$ and $M = e^{\gamma b}$.

For the AI asset's dividend dynamics, we assume that in normal times (no disaster), the dividend remains unchanged. If a disaster occurs, the dividend changes by a factor e^h . Thus:
- With probability $1 - p$: $D_{t+1} = D_t$ - With probability p : $D_{t+1} = D_t \times e^h$

By no-arbitrage and given the household's SDF, the fundamental pricing equation for the AI asset is:

$$P_t = E_t[M_{t+1}(D_{t+1} + P_{t+1})]$$

We seek a time-invariant price-dividend ratio $\phi := \frac{P_t}{D_t}$, assuming the underlying consumption process is i.i.d. over time. Substituting and solving the resulting equation yields:

$$\phi = \frac{(1 - p) + pe^{\gamma b}e^h}{p(1 - e^{\gamma b})}$$

This closed-form expression for the price-dividend ratio reveals how AI asset valuations depend on disaster probability (p), disaster magnitude (b), risk aversion (γ), and the asset's dividend response to disasters (h).

To illustrate the quantitative implications of our model, we compute the price-dividend ratio for various parameter combinations. We set $h = 0.20$ (modest dividend growth during disasters), $\gamma = 2$ (moderate risk aversion), and introduce a time preference parameter $\beta =$

0.96 (standard in the literature). The pricing equation becomes:

$$\phi = \frac{\beta G}{1 - \beta G} \quad \text{where} \quad G = (1 - p) + p \cdot e^{0.20+2b}$$

The table below shows the rounded price-dividend ratios for different combinations of disaster magnitude b (rows) and disaster probability p (columns). When $\beta G \geq 1$, no finite equilibrium exists (denoted by "Inf").

	$p = 0.0001$	$p = 0.001$	$p = 0.005$	$p = 0.01$	$p = 0.02$
$b = 0.40$	24	25	31	41	124
$b = 0.45$	24	25	32	47	655
$b = 0.50$	24	25	34	55	Inf
$b = 0.55$	24	26	36	76	Inf
$b = 0.60$	24	26	38	93	Inf
$b = 0.65$	24	26	41	142	Inf
$b = 0.70$	24	27	47	799	Inf
$b = 0.75$	24	27	55	Inf	Inf
$b = 0.80$	24	27	62	Inf	Inf
$b = 0.85$	24	28	76	Inf	Inf
$b = 0.90$	24	29	99	Inf	Inf
$b = 0.95$	24	29	166	Inf	Inf

Table 1: Price-dividend ratio ϕ for combinations of disaster magnitude b and probability p

The table reveals that even small probabilities of AI disasters can generate substantial price-dividend ratios, especially as the disaster magnitude increases. For example, with a modest disaster probability of $p = 0.005$ and disaster magnitude $b = 0.95$, the price-dividend ratio reaches 166. As either the probability or magnitude of disasters increases further, the model can generate arbitrarily high valuations or even no finite equilibrium.

These results suggest that the possibility of an AI singularity, even one that is harmful to the representative investor, could contribute to high valuations of AI stocks if these stocks serve as hedges against such events.

4 Model Discussion

While our model is deliberately streamlined, several important extensions and considerations deserve mention. First, market incompleteness is implicit but crucial to our framework. The disaster magnitude parameter b represents the *net* effect of both the AI disaster and the AI asset dividend response. If markets were complete, the representative household could buy

shares in all AI assets (including private AI assets), and not only fully hedge but potentially benefit from the singularity. In reality, most households cannot buy shares in many cutting-edge AI labs like OpenAI, Anthropic, xAI, or DeepSeek—creating the incomplete markets scenario our model implicitly captures.

A more elaborate model would explicitly model the AI owners, their incentives, and their interaction with the representative household. Such a model might explore how AI owners' incentives could lead to a negative singularity, perhaps through competitive pressures that favor capability advances over safety measures. However, this would essentially decorate speculations with mathematics. The additional complexity would be costly to analyze and read, while the core economic mechanism—that AI stocks might serve as hedges against AI-driven consumption disasters—would remain unchanged.

Our modeling approach prioritizes clarity over comprehensiveness. The simple framework allows us to make our central point without getting bogged down in parametric assumptions about the complex dynamics of AI development. It also leaves room for the human-written Appendix A, which provides additional context and reflections that complement the model-based analysis.

5 Conclusion and Implications

This paper has developed a simple disaster-risk model to understand how AI stocks might be valued if they serve as hedges against a negative AI singularity. Our key insight is that AI stocks can command extraordinarily high price-dividend ratios even without expected dividend growth if they provide insurance against AI-driven consumption disasters. This hedging value comes from the stochastic discount factor—when consumption falls dramatically, the marginal utility of consumption rises, making payoffs in those states particularly valuable.

Financial markets might offer solutions to AI catastrophe risk as alternatives to approaches like universal basic income. Just as catastrophe bonds help transfer natural disaster risk to capital markets, financial innovations could potentially help society hedge against AI disaster risk. The key economics of this approach is that such hedging is limited by market incompleteness—without access to privately held AI assets, public markets can only provide partial protection.

Companies might issue "AI catastrophe bonds" whose payoffs are triggered by specified AI development milestones or economic indicators of AI disruption. Retail investors could gain access to AI hedging strategies through exchange-traded products specifically designed to provide protection against AI-related economic disruptions.

These market-based approaches to AI risk have received insufficient attention in discussions about AI governance and safety (Bostrom, 2014; Bengio et al., 2024). While technical alignment work and policy interventions are vital, financial mechanisms may provide complementary tools for managing transition risks as AI capabilities advance.

More comprehensive financial innovations might include public-private partnerships that expand access to investments in cutting-edge AI development. Understanding how financial markets price AI risk is crucial for both investors and policymakers navigating the uncertain terrain of rapid technological change.

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A A Purely Human Perspective

The following is the README.md file from the GitHub repository:

Prompts-to-Paper

Writes a paper about hedging a negative AI singularity, using AI.

- `make-paper.py` writes a paper
- `plan0403-streamlined.yaml` contains the prompts
- `make-many-papers.py` runs `make-paper.py` many times.

The README is entirely human-written. Please forgive typos and errors.

Motivation

On March 8, 2025 I thought I should write a paper about hedging the AI singularity.

I was worked up. I had been repeatedly shocked by AI progress. I was using AI reasoning, vibe coding, and AI lit reviews in my daily life. Six months ago, I had thought each of these things is impossible.

What will happen in the next six years?! Will my entire job be replaced by AI? I have no idea.

But I do know that if there are huge disruptions, then tech stocks will benefit. So if anything bad happens to my human capital, I could at least partially hedge. Strangely, I hadn't heard about this concept before.

I asked a friend if he would be interested in working on this paper. Unfortunately, he was busy with revision deadlines for the next month.

So, I thought I should use AI to write the paper. It would be an elegant way to make my point. It would also hint at where the research process is going in this strange age of AI.

This project was inspired by [Novy-Marx and Velikov \(2025\)](#) and [Chris Lu et al. \(2024\)](#). These projects show how AI could generate massive amounts of academic research. My goal differs in quality over quantity. I want to generate just one paper, but one paper that (I hope) people find is worth reading.

The Paper Generation Process

A natural question is: is this paper **really** written by AI?

I'd say the AI are junior co-authors.

If they were human, I would absolutely have to give o1, Sonnet, and ChatGPT Deep Research credit as co-authors. They did the math, writing, and literature reviews. Sonnet also wrote much of the code (via the Cursor AI IDE).

Of course, I did substantial hand-holding (see `plan0403-streamlined.yaml`). Writing this paper would have been easier if I had done more of the work myself. But that can happen with human co-authors too.

Perhaps in 12-24 months, AI can be equal co-authors. I wouldn't be surprised if I could just ask Gemini 3.5 to "write a model to formalize my intuition," and it would get it right.

Paper Iterations

Like human-written papers, the writing process was iterative. The first formalizations were terrible.

`plan0313-laborshare.yaml` contains prompts for a neoclassical growth model, where the capital share suddenly increases. ChatGPT-o1 **patiently explained to me** why this is a bad model.

me: > I thought there would be a wage risk effect that leads to higher investment for the more risk averse agent. High capital share means low or even no wage income.

ChatGPT-o1: > Below is an explanation of why one might **expect** a "wage-risk" channel in which **more** risk aversion could lead to **more** *additional* investment (relative to the no-jump benchmark) in the event that the capital share might jump to 1. However, this channel **does not operate** in the usual **representative-agent** version of the model---there, wage and capital income ultimately go to the *same* agent, so there is no meaningful "hedge" of wage risk. Instead, the wage-risk hedge arises naturally if you depart from the pure representative-agent setting (for example, if households receive labor income but must *choose* how much capital they own).

The final `plan0403-streamlined.yaml` uses a simplified Barro-Rietz disaster model, with two agents (though only one is relevant for stock prices). I went through several iterations of this model with Claude 3.7 Sonnet (thinking mode) and ChatGPT-o1. The only derivations I did myself were to check o1's work.

Literature Reviews

A key element was generating lit reviews (`./lit-context/`) to give the AI context. I used ChatGPT's Deep Research (launched Feb 2025) until I ran out of credits. Claude Web Search (launched March 2025, after I began the project) did the remainder.

These new products were a game changer. Both [Novy-Marx and Velikov \(2025\)](#) and [Chris Lu et al. \(2024\)](#) ran into hallucinated citations. OpenAI Deep Research and Claude Web Search had no problems if they were used with care.

More broadly, knowing how to use which AI and when was helpful for generating a good paper.

AI Model Selection

o1 did the theory, and sonnet thinking did the writing. It's well known that these are the strengths of these two models.

Sonnet thinking is OK at economic theory. But I found that it was not assertive enough. It led me down wrong paths because it was too eager to come up with some ideas that for my story (even if they did not make sense).

I briefly tried having Llama 3.1 470b do the writing. It was terrible! It would be extremely difficult to generate a paper worth reading that way.

I did not try many other models, in order to get this paper out quickly. Gemini 2.5's release, at the end of March 2025, was **hype**. I tried it out briefly and was impressed. But I gritted my teeth and ignored it. I'd never get the paper finished if I wanted to really try to explore alternative models.

Picking the best of N papers

The quality writing varies across each run of the code. There is both a good tail and a bad tail. Some drafts, I found quite insightful! Others, had flagrant errors in the economics.

Rather than try to prompt engineer an error free, insightful paper, I decided to just generate N papers and choose the best one.

Some papers had problematic cites ([run01](#)). Others provided low-quality model discussions ([run02](#)) or poor explanations of the algebra ([run03](#))

Lessons about Research

A common response to [Novy-Marx and Velikov \(2025\)](#) is that "people are not ready for this." I heard concerns that peer review process will be inundated with AI-generated slop.

Working on this paper gave me a different perspective. It made me think about the fundamentals. I think the fundamentals are the following:

1. Readers want to learn something interesting and true.
2. Readers don't want to check all the math.
3. A system of author reputations makes 1 and 2 possible.

AI-generated papers don't change any of these fundamentals. Critically, item 3 made me quite cautious about putting my name on AI slop. As a result, I don't think AI-generated papers will change much about peer review, at least not the current generation of AI.

Limitations of the Current AI (April 7, 2025)

This will likely be out of date by the time you read it.

But right now, AI is like a junior co-author with a talent for mathematics and elegant writing, but sub-par economics reasoning. Put another way, the writing can fail to portray the mathematics accurately.

For example, 3.7 Sonnet sometimes fails to recognize that the economic model does not capture an important channel. This is a common scenario in economics writing (no model can capture everything). The standard practice is to dance gingerly around the channel in the writing. A decent PhD student can recognize this. But Sonnet cannot. Instead, 3.7 Sonnet will write beautiful prose about the channel anyway, even though it's not really being studied properly.

AI also cannot generate satisfying mathematics on its own (at least not satisfying to me). I tried asking o1 and Sonnet to generate a model to

illustrate the point I'm trying to make. The resulting models were either too simplistic or did not lead to a clean analysis. They often introduced complications that I found unnecessary.

There could be models with capabilities that I missed. But my sense is that ChatGPT-o1 and Claude 3.7 Sonnet are close to the best for producing economic research.

But more importantly, how long will these limitations last?

The Future of AI and Economics Research

At some point, 2024-style economic analysis will be "on tap." You'll be able to go to a chatbot and ask "write me a paper about hedging AI disaster risk," and it will return you something like this paper (or perhaps something better).

"Economics on tap" could be a disaster for the economics labor market. It would certainly mean that AI is an extremely cheap substitute for at least some economists' labor. It's possible that this would result in a strong substitution away from labor.

The optimistic argument is that AI also complements economists' labor. Perhaps, the number of economists will remain the same, but research output increases in terms of both quantity and quality.

But I think there are reasons why total research output is limited. Two key factors in academic publishing are attention and reputation (Klamer and van Dalen 2001, *J of Economic Methodology*). Readers can only pay attention to so many scholars. These scholars, in turn, can only pay attention to so many projects.

I'm not saying that I *expect* a disaster for the economics labor market. But it's definitely a scenario that economists should think about.

B Prompts Used to Generate This Paper

Each prompt consists of context and instructions. The context consists of the responses to the previous prompts, and may include literature reviews (all AI generated). For writing tasks (using Claude 3.7 Sonnet), a system prompt is also included.

For further details, see <https://github.com/chenandrewy/Prompts-to-Paper/>.

The system prompt and instructions are listed below.

System Prompt (model: claude-3-7-sonnet-20250219)

You are an asset pricing theorist who publishes in the top journals (Journal of Finance, Journal of Financial Economics, Review of Financial Studies). You think carefully with mathematics and check your work, step by step.

Your team is writing a paper with the following main argument: the high valuations of AI stocks could be in part because they hedge against a negative AI singularity (an explosion of AI development that is devastating for the representative investor). This contrasts with the common view that AI valuations are high due to future earnings growth. Since the AI singularity is inherently unpredictable, the paper is more qualitative than quantitative. The goal is to just make this point elegantly.

Write in prose. No headings and no bullet points. But do use display math to highlight key assumptions. Cite papers using Author (Year) format.

Be conversational yet rigorous. Favor plain english. Be direct and concise. Remove text that does not add value. Use topic sentences. The first sentence of each paragraph should convey the point of the paragraph.

Be modest. Do not overclaim.

Format the math nicely. Use we / our / us to refer to the writing team.

Instruction: 01-model-prose (model: claude-3-7-sonnet-20250219)

Draft the model description. The model is purposefully simple and captures the essence of the main argument. Only describe the assumptions. No results or insights.

- Two agents
 - AI owners: Fully invested in AI, not marginal investors in stocks
 - Representative household: Marginal investor, only their consumption matters, CRRA

- Representative household's gross consumption growth
 - is either 1 or e^{-b} (disaster)
 - A disaster is a revolutionary improvement in AI that is devastating for the household
 - Benefits of AI improvement are captured by the AI owners
 - For the household, labor income, way of life, meaning is lost
 - At $t=0$, no disasters have happened (singularity has not occurred)
 - Multiple disasters may happen, capturing ongoing uncertainty if a singularity occurs
- A publicly traded AI asset
 - Dividend is a small fraction of consumption before the singularity
 - Each time a disaster occurs, the dividend's fraction of consumption grows by a factor of e^h
 - Meant to capture a worst case scenario, where the dividend may actually shrink in each disaster
 - i.e. AI improvements are concentrated in privately-held AI assets

Instruction: 02-result-notes (model: o1)

Find the price/dividend ratio of the AI asset at $t = 0$. Show the derivation, step by step.

Instruction: 03-table-notes (model: o3-mini)

Make a table of the price/dividend for b from 0.40 to 0.95 and prob of disaster from 0.0001 to 0.02. Here, fix $h = 0.20$, $CRRA = 2$, time preference = 0.96. If the price is infinite, use "Inf". Round to the nearest whole number.

Instruction: 04-resultandtable-prose (model: claude-3-7-sonnet-20250219)

Convert the notes in '02-result-notes' and '03-table-notes' into prose. The prose is intended to immediately follow '01-model-prose' and should flow naturally. Include the table.

Instruction: 05-litreview-prose (model: claude-3-7-sonnet-20250219)

Write a short two paragraph lit review based on the "prose-response" and "lit-" context.

Be careful to avoid incorrect citations. Make sure the papers cited make the claims they are cited for.

Instruction: 06-full-paper (model: claude-3-7-sonnet-20250219)

Write a paper titled "Hedging the AI Singularity" based on the "prose-response" context.

Title page:

- Title: "Hedging the AI Singularity"
- Abstract (less than 100 words)
 - Goal is to make a simple point
 - Secondary goal: bring attention to financial market solutions to AI disaster risk
- At the end, say: unlike previous work, this short paper is generated by prompting LLMs.

The start of the Introduction is important. You need to bring the reader in, catch their eye, and establish credibility.

Start with background. Describe how AI progress is happening quickly (e.g. Deepseek R1, Waymo), and investors may be concerned about their wages being displaced (cite papers).

Then describe how technological change has occurred before, but AI is distinct because there is no product or service that AI could not, in principle create. An example is the current paper, which is entirely written by AI, using six prompts. Provide a link to the github site, which is <https://github.com/chenandrewy/Prompts-to-Paper/>. This differs from say, the internet revolution. AI progress may also be incredibly sudden (the AI singularity). Include a footnote: "we" refers to one human author and multiple LLMs. For a purely human perspective see [\hyperref\[app:readme\]\{\textcolor{blue}\}\{Appendix \ref{app:readme}\}\}](#).

Then describe what the paper does. It studies how AI stocks are priced, given that there is the risk that AI will destroy livelihoods and consumption.

Afterwards, the text should discuss:

- We are not saying a negative singularity will happen
 - But it is nevertheless important to consider this scenario
- We are also not saying that this hedging value is priced in already
 - Model illustrates a possible mechanism
- Related lit at end of Introduction
 - Cite papers in '05-litreview-prose'
 - Add Jones (2024) "AI Dilemma" and Korinek and Suh (2024) "Scenarios" if they're not already cited
- Model is the simplest possible to make the main argument
- Derivation of the key formulas
- High price/dividend ratios, even though dividends never grow
- A "Model Discussion" section that discusses natural model extensions and why they are not included
- Market incompleteness is implicit but important
 - Implicit in the disaster magnitude 'b'
 - 'b' is the **net** effect of (1) AI disaster and (2) AI asset dividend
 - If markets were complete, representative household could buy shares in all AI assets (including private AI assets), and not only fully hedge but benefit from the singularity
 - In reality, most households cannot buy shares in many cutting edge labs (e.g. OpenAI, Anthropic, xAI, DeepSeek)
- A more elaborate model would explicitly model the AI owners, their incentives, and interaction with the representative household
 - How might AI owners' incentives lead to a negative singularity?
 - But wouldn't this just decorate speculations with math?
 - This would be costly to analyze, as well as to read
 - The core economics will remain the same
- A short model analysis allows room for the human-written Appendix \\ref\\{app:readme\\}

- A "Conclusion and Implications" section
 - Review the main argument
 - End paper by discussing financial market solutions to AI catastrophe risk
 - These solutions are an alternative to UBI
 - Key economics: this hedge is limited by market incompleteness
 - These solutions to AI disaster risk are not discussed enough in the literature (cite papers)
 - Be very centrist (see below)
 - Don't say "In conclusion." Just conclude

Text should avoid

- Being overly academic
- Politically-charged topics: sovereign wealth funds, industrial policy, redistribution, extolling free markets
- Overselling the model (it's just a simple illustration)
- Taking the model too seriously
- Incorrect citations
 - Make sure papers cited make the claims they are cited for

Style Notes:

- Be conversational and direct, yet rigorous
- A touch of wit and wry humor are OK
- No bulleted lists
- No subsections (e.g. Section 1.2) though sections are OK (Section 1)

Output a complete latex document, including preamble. Cite papers using `\cite`, `\citep`, `\citet`. Use 'template.tex' and keep the appendix that is already in the template.