Five Easy Pieces[1]: on Magnificent 7 stocks, open source large language models, the No Labels movement, the Armageddonists and bottom-fishing in Chinese equities

Consistent with our Rasputin piece last August and our 2024 Outlook, US manufacturing surveys for January improved vs December and were stronger than regional surveys implied. Encouraging sign: a pick-up in new orders. Something to worry about: very tight labor markets and the increase in "prices paid" inflation. In early March we will release our 14th annual Eye on the Market energy paper, entitled "*Electravision*".

[1] Magnificent 7 stocks keep rolling

	Q4 2023 Sales gr	Q4 2023 Margin Δ	Q4 2023 Margin %	YTD Returns	2023 Returns	2021-2024 Returns	Share of S&P Mkt Cap	Share of S&P Cons Net Inc	P/E multiple	3 Year fwd EPS growth	LT Consen EPS growth
Mag 7	14%	7.5%	23%	7.9%	76%	15%	29%	22%	30x	15%	20%
S&P 493	2%	-1.1%	9%	2.6%	14%	5%	71%	78%	18x	12%*	12%*

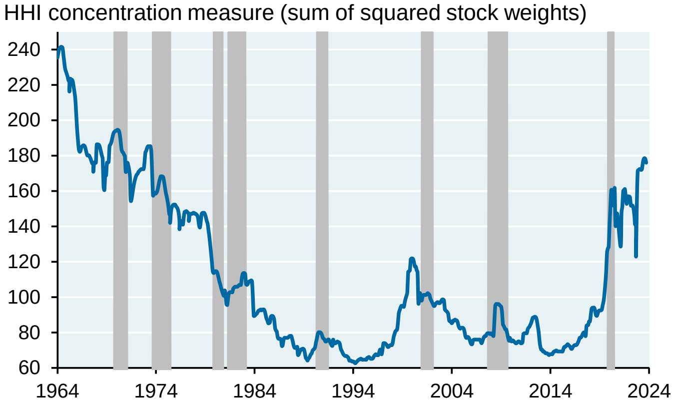
Source: GS, JPMAM, February 2, 2024. *Median stock of S&P 500.

First the good news: the Mag 7 rally has been earnings-driven rather than relying on multiple expansion. Of the group's 28% return since 2019, 21% is attributable to sales growth, 6% from margin expansion and just 1% from multiple expansion. This is quite different than the margin-less bubble in 2000-2001. But there are challenges as well, covered by Marko Kolanovic and Dubravko Lakos-Bujas at JP Morgan in an excellent piece last week[2]. Some of their major observations:

- Market concentration has reached its highest level since 1972. The top 10 stocks have broken away from stocks #11-#50 to an even greater degree than during the tech bubble in 2000-2001
- Large spikes in market concentration have frequently coincided with or preceded prior recessions, as shown in the chart below
- Market concentration is making life difficult for active equity managers; 2023 was one of the worst alpha years on record with only 23% of Russell 1000 large cap managers outperforming (vs 66% in 2022)

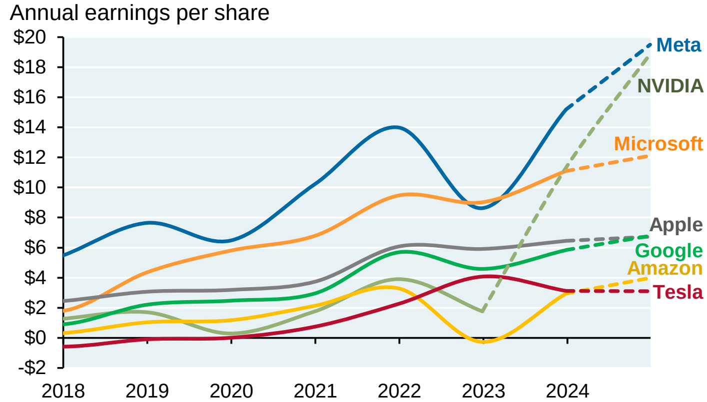
These dynamics explain why we spent so much time on antitrust issues in the 2024 Outlook, since that's the primary Achilles heel I can imagine that could disrupt the continued domination of the largest stocks. While Tesla has run into a pricing buzzsaw and lower volumes[3], the rest continue to thrive.

Highest stock market concentration since the early 1970s
HHI concentration measure (sum of squared stock weights)



Source: J.P. Morgan Equity Macro Research, January 30, 2024

Magnificent 7 earnings
Annual earnings per share



Source: BBG, JPMAM, Feb 6, 2024. Excl. Tesla tax valuation allowance.

[1] *Five Easy Pieces* (1970), in which Jack Nicholson is an oil rig worker and formal classical pianist

[2] "*Record Stock Concentration and Active Manager Performance*", Lakos-Bujas and Kolanovic, JP Morgan Global Markets Strategy, January 30, 2024

[3] Tesla Q4 2023 earnings were flattered by a one-time non-cash "**tax valuation allowance adjustment**". In plain English: loss-making companies establish deferred tax assets based on losses they expect to be able to use to offset taxes on future profits. But losses in excess of that figure are held in accounting limbo until such time that the company is profitable enough to recognize them for accounting purposes. In Q4, Tesla finally decided to recognize $5.9 billion of its $7.3 billion accounting limbo account, which showed up as non-cash income.

[2] Open source large language models raise questions on closed model monetization strategies

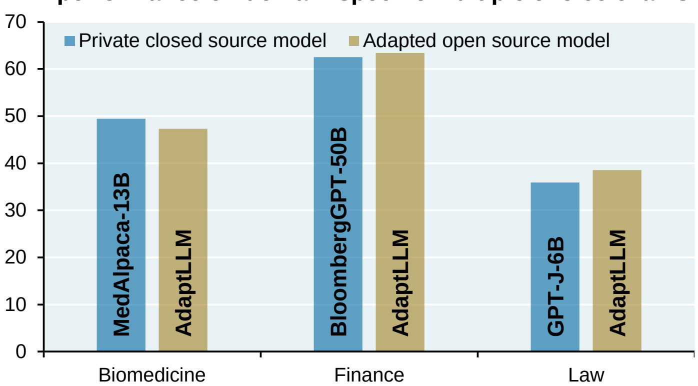
One of the most interesting things going on in AI is development and refinement of free open source[4] language models. To see why, consider the following three options for developing a specialized language model to answer prompts related to biomedicine, finance and law:

1. Build it from scratch, training it on billions of parameters
2. Take an existing open-source model and feed it additional domain-specific raw data
3. Take an existing open-source model, feed it domain-specific raw data and also provide the model a series of questions it must answer as it digests the raw data to improve its comprehension

Example of #3: Microsoft's AdaptLLM model was built at low cost (reportedly < $100) using Meta's LLaMA as a base open source model. Compare its results in finance to Bloomberg which spent more than $1 mm training its own GPT model on 50 billion parameters, consuming 1.3 million GPU hours. Microsoft's open source model matched performance of closed source models on biomedicine and law as well[5]. One of my colleagues used Mistral's open source LLM to create a model that scores as well as Google's closed source Gemini Pro.

Open source models can provide greater transparency to companies using them for document retrieval, writing assistance, or coding support; version control (since Open AI could phase out certain models); control over which servers and cloud providers you want to use; and less exposure to business issues at closed source AI companies. Also: open source models don't require you to give your private data to owners of the model who may choose to censor or limit the specific case that a startup wants to work on.

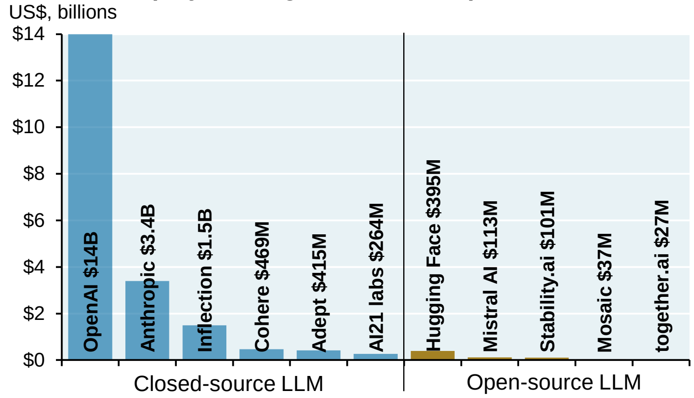
LLM performance on domain-specific multiple choice exams



Source: *"Adapting large language models via reading comprehension"*, Huang et al, Microsoft, September 2023

Disclosed equity funding to LLM developers

US$, billions



Source: CB Insights, October 2023

There are also tools available for customizing open source LLMs for specific applications which are not available for private models. Enterprises can use "quantization" to cut costs or employ "low-rank adaptation" to fine-tune them, allowing language models to run on a single GPU or a MacBook rather than on a huge GPU cluster.

To be clear, companies using open source models need in house expertise to integrate and continually train them, which entails a cost. Some open source models are designed for less complex applications, and in some use cases there's still a performance gap vs closed models using metrics such as the "multi-task language understanding benchmark"[6]. But the success of open model adaptation raises questions about monetization strategies for closed source models. That's apparently the basis for the leaked May 2023 Google memo[7] entitled "We have no moat, and neither does Open AI"…although Google Deep Mind's CEO reportedly disagrees.

[4] Some open source models share weights, code and data to allow users to replicate the results, while others only release the model weights allowing the model to be used but not reverse engineered

[5] Open source models now score as well as on many benchmarks: Alpaca Eval, EQ-Bench, MT-Bench, etc

[6] This benchmark covers 57 subjects across STEM, humanities, social sciences and other topics, ranging from elementary school to advanced professional skill sets and problem solving

[7] "*That Google memo about having no moat in AI was real*", The Verge, July 10, 2023

The bigger monetization challenge for models like Open AI: most performance gains come from increasing the training corpus which is now more difficult. Much of the internet has already been ingested, and companies are raising walls to prevent OpenAI from taking their data or requiring licenses to access it. The **Golden Age** of surreptitiously scraping data for training purposes, calling it research and then charging for it are over.

[3] The No Labels Movement: running the gauntlet on the Twelfth Amendment

I spoke at a CEO event and discussed what would happen if a No Labels ticket won enough electors to prevent either major party's presidential ticket from receiving 270 electoral votes. In that case, the Twelfth Amendment would require the House of Representatives to hold a contingent election for President and the Senate to hold a contingent Election for VP. Even though no independent candidate has won electoral votes since 1968 (George Wallace), it's worth considering the outcomes if they did.

An attending CEO asserted that the No Labels movement would prevent such an outcome by "negotiating with one of the major parties to form a unity government before that happened", and that contingent election concerns were unfounded. **Not so fast; in this hypothetical scenario, the No Labels movement would have to run a huge constitutional and legal gauntlet to prevent a contingent election from taking place.**

As of early January 2024, the No Labels movement had qualified for ballot access in 13 states and was actively seeking access in 14 others. The group claims to have a strategy to get on 50 state ballots and stated that it will announce whether it will nominate a "Unity ticket" shortly after March 15, 2024. Along those lines, a SuperPAC called New Leaders 2024 was established to support a potential No Labels ticket.

No Labels chief strategist Ryan Clancy stated that by winning electoral votes in a few states, its candidates could prevent either major-party candidate from amassing 270 electoral votes; and former Congressman Tom Davis (co-founder of No Labels) explained that the group could negotiate with one of the major parties to trade electoral votes for "Cabinet posts" or "policy concessions"[8]. Any such arrangements would have to be resolved before electors cast their electoral votes in mid-December 2024.

There are four major hurdles regarding the ability of the No Labels movement to direct its electors to support Trump or Biden in the hypothetical scenario, preventing a contingent election from taking place[9]:

1. **Electors cannot be forced or compelled to switch votes**. If the No Labels group came to an understanding or deal with a major party's presidential candidate, No Labels electors would have to be *willing* to attempt to cast their electoral votes for that person. They could not be forced by their party to do so
2. **Roughly 2/3 of states have elector binding laws expressly prohibiting electors from switching their votes**. Some have explicit enforcement mechanisms while other states with elector binding laws don't. But even in the latter states, voters could file constitutional and "writ of mandamus" challenges to compel No Labels electors to fulfill their statutory duty by voting for the No Labels candidate. Some constitutional challenges could even be filed in states *without* elector binding laws[10]; in these states I would expect an avalanche of court challenges financed by the party that would lose out by No Labels attempting to redirect its electors

[8] Vaughn Hillyard and Dan Gallo, "*No Labels Floats the Possibility of a Coalition Government or Congress Selecting the President in 2024*", NBC News, December 21, 2023

[9] As with prior Eye on the Market sections on election law, I appreciate the guidance and insights of Michael Morley, Sheila M. McDevitt Professor of Law at FSU College of Law. Michael is a specialist on election law, constitutional law and the federal courts, and author of "*Election Emergencies*" in the forthcoming Oxford Handbook of American Election Law

[10] **Why might the courts disallow elector switching even in states without elector binding laws?** The Supreme Court has held that once a state decides to appoint electors based on the popular vote, the constitutional right to vote applies. The Court may reasonably conclude that when a presidential candidate's name appears on the popular ballot, and a state appoints a slate of electors because that candidate won a plurality of the popular vote, that it violates constitutional rights for electors to cast electoral votes for someone else

3. **Congress could reject "faithless elector" votes on January 6**. If No Labels electors cast their electoral votes for a candidate who lost the popular vote in that state (the so-called faithless elector issue), particularly as part of a political bargain, Congress could reasonably conclude that those electoral votes were not "regularly given" according to Electoral Count Reform Act rules and reject them

4. **No Labels horse-trading would have to avoid violating Federal and criminal laws**. Federal and state laws prohibiting bribery, as well as federal prohibitions on offering or accepting anything of value in exchange for appointments to federal positions such as cabinet posts, judgeships, and other high-level offices, may impede No Labels ability to reach the sorts of arrangements it envisions

So: in the unlikely event that a No Labels ticket[11] won enough electoral votes to prevent either major party candidate from reaching 270, a contingent election would be the more likely outcome, a process over which the No Labels ticket would have little to no influence or leverage. I respect those attempting to build a third-party movement at a time when both major parties have become highly polarized. But that does not affect a dispassionate evaluation of the scenario in which No Labels (or RFK Jr for that matter) wins a material number of electoral votes. **The more likely impact of third-party tickets**: not winning electors but attracting enough votes in swing states to influence the outcome in favor of one of the major party candidates. Also, we should not *completely* discount the following bizarre possibility: No Labels draws enough votes from Trump and Biden in a given state to allow RFK Jr to win the state's electors with a plurality of its votes.

Rules Likely to Govern Twelfth Amendment Contingent Elections for President in the House of Representatives

- If no presidential candidate wins electoral votes from a majority of electors, a contingent election in the US House of Representatives would be triggered. This election would commence immediately after adjournment of the joint session of Congress to count electoral votes on January 6, 2025
- The contingent election would be conducted by Representatives elected in November 2024 and take office on January 3, 2025 (i.e., not by currently sitting Representatives)
- In a contingent election, each state's congressional delegation casts a single vote as determined by the majority of that state's Representatives. The current House delegation split: 26 GOP, 22 DEM and 2 ties
- Members may choose only from among candidates with the three highest numbers of electoral votes for President (i.e., Biden, Trump and the No Labels nominee)
- If a majority of members from a state's delegation cannot agree on a presidential candidate, that state would most likely abstain in that round of voting
- A candidate would need to receive votes from 26 or more delegations to be declared President
- There have been only two contingent presidential elections in American history; they occurred following the Elections of 1800 and 1824
- In the extremely unlikely event that no eligible presidential candidate received votes from a majority of state delegations in a contingent House election by Inauguration Day (January 20, 2025), whether due to ties within state delegations or an overall 25-25 split between state delegations, the incoming Vice President (determined via contingent election in the Senate) would assume the powers of President until the contingent election was ultimately resolved

[11] **On "Sore loser" laws and Nikki Haley:** There has been speculation that a No Labels ticket could include Nikki Haley. Nearly every state has "**sore loser**" laws that limit the ability of candidates who unsuccessfully sought a given party's nomination to run in the general election as another party's candidate or as an independent candidate. Experts disagree on how many of these laws apply to presidential elections since that is a national office and involves unique processes at both the nomination and general election stages.

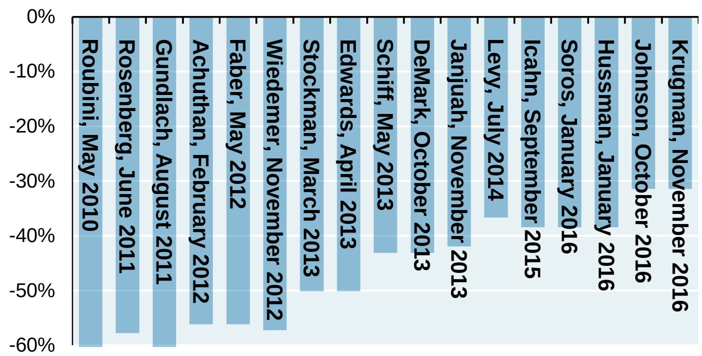
Recent estimates suggest that most states would apply sore loser laws in presidential elections. A complicating factor: several states with sore loser laws that appear textually applicable have refrained from enforcing them in one or more past presidential elections. Substantial arguments exist that sore loser laws may be unconstitutional as applied to presidential elections. The handful of federal courts to have considered this issue have upheld the laws' validity in that context. Similarly, the US Supreme Court held that sore-loser laws are generally valid, albeit in a 6-3 ruling nearly a half-century ago that did not specifically consider applicability to presidential elections.

[4] Armageddonist update

One of my guilty pleasures: highlighting the track record of the Armageddonists that the media[12] flock to for comments on the impending disasters always facing investors. I first wrote about this "Legion of Doom" in 2019. From 2011 to 2016, these pundits each proclaimed at some point that the sky was falling. We computed the returns investors would have missed out on by switching from stocks into bonds when their predictions occurred; the resulting underperformance ranged from 30% to 60% by the end of 2019.

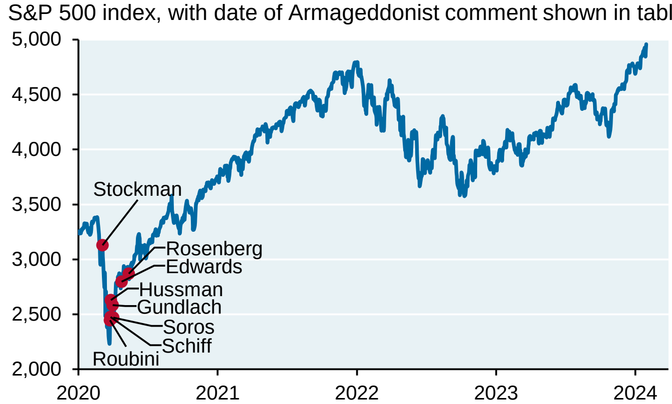
In 2020, it looked like Armageddonists got bailed out by a global pandemic. However, after markets had *already* collapsed in March 2020, the Armageddonists started doing Armageddony things again and predicted further calamity. As shown in the second chart, markets have almost doubled since COVID Armageddonizing took place. To be clear, investor sentiment is currently very bullish, leverage is elevated and markets are pricing in a lot of good news. I would not be surprised to see some kind of correction later this year. If history is any guide, the Armageddonists will pick that point in time to tell you that it's going to get a whole lot worse.

The consequences of Armageddonism, 2010-2019
Performance impact of shifting $1 from S&P 500 to the Barclay's Aggregate Bond Index on date of Armageddonist comment



Source: JPMAM, Bloomberg. October 23, 2020

Timing is everything
S&P 500 index, with date of Armageddonist comment shown in table



Source: Bloomberg, JPMAM, Feb 2, 2024.

Date	Armageddonist	Quote
March 4, 2020	David Stockman	"The stock market is heading not only for another 50% correction (1600 on the S&P 500), but also a long L-shaped bottom rather than a quick V-shaped rebound which occurred after 2009." - Published note on PeakProsperity
March 24, 2020	Nouriel Roubini	"With the COVID-19 pandemic still spiraling out of control, the best economic outcome that anyone can hope for is a recession deeper than that following the 2008 financial crisis… The risk of a new Great Depression, worse than the original — a Greater Depression — is rising by the day." - Published note on Project Syndicate
March 25, 2020	Peter Schiff	"What the Fed is doing is extremely bearish for the U.S. economy… It ensures that this recession, depression that we're entering is going to be extremely brutal in the inflation that is going to ravage the economy, particularly investors and retirees." -FOX Business
March 26, 2020	John Hussman	"I continue to expect the S&P 500 to lose about two-thirds of its value over the coming years." - Hussman Funds
March 31, 2020	Jeff Gundlach	"The low we hit in the middle of March … I would bet that low will get taken out… The market has really made it back to a resistance zone and the market continues to act somewhat dysfunctionally in my opinion… Take out the low of March and then we'll get a more enduring low." - CNBC
April 1, 2020	George Soros	"We're going to have the worst bear market in my lifetime." - Business Insider
April 23, 2020	Albert Edwards	"Many equity bulls think it is inevitable that massive central bank liquidity will boost equity prices. This strikes me as ludicrous… The collapse in profits is highly likely to fatally undermine the argument that equities can look through the valley. I expect instead ample liquidity to flow into government bonds." - Business Insider
May 12, 2020	David Rosenberg	"So even as the stock market is telling you that it is all figured out, I can assure you, what we face at this very moment is a highly uncertain economic future, and unfortunately, most of the longer-term risks are to the downside, not the upside. We are in a depression, not a recession. It's a depression. I didn't say the Great Depression; it's a depression," Rosenberg stressed. "And I think the dynamics of a depression are different than they are in a recession, because depressions invoke a secular change in behavior. Classic business cycle recessions are forgotten about within a year after they end. At a minimum, depressions entail a prolonged period of weak economic growth, widespread excess capacity, deflationary pressure and a wave of bankruptcies." - Advisor Perspectives

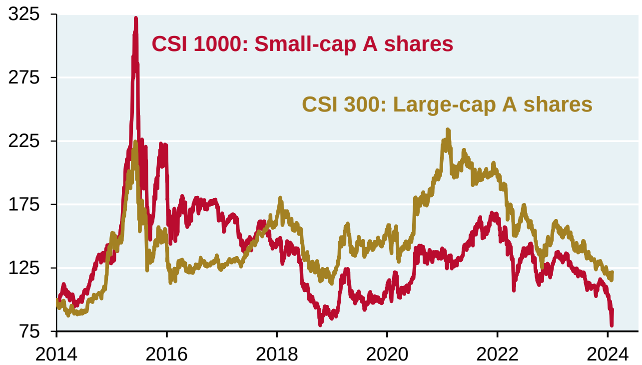
Source: JPMAM, 2024

[12] **Most media outlets prefer to report bad news**. This is in part a reflection of human behavior: bearish news appeals to human negativity bias, a topic examined by Nobel Prize winner Daniel Kahneman in his 2011 book on the brain and human survival instincts; by political scientist Stuart Soroka who illustrated the inverse relationship between magazine sales and the positivity of a magazine's cover; and in a 2014 experiment in which a German city newspaper lost two thirds of its readers on days when it deliberately only published positive news

[5] Bottom fishing in Chinese equities

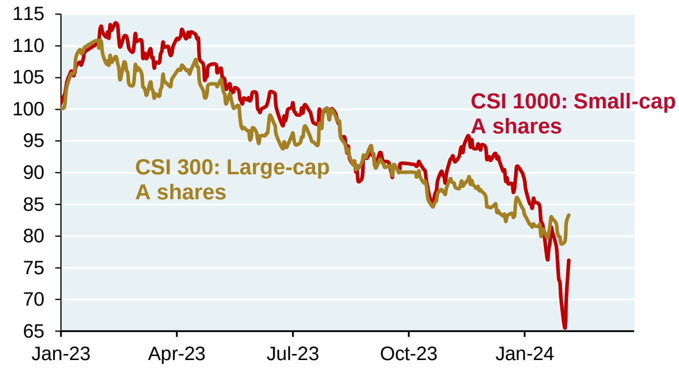
One place Armageddon is happening: China, where equity markets are crashing. Trading volumes are up, which is typically a sign of seller capitulation and a bottom; but there is nothing typical about Chinese equity markets. Like a Venus Fly Trap, MSCI raised its China weight in the EM Equity Index from 20% to 40% right before Xi's "progressive authoritarianism" campaign began in 2021. Since then, Chinese equities have been tumbling.

China's CSI 1000 and 300 Index, 2014-2024
Index (100 = Jan 2014)



Source: Bloomberg, JPMAM, February 8, 2024

China's CSI 1000 and 300 Index, 2023-2024
Index (100 = Jan 2023)

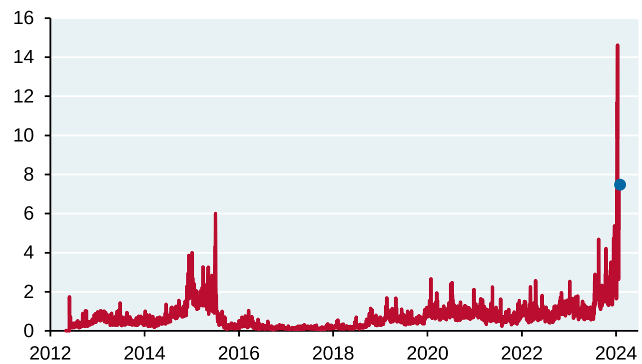


Source: Bloomberg, JPMAM, February 8, 2024

China equity valuations
MSCI China Index, forward price-to-earnings ratio

Source: Bloomberg, JPMAM, February 5, 2024

Total CSI 300 ETF trading volume
Units, billions



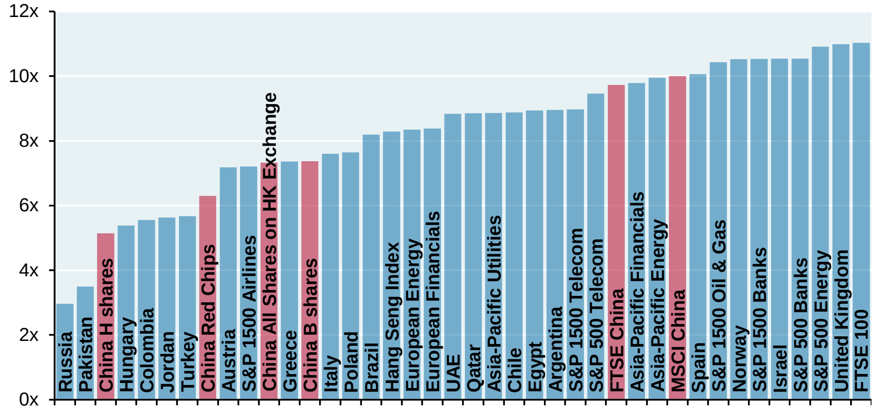
Source: Bloomberg, JPMAM, February 4, 2024

There are some technicals involved that are worth understanding:

- Chinese investors traded a record 46 billion shares of ETFs tracking foreign markets as a means of shedding exposure to local markets and investing overseas. China limits trading in certain ETFs and as a result, these inflows led to distortions with some foreign market ETFs trading at 40% premiums to net asset value
- Small cap Chinese stocks are under a lot of selling pressure since their peaks in 2021. Some investors are long the big cap stocks (expecting greater gov't support for national champions) and short the smaller names
- Selling pressure on small caps is exacerbated by their use as a benchmark for "snowball derivatives" which involve knock-in levels that result in losses for investors. This reminds me of 2007-2008 when I discouraged the use of "leveraged accumulator" notes to the disappointment of some risk-seeking Asian clients
- Chinese securities regulators pledged on Sunday to prevent "abnormal fluctuations", saying it would guide investor funds into the market and crack down on illegal activities including "malicious short selling"
- Liu Yuhui, an academic at a government think tank, argued that China should set up an equity market stabilization fund as soon as possible to boost market confidence with $1.4 trillion or more

For all the talk about how cheap Chinese equities have become, that's relative to valuations they once traded at. **On an absolute basis there are several markets/sectors that are just as cheap**. Anyone interested in bottom-fishing should probably cast a wider net in addition to looking at China:

Cheapest equity market valuations
Forward price-to-earnings ratio



Source: Bloomberg, JPMAM, February 8, 2024

China's equity alphabet soup

MSCI China Index: A/H/B shares, Red Chips, P Chips and ADRs; **CSI 300/1000 Index**: Large/small cap A shares; **A shares**: incorporated in China, trading on Shanghai and Shenzhen exchanges, accessible via Stock Connect; **H shares**: large/mid caps incorporated in China, listing in HK; **B shares**: incorporated in China trading on the Shanghai and Shenzhen exchanges in foreign currency; **Red Chips**: large/mid cap companies incorporated outside China, listed on HK exchange, generally SOEs; **P Chips**: same as Red Chips, not state-owned; **ADRs**: trading on NYSE/NASDAQ

The bigger picture on China:

- China's main problem is a massively overbuilt real estate sector which is creating losses for the banking system and for the shadow banking system as well

China / US housing comparison

	China (peak)	US		China (peak)	US
Value of housing stock relative to personal consumption expenditures	6.0x	2.2x	Home price to income ratios, mid-2023*	~40x	~10x
Direct real estate related activities as a share of GDP	18%	6%	Home ownership rate	90%	66%

Source: Empirical Research, CEIC, NIH, Numbeo, Fed, Rogoff & Yang, 2022. * China: Shanghai, Shenzhen, Beijing, Guangzhou. US: NY, SF

- The Dec 2023 failure of Zhongzhi Enterprises ($141 bn in peak assets) is indicative of the problems in shadow banking. It went bankrupt with $30 bn in assets and $60 bn in liabilities and now its two chief executives are missing. This follows on the default last year by Zhongrong Enterprises ($138 bn in assets, 9th biggest trust), one of China's largest shadow banks. While shadow banking assets are only 5% of regular banking system assets in China, they are less regulated, less well capitalized and take on riskier loans
- The size of the shadow banking system has been falling since the Chinese government has been trying to get control over it. It is now ~18 trn Yuan which is ~$2.5 trn. But almost half of the funding for shadow banks comes from the regular Chinese commercial banks, so whenever China squeezes the shadow banks, it reverberates back onto the entire banking system.

On October 14 2008, I wrote a piece on why we were optimistic on US equities after the passage of the TARP bill in Congress. Initially, the Administration sought to reduce bank solvency concerns by having the government buy bad loans from the banking system**. But as an IMF paper at the time highlighted, the historical track record of such efforts in reviving GDP and equity markets was poor. Direct government purchases of bank liabilities and bank equities was more successful and had a much faster impact on growth and the stock market**[13].

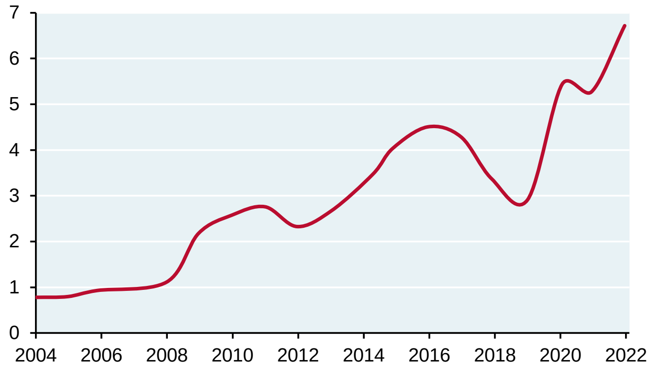
Any oversold market can rally by 10%-15% just based on technicals, which is possible in China as well. The head of China's securities regulatory commission was just fired, and the last two times that happened Chinese equities rallied substantially; but economic conditions are worse now than in 2016 or 2018. Longer term, I would be more bullish on China if the gov't did the same as the US in 2008: **recapitalize both regular and shadow banks**. Running after short sellers and strong-arming state-owned entities into the market is unlikely to work for long, particularly given a bipartisan US Congressional report pushing for more economic conflict with China (tariffs, trade restrictions, sanctions) irrespective of who wins the US 2024 Presidential election.

[13] "*Systemic Banking Crises: A New Database*", IMF Working Paper, Laeven and Valencia, 2006

A discussion of bottom fishing in China should also address China's actual water quality issues. While water quality in China's coastal seas has improved since 2015 (dissolved inorganic nitrogen, phosphates and petroleum hydrocarbons), China's overall water resources are still highly polluted. Roughly 70% of China's rivers and lakes are unsafe for human use (Nanjing University, 2021), 91% of water bodies reportedly remediated by local governments still did not meet baseline standards, and the Chinese Academy of Medical Sciences has found a relationship between elevated surface water pollution and cancer (2023).

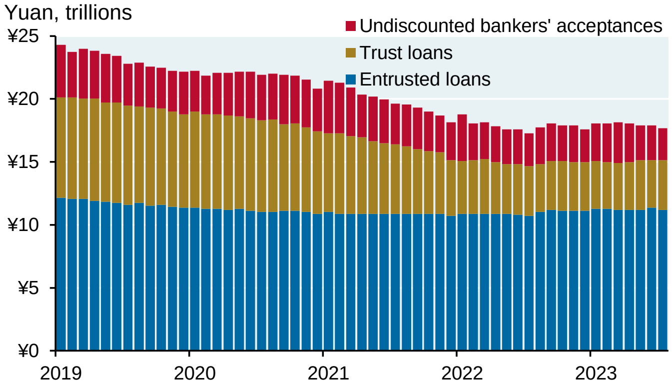
Additional China charts: worsening credit intensity, gradually shrinking shadow banking system, rising economy-wide debt, modest improvement in real activity and housing data, FDI still fleeing rapidly

Credit intensity of GDP
Increase in credit to increase in GDP, three-year moving average



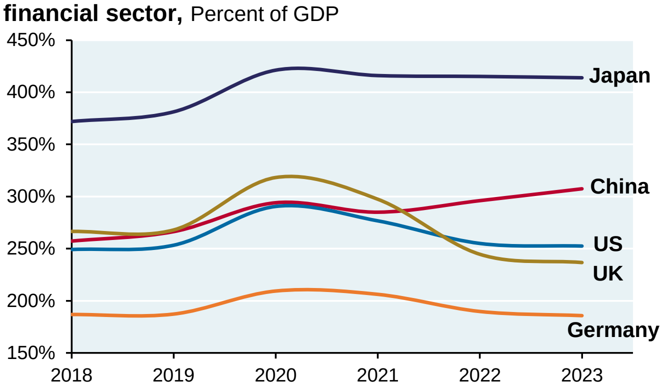
Source: Federal Reserve, 2022

Core shadow banking activities in China
Yuan, trillions



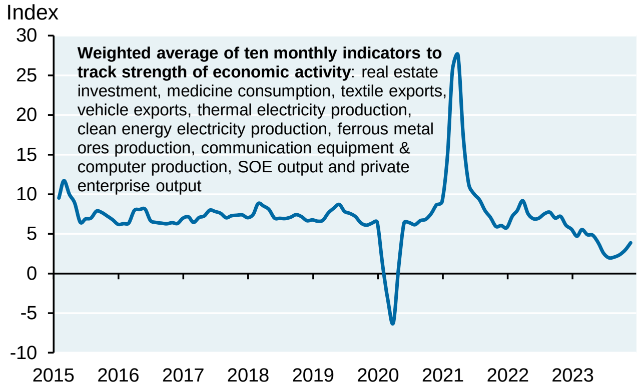
Source: S&P Global, August 2023

Total gov't, household and corporate debt to the non-financial sector, Percent of GDP



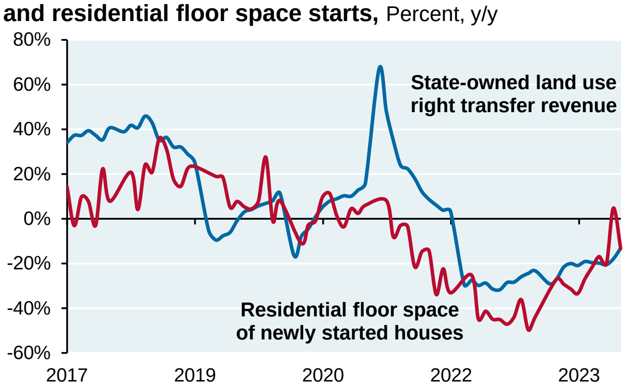
Source: BIS, JPMAM, 2024

China real activity monitor
Index



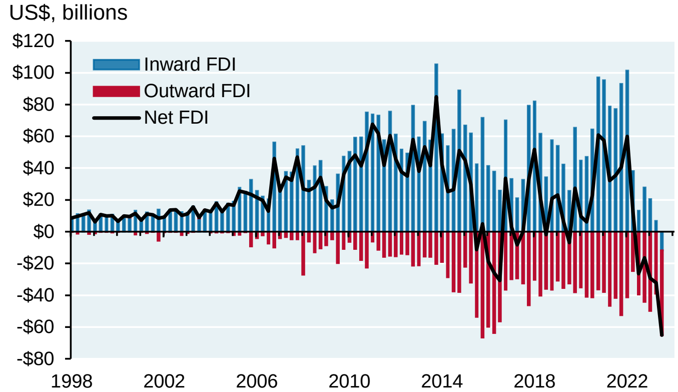
Source: Bloomberg, JPMAM, November 2023

China housing drag: weak state-owned land transfer fees and residential floor space starts, Percent, y/y



Source: Bloomberg, JPMAM, December 2023

China FDI monitor
US$, billions



Source: Bloomberg, JPMAM, Q3 2023

IMPORTANT INFORMATION

KEY RISKS

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As a general matter, we prefer J.P. Morgan managed strategies. We expect the proportion of J.P. Morgan managed strategies will be high (in fact, up to 100 percent) in strategies such as, for example, cash and high-quality fixed income, subject to applicable law and any account-specific considerations.

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