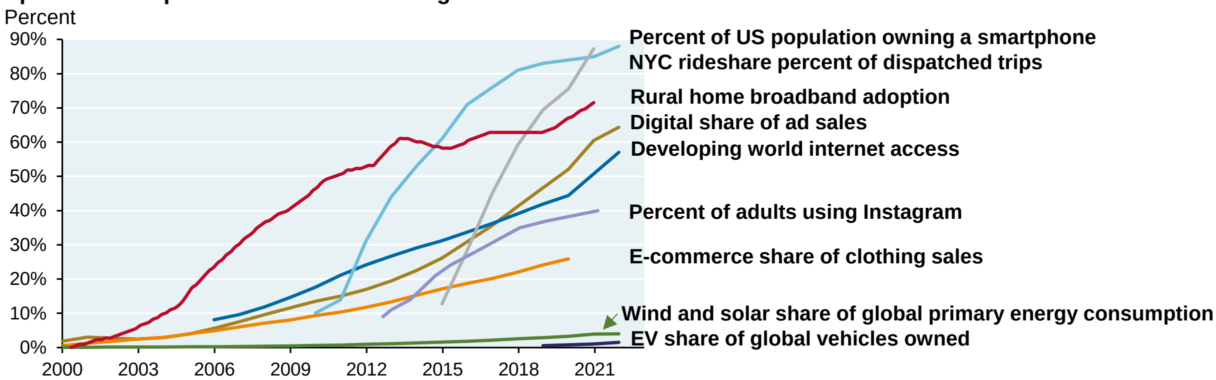
Topics: China and the Russian invasion of Ukraine; full steam ahead for the Fed; the paths not taken

The bulk of this note is on China, Russia's invasion of Ukraine and the surge in natural gas, oil, coal, electricity, wheat, copper, palladium and other prices which will probably drag Europe into recession, and impose a heavy growth drag on the rest of the world as well. But before getting into it, the chart below should hang in the offices of policymakers everywhere. Energy transitions are inherently slow moving, particularly when citizens of countries adopting them erect NIMBY barriers along the way (a topic we cover in this year's forthcoming energy paper). As we have discussed often, capital spending by the world's largest energy companies has fallen 75% from peak levels while global demand for oil, gas and coal are all at or above pre-COVID levels. Countries that reduced their ***supply*** of thermal energy at a much faster pace than they reduced their ***demand*** are paying a very stiff price for that right now. We expect some about-face movements on this in the days ahead.

Michael Cembalest
Chairman of Market and Investment Strategy
JP Morgan Asset Management

Speed of disruption: some of these things are not like the others



Source: GroupM, Census, BP, IEA, FHV, Pew Research, NYC Taxi & Limousine Commission, JPMAM. 2021.

After issuing an Executive Order banning new oil and gas leases on Federal lands, Biden is now reportedly considering a trip to Saudi Arabia to ask for more crude supply (Source: Axios), his team already visited Venezuela to do the same, and the administration is engaging in "outreach" to the oil and gas industry. Wow.

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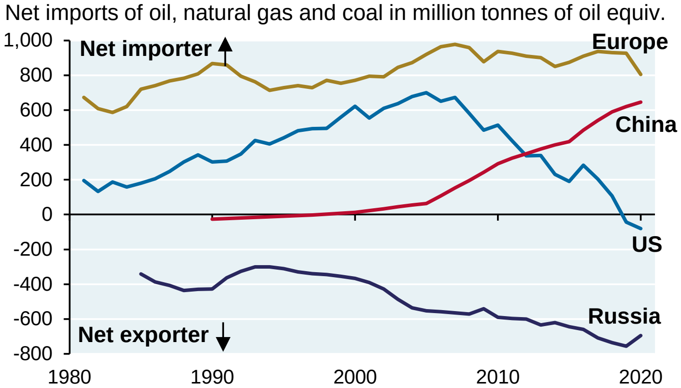
China and the Russian invasion of Ukraine

In this note we examine the latest on China's economy and markets. First, comments on China's connection to the war in Ukraine since its financial and energy decisions may dilute the effectiveness of sanctions on Russia:

- *Energy*. As shown below, Europe and China are large importers of energy while Russia is a large exporter. So far, Russian gas exports to Europe are down ~15% from 2021 average levels (2nd chart). But if Europe permanently reduced exposure to Russian gas, China could step in over the next decade. The Power of Siberia expansion and Sakhalin projects could eventually add ~80 bcm per year to Russia's gas exports to China, compared to its gas exports to Europe which have averaged ~190 bcm per year since 2017
- *Trade*. Since Russia's invasion of Crimea in 2014, Russian-Chinese trade has risen by 50%. Russia is now Beijing's largest recipient of state sector financing, securing 107 loans and export credits worth $125 billion from Chinese state institutions
- *Currency*. China and Russia began using their own currencies to settle bilateral trade in 2010 and opened a currency swap line in 2014, sharply reducing reliance on the US$ for bilateral trade (3rd chart)
- *Payments*. While China's Cross-Border Interbank Payment System is mentioned as an alternative to SWIFT, it only processed 13,000 transactions per day in Q4 of last year compared to 41 million per day for SWIFT
- *UN*. I'm not sure it matters, but China abstained from condemning Russia at the UN

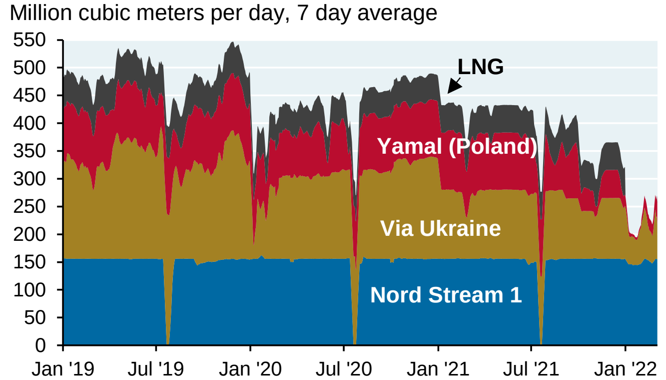
As a reminder of how China's geopolitical lens often differs from the West, since 2010 it has been North Korea's almost sole trade counterparty (4th chart). We searched through all 40,000 bilateral trade combinations in the world and there is none as high as North Korean trade reliance on China

Energy dependence and independence
Net imports of oil, natural gas and coal in million tonnes of oil equiv.



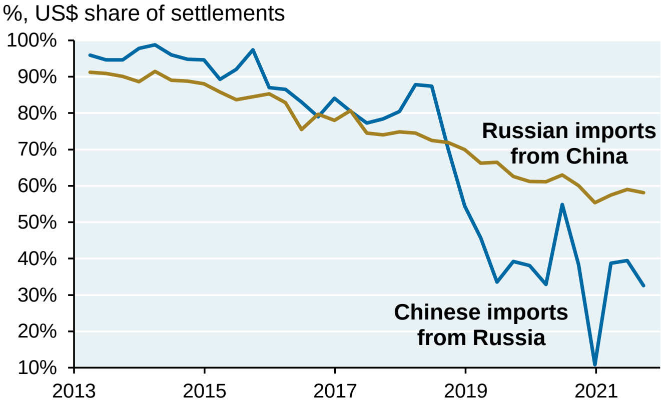
Source: BP Statistical Review, NBS China, JPMAM. 2020.

Russian natural gas exports to Europe
Million cubic meters per day, 7 day average



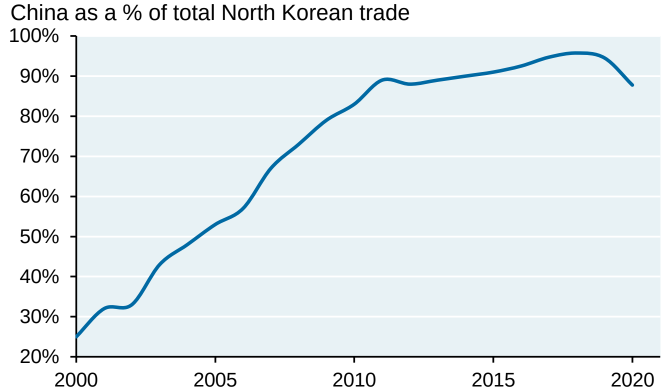
Source: Bloomberg, EIA, JPMAM. March 4, 2022. Excludes pipelines to and through Turkey. Annual LNG data amortized daily; no data for 2022.

Russia-China trade: US$ share of settlements
%, US$ share of settlements



Source: Bank of Russia. Q3 2021.

China is practically North Korea's sole trade counterparty
China as a % of total North Korean trade

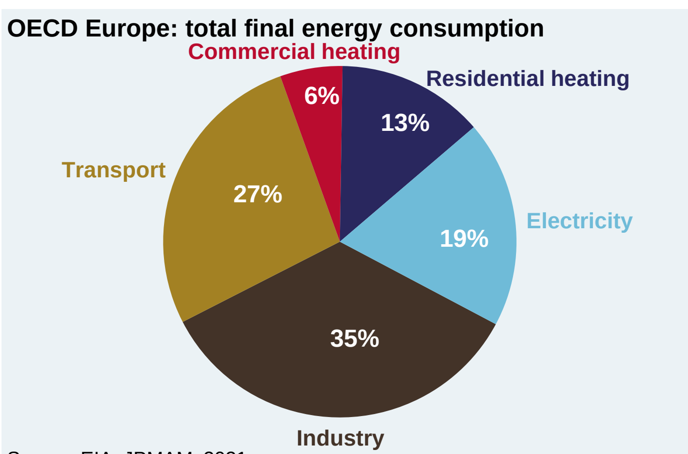


Source: US Korea Institute at Johns Hopkins SAIS. 2020.

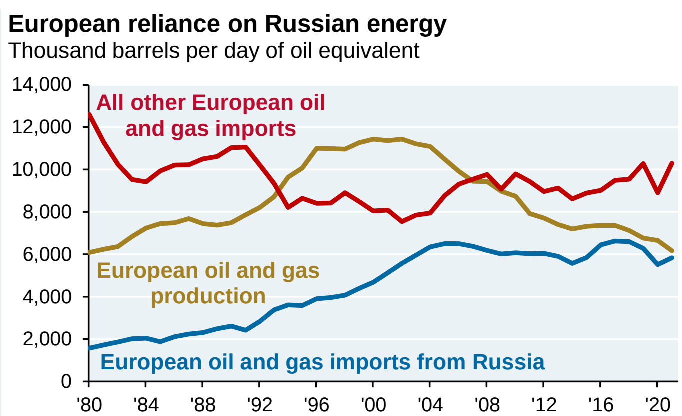
Before we get further into China, some comments on "shock treatment" plans advanced by the IEA to wean Europe off of Russian energy. It is VERY ambitious:

- "*Diversify gas suppliers*"? That may drive prices up by narrowing European supply but not global demand. Also: 80% of US LNG is already going to Europe (and as discussed last week, is sold at high spot market "TTF" prices). The next major wave of US LNG liquefaction facilities is not coming online until 2025, and much of this capacity is already contracted as is usually the case since developers need such contracts to finance construction. In Europe, it will take time for completion of any new German LNG import facilities and to improve connectivity between Spain's LNG import facilities and the rest of the continent
- "*Accelerate wind and solar*"? European wind and solar MWh have been growing at just 1% per year since 2000; bottlenecks are often transmission and interconnection queues. Furthermore, electricity represents just 19% of European final energy consumption. In other words, Europe can decarbonize the grid more rapidly but the region would still be heavily reliant on thermal energy (oil, gas, coal) for industrial production of cement, glass, bricks, steel, ammonia, plastics; and for transportation and building heat
- "*More heat pumps for residential heating*"? European electrification of residential heating is unchanged since 2013 at 25% of residential energy consumed. These are very slow-moving transitions; heat pump adoption is confined so far mostly to Scandinavia whose adoption rates are 9x the rest of Europe
- "*Maximize nuclear power*"? Oh, the irony. In any case, European nuclear plants already operate at 80% capacity factors with much of the residual unavailable due to maintenance downtime (US levels are ~90%)

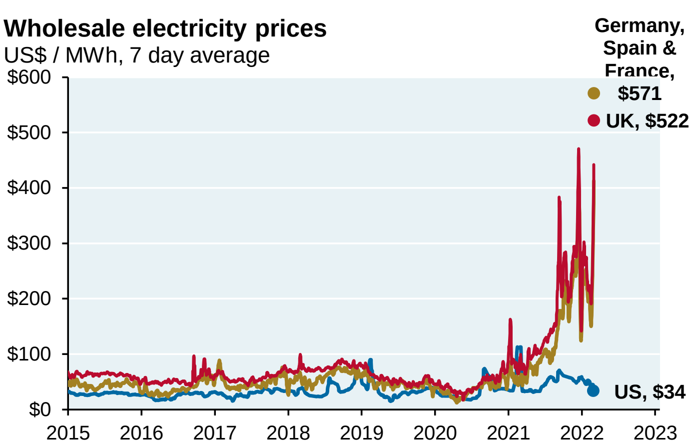
As shown below, Europe's energy reliance on Russia is too high to reduce quickly. A decline in European energy costs is mostly dependent on (a) resolution of the Ukraine conflict, (b) the large 2.5x seasonal drop in gas demand in March/April and (c) an end to US/EU oil and gas buying for strategic reserve purposes.



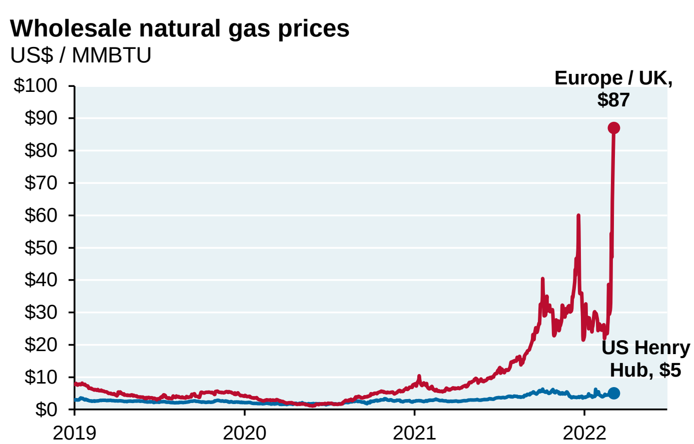
Source: EIA, JPMAM. 2021.



Source: BP, Gazprom, Eurostat, Perovic et al, Russia Federal Customs Service, JPMAM calculations. 2021.



Source: Bloomberg. March 7, 2022.



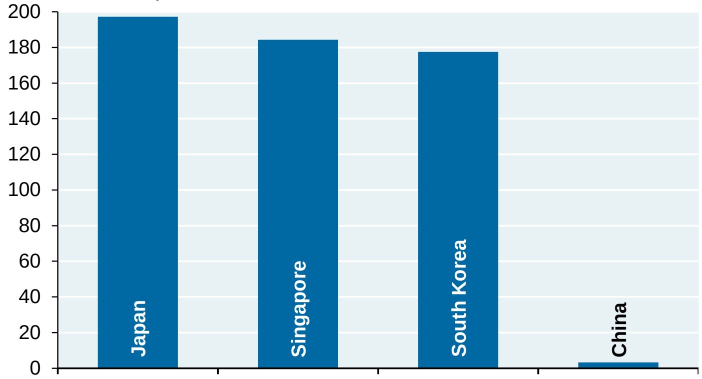
Source: Bloomberg. March 7, 2022.

In any case, what is going on in China? As usual, that's a question that has to be triangulated

I often read that China has a zero COVID tolerance policy but I'm not sure what to make of this. As shown below, China's reported COVID mortality rate is just 2% of South Korea, Singapore and Japan levels. Once you strip out people that reportedly died in Hubei province, **the official COVID mortality rate in all of China outside Hubei is just 0.05% of its Asian neighbors**. It's hard for epidemiologists to cross check by looking at "all-cause" excess deaths in China, since China is the reportedly only place in the world other than Greenland and the Spanish Sahara (the area between Morocco and Mauritania) that doesn't report this data on a regular basis[1].

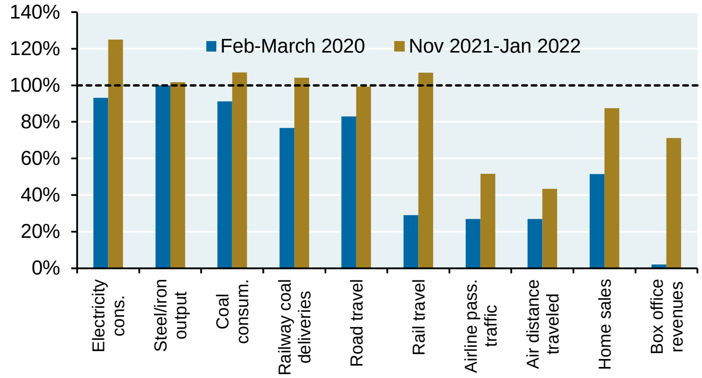
Second, a lot of high frequency economic data in China is almost back to normal. In other words, whatever COVID measures China has adopted, much of its economic activity is close to pre-COVID levels including electricity and coal consumption, steel output, road travel, rail travel and home sales. Only domestic air travel and movie theatre receipts show signs of much lower mobility.

Select Asia COVID mortality rates
Deaths to date per mm



Source: Johns Hopkins University, IMF, JPMAM. March 6, 2022.

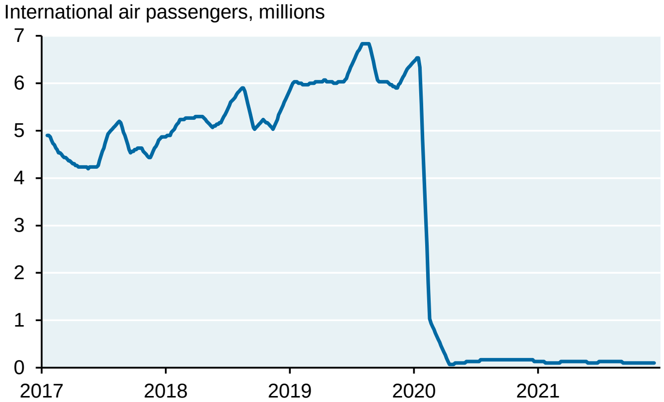
China high frequency economic indicators
% of 2019 level



Source: Wind, China NBS, Bloomberg, JPMAM. January 20, 2022.

Of course, the other challenge regarding China analysis is that not that many people are allowed to go there right now. As a result, we have to rely on triangulated data to draw our conclusions.

International air travel to China
International air passengers, millions

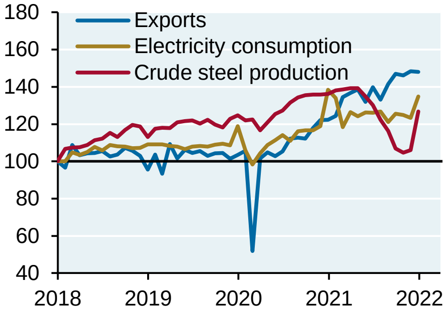


Source: CEIC, Gavekal Research. March 4, 2022.

[1] "*Beijing is intentionally underreporting China's COVID death rate*", George Calhoun (Forbes), January, 2, 2022

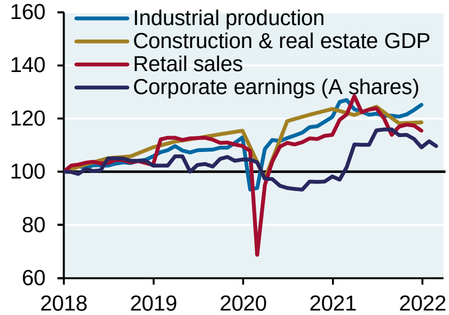
The next three charts show our China activity monitors separated into positive, stable and negative signs. The 5.5% GDP growth target just announced by China's National People's Congress will likely require some additional fiscal stimulus to meet (this GDP growth target is 1% lower than targets for 2019-2021). The third chart may not change anytime soon: the Chinese gov't reiterated its stance that "housing is for living in, not speculation".

China economy: positive signs
Index (100 = Jan 2018)



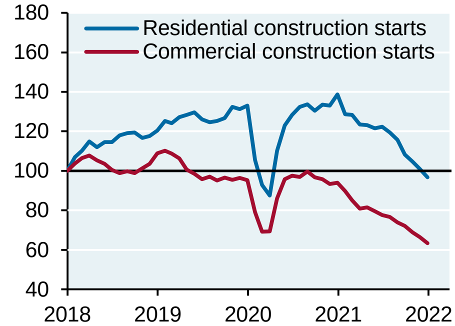
Source: China NBS, General Administration of Customs, MSCI, JPMAM. December 2021.

China economy: stable signs
Index (100 = Jan 2018)



Source: China NBS, China Electricity Council, JPMAM. February 2022.

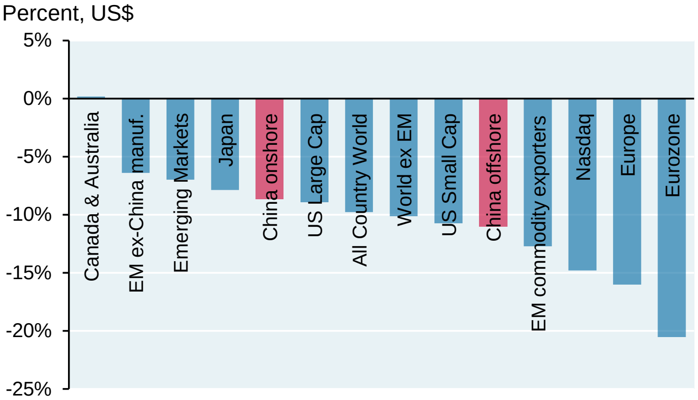
China economy: negative signs
Index (100 = Jan 2018)



Source: China NBS, JPMAM. December 2021.

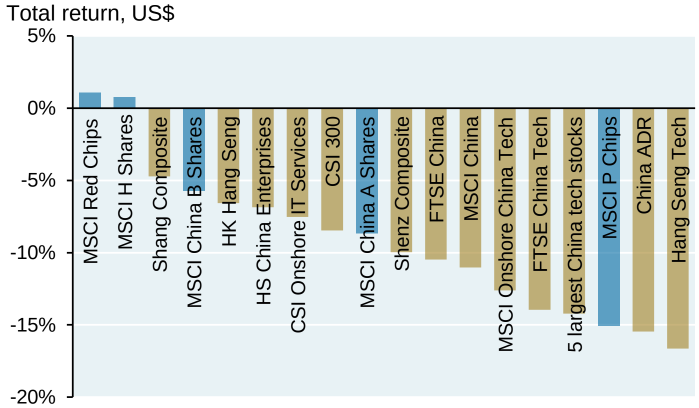
For equity investors: China has performed poorly in 2022 so far, in-line with the selloffs in other major regions this year in spite of stabilizing economic and profits data. The primary reason: despite the war, markets still expect substantial Fed tightening this year (and so do we). While abstract rules can diverge from Fed decisions, the last chart below from JP Morgan Economic Research shows the rising pressure on the Fed to act in 2022[2]. **Bottom line: we have not seen the worst of the current war, or stock market levels just yet.**

YTD total returns for major equity markets/regions
Percent, US$



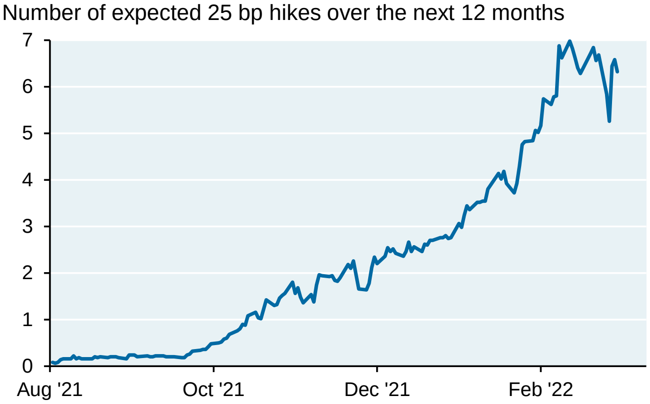
Source: Bloomberg. March 4, 2022.

China YTD equity returns
Total return, US$



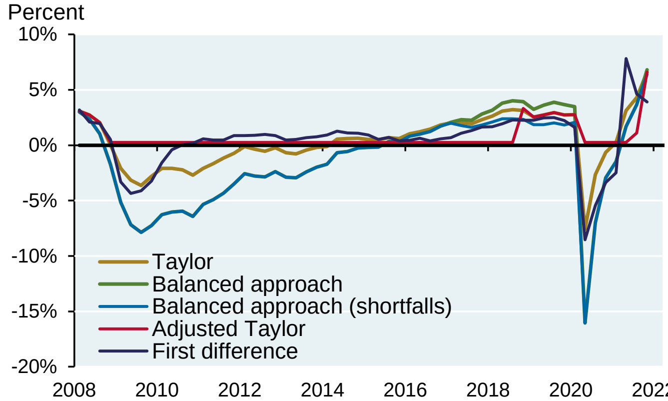
Source: Bloomberg. 3/4/2022. Blue: MSCI subcomponent. Gold: Index.

Market implied Fed hikes, derived from futures market
Number of expected 25 bp hikes over the next 12 months



Source: Bloomberg. March 4, 2022.

Required Fed Funds rate by policy rule
Percent

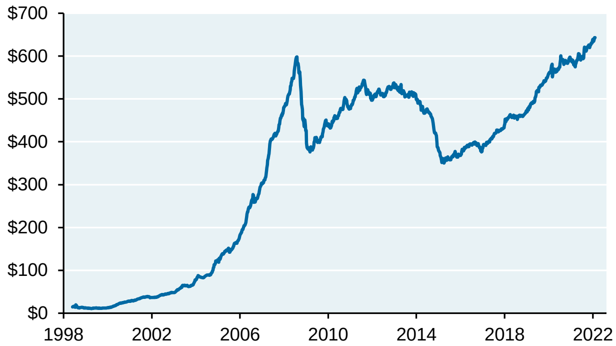


Source: JP Morgan Economic Research, FRB. Q4 2021.

[2] *"A series of hikes coming, but carefully not steadily",* M Feroli, JP Morgan Economic Research, March 3, 2022

The Russian invasion of Ukraine, military balances and paths not taken

Russia foreign exchange reserves
US$, billions



Source: Bloomberg. February 25, 2022.

Russia current account balance
Percent of GDP

Source: Bloomberg, JPMAM. Q3 2021.

On our webcast last week we discussed 1,000 years of Russian totalitarianism and the window during the 1990's when Russia was geopolitically weakened that coincided with NATO's eastward expansion. Factors driving that brief period: Russia's sovereign debt default, oil prices collapsing to $10 per barrel and the disintegration of Russia's foreign exchange reserves, current account surplus and currency. **In the late 1990's, Russians were already anxious for change back to the old ways, and NATO understood this risk very clearly**:

> "…the inclination to the authoritarian forms of government is not limited by the ruling elite only. Diverse social groups are more and more actively revealing their interest in authoritarianism"
>
> "the notion of enlightened, liberal, civilized and tame authoritarianism in Russia where there are such strong and deep historical traditions will hardly work…if society does not resist authoritarianism, the present authoritarian forms of government will acquire a much more brutal and despotic character"
>
> "*Authoritarianism in Russia: Dangers for Democracy*", A. Galkin/NATO Office of Information and Press, 1999

Around the same time, there were warnings against NATO expansion from George Kennan and from 50 US foreign policy experts, politicians and retired military officers who signed a letter entitled "*Opposition to NATO expansion*". Signatories included Bill Bradley, Gary Hart, Sam Nunn, Paul Nitze (Secretary of the Navy), Stansfield Turner (Navy Admiral, commander of Second Fleet, Supreme Allied Commander NATO Southern Europe and CIA) and Robert McNamara (Secretary of Defense), who by then had realized the mistakes the US made during the Vietnam War.

Was there a path that might have prevented the destruction of Ukraine? One might have been "Finlandization", and the other might have been a path to NATO membership with explicit military protection along the way. Last November, the US and Ukraine signed a "Charter on Strategic Partnership" that asserted US support for Ukraine's right to join NATO, but with no protections. Neither path was taken, and now 90 years after Stalin imposed the Holodomor terror-famine on Ukraine which killed 4 million people[3], Russia is destroying Ukraine again. At this point, in addition to the bravery of its defenders, the only thing that might preserve an independent Ukraine is the "protection of Divine Providence", requested by Thomas Jefferson in the US Declaration of Independence in 1776.

Russia Ukraine military balance, 2022

	Russia	Ukraine
Ground forces	850,000	200,000
Aircraft	4,173	318
Tanks	12,420	2,596
Fighter aircraft	772	69
Armored vehicles	30,122	12,303
Attack helicopters	544	34

Source: Global Firepower, The Independent, 2022

USA Britain military balance, Revolutionary War

	Britain	USA
Naval ships, early 1776	270	27
Naval ships, 1782 (war's end)	500	20
Army soldiers	194,000	30,000 (peak)
Army soldiers	194,000	15,000 (avg)

Sources: Willard Wallace (Wesleyan University), Richard Rinaldi (Swarthmore/Yale), Charles Lesser (South Carolina Historical Archives)

[3] Outside aid was rejected and Ukrainian food supplies were confiscated, leading some scholars to believe that the famine was deliberately imposed by Stalin to eliminate the Ukrainian independence movement.

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