



Business Retreats and Sanctions Are Crippling the Russian Economy

Measures of Current Economic Activity and Economic Outlook Point to Devastating Impact on Russia

August 2022

Yale Chief Executive Leadership Institute

Jeffrey Sonnenfeld



Presentation Co-Authors

Jeffrey A. Sonnenfeld, President of the Yale Chief Executive Leadership Institute; Senior Associate Dean and Lester Crown Professor in Management Practice at Yale School of Management

Steven Tian, Director of Research at the Yale Chief Executive Leadership Institute, Yale University

Franek Sokolowski, Research Fellow in Business & Economics at the Yale Chief Executive Leadership Institute, Yale University

Michal Wyrebkowski, Research Assistant in Energy at the Yale Chief Executive Leadership Institute and University of Pennsylvania, Wharton Business School

Mateusz Kasprowicz, Research Assistant at the Yale Chief Executive Leadership Institute and Warsaw School of Economics



Introduction

- **Our team of experts, using private Russian language and direct data sources including high frequency consumer data, cross-channel checks, releases from Russia's international trade partners, and data mining of complex shipping data, have released one of the first comprehensive economic analyses measuring Russian current economic activity five months into the invasion. From our analysis, it becomes clear: business retreats and sanctions are catastrophically crippling the Russian economy.**



Introduction

- **This visual slide deck accompanies the working paper “Business Retreats and Sanctions Are Crippling the Russian Economy” by Jeffrey Sonnenfeld et al.**
- **The paper can be found here:**
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4167193
- **Inquiries/feedback should be directed towards jeffrey.sonnenfeld.celi@yale.edu and steven.tian@yale.edu**



Working Paper

The full working paper can be accessed by clicking on the below link:

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4167193

Source: Yale Chief Executive Leadership Institute



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Jeffrey A. Sonnenfeld

Founder & President, Yale Chief Executive Leadership Institute
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Director of Research, Yale Chief Executive Leadership Institute
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University of Pennsylvania, Wharton Business School

Mateusz Kasprowicz

Research Assistant, Yale Chief Executive Leadership Institute
Warsaw School of Economics

July 2022

With Research Assistance from Yale Chief Executive Leadership Institute Researchers:

Wiktor Babinski; Yale Graduate School of Arts and Sciences and London School of Economics

Yash Bhansali; Goldman Sachs

Forrest Michal Bomann; Columbia University

Michal Boron; Humboldt University

Katie Burke; Johns Hopkins University

Dr. Adriana Coleska; MD Yale School of Medicine

Stephen Henriques; McKinsey & Co.

Georgia Hirsty; Frailty Myths and Yale School of Management

Andrew Kaiser; Publicis Sapient

Cate Littlefield; PepsiCo

Camillo Padulli; Yale University

Ryan Vakil; Yale University

Israel Yolou; Big Data Post-Bac, Yale University

Steven Zaslavsky; Moelis & Company



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- 4 **Weak Russian Domestic Consumption & Production Data Shows Import Substitution Not Feasible**
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- 7 **Financial Markets Pricing In Sustained Weakness In Real Economy with Liquidity and Credit Contracting**
- 8 **Conclusion: Russia's Economic Vulnerabilities Reveal Key Lessons For The West**



Russian Economy In Crisis Theme #1: Decoding Russian Economic Statistics

- 1 **Background: Decoding Deceptive Official Russian Economic Statistics**
- 2 **Re-Evaluating Russia as a Commodity Exporter: Rising Prices Mask Irreversible Deterioration in Long-Term Strategic Positioning**
- 3 **Drop In Russian Imports Illustrates Asymmetric Weakness of Russia's Global Economic Relationships**
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Decoding Russian Economic Statistics

Many of the optimistic economic analyses, forecasts, and projections which have proliferated in recent months share a crucial methodological flaw: these analyses draw most, if not all of their underlying evidence from periodic economic releases by the Russian government itself. There are three significant, underappreciated considerations which severely strain the integrity of the Kremlin's statistics since the outset of the invasion. First, the Kremlin's economic releases are becoming increasingly cherry-picked; partial, and incomplete, selectively tossing out unfavorable statistics while keeping favorable statistics.

Sources: Yale Chief Executive Leadership Institute, [Bloomberg](#), [Atlantic Council](#), [Russian Federal Service of State Statistics](#)

Optimistic Forecasts Have It All Wrong with Cherry-Picked Statistics: Drinking From The Fountain of Russian Propaganda

Statistics Withheld By the Kremlin Post-Invasion

All Foreign Trade Data

All Export Data

All Import Data

Oil and Gas Monthly Output Data

Capital Inflows and Outflows

Financial Statements of Major Companies

Central Bank Monetary Base Data

Foreign Direct Investment Data

Airline and Airport Passenger Volumes

Lending and Loan Origination Data



Decoding Russian Economic Statistics

Second, even those favorable statistics which are released are questionable if not downright dubious when measured against cross-channel checks and given the political pressure the Kremlin has exerted to corrupt statistical integrity. Indeed, the Kremlin has a long history of fudging official economic statistics, even prior to the invasion.

Sources: Yale Chief Executive Leadership Institute, Bloomberg, Reuters, International Monetary Fund, Interfax



Fudging the Numbers: Putin Has Long and Shameful Track Record of Political Interference with Rosstat

Instances of Political Interference with Rosstat

Putin personally transferred Rosstat to political officials at the Economic Ministry

Putin sacked multiple Rosstat heads

Putin appointed a political pick (former Deputy Minister) as head in May 2022

Alarming propensity of Kremlin economists for “switching to new methodologies”

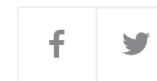
IMF sounding alarms over “concerns about the reliability and consistency” of data



Investors see bias as Russian statistics agency revises figures

By Andrey Ostroukh, Alexander Winning

7 MIN READ





Decoding Russian Economic Statistics

Third, almost all rosy projections and forecasts are irrationally extrapolating economic releases from the early days of the post-invasion period, when sanctions and the business retreat had not taken full effect, rather than the most recent, up-to-date numbers from recent weeks and months. For example, many alarming forecasts projecting strong revenue from energy exports were based on the last available official export data from March, even though many business withdrawals and sanctions on energy had not yet taken effect, with orders placed prior to the invasion still being delivered. After a long and unexplained delay, only a few weeks ago did the Kremlin finally disclose that total oil and gas revenues dropped by more than half in May from prior months, by the Kremlin's own numbers – along with the declaration that the Kremlin would cease releasing any new oil and gas revenues from that point on.

Sources: Yale Chief Executive Leadership Institute, Bloomberg, The Washington Post, Business Insider, Russian Federal Service of State Statistics



Extrapolation of Misleading Early Statistics in Economic Forecasts Creates Unrealistic Projections

“even with some countries halting or phasing out energy purchases, Russia’s oil-and-gas revenue will be about \$285 billion this year, according to estimates from Bloomberg Economics based on Economy Ministry projections. That would exceed the 2021 figure by more than one-fifth” – Bloomberg, June 2022

“It is now clear that the economic war against Russia is not working nearly as well as people thought it would. Thanks to rising energy prices, Bloomberg News projects the Russian government will make considerably more revenue from oil and gas than it did before the war, around \$285 billion this year compared with \$236 billion in 2021.” – Fareed Zakaria, July 7, 2022

Russia Monthly Oil and Gas Revenue





Russian Economy In Crisis Theme #2: Commodity Exports

- 1 Background: Decoding Deceptive Official Russian Economic Statistics
- 2 Re-Evaluating Russia as a Commodity Exporter: Rising Prices Mask Irreversible Deterioration in Long-Term Strategic Positioning
- 3 Drop In Russian Imports Illustrates Asymmetric Weakness of Russia's Global Economic Relationships
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Russian Exports

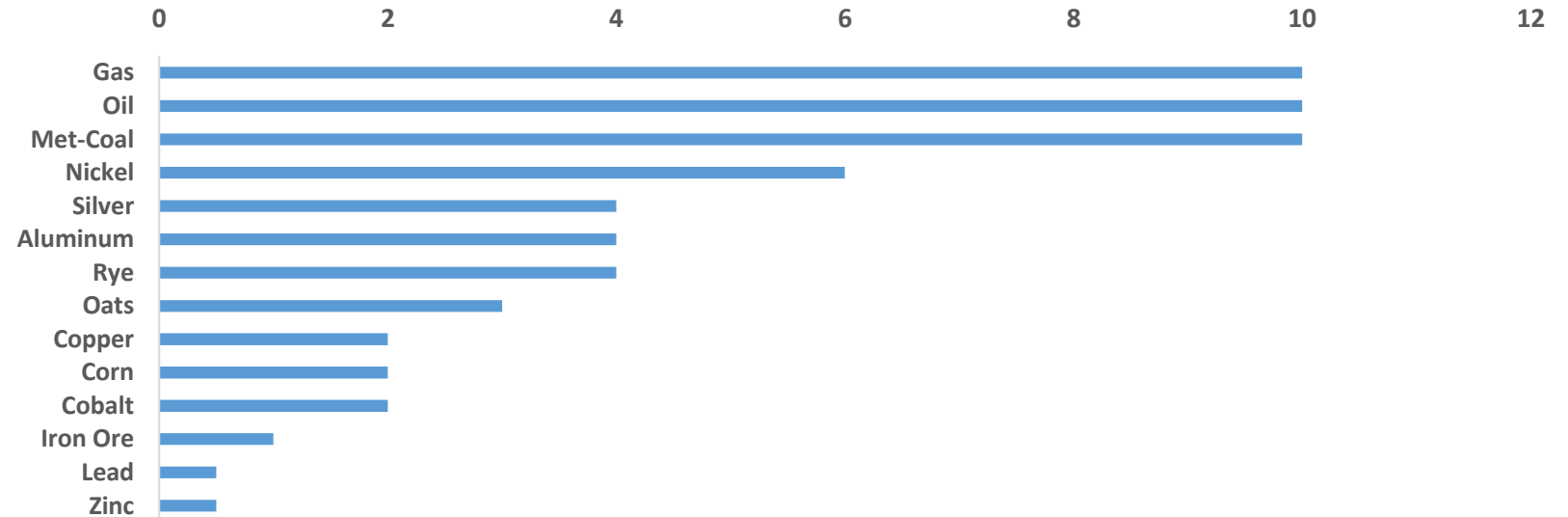
There is widespread under-appreciation of the damage already wrought to Russia's status as a leading commodity exporter. A close macroeconomic analysis of measures of current economic activity demonstrates that under the surface, Russia's commodity exports are already under severe strain. First, the importance of commodity exports to Russia far exceeds the importance of Russian commodity exports to the rest of the world. Russia's total export earnings consist overwhelmingly of revenue derived from commodities and raw materials; these export earnings make up well over half of Russia's total government budget in most years – and presumably an even larger proportion now. On the flip hand, of each of the major commodities Russia exports, Russian supply is no more than 10% at most.

Sources: Yale Chief Executive Leadership Institute, Morgan Stanley, Russian Federal Service of State Statistics, JPMorgan, Bank of America Global Research, Deutsche Bank, UBS, Bloomberg

Russian Commodity Exports Far More Important To Russia Than Rest Of The World

Russian Share of Global Commodity Exports by Commodity

(shown as % share of global exports)



energy revenue represents ~60% of total Russian government revenue



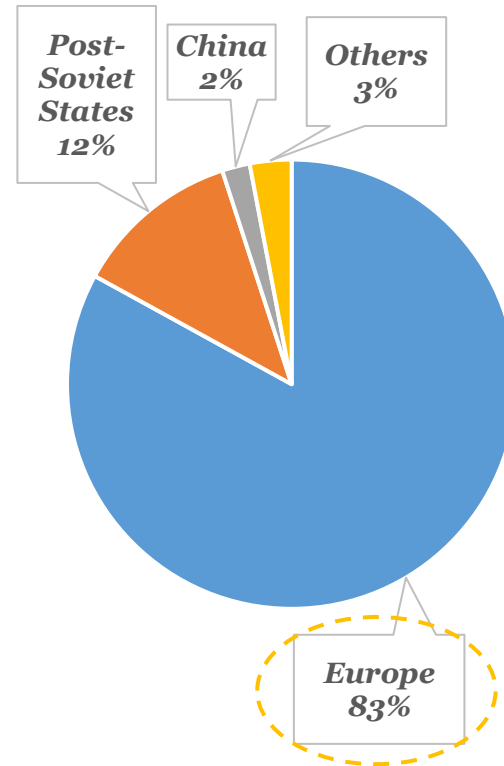
Russian Exports

Legacy commodity supply chains and trade patterns put Russia at a significant strategic and economic disadvantage. Europe has long been the destination of choice for Russian commodity exports, particularly energy exports, though once again, these energy exports are far more important to Russia than they are to Europe. Europe's challenges are legitimate; it cannot fully replace Russian energy in the short-term without painfully reducing energy consumption as a transitory measure, particularly in Germany, Poland, and Hungary. Yet there is some irony that although Europe has understandably cried foul at Russia's politically motivated attempt to weaponize energy, particularly gas, the Russian economy is hurt the most by shifting natural gas supply chains.

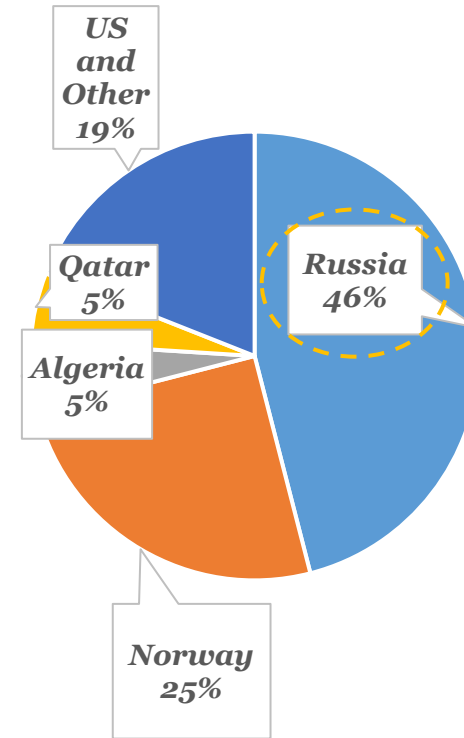
Sources: Yale Chief Executive Leadership Institute, Morgan Stanley, ING, International Energy Agency (IEA), Russian Federal Service of State Statistics, Bank of America Global Research, Deutsche Bank, JPMorgan, UBS, Bloomberg

When It Comes To Natural Gas, Russia Far More Dependent on Europe Than Vice Versa

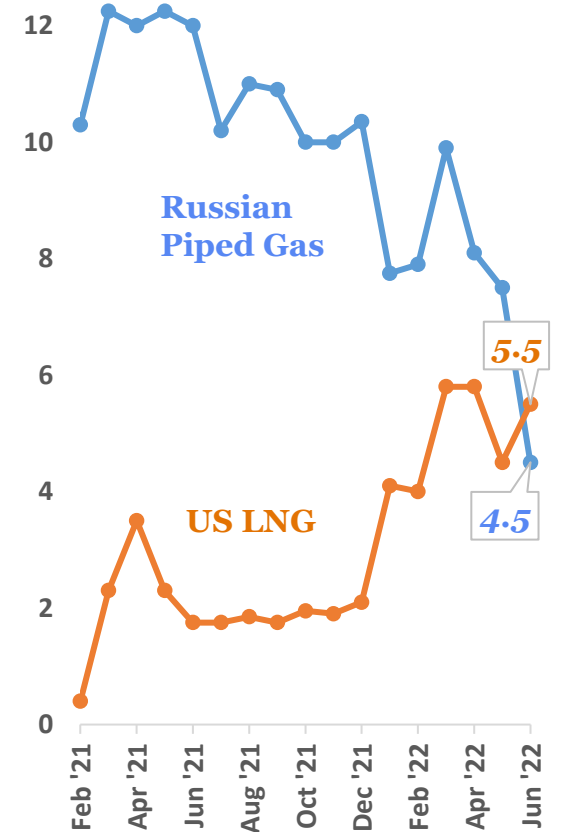
Russian Gas Exports Destination
(shown as % of total Russian gas exports)



Sources of EU Gas Imports
(shown as % of total EU gas imports)



US LNG Overtakes Russia Piped Gas in EU Gas Imports
(units in bcm/billion cubic meters per month)





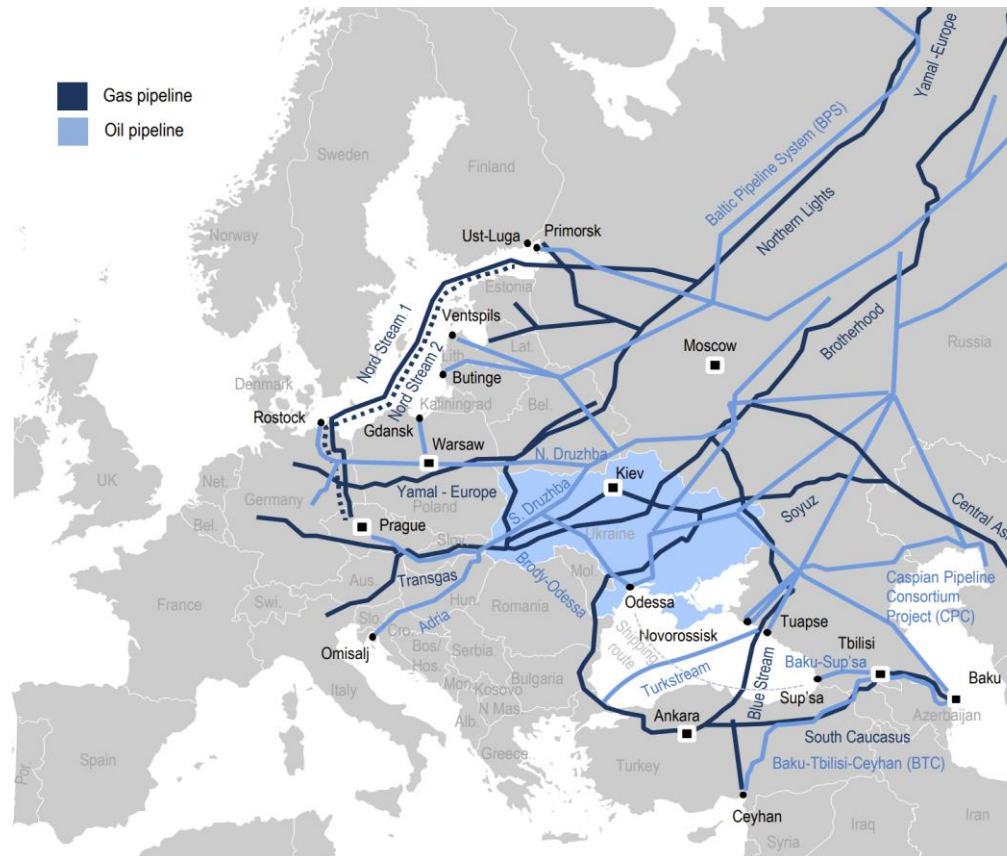
Russian Exports

Russian gas is transported primarily through a complex network of fixed pipelines which connects western Russia to Europe. Many of these pipelines flow through Ukraine, a relic of pre-1989 Soviet planning when Ukraine and Russia were both parts of the same country, and Russia has been loath to send gas through these Ukrainian pipelines since the onset of the invasion. Combined with the recent shutdown of the Nord Stream pipeline, which is Russia's largest gas route to Europe (which was running at ~40% capacity prior to being shut down); Russian gas exports to Europe (and the revenue that is derived) have plummeted to near-record lows.

Sources: Yale Chief Executive Leadership Institute, Morgan Stanley, Russian Federal Service of State Statistics, JPMorgan, Bank of America Global Research, Deutsche Bank, UBS, Bloomberg

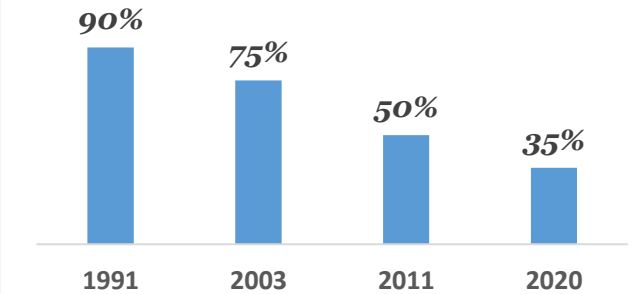
Russia Gas Exports To Europe Have Plummeted to Near Record Lows

Network of Pipelines Connecting Russia and Europe



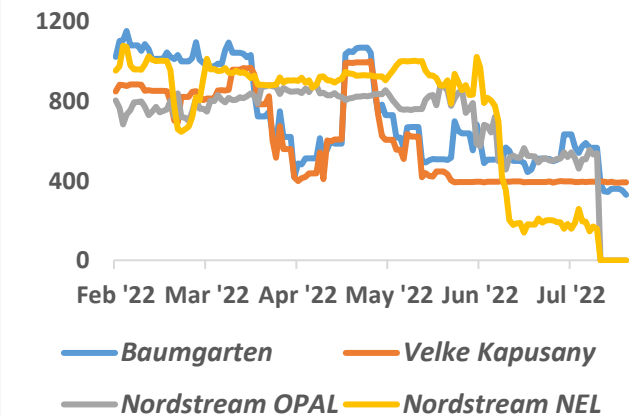
Share of Russia to Europe Gas Transited Through Ukraine

(shown as % of total Russia to Europe gas)



Russian Gas Flows to Europe

(in GWh/d, by Russia-Europe pipeline)

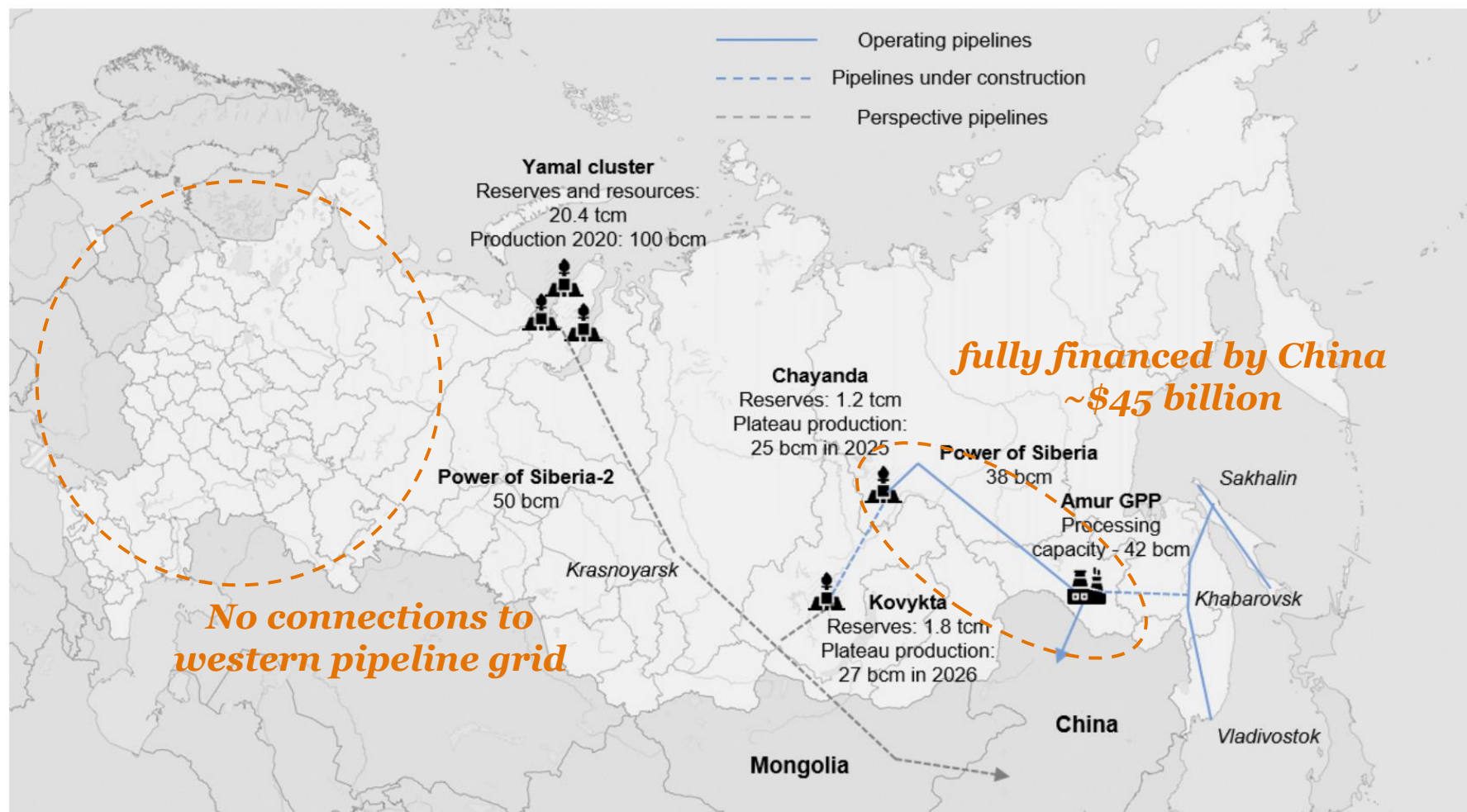




Russian Exports

To mitigate lost European transports of gas, in a speech in the days following the invasion, Putin doubled down on a much-ballyhooed “povorot na vostok”, or “pivot to the east”, declaring “[Russia] must diversify exports. Let us assume that energy supplies to the West will continue going down in the foreseeable future. Therefore, it is important to consolidate the trend of the past few years: to redirect our exports gradually to the rapidly growing markets of the South and the East.” The vast majority of Russia’s pipelines flow towards Europe; those pipelines, which originate in western Russia, are not connectable to a separate nascent network of pipelines which link the far East of Russian Siberia to Asia. This Asian pipeline network contains a fraction of the capacity of the European pipeline network; and even long-planned Asian pipeline projects currently under construction are still years away from becoming operational, much less hastily initiated new projects.

Gas Not Fungible; Russia’s Much-Hyped “Pivot to The East” Still Far Away From Happening



Sources: Yale Chief Executive Leadership Institute, [Morgan Stanley](#), [JPMorgan](#), [Bank of America Global Research](#), [Deutsche Bank](#), [UBS](#), [Bloomberg](#)



Russian Exports

The 16.5 billion cubic meters of gas exported by Russia to China last year represented less than 10% of the 170 billion cubic meters of natural gas sent by Russia to the European market. Financing of these costly gas pipeline projects also now puts Russia at a significant disadvantage. The major operational pipeline linking Siberia to China, the \$45 billion, thirteen-hundred mile “Power of Siberia” pipeline, was completely financed by China in 2014; now the onus is now on Russia to fund these new pipeline projects itself. In anticipation of “massive capital expenditures”, the Russian gas giant Gazprom has already taken the unprecedented step of suspending dividends, the first time in thirty years, and its stock is the single worst performing major stock on the Moscow Stock Exchange since the invasion.

Sources: Yale Chief Executive Leadership Institute, Russian Federal Service of State Statistics, CNBC, JPMorgan, Bank of America Global Research, Deutsche Bank, UBS, Bloomberg



Russia’s “Pivot to The East” Faces Daunting Financial, Logistical Hurdles

Total Russian Gas Sent to Europe vs. China in 2021

(units in bcm/billion cubic meters)



Russia Will Likely Have to Pay for Pipelines Connecting to Asia By Itself

EUROPE NEWS

Gazprom shares crater after Russian energy giant cancels dividend for first time since 1998



PUBLISHED THU, JUN 30 2022-10:16 AM EDT



Russian Exports

As a more fungible commodity, the “pivot to the East” for oil represents a different situation than natural gas for Russia, but no more beneficial. Even before official EU and US sanctions, western importers and commodity traders largely eschewed Russian oil purchases given not only reputational risk but also difficulty securing shipping insurance and financing, especially after Shell was lambasted for purchasing discounted Russian oil.

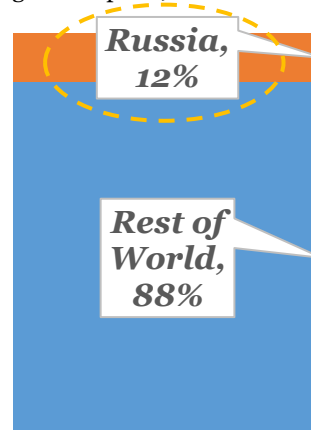
The Russian upstream industry has long been reliant on western technology, which combined with the loss of both Russia’s erstwhile primary market and Russia’s diminished economic clout, leads to even the Russian Energy Ministry revising their projections of long-term oil output downward.

Sources: Yale Chief Executive Leadership Institute, Morgan Stanley, ING, Oxford Institute for Energy Studies, Russian Federal Service of State Statistics, JPMorgan, Bank of America Global Research, Deutsche Bank, UBS, Bloomberg

Oil More Fungible But Even More Troublesome for Russia

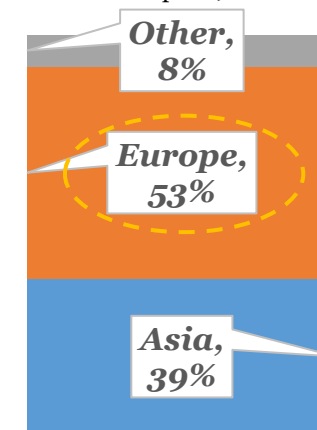
Russian Share of Global Oil Exports

(shown as % share of global exports)



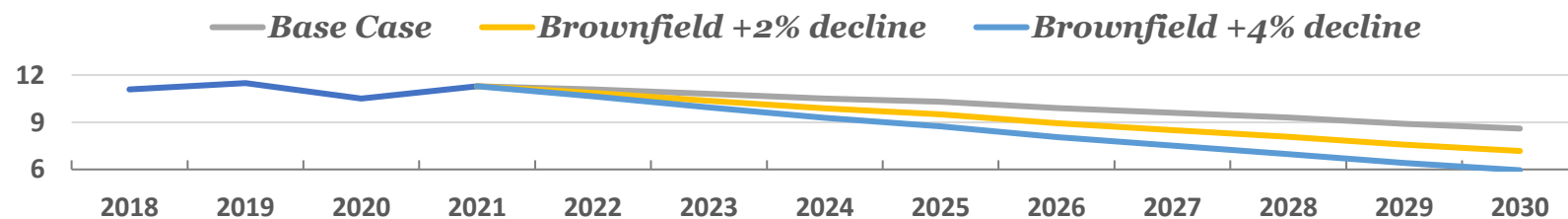
Russian Oil Exports by Destination

(shown as % of total Russian oil exports)



Projections of Long-Term Decline in Russian Oil Production

(in million barrels of output per day)



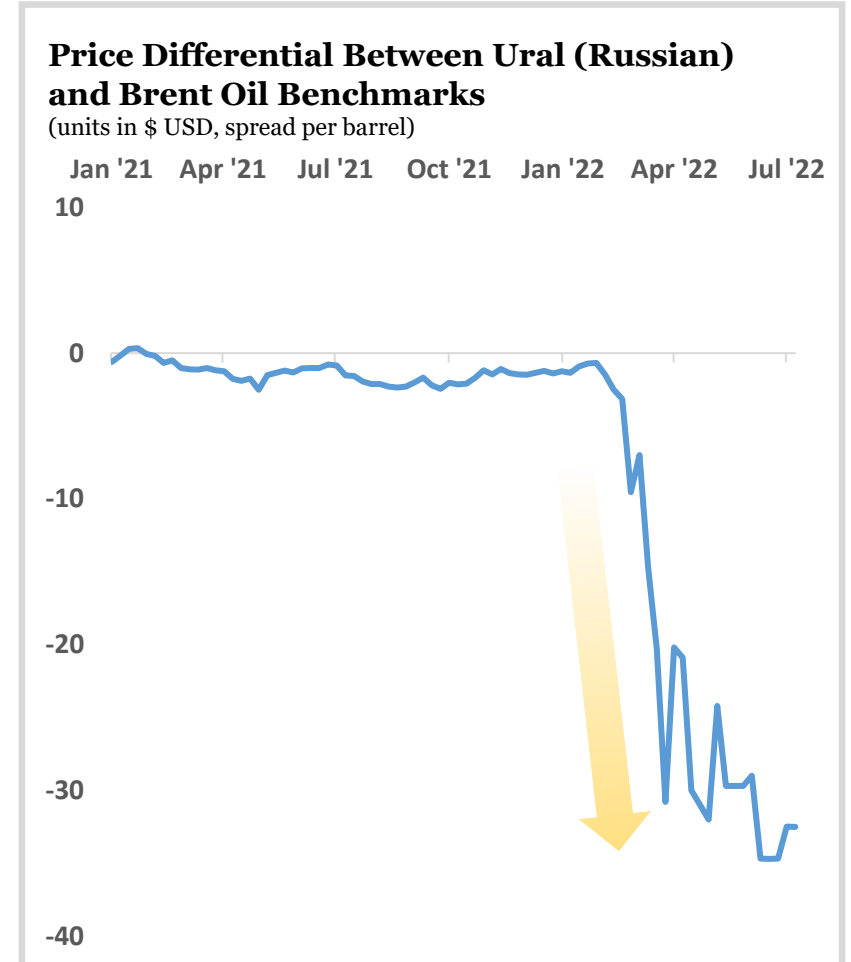
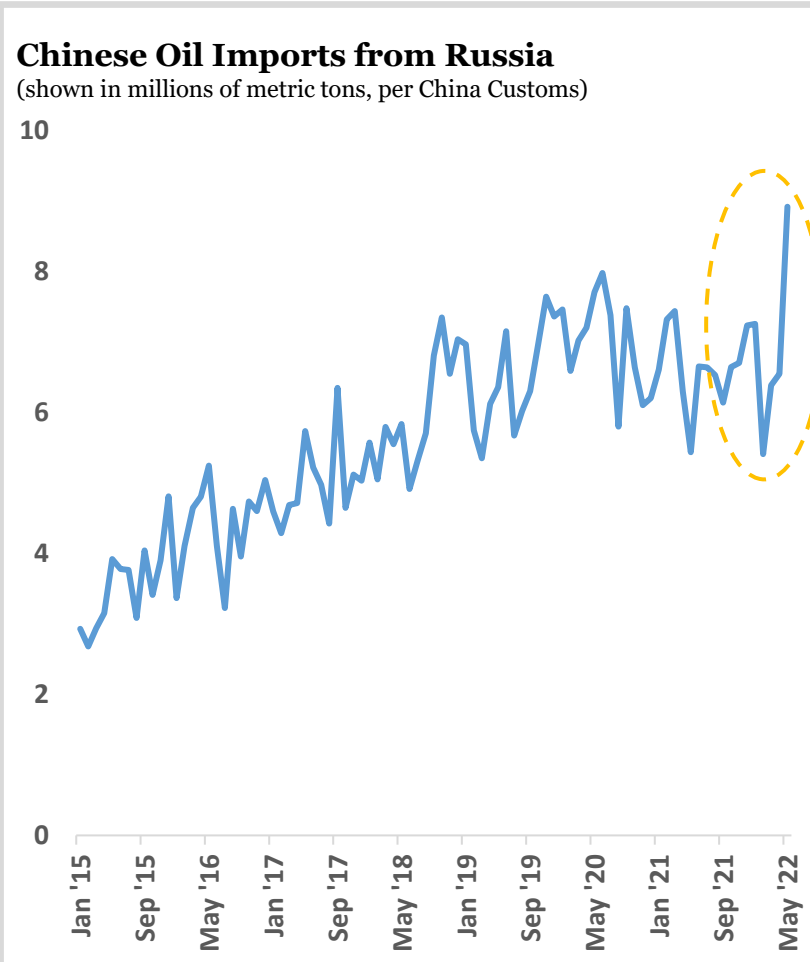


Russian Exports

Only 39% of Russia’s oil exports were sent to Asia last year, but this number has likely increased this year – even as the Kremlin has not released any energy export statistics since the start of the invasion, statistics released by China indicate that China has increased its Russian oil purchases rather significantly. This oil, however, is being purchased at a significant discount, with Russian Urals oil trading at the largest discount to the Brent benchmark on record, a whopping \$35 price differential – even though Urals and Brent oil have largely traded at comparable prices prior to the invasion. Russia remains a relatively high-cost producer relative to the other major oil producers – i.e. Saudi Arabia and the United States – and thus any margin pressure will be felt keenly by Russia.

Sources: Yale Chief Executive Leadership Institute, Russian Federal Service of State Statistics, JPMorgan, Bank of America Global Research, Deutsche Bank, UBS, Bloomberg

China Buying More Russian Oil – But With \$35 Discount Per Barrel





Russian Exports

The landscape for commodity exports already represents a far bleaker picture for Russia than conventionally appreciated. Not only have total oil and gas revenues dropped by more than half in May from the month before, by the Kremlin's own numbers, and the last month for which the Kremlin released its once-regular commodity export statistics, but even beyond any specific indicator, Russia's long-term strategic positioning as an exporter of commodities has deteriorated dramatically. Its isolation from the west has devastated Russia's strategic hand in negotiating with China and India, notoriously price-conscious buyers who retain close ties to other major commodity exporters. These countries have not been shy to exploit sanctioned pariah countries before, with China notoriously driving massively discounted oil deals with countries such as Iran and Venezuela with regularity.

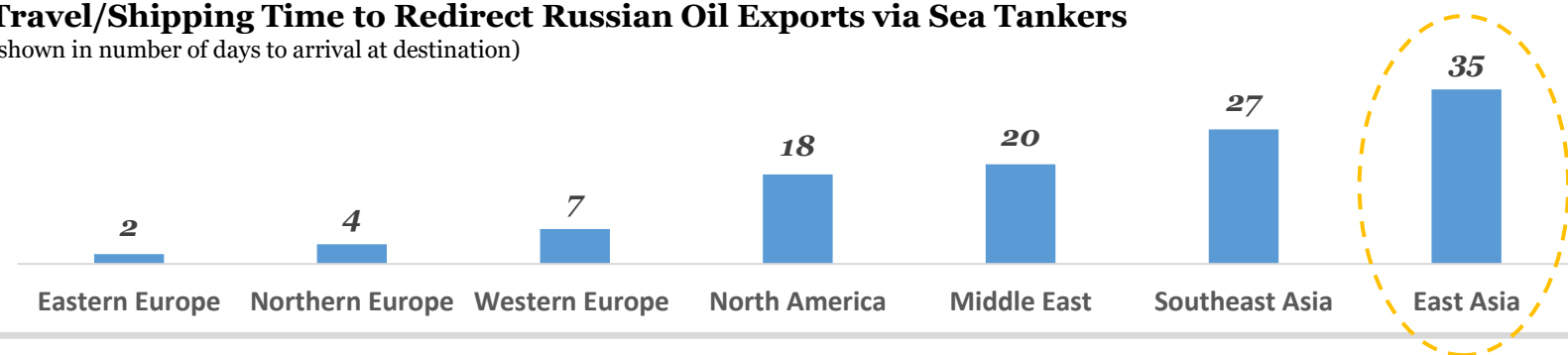
Sources: Yale Chief Executive Leadership Institute, [Morgan Stanley](#), [Russian Federal Service of State Statistics](#), [JPMorgan](#), [Bank of America Global Research](#), [UBS](#),



Record Urals Discount Reflects Russia's Diminished Strategic Positioning And Relative Weakness

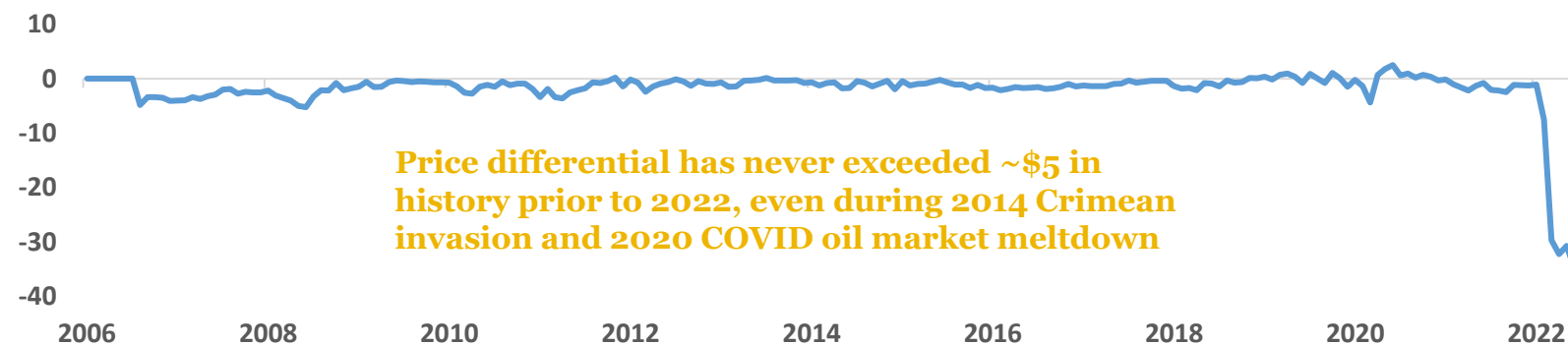
Travel/Shipping Time to Redirect Russian Oil Exports via Sea Tankers

(shown in number of days to arrival at destination)



Unprecedented Record Urals-Brent Discount Reflects How Invasion of Ukraine Reversed Two Decades' Worth of Economic Progress for Russia

(units in \$ USD, spread per barrel)





Russian Economy In Crisis Theme #3: Russian Imports

- 1 Background: Decoding Deceptive Official Russian Economic Statistics
- 2 Re-Evaluating Russia as a Commodity Exporter: Rising Prices Mask Irreversible Deterioration in Long-Term Strategic Positioning
- 3 **Drop In Russian Imports Illustrates Asymmetric Weakness of Russia's Global Economic Relationships**
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Russian Imports

Imports play an important role within Russia's domestic economy. Imports consist of ~20% of Russian GDP, and the domestic economy is largely reliant on imports across industries and across the value chain with few exceptions, despite Putin's bellicose delusions of total self-sufficiency.

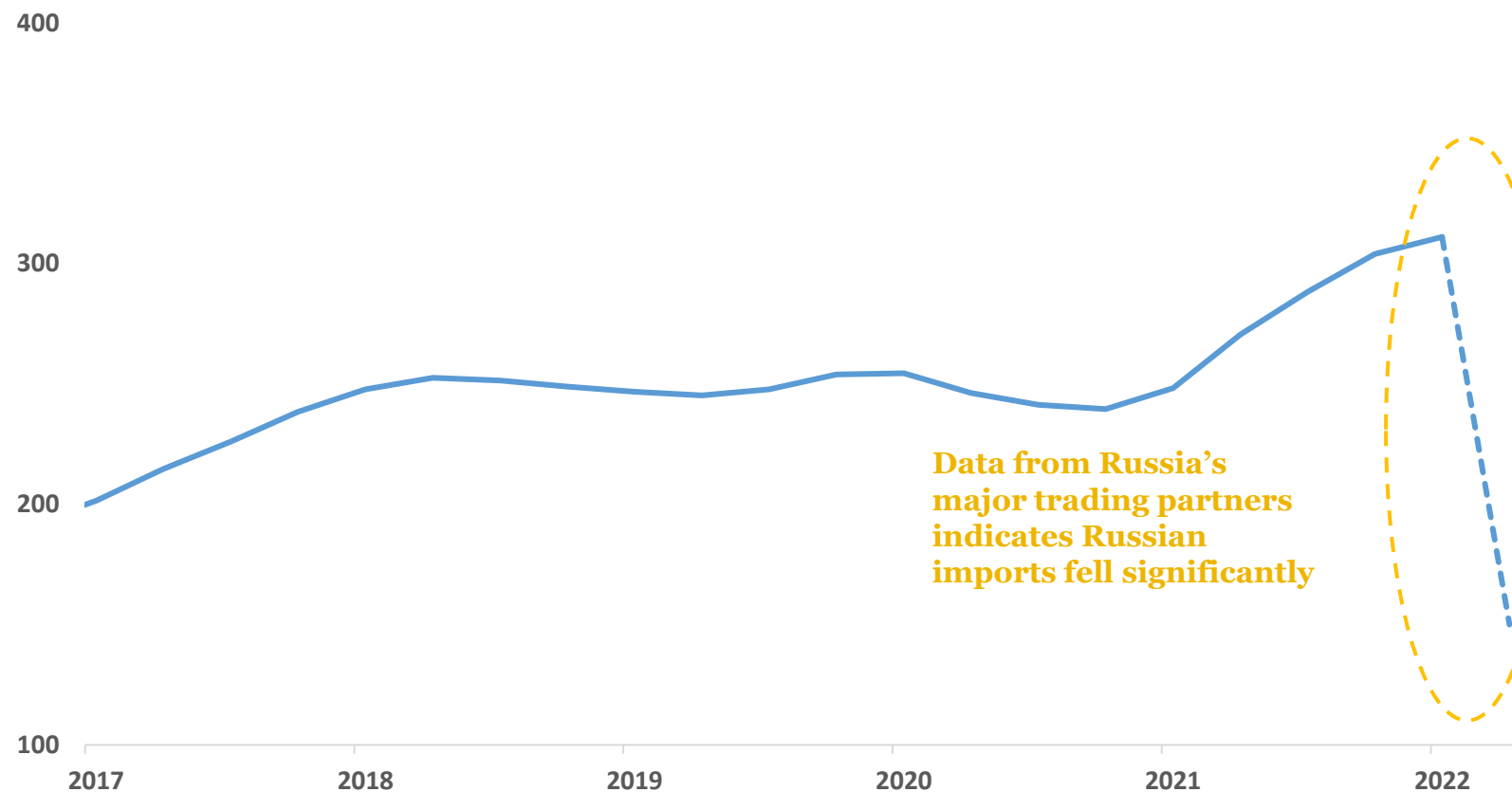
By far and large, the flow of imports into Russia has drastically slowed in the months since the invasion. A review of trade data from Russia's top trade partners – since, again, the Kremlin is no longer releasing its own import data – suggests that Russian imports fell by upwards of ~50% in the initial months following the invasion.

Sources: Yale Chief Executive Leadership Institute, Russian Federal Service of State Statistics, JPMorgan, Bank of America Global Research, Deutsche Bank, UBS, Bloomberg

Russian Imports Fell Significantly In Months After Invasion

Russian Imports from the Rest of the World

(units in \$ USD billions, annualized)





Russian Imports

According to the most recent monthly releases from the Customs General Administration of China, which maintains detailed Chinese trade data with detailed breakdowns of exports to individual trade partners, Chinese exports to Russia plummeted by 50% from the start of the year to April, falling from over \$8 billion monthly at the end of 2021 to under \$4 billion in April.

This aligns with our anecdotal observations of several Chinese banks withdrawing all credit and financing from Russia, including ICBC, the New Development Bank, and the Asian Infrastructure Investment Bank, in addition to energy giants such as Sinochem suspending all Russian investments and joint ventures – though other Chinese companies remain active.

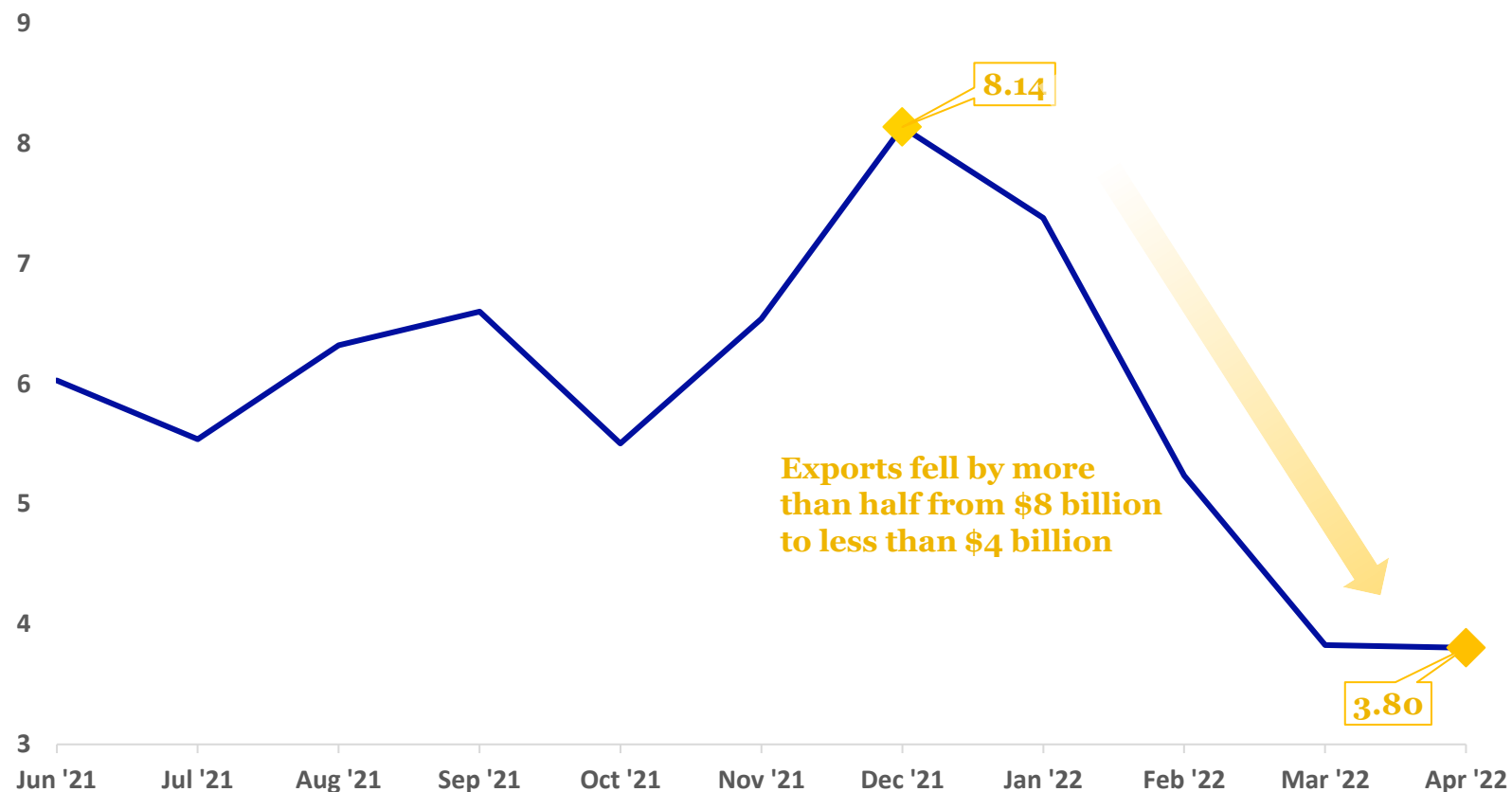
Sources: Yale Chief Executive Leadership Institute, Customs General Administration of the PRC, Bloomberg, Russian Federal Service of State Statistics, JPMorgan, Bank of America Global Research, Deutsche Bank, UBS



China Throttling Back On Exports To Russia, According To China's Own Official Trade Data

China Exports to Russia, Per the Customs General Administration of China

(units in \$ USD billions, monthly totals)





Russian Imports

Even on imports, Russia needs its trade partners far more than its partners need Russia. Given the extremely minor proportion of Chinese exports going to Russia vis-à-vis China's trading relationship with the United States and Europe, clearly most Chinese companies are much more wary of losing access to US and European markets by running afoul of US sanctions and crossing US companies than they are of losing whatever erstwhile market share they had in Russia. China is the most prominent example, but other trade partners have been just as reticent to export to Russia. In fact, it appears that exports to Russia from sanctioning and non-sanctioning countries have collapsed at a roughly comparable rate in the months following the invasion

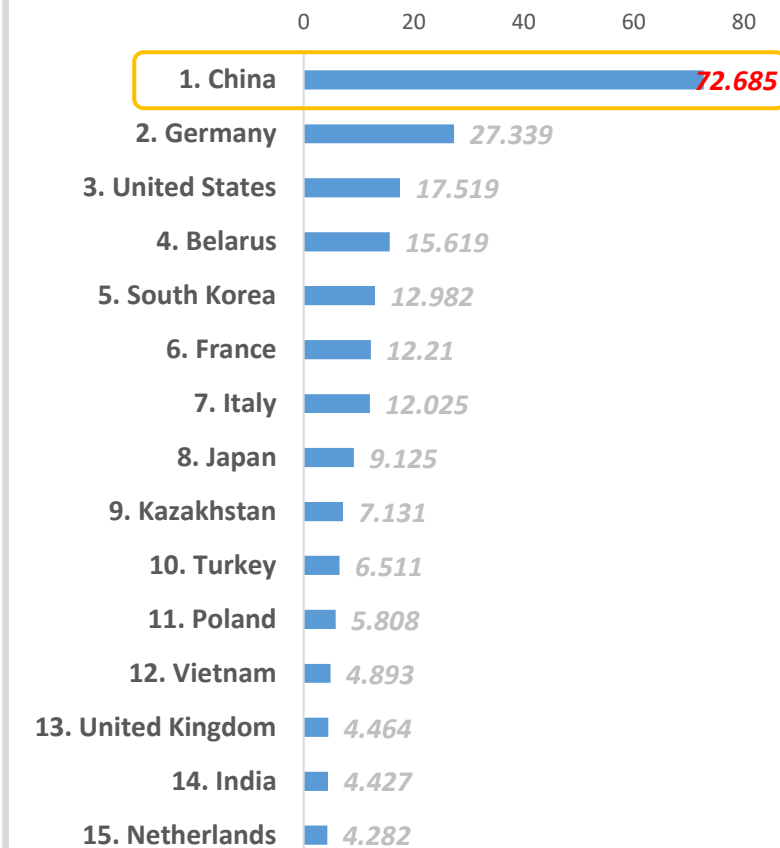
Sources: Yale Chief Executive Leadership Institute, Customs General Administration of the PRC, Eurostat, Other National Sources, Bloomberg, Russian Federal Service of State Statistics, JPMorgan, Bank of America Global Research, Deutsche Bank, UBS



Asymmetric Trade Relationship: China Is Much More Important To Russia Than Russia Is To China

Where Do Russian Imports Come From?

(units in \$ USD billions, annual totals as of 2021)



Where Do Chinese Exports Go?

(units in \$ USD billions, annual totals as of 2021)





Russian Economy In Crisis Theme #4: Russian Domestic Consumption & Production

- 1 Background: Decoding Deceptive Official Russian Economic Statistics
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Russian Domestic Consumption & Production

With the drop-off in Russian imports, many domestic producers have been unable to procure supplies and inputs. In desperation, Putin has effectively legalized grey market and intellectual property infringement – and at times has outright encouraged parallel imports. Putin declared the goods of certain companies exempt from trademark laws, including electronic components from manufacturers such as Cisco, Intel, Motorola, and Siemens as well as industrial goods such as paper, textiles, ceramics, locomotives, and nuclear reactors. Despite Putin’s efforts, there is little evidence that these permissive parallel import substitution laws are actually having much effect, especially in sensitive sectors such as aerospace, with widespread supply shortages and price inflation across the entire economy.

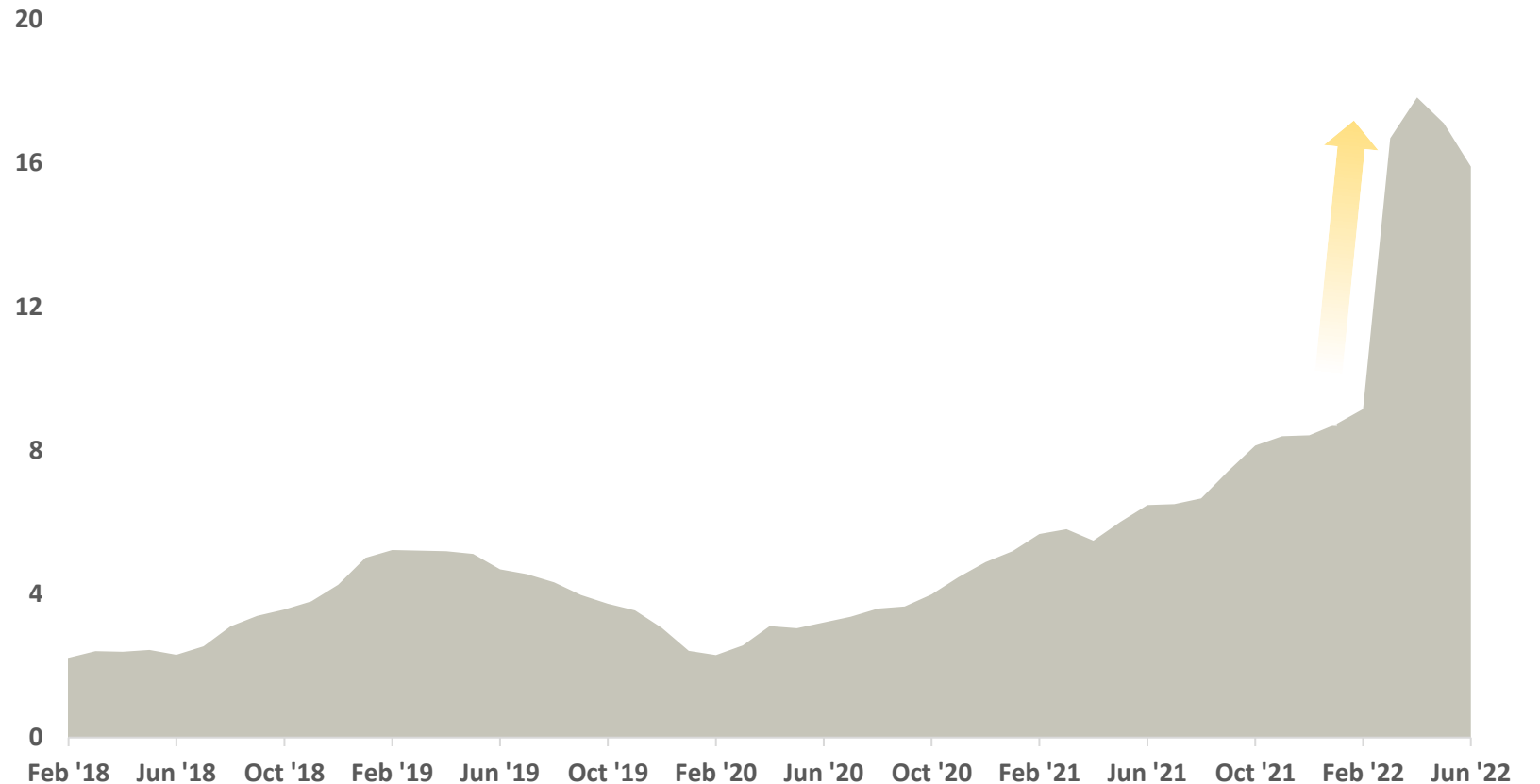
Sources: Yale Chief Executive Leadership Institute, Bloomberg, Russian Federal Service of State Statistics, JPMorgan, Bank of America Global Research, Deutsche Bank, UBS



Official Russia Consumer Price Index CPI Indicates ~20% Inflation

Russia CPI (Consumer Price Index)

(%, year-over-year percentage change)





Russian Domestic Consumption & Production

Many Russian manufacturers are having to cannibalize and recycle parts in the absence of foreign supply. As Commerce Secretary Gina Raimondo said, “we have reports from Ukrainians that when they find Russian military equipment on the ground, it’s filled with semiconductors that they took out of dishwashers and refrigerators”. Within aerospace, flag-carrier Aeroflot and others have been cannibalizing existing aircraft parts to continue servicing the operations of its remaining fleet, even though operators such as Boeing have cut off all support and service and have issued warnings that cannibalized aircraft are not safe for operation. Some carriers, such as Pobeda, have even intentionally grounded up to 40% of their existing fleet to provide parts to service and operate the remaining fleet.

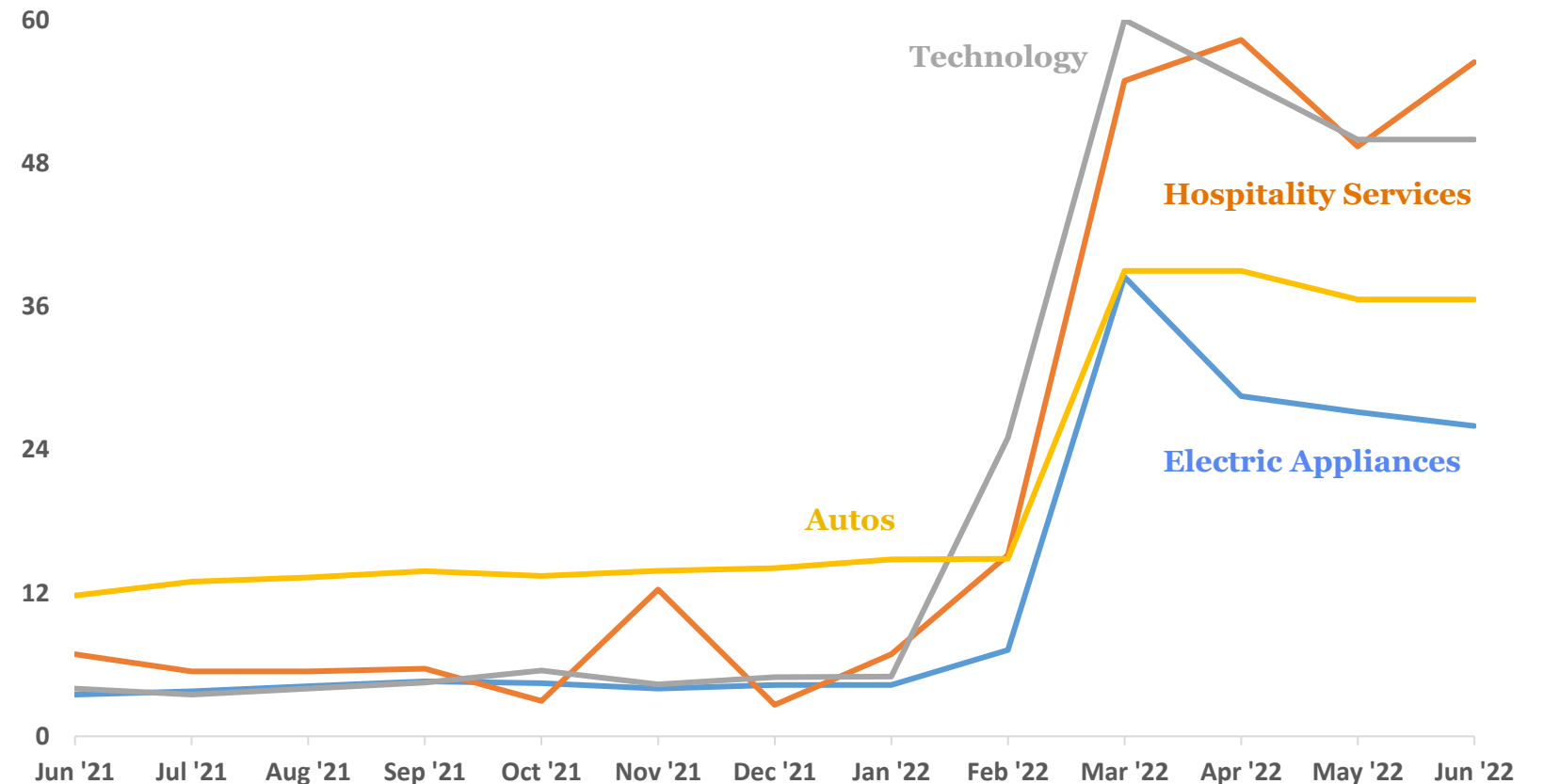
Sources: Yale Chief Executive Leadership Institute, Association of European Businesses, Bloomberg, Russian Federal Service of State Statistics, JPMorgan, Bank of America Global Research, Deutsche Bank, UBS



Sectors Most Dependent On International Supply Chains Hit With 40-60% Inflation

Russia CPI (Consumer Price Index) by Expenditure Category

(%, year-over-year percentage change)





Russian Domestic Consumption & Production

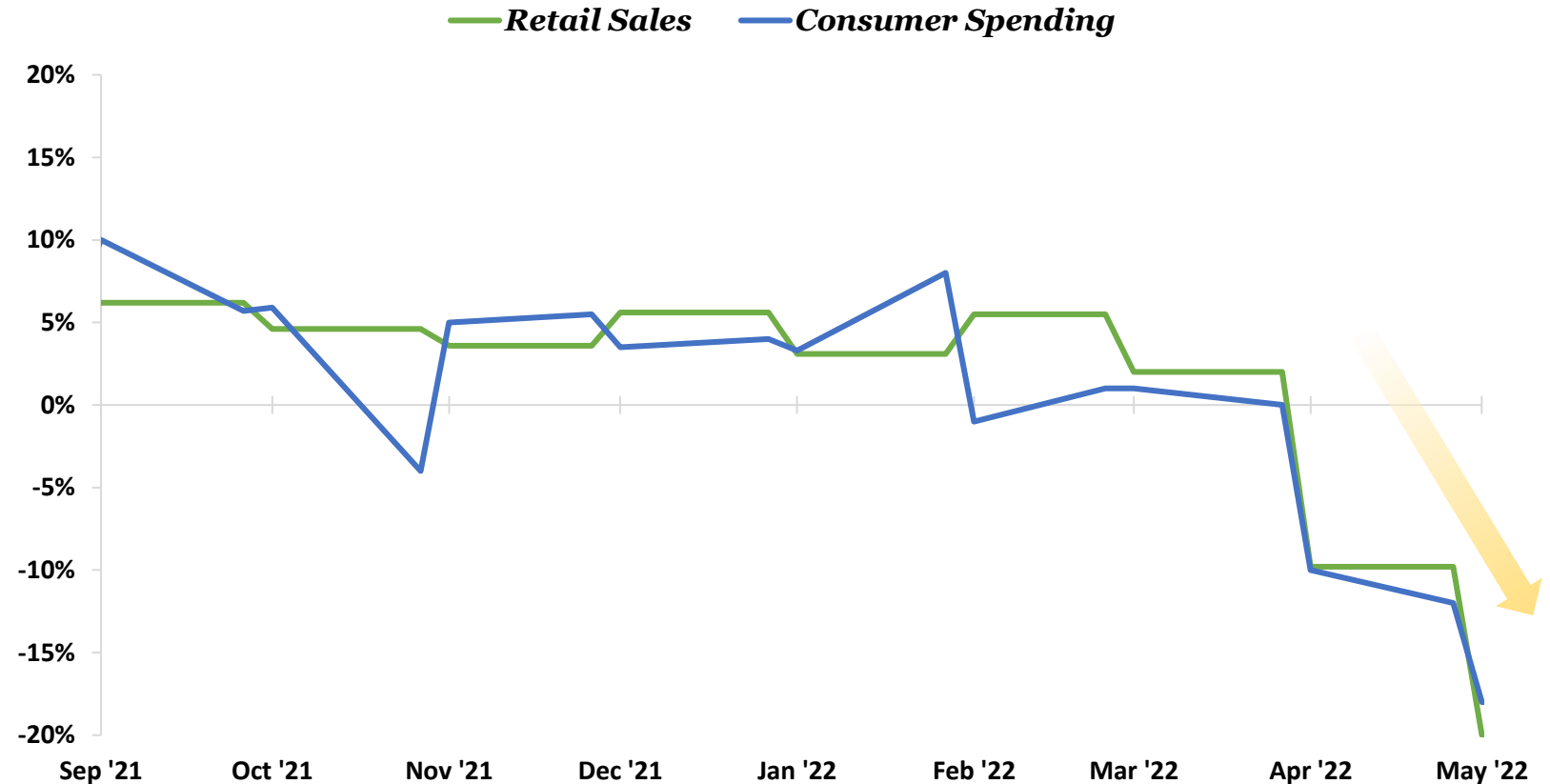
Given the combination of supply shortages, soaring prices and difficulty finding premium products on top of fading consumer sentiment, it is hardly surprising that by Sberbank's own high frequency data readings of consumer spending and retail sales, both plunged dramatically in the months following the invasion, by upwards of ~20% year-over-year. Other readings of high frequency data such as e-commerce sales within Yandex and same-store traffic at retail sites across Moscow reinforce steep declines in consumer spending and sales.

Sources: Yale Chief Executive Leadership Institute, Morgan Stanley, Bloomberg, Russian Federal Service of State Statistics, JPMorgan, Bank of America Global Research, Deutsche Bank, UBS



High Frequency Data Shows Russian Retail Sales And Consumer Spending Plummet

Russian Retail Sales and Consumer Spending
(%, shown as year-over-year percentage change, not seasonally adjusted)



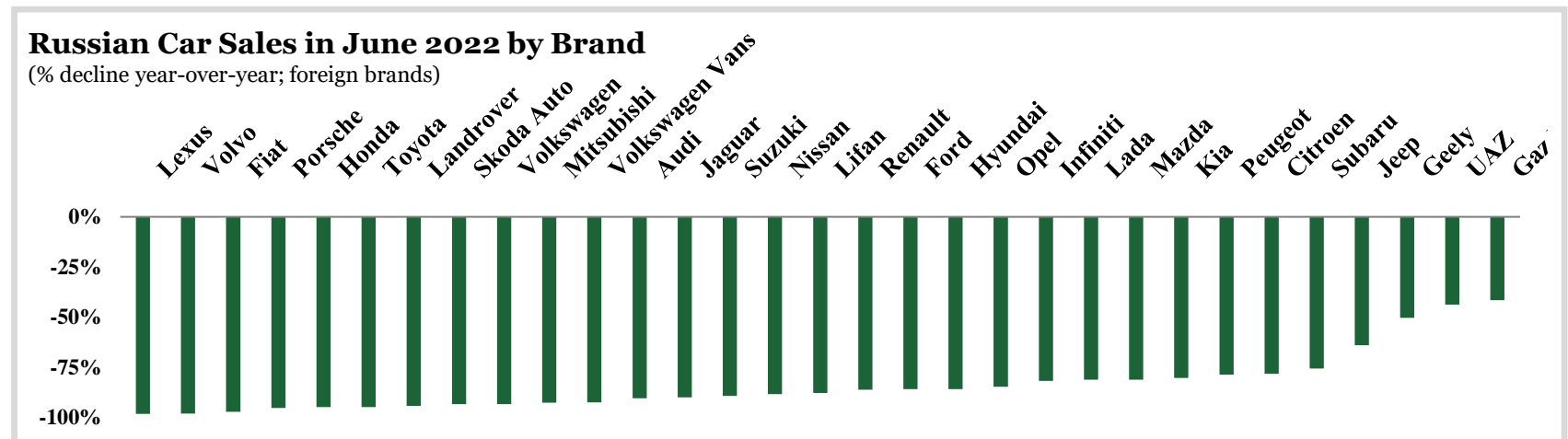
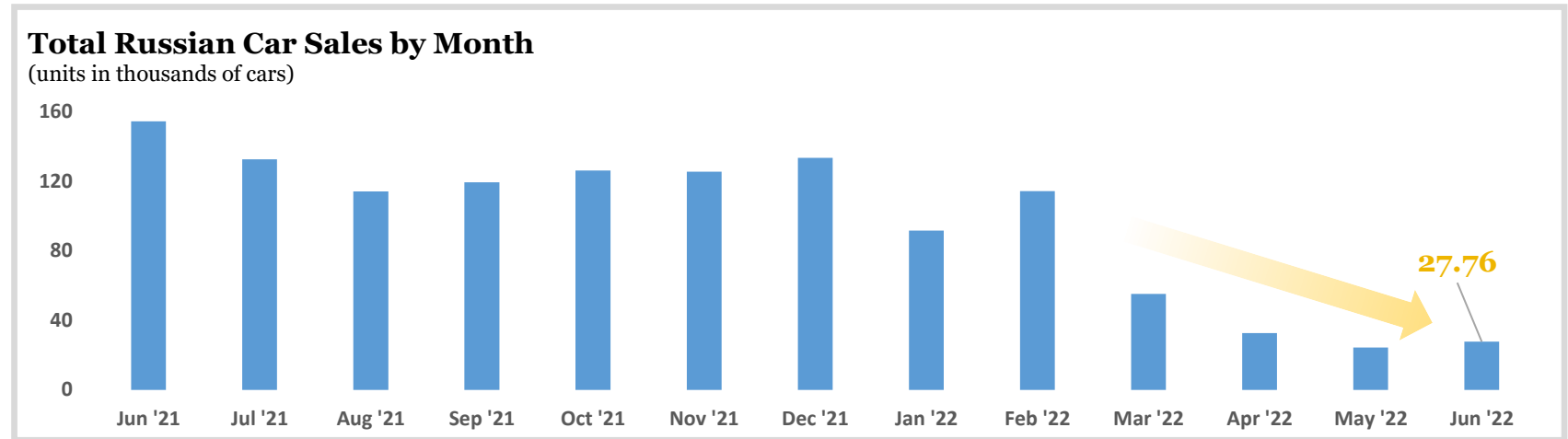


Russian Domestic Consumption & Production

Prior to the invasion, an average of ~100,000 automobiles were sold every month across Russia, but these sales have collapsed to just a quarter of their prior volume. The most recent data releases indicate that only 27,000 cars were sold in the month of June across all of Russia, driven not only by soaring prices and deteriorating consumer sentiment but also because of lack of supply. The data release for foreign automobiles in Russia was even more disastrous. Historically, many Russians have preferred to drive foreign automobiles – not only because of prestige but also due to concerns about safety and quality. But in the months after the invasion, the purchase of foreign-made automobiles in Russia has ground to an almost complete standstill.

Sources: Yale Chief Executive Leadership Institute, Association of European Businesses, Bloomberg, Russian Federal Service of State Statistics, JPMorgan, Bank of America Global Research, Deutsche Bank, UBS

Collapse In Car Sales Representative Of Broader Economic Woes





Russian Domestic Consumption & Production

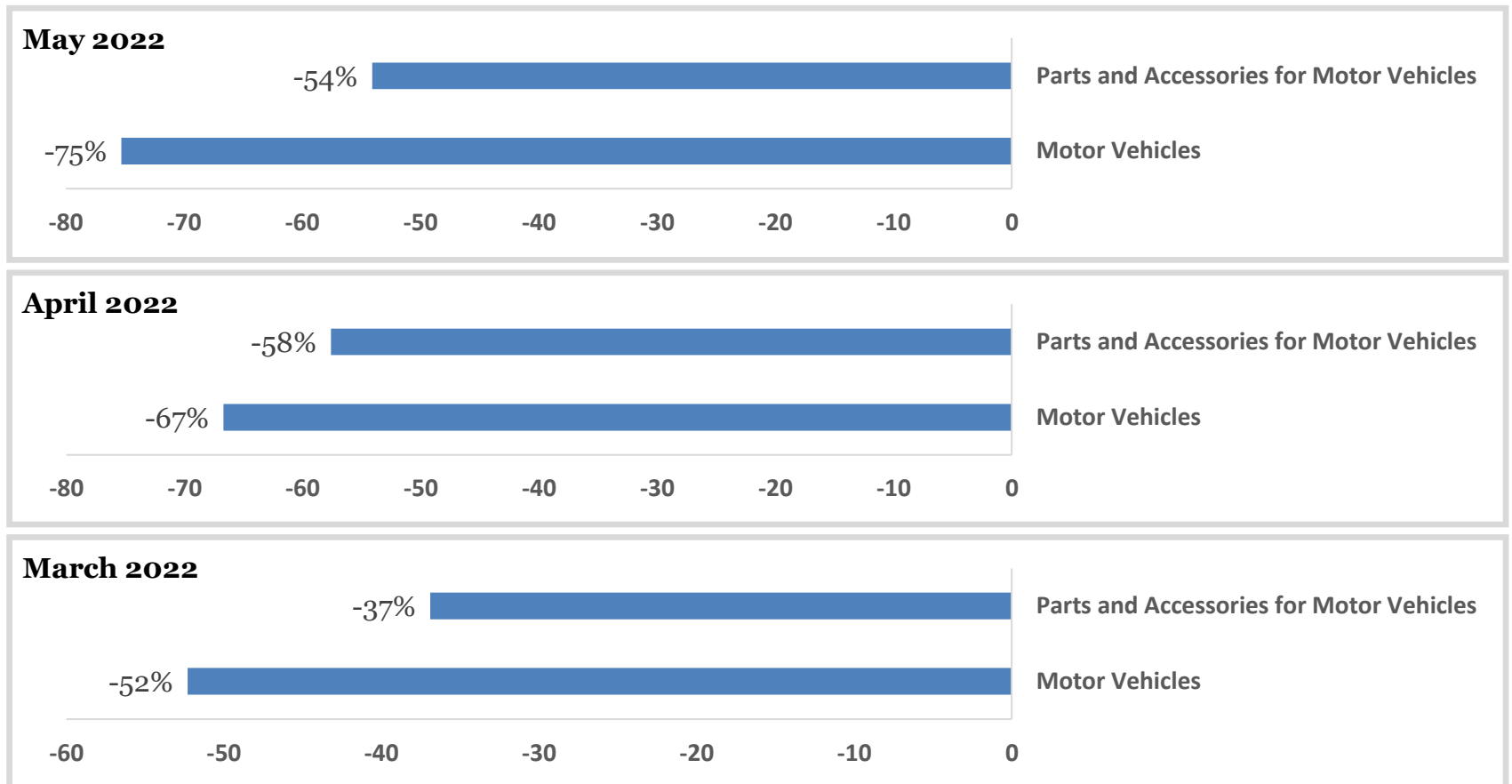
Putin has prioritized import substitution, to replace lost foreign imports with ramped-up domestic production – but import substitution has not been successful, and Russian innovation lags far behind that of peer countries. Russian domestic production of automobiles has plummeted, given the reliance on international supply chains for not only raw materials such as steel and machinery, but also complex parts such as brakes and airbags in addition to western technology in semiconductors. Even at these minimal production levels, significant shortcuts are being taken. Russia went so far as to suspend car production safety requirements in domestic automobile manufacturing, and many of the cars being manufactured post-invasion now lack such essentials as airbags and anti-lock brakes.

Source: Yale Chief Executive Leadership Institute, Russian Federal Service of State Statistics, Bloomberg, JPMorgan, Bank of America Global Research, Deutsche Bank, UBS

Import Substitution With Made-In-Russia Cars? Quite The Opposite

Russian Domestic Industrial Production Volume of Motor Vehicles and Parts/Accessories

(%, year-over-year percentage change, by month)





Russian Domestic Consumption & Production

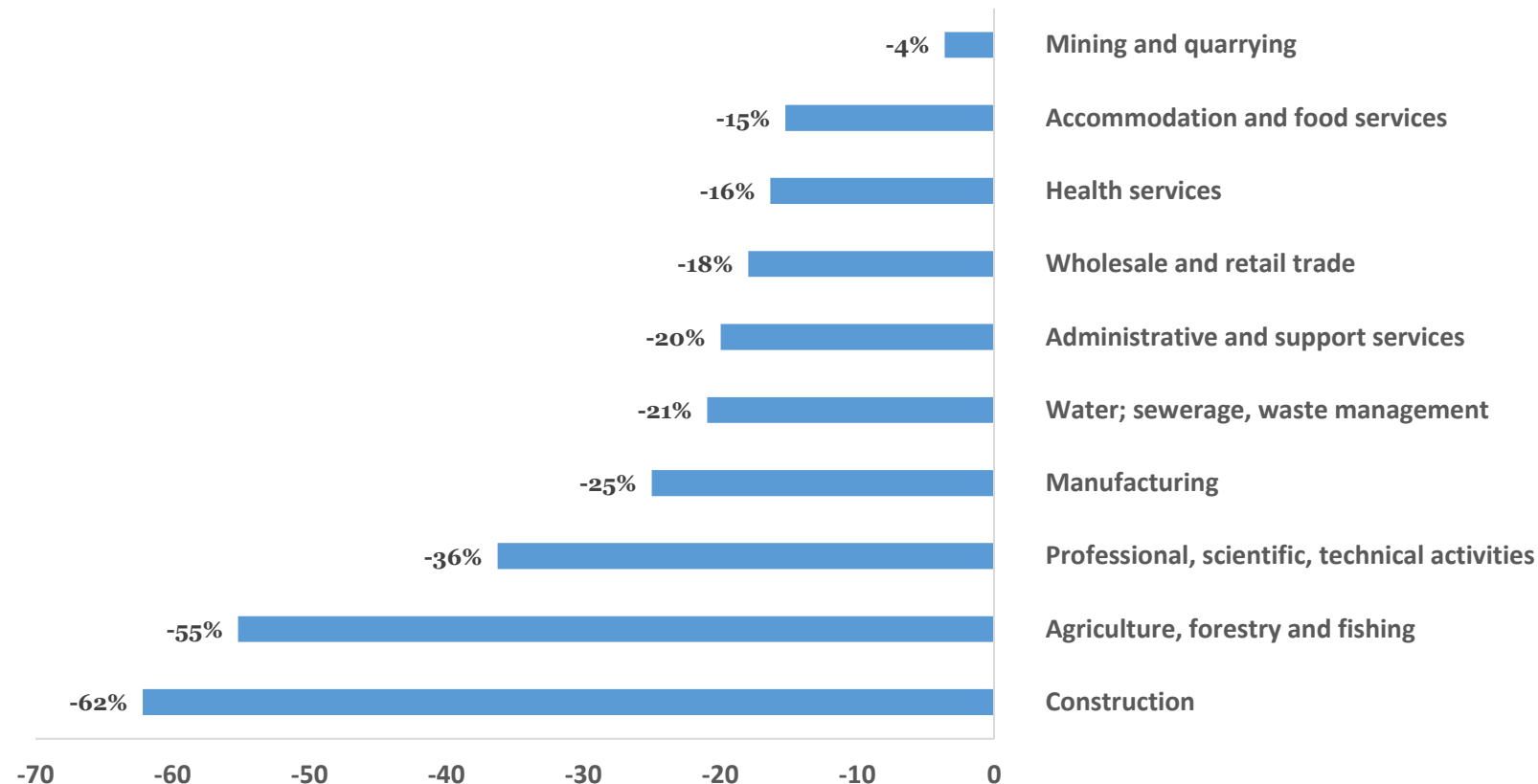
Import substitution is not a new area of focus for Putin – ever since the Crimean crisis of 2014 and the implementation of western sanctions then, Putin has long focused on building up the capabilities of domestic industry – with little success, as even he acknowledges. In his recent plenary address at the much-diminished St. Petersburg Economic Forum, Putin laid out his revamped vision for import substitution moving forward – but Russian domestic manufacturers seem to have missed the memo, as Q1 2022 results were uniformly disastrous across the board despite Putin’s (futile) emergency efforts to increase domestic production.

Source: Yale Chief Executive Leadership Institute, Russian Federal Service of State Statistics, Bloomberg, Bank of America Global Research, Deutsche Bank, UBS

Putin’s Import Substitution Rhetoric Is Only Rhetoric

Russian Gross Domestic Value Added in Q1 2022 by Industry

(%, quarter-over-quarter percentage change, not seasonally adjusted)





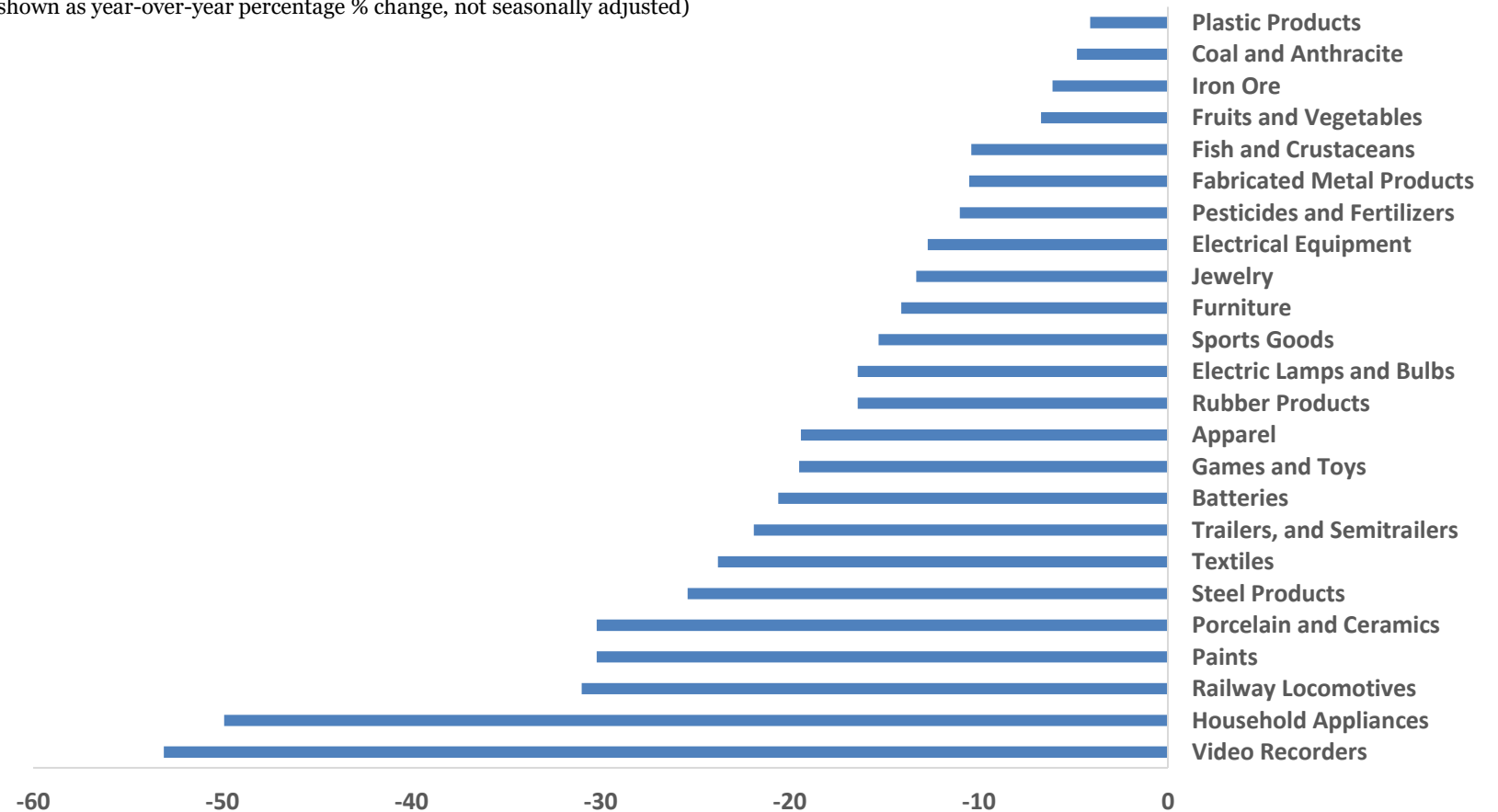
Russian Domestic Consumption & Production

Despite Putin’s rallying cries of self-sufficiency, all these industries share a crucial similarity: they simply cannot replace imported parts and components that Russia lacks the technological prowess to make, and illicit, shadowy parallel imports can only go so far. For example, the Russian tank producer Uralvagonzavod has furloughed workers based on input shortages; Russian production of tanks, missiles and other equipment relies on imported microchips and precision components that simply cannot be sourced right now. Likewise, Russia’s Caspian pipeline has had challenges finding spare parts related to the US and EU’s gas liquefaction ban. Each of these supply disruptions – which cannot be replaced by import substitution or parallel imports – leads to production shutdowns which then ripple across the entire supply chain, bringing various ancillary products and services into a simultaneous standstill.

Granular Russian Industrial Production Data By Sub-Industry Shows Russian Production At Standstill

Russian Domestic Industrial Production Volume Decrease by Industry

(shown as year-over-year percentage % change, not seasonally adjusted)



Source: Yale Chief Executive Leadership Institute, [Russian Federal Service of State Statistics](#), [Bloomberg](#), [Morgan Stanley](#), [Bank of America Global Research](#), [UBS](#)



Russian Domestic Consumption & Production

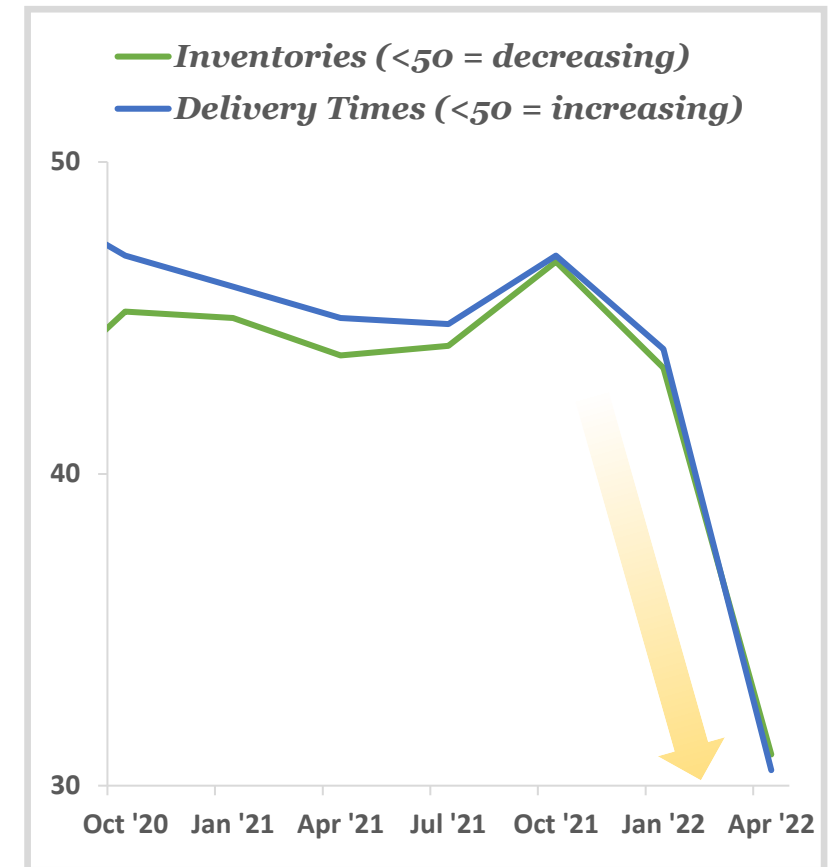
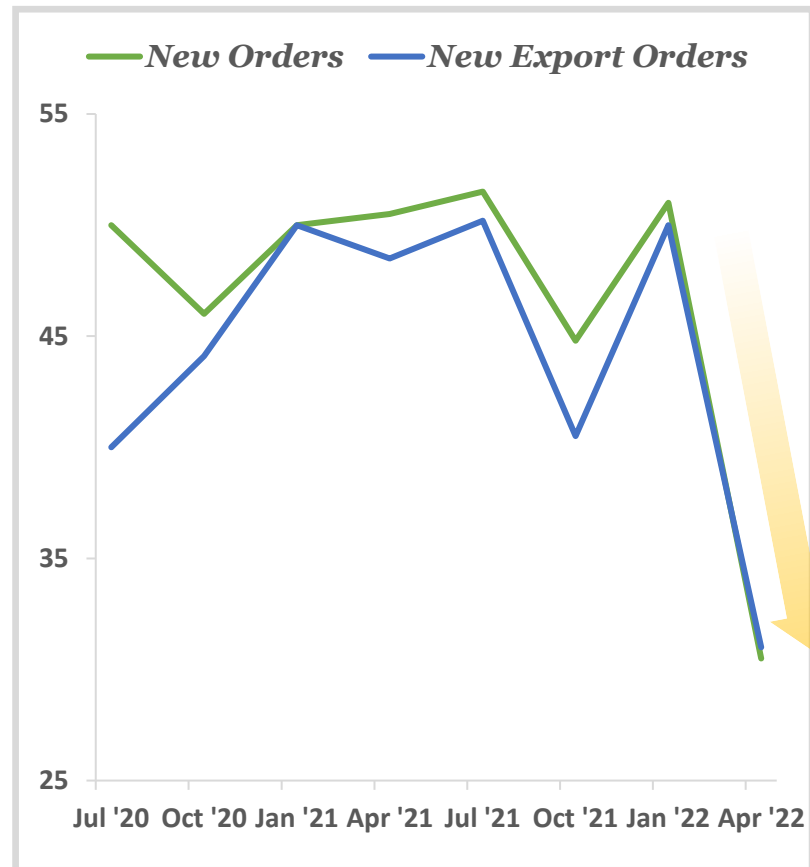
A reading of the Russian Purchasing Managers' Index (PMI) shows that clearly, purchasing managers want nothing to do with placing new orders until the geopolitical environment stabilizes. The structural headwinds facing Russian domestic consumption and production are unlikely to change as long as the overhang of Putin's invasion and associated western sanctions and business retreats are present. Despite Putin's rallying cries of import substitution and illicit parallel import schemes, Russia is far from self-sufficiency, and the hallowing out of its domestic innovation and production base will continue to impair Russian economic development for years to come.

Source: Yale Chief Executive Leadership Institute, Russian Federal Service of State Statistics, Morgan Stanley, S&P Global, Bloomberg, JPMorgan, Bank of America Global Research, Deutsche Bank, UBS

Purchasing Managers Survey Reflects Pervasive Economic Anxiety

Russian Purchasing Managers Indices (PMI)

(shown as composite scores, quarterly)





Russian Economy In Crisis Theme #5: Business, Capital, and Talent Flight

- 1 **Background: Decoding Deceptive Official Russian Economic Statistics**
- 2 **Re-Evaluating Russia as a Commodity Exporter: Rising Prices Mask Irreversible Deterioration in Long-Term Strategic Positioning**
- 3 **Drop In Russian Imports Illustrates Asymmetric Weakness of Russia's Global Economic Relationships**
- 4 **Weak Russian Domestic Consumption & Production Data Shows Import Substitution Not Feasible**
- 5 **Business, Capital, and Talent Flight From Russia**
- 6 **Unsustainable Fiscal and Monetary Stimulus And Kremlin Interventions Conceal Structural Economic Weaknesses**
- 7 **Financial Markets Pricing In Sustained Weakness In Real Economy with Liquidity and Credit Contracting**
- 8 **Conclusion: Russia's Economic Vulnerabilities Reveal Key Lessons For The West**



Business, Capital, Talent Flight

Since Russia’s invasion of Ukraine began in February 2022, the authors have led an intensive research effort to track the responses of nearly 1,500 public and private companies from across the globe, with well over 1,000 companies publicly announcing they are voluntarily curtailing operations in Russia. The value of the Russian revenue represented by these companies and the value of these companies’ investments in Russia together exceed \$600 billion - meaning the retreat of well over 1,000 companies in the span of three months has almost single-handedly reversed three decades’ worth of Russian economic integration with the rest of the world, while undoing years of foreign investment into Russia. In total, these companies, and the Russian companies which provide services to them, employ over 5 million Russians, and the Mayor of Moscow has already expressed concern over unemployment.

Source: Yale Chief Executive Leadership Institute, [Russian Federal Service of State Statistics](#), [Bloomberg](#), [Bank of America Global Research](#), [UBS](#), [Associated Press](#)

Proprietary Yale CELI Russian Business Retreat Data Suggests ~40% Of Russian GDP At Risk

Yale CELI List of Companies Curtailing Operations in Russia Contains 40%+ of Russian GDP



1000+ *global companies*

40%+ *of Russia’s GDP*

5mm+ *Russian jobs dependent on foreign investment*



Russian Macroeconomic Indicators

The official level of capital outflows indicated by the Bank of Russia is likely to be a gross underestimate of the actual level of capital outflows, given strict capital controls implemented by the Kremlin restricting the amount of wealth Russian citizens can transfer out of the country. By all anecdotal reports, wealthy Russians are flocking to safe havens in droves. Many of these Russians have swarmed to financial centers such as Dubai in the Middle East; the presence of Russian capital inflows in Dubai is so significant in magnitude that many local real estate experts attribute Dubai's ballooning property values over the last 4 months to the influx of new Russian wealth seeking shelter, with many Dubai real estate firms reporting 100% and even 200% year-over-year increases in sales to buyers from Russia.

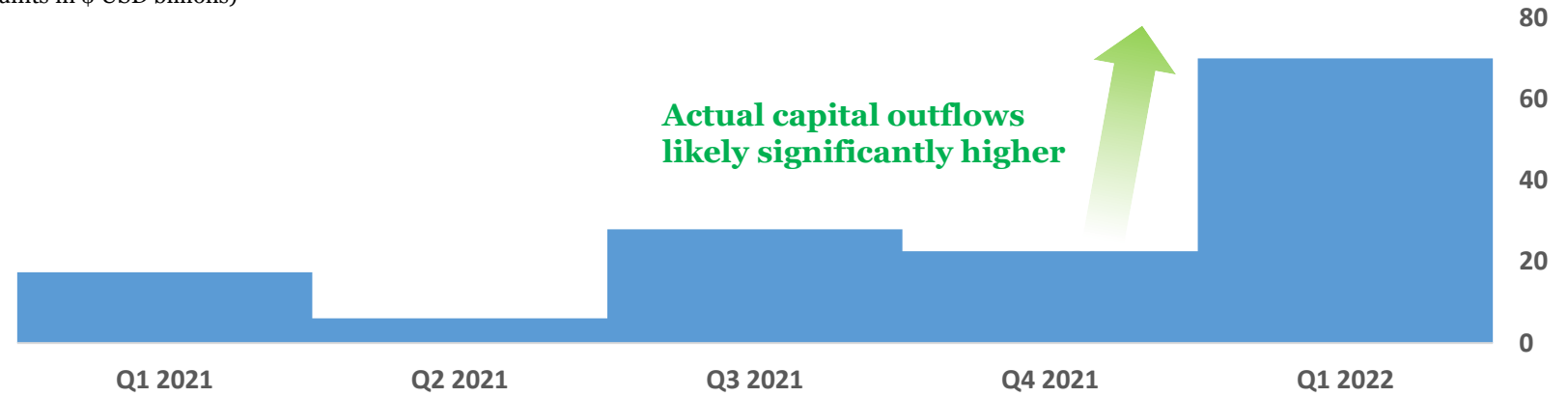
Source: Yale Chief Executive Leadership Institute, The Central Bank of the Russian Federation, Russian Federal Service of State Statistics, Bloomberg, JPMorgan, Bank of America Global Research, Deutsche Bank, UBS



Official Central Bank Gauge Shows Quadrupling Of Formal Capital Outflows Post-Invasion Amidst Brain Drain

Russian Private Sector Capital Outflows Per Central Bank of Russia

(units in \$ USD billions)



Exodus of Ultra-High Net Worth And Highly Educated/Skilled Russians Of Particular Significance

500k+

Russians who have fled Russia

50%

are highly-educated or work in skilled sectors such as tech

15k+

UHNWI (ultra-high-net-worth individuals) have fled Russia

20%

of all Russia's UHNWI (defined as those with net worth of \$30MM+)



Russian Economy In Crisis Theme #6: Unsustainable Kremlin Policies

- 1 **Background: Decoding Deceptive Official Russian Economic Statistics**
- 2 **Re-Evaluating Russia as a Commodity Exporter: Rising Prices Mask Irreversible Deterioration in Long-Term Strategic Positioning**
- 3 **Drop In Russian Imports Illustrates Asymmetric Weakness of Russia's Global Economic Relationships**
- 4 **Weak Russian Domestic Consumption & Production Data Shows Import Substitution Not Feasible**
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- 7 **Financial Markets Pricing In Sustained Weakness In Real Economy with Liquidity and Credit Contracting**
- 8 **Conclusion: Russia's Economic Vulnerabilities Reveal Key Lessons For The West**



Unsustainable Kremlin Policies

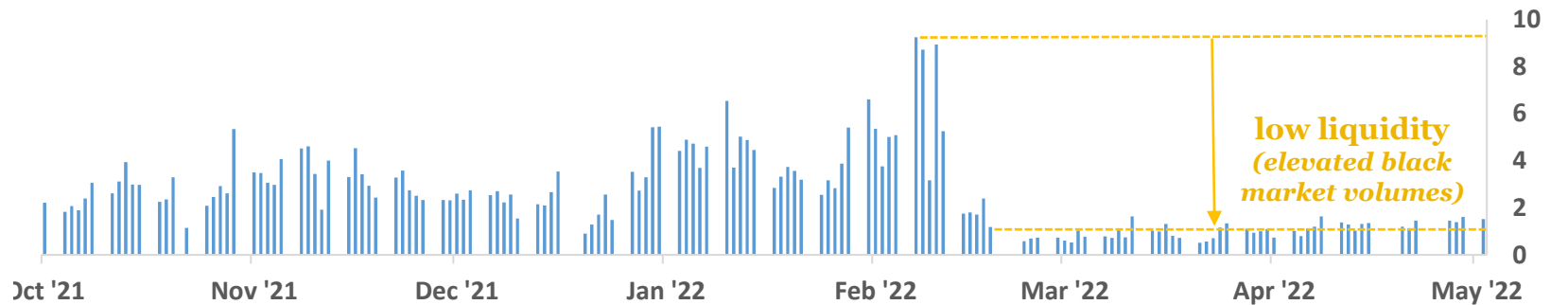
The official exchange rate of the ruble given the presence of such draconian capital controls can be misleading – as the ruble is, unsurprisingly, trading at dramatically diminished volumes compared to pre-invasion on low liquidity. By many reports, much of this erstwhile trading has migrated to unofficial ruble black markets, where the spread between the official exchange rate and the actual exchange rate is equally dramatic – upwards of 20% to 100% higher than the official exchange rate, in some cases, given a shortage of obtainable, liquid dollars within Russia. Even the Bank of Russia has admitted that the exchange rate is a reflection more of government policies and a blunt expression of the country’s trade balance rather than freely tradeable liquid FX markets.

Source: Yale Chief Executive Leadership Institute, Morgan Stanley, Bloomberg, Russian Federal Service of State Statistics, JPMorgan, Bank of America Global Research, Deutsche Bank, UBS

Russian Ruble Exchange Rate Reflects Stringent Capital Controls, Low Liquidity, And Artificial Value

Russian Ruble Spot Daily Trading Volumes Across All Official Markets

(units in \$ USD billions)



Capital Controls on the Ruble Post-Invasion

- Banned Citizens from Sending Money to Bank Accounts Abroad
- Suspending Cash Withdrawals from Dollar Banking Accounts Beyond \$10,000
- Force Exporters to Exchange 80% of Earnings for Rubles
- Suspend Direct Dollar Conversions for Individuals With Ruble Banking Accounts
- Suspend Lending in Dollars
- Suspend Dollar Sales Across Russian Banks
- Encourage Individuals to Redeem Dollars for Rubles
- Companies Must Pay Foreign Dollar Debt in Rubles



Unsustainable Kremlin Policies

It is impossible to quantify the exact magnitude of Putin's spending – and where the money goes – with any great degree of precision, considering, since the invasion started, the Russian government has intentionally obfuscated budget items under the guise of guarding against international sanctions. Nevertheless, Putin's announcements of fiscal measures provide some sense of the unprecedented magnitude of Kremlin intervention in helping to prop up the flagging Russian economy. All of this enhanced fiscal stimulus is on top of presumably vast military spending, further straining the Russian budget.

Source: Yale Chief Executive Leadership Institute, Morgan Stanley, Russian Federal Service of State Statistics, Bloomberg, JPMorgan, Bank of America Global Research, Deutsche Bank, UBS

Massive, Unsustainable Fiscal Stimulus From Kremlin Masking Structural Economic Weakness

Post-Invasion Fiscal Stimulus from Kremlin

Subsidized Loans and Loan Payment Assistance to Companies

Transfer Payments to Affected Industries

Subsidized Mortgages and Mortgage Payment Assistance

Increase in Direct Payments to Individuals, Including Families, Pregnant Women, Government Employees, Pensioners, Military, Low-Income

Recapitalization of Companies by National Wealth Fund

Nationalization and Recapitalization of Certain Companies

Subsidized Credit Forgiveness/Debt Jubilee

Subsidized Protection from Bankruptcy and Foreclosure

Drawdowns from National Wealth Fund for State Expenditures

Subsidized Infrastructure Development





Unsustainable Kremlin Policies

The black-box that is the budget and financing of the Russian state cannot be known with 100% precision or certainty – but certain facts are indisputable. Thanks to a massive wave of fiscal and monetary stimulus unleashed post-invasion, Russian state spending and social obligations are now at a magnitude much higher than before. To sustain this unprecedented level of spending, any decrease in Russian gas and oil revenues would force Russia to tap into its “rainy-day” funds even more than it is already doing, but these reserves are seemingly already dwindling, with the prospects for future “top-offs” of these vital reserves increasingly bleak for Russia. It appears to be a fiscal path with little margin for error – operating under the preconception that oil and gas revenues will only go up. That is the fundamental bet underlying whether Putin will run out of cash, or whether he can sustain these unprecedented levels of fiscal spending.

Kremlin Inundating Economy With Artificial Liquidity To Mask Economic Weakness

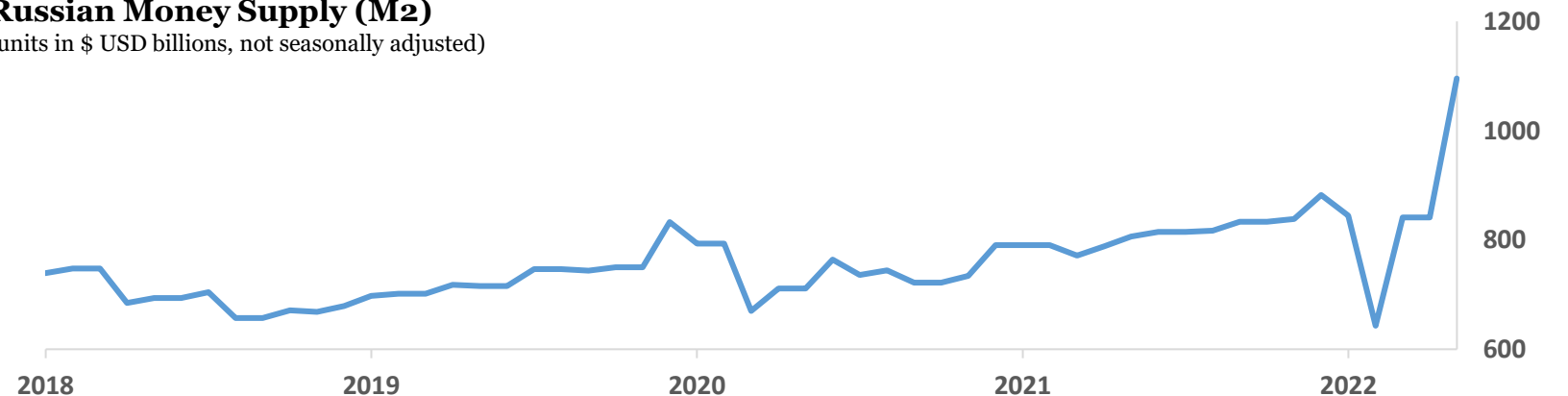
Russian Government Increase In Fixed Asset Investment Budgets (Infrastructure) in Q1 2022

(shown as year-over-year % percentage change, not seasonally adjusted)



Russian Money Supply (M2)

(units in \$ USD billions, not seasonally adjusted)

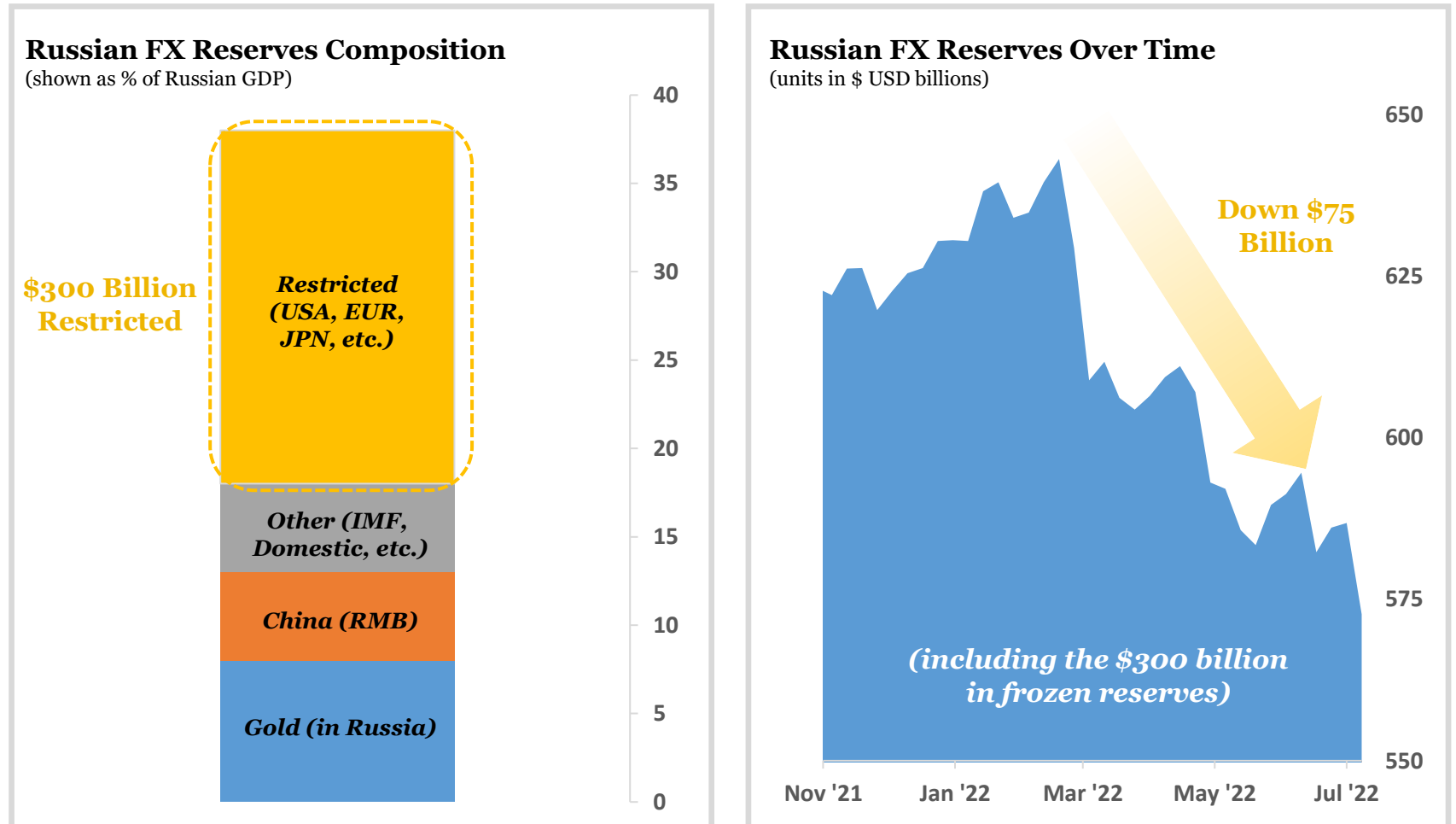




Unsustainable Kremlin Policies

The most obvious challenge facing Putin's rainy-day funds is the fact that of his \$600 billion in foreign exchange reserves, accumulated from years' worth of oil and gas revenues, \$300 billion is frozen and out of reach with allied countries across the US, Europe and Japan restricting access. There have been some calls to seize this \$300 billion to finance the reconstruction of Ukraine, calls which are seemingly louder in European policy circles than in the US – for now, at least. Putin's remaining FX reserves are decreasing at an alarming pace, as Russian FX reserves have declined by \$75 billion since the start of the war – a rate which, if annualized, suggests these reserves may be spent down within a few years' time.

Russia's Foreign Exchange Reserves Bleeding Out Fast

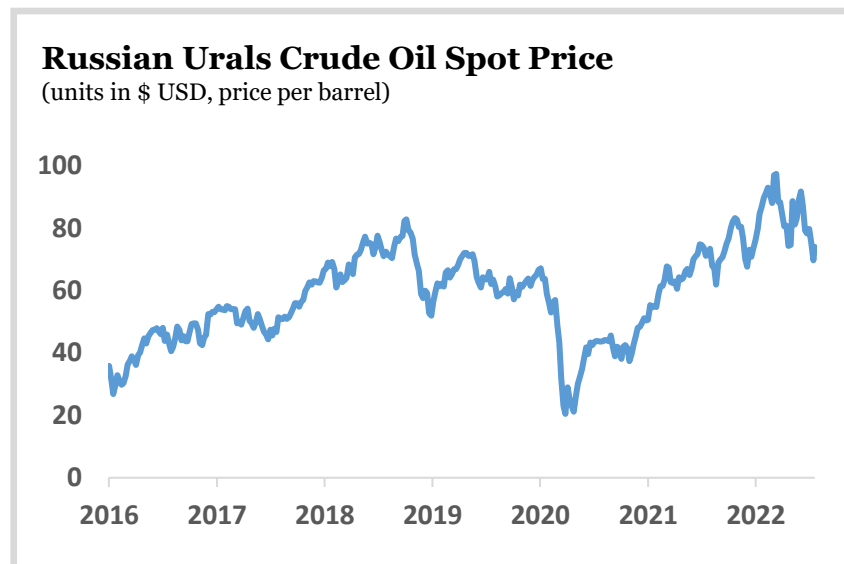
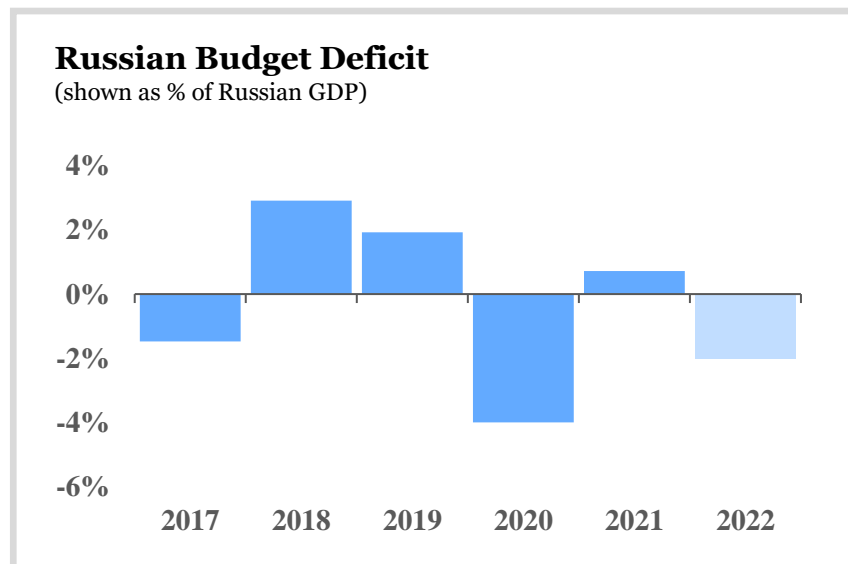




Unsustainable Kremlin Policies

One sign of just how high spending levels have risen is the fact that Finance Minister Anton Siluanov has readily acknowledged that the Russian government budget will likely be in deficit this year by an amount equivalent to 2% of Russian GDP – compared to previous rosy projections of a surplus, as has been typical the past few years. Even more interestingly, Siluanov floated the idea of withdrawing funds from the National Wealth Fund equivalent to a third of the entire fund to pay for this deficit – a whopping withdrawal which would far surpass previous withdrawals by many orders. If Russia is running a budget deficit requiring the drawdown of a third of its sovereign wealth fund when oil and gas revenues are still relatively strong, the financial picture which is emerging of the Kremlin’s financing does not seem promising at all. In fact, the picture seems to be of a Kremlin which is fast running out of money, despite intentional obfuscation.

Kremlin Drawing Down Rainy Day Funds To Cover Steep Budget Deficit Despite High Oil Prices



Russia Drawing Down One-Third of Sovereign Wealth Fund to Cover 2022 Budget Deficit

(according to [Reuters](#) and [Russian sources](#))

Macro Matters



Russia to cover budget deficit with rainy-day fund in 2022, FinMin says

Reuters



Russian Economy In Crisis Theme #7: Russian Financial Markets

- 1 **Background: Decoding Deceptive Official Russian Economic Statistics**
- 2 **Re-Evaluating Russia as a Commodity Exporter: Rising Prices Mask Irreversible Deterioration in Long-Term Strategic Positioning**
- 3 **Drop In Russian Imports Illustrates Asymmetric Weakness of Russia's Global Economic Relationships**
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- 7 **Financial Markets Pricing In Sustained Weakness In Real Economy with Liquidity and Credit Contracting**
- 8 **Conclusion: Russia's Economic Vulnerabilities Reveal Key Lessons For The West**

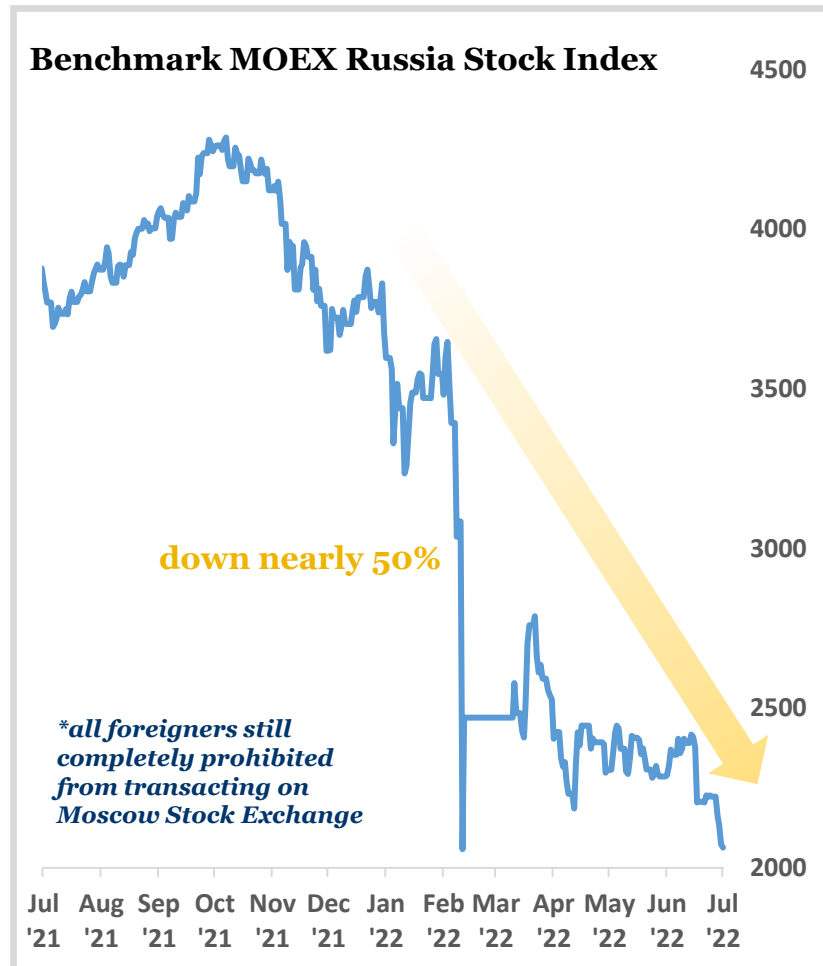


Russian Financial Markets

Financial markets are useful not only as an indicator of current financial and liquidity conditions, but also as a discounting mechanism for understanding what is priced into the future. If the performance of Russian financial markets across asset classes this year is to be given any weight, then the message seems to be clear: the situation is dire now, and the situation is dire moving forward – especially with Russian entities frozen out of international capital markets.

Source: Yale Chief Executive Leadership Institute, Bloomberg, JPMorgan, Bank of America Global Research, Deutsche Bank, UBS

Frozen Out Of International Capital Markets, Capital-Starved Russian Financial Markets Pricing In Sustained Weakness



Russian Access to International Capital Markets Since Start of Invasion

zero equity (stock) issuances

zero debt (bond) issuances

one sovereign debt default



Russian Financial Markets

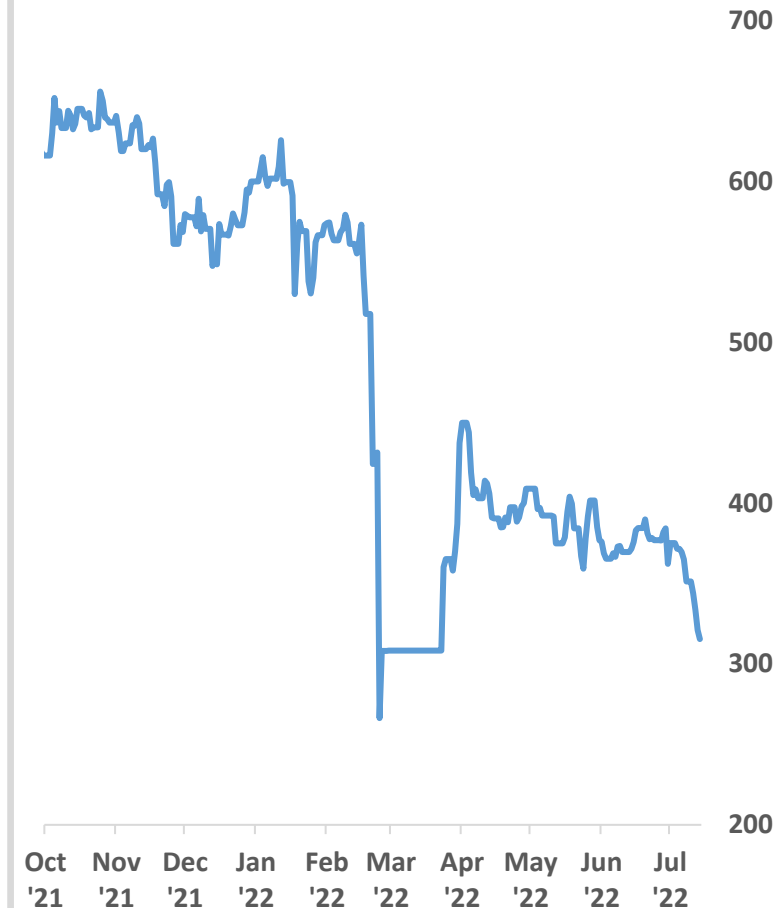
The benchmark Russian equity index is one of the single worst performers of any major country index in the entire world this year, falling nearly ~50% since the start of the invasion. This reflects purely domestic sentiment from Russian investors alone: if foreign investors were allowed to liquidate their positions, selling pressure would be several degrees higher across the entire Moscow Stock Exchange. What is even more striking is that, in examining single stock performance across the Moscow Stock Exchange, several of the worst performing single stocks are those of Rosneft, the Russian state oil giant, and Gazprom, the state gas giant – and some of the erstwhile crown jewels of the Russian economy. Clearly, financial markets are unwilling to touch these companies with a ten-foot pole in the expectation that Putin is cannibalizing what had been credible, profit-making companies to advance his geopolitical agenda.

Source: Yale Chief Executive Leadership Institute, [Moscow Stock Exchange](#), [Bloomberg](#), [Russian Federal Service of State Statistics](#), [JPMorgan](#), [Bank of America Global Research](#), [UBS](#)

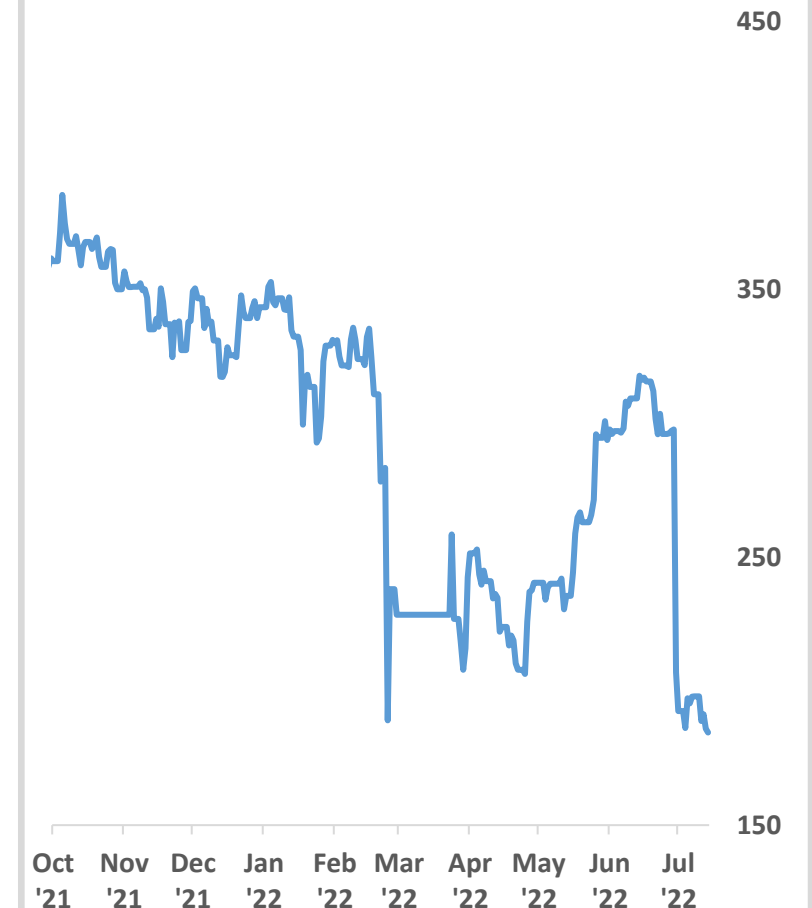


Major Russian Energy Giants Are Some Of The Worst Performing Stocks On The Moscow Stock Exchange This Year

Rosneft Stock Performance (ROSN)



Gazprom Stock Performance (GAZP)





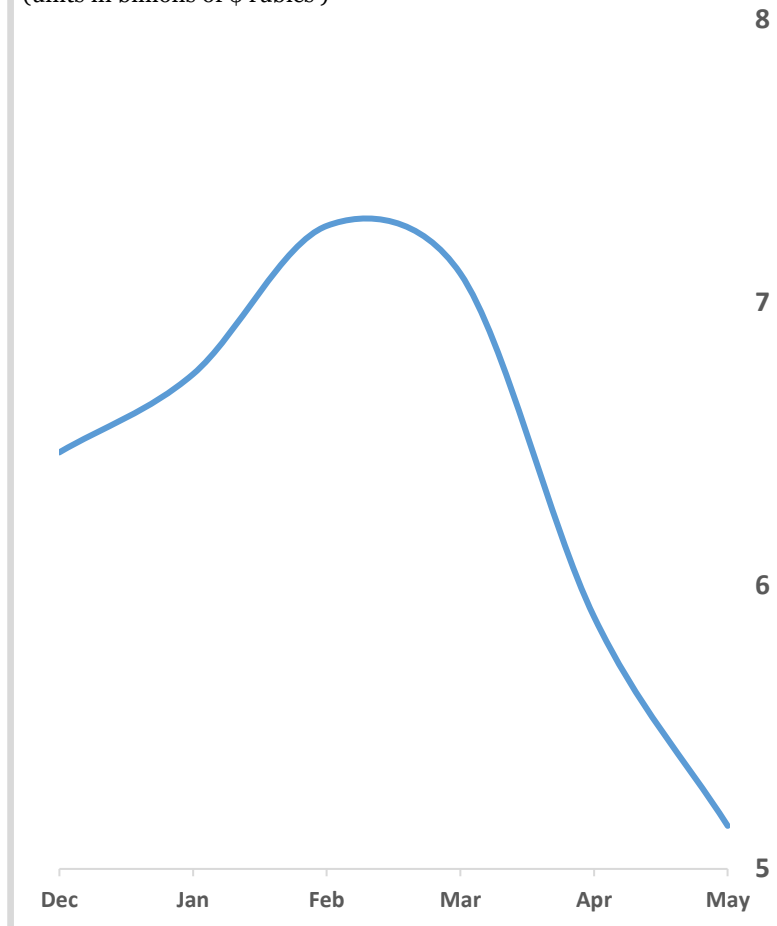
Russian Financial Markets

The massive Kremlin-backed liquidity and credit injections which prevented a financial crisis in the days following the invasion have been insufficient to spur true credit formation and risk-taking by small and medium sized businesses. In fact, despite the permissive credit environment fostered by the Kremlin and state subsidization of various forms of loans including mortgages and business loans, loans originated to small and medium businesses have actually fallen dramatically in spite of these subsidies. It seems no amount of Kremlin incentives are enough to spur businesses to underwrite new investments and capital expenditure in this political and economic climate – a reflection of what Russian business leaders truly think about their own economy, and the outlook for future growth (or more aptly, contraction).

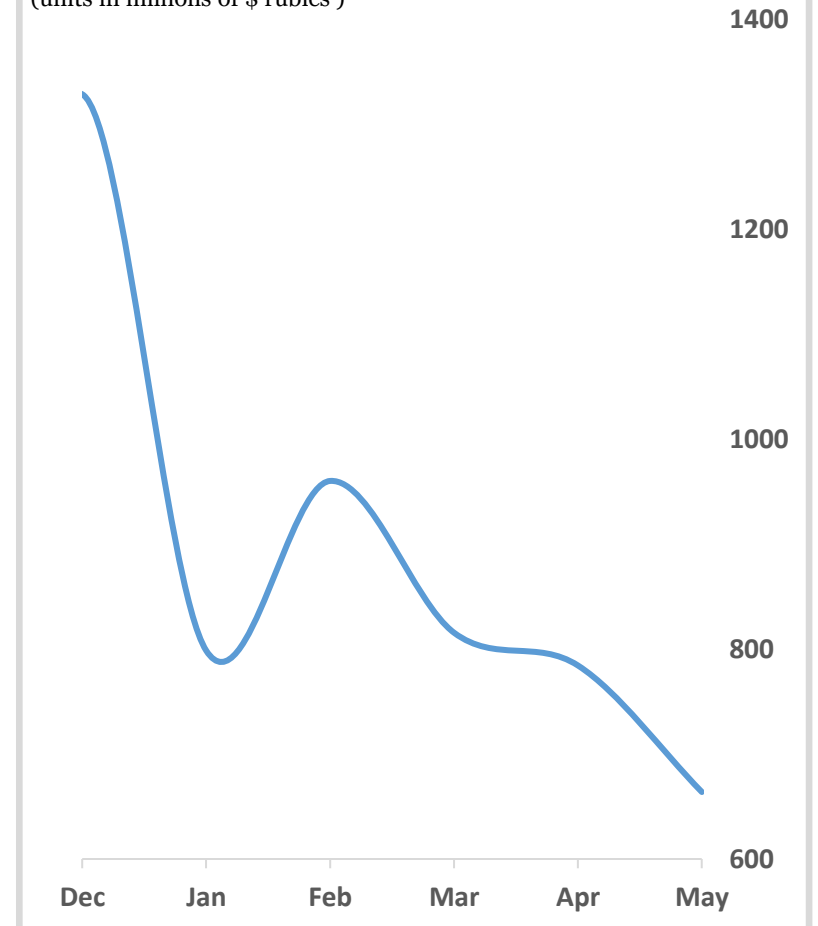
Source: Yale Chief Executive Leadership Institute, [Moscow Stock Exchange](#), [Bloomberg](#), [Russian Federal Service of State Statistics](#), [JPMorgan](#), [Bank of America Global Research](#), [Deutsche Bank](#), [UBS](#)

Credit Not Flowing Through To Liquidity-Challenged Small And Medium Russian Businesses

Debt Held By Small And Medium Businesses
(units in billions of \$ rubles)



New Loans Originated To SME Businesses
(units in millions of \$ rubles)





Russian Economy In Crisis Theme #8: Sustained Economic Pressure Is Working

- 1 **Background: Decoding Deceptive Official Russian Economic Statistics**
- 2 **Re-Evaluating Russia as a Commodity Exporter: Rising Prices Mask Irreversible Deterioration in Long-Term Strategic Positioning**
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Conclusions

- **Russia's strategic positioning as a commodities exporter has irrevocably deteriorated, as it now deals from a position of weakness with the loss of its erstwhile main markets, and faces steep challenges executing a "pivot to Asia" with non-fungible exports such as piped gas**
- **Despite some lingering leakiness, Russian imports have largely collapsed, and the country faces stark challenges securing crucial inputs, parts, and technology from hesitant trade partners, leading to widespread supply shortages within its domestic economy**
- **Despite Putin's delusions of self-sufficiency and import substitution, Russian domestic production has come to a complete standstill with no capacity to replace lost businesses, products and talent; the hollowing out of Russia's domestic innovation and production base has led to soaring prices and consumer angst**
- **As a result of the business retreat, Russia has lost companies representing ~40% of its GDP, reversing nearly all of three decades' worth of foreign investment and buttressing unprecedented simultaneous capital and population flight in a mass exodus of Russia's economic base**



Conclusions – Continued

- Putin is resorting to patently unsustainable, dramatic fiscal and monetary intervention to smooth over these structural economic weaknesses, which has already sent his government budget into deficit for the first time in years and drained his foreign reserves even with high energy prices – and Kremlin finances are in much, much more dire straits than conventionally understood
- Russian domestic financial markets, as an indicator of both present conditions and future outlook, are the worst performing markets in the entire world this year despite strict capital controls, and have priced in sustained, persistent weakness within the economy with liquidity and credit contracting – in addition to Russia being substantively cut off from international financial markets, limiting its ability to tap into pools of capital needed for the revitalization of its crippled economy
- The Kyiv School of Economics and McFaul-Yermak Working Group under former US Ambassador to Russia Mike McFaul have led the way in proposing additional sanctions measures across individual sanctions, energy sanctions and financial sanctions. Looking ahead, there is no path out of economic oblivion for Russia as long as the allied countries remain unified in maintaining and increasing sanctions pressure against Russia
- Defeatist headlines arguing that Russia's economy has bounced back are simply not factual - the facts are that, by any metric and on any level, the Russian economy is reeling, and now is not the time to step on the brakes