

It Pays for Companies to Leave Russia

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I. Introduction and Methodology

Since Russia's invasion of Ukraine began in February 2022, the first author has led an intensive effort to track the responses of well over 1,200 public and private companies from across the globe, with almost 1,000 companies publicly announcing they are voluntarily curtailing operations in Russia to some degree beyond the bare minimum legally required by international sanctions.

The list has been, and continues to be, continually updated with new additions and new announcements by the first author's team of two dozen experts with diverse backgrounds in financial analysis, economics, accounting, strategy, governance, geopolitics, and Eurasian affairs; with collective fluency in ten languages including Russian, Ukrainian, German, French, Italian, Spanish, Chinese, Hindi, Polish, and English. The dataset is compiled using not only public sources such as government regulatory filings, tax documents, company statements, financial analyst reports, earnings calls, Bloomberg, FactSet, MSCI, S&P Capital IQ, Thomson Reuters, and business media from 166 countries; but also non-public sources, including a sui generis global wiki-style network of 250+ company insiders, whistleblowers and executive contacts.^{1 2}

When the list was first published the week of February 28, only several dozen companies had announced their departure from Russia. In the two months since, this list of companies staying/leaving Russia has already garnered significant attention for its role in helping catalyze the mass corporate exodus from Russia, with widespread media coverage and circulation across company boardrooms, policymaker circles, and other communities of concerned citizens around the world.^{3 4} The authors have also written short editorials for The New York Times, The Washington Post, Fortune, amongst others; each of which were the most-read articles in their respective outlets for at least 36 hours upon publication.⁵

In recognition that the decision to exit Russia reflects a complex calculus for companies, with varying degrees of actual curtailment of operations, the list consists

¹ The dataset can be accessed at <https://som.yale.edu/story/2022/almost-1000-companies-have-curtailed-operations-russia-some-remain>

² An enhanced, detailed version of the same dataset can be accessed at <https://www.yalerussianbusinessretreat.com/>

³ For example, see <https://www.washingtonpost.com/business/2022/03/08/russia-company-boycott-yale-list/>

⁴ For example, see <https://www.washingtonpost.com/business/2022/03/11/sonnenfeld-russia-ukraine-corporations/>

⁵ For example, see <https://www.nytimes.com/interactive/2022/04/07/opinion/companies-ukraine-boycott.html>

of five categories corresponding with an A-F letter grade scale, schoolhouse-style, based on their level of curtailment.

A: WITHDRAWAL: companies making a clean break/permanent exit from Russia or and/or leaving behind no operational footprint.

B: SUSPENSION: companies temporarily suspending all or almost all Russian operations without permanently exiting or divesting.

C: SCALING BACK: companies suspending a significant portion (but not all) of their business in Russia.

D: BUYING TIME: companies pausing new investments/minor operations in Russia but largely continuing substantive business in Russia.

F: DIGGING IN: companies defying demands for exit or reduction of activities largely doing business-as-usual.

Each potential addition is carefully reviewed by a team of experts through a collaborative process before a company is assigned a final grade through consensus and then added to the list. The list was initially primarily focused on large US companies with substantial exposure to Russia, but expanded over time to include firms from across the world, particularly from Europe and Asia, as well as public and private companies of varying size and varying presence in Russia.⁶

Our proprietary database has become the basis of several thoughtful research abstracts tracking the financial response to companies' withdrawal from Russia, such as the 2022 Edelman Trust Barometer Special Report: The Geopolitical Business, conducted in 14 countries with 14,000 respondents in the past month based in part on our list of companies.⁷

In this paper, we seek to explore the response within financial markets, across asset classes, to the decisions individual companies are making to either exit or remain in Russia. This work builds on a simplified earlier version which was published in the

⁶ For more details, see <https://fortune.com/2022/03/16/companies-leaving-russia-list-accountability/>

⁷ For more details, see <https://www.weforum.org/agenda/2022/05/the-geopolitical-business-russia-ukraine-war>

Washington Post.⁸ This paper amplifies the response within equity markets through various methodological approaches to measuring total shareholder returns by letter grade – including both market capitalization weighed returns as well as equal weighted returns. The returns by letter grade are further measured against variables including region (North America, Asia, and Europe), as well as market capitalization segment (small cap, mid cap, and large cap) and sector (GICS industry classifications). Based on the clear divergent financial performance of companies that have withdrawn from Russia relative to those that remain, an analysis of a representative basket of companies engaged in high-profile Russian asset write-downs and one-time impairment charges challenges the misleading but oft-repeated argument that the value of asset write-downs exceeds the value of equity gains. This paper then extends the study beyond public equity markets into credit markets through an analysis of longer dated corporate debt pricing, credit spreads and related derivative products, showing that the investor response has been incredibly broad-based across financial markets. Our sweeping analysis of global capital flows demonstrates the importance investors attribute to the decision to withdraw from Russia – and that investors believe the global reputational risk incurred by remaining in Russia at a time when nearly 1,000 major global corporations have exited far outweigh the costs of leaving. Clearly, doing well has not been antithetical to doing good – at least when it comes to withdrawing from Russia.

II. Financial Performance – Equity Markets

In this section, we explore the financial performance, as measured through total shareholder returns, of the companies exiting Russia relative to those remaining in Russia. We measure performance through total shareholder returns – necessarily excluding private companies – since other applicable metrics contain intrinsic flaws. For example, disproportionate attention has been focused on asset write-downs and one-time impairment charges in measuring the cost of Russian withdrawal, though these costs only capture the loss of fixed investments in Russia without consideration to the global reputational risk incurred by firms that remain. Asset write-downs are also more common in capex-intensive industries such as heavy manufacturing or commodities production but less appropriate as a metric for measuring the

⁸ For more details, see <https://www.washingtonpost.com/opinions/2022/04/26/businesses-that-left-russia-not-hurting-better-off/>

performance of more human-capital dependent industries such as professional services or software, making any analysis based on asset-write downs inherently incomplete and incomparable between different sectors.

Another flawed approach in quantifying the costs to companies that have exited Russia relative to those that remain is measuring lost Russian revenue incurred by firms withdrawing from Russia, yet our research reveals the share of Russian revenue as a percentage of total revenue is minimal for a majority of companies in our dataset. Indeed, generally speaking, the lost revenue from Russian operations is far more significant to the domestic economy of Russia – with crucial industries ranging from automobiles to technology grinding to essentially a complete standstill – than to the balance sheets of the companies in our dataset. Total shareholder returns thus provides the most complete accounting of the aggregate costs and benefits to companies from their decision to withdraw or remain in Russia, though the metric necessarily excludes private companies for whom no share price performance data is available. The study is thus confined to the ~600 publicly traded companies from our list.

In measuring total shareholder returns, there are several key parameters which involve some discretion – namely, time interval and methodology. The start date is not under dispute. We choose to measure from the start of the Russian invasion of Ukraine onwards, and thus utilize a starting date of Wednesday February 23 at market close reflecting the start of the invasion overnight. The end date, however, contains more room for ambiguity. We tested two end dates – the first, through market close April 8th, which provided a clean cut-off before the start of 2022 Q1 earnings season, to exclude idiosyncratic moves and volatility arising from non-Russia related earnings announcements, especially given the significant number of FY '22-'23 forward guidance revisions released on these earnings calls related to more macro drivers such as inflation and growth and liquidity. The second end date tested was through market close April 19th, to capture a full eight weeks, equivalent to two months, from the start of the invasion. As additional confirmation, for our overall A-F category return calculations, we also tested a third time period of February 23rd to March 14th, which generally tracked the steep initial market-wide sell-off in the days immediately after Russia's invasion, which we refer to as the market “fall” period.

Likewise, when measuring performance of a basket of stocks, there are two commonly accepted methodologies. We cluster companies into five buckets aligning

with the letter grade categories assigned to companies, on the A-F scale described above, and thus test two methodologies for computing the value of these baskets of stocks: 1) a market capitalization weighted method, also known as a market value weighted method, in which individual companies are included in amounts that correspond to their total market capitalization, with larger companies receiving a higher weighting and smaller companies receiving less weighting; and 2) an equal weighted method, in which all stocks are given the same proportional weight regardless of size in evaluating the overall group's performance. While we include results for both methodologies, we advise that market capitalization weighting is likely a more accurate representation of total category performance reflecting actual financial markets more closely.

Table #1: Market Capitalization Weighted Returns by Letter Grade Through Different Time Periods Since Start of Russian Invasion

Market Capitalization Weighted Returns by Letter Grade				
Grade	War Avg Return 2/23 to 4/8	War Avg Return 2/23 to 4/19	Avg of Fall 2/23 to 3/14	Count
A – Withdrawal	3.96%	3.57%	-2.97%	139
B – Suspension	2.99%	2.16%	-3.90%	228
C – Scaling Back	2.93%	3.63%	-3.20%	65
D – Buying Time	-2.18%	-4.52%	-7.54%	74
F – Digging In	-5.47%	-6.82%	-12.54%	87
Total	1.66%	0.76%	-4.96%	593

Table #2: Equal Weighted Returns by Letter Grade Through Different Time Periods Since Start of Russian Invasion

Equal Weighted Returns By Letter Grade				
Grade	War Avg Return 2/23 to 4/8	War Avg Return 2/23 to 4/19	Avg of Fall 2/23 to 3/14	Count
A – Withdrawal	-0.51%	0.25%	-5.74%	139
B – Suspension	-1.98%	-1.24%	-5.94%	228
C – Scaling Back	-2.34%	-1.29%	-4.75%	65
D – Buying Time	-0.49%	0.25%	-5.01%	74
F – Digging In	-6.97%	-7.09%	-9.48%	87
Total	-2.22%	-1.57%	-6.17%	593

We see that since Russia invaded Ukraine, companies that curtailed operations in Russia have generally dramatically outperformed companies that did not, via both the market capitalization weighting and equal weighting methodologies, and across both the April 8th and April 19th end dates. We see this trend was especially pronounced in the weeks immediately after the invasion, during the “fall” period. Of particular significance is the fact that the F category consistently underperformed all other categories by a statistically significant degree in every trial.

A linear regression using (1) equal weighted returns and (2) market capitalization weighted returns as the independent variable confirmed this trend. After converting the A-F grades to a numeric score of 1-5 (1 = F, 5 = A) to run the regressions, a linear regression using grades (x) and equal weighted returns (y) yielded $y = -0.06 + 0.01x$. Thus, stripping away the grades in the relationship, each company starts with a base negative return of -6%. The regression estimate suggests that each better grade added +1.12% returns to performance, or approximately corresponding with grade F = -5%; D = -4%; C = -3%; B = -2%; and A = -1%. Likewise, a linear regression using grades (x) and market capitalization weighted returns (y) yielded $y = -0.07 + 0.02x$, suggesting that each better grade added 2% returns to performance when weighted by market capitalization. Furthermore, a linear regression using grades (x) and market capitalization (y) was not statistically significant with a p-value of 0.67 far above the 0.05 p-value threshold, confirming that size played no role in determining companies’ response to the war.

Table #3: Linear Regression Using Grades (X) and Equal Weighted Returns (Y)

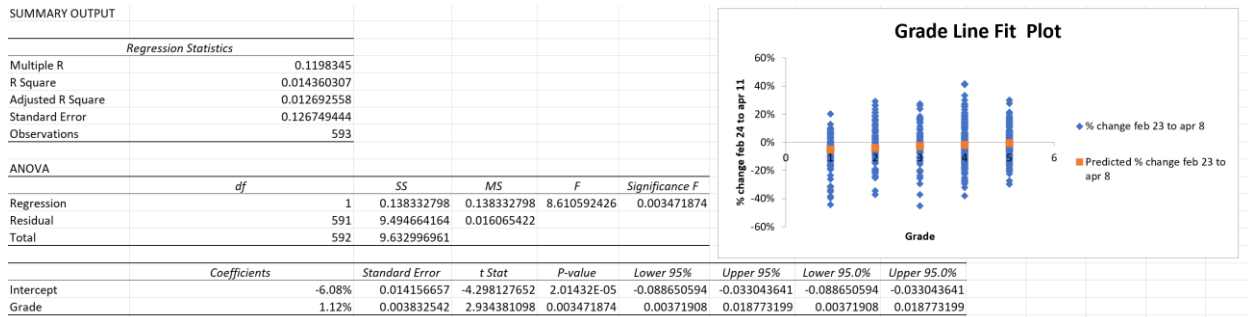


Table #4: Linear Regression Using Grades (X) and Market Capitalization Weighted Returns (Y)

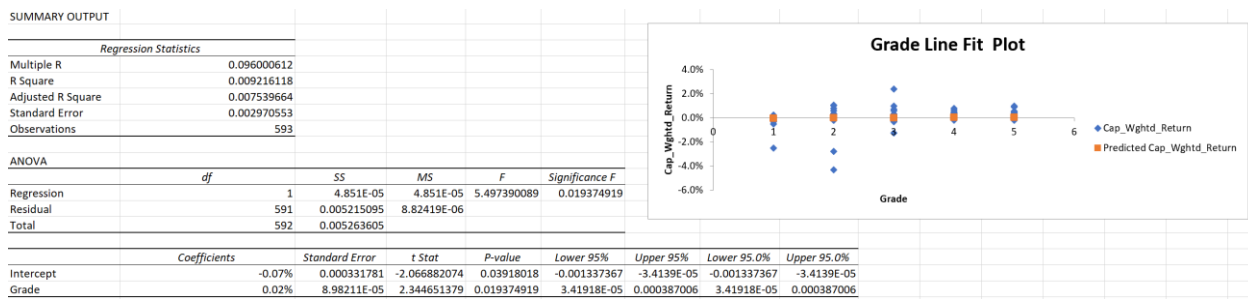
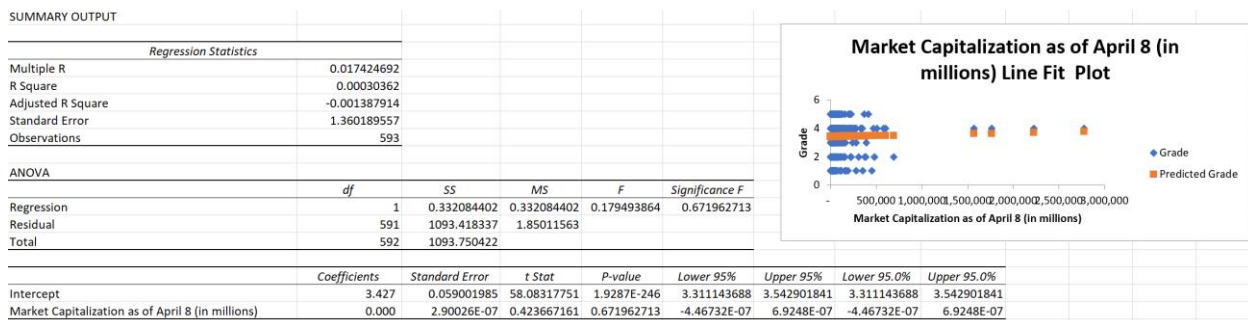


Table #5: Linear Regression Using Grades (X) and Market Capitalization (Y)



The pattern of F companies underperforming generally aligns with our anecdotal observations from updating the list in real-time. As soon as our list first appeared on CNBC on March 7th, many of the companies we identified as remaining in Russia saw their stocks plummet 15 to 30 percent, even though key market indices fell only about 2 to 3 percent – but now our findings confirm that financial markets are systematically rewarding companies that withdraw while punishing those that remain.

Table #6: Performance of New “F” Companies on March 7th, 2022, and Since Start of Invasion Relative to Major Market Indices

	Performance March 7	Since the Start of Invasion, February 23
S&P 500 (Index)	-2.95%	-2.36%
Dow Jones Industrial Average (Index)	-2.37%	-2.24%
Nasdaq 100 (Index)	-3.75%	-3.91%
Arconic (ARNC)	-9.12%	-21.42%
Citigroup (C)	-1.87%	-13.06%
Coty (COTY)	-9.48%	-17.05%
Estee Lauder (EL)	-7.69%	-10.76%
Herbalife (HLF)	-0.11%	-15.13%
Hilton (HLT)	-6.23%	-12.28%
Hyatt (H)	-9.23%	-16.55%
Marriott (MAR)	-7.04%	-14.48%
McDonald's (MCD)	-4.87%	-11.23%
Mohawk Industries (MHK)	-9.89%	-11.54%
Mondelez (MDLZ)	-2.04%	-5.93%
Otis Worldwide (OTIS)	-4.63%	-3.62%
Papa John's (PZZA)	-7.76%	-14.98%
Pepsi (PEP)	-1.99%	-3.51%
Philip Morris (PM)	-6.61%	-14.18%
PVH Corp (PVH)	-15.37%	-32.11%
Starbucks (SBUX)	-6.19%	-9.29%
Timken (TKR)	-7.35%	-11.51%
Trimble (TRMB)	-4.42%	-5.27%
Unilever (UL)	-3.94%	-14.55%
Yum Brands (YUM)	-4.57%	-8.68%

The returns for major market indices over the same periods we tested are provided below, but we note that by virtue of the fact our list contains publicly traded stocks across different regions, and given highly divergent regional performance post-invasion, it is more appropriate to benchmark companies from a specific region to their respective region benchmark as opposed to taking the categories in aggregate across the entire list. Thus, we provide detailed breakdowns of performance of A category companies relative to F category companies, cross-tabulated against region,

below across both equal-weight and market-cap weight methodologies and across various time intervals.

Table #7: Returns of Major Market Indices vs. Companies On Our List Through Different Time Periods Since Start of Russian Invasion

Returns of Major Market Indices vs. Our List			
	War Avg Return Up To 4/8	War Avg Return Up To 4/19	Avg of Fall 2/23 to 3/14
Our List (Equal-Weighted)	-2.22%	-1.57%	-6.17%
Our List (Market Cap Weighted)	1.66%	0.76%	-4.96%
S&P 500	6.07%	5.47%	-1.17%
Nasdaq 100	5.99%	5.11%	-3.42%
Euro Stoxx 50	-6.56%	-6.72%	-8.59%
Stoxx Europe 600	1.97%	1.13%	-3.67%

Table #8: Market Capitalization Weighted Returns by Letter Grade and Region From Start of Invasion Through April 8th

Market Cap Weighted Averages by Region, From February 23 to April 8 th			
Grade	North America	Europe	Asia
A – Withdrawal	4.36% (70)	3.44% (64)	2.80% (5)
F – Digging In	0.34% (16)	-8.12% (29)	-5.79% (41)
Total	4.69% (251)	1.37% (247)	-8.72% (90)

Table #9: Market Capitalization Weighted Returns by Letter Grade and Region From Start of Invasion Through April 19th

Market Cap Weighted Averages by Region, From February 23 to April 19 th			
Grade	North America	Europe	Asia
A – Withdrawal	4.16% (70)	3.31% (64)	-2.31% (5)
F – Digging In	1.76% (16)	-7.78% (29)	-7.68% (41)
Total	3.97% (251)	0.61% (247)	-10.74% (90)

Table #10: Market Capitalization Weighted Returns by Letter Grade and Region From Start of Invasion Through April 19th

Market Cap Weighted Averages by Region, From February 23 to April 8 th			
Grade	North America	Europe	Asia
A – Withdrawal	4.36% (70)	3.44% (64)	2.80% (5)
F – Digging In	0.34% (16)	-8.12% (29)	-5.79% (41)
Total	4.69% (251)	1.37% (247)	-8.72% (90)

Table #11: Equal Weighted Returns by Letter Grade and Region From Start of Invasion Through April 8th

Equal Weighted Averages by Region, From February 23 to April 8 th			
Grade	North America	Europe	Asia
A – Withdrawal	.54% (70)	-1.86% (64)	2.19% (5)
F – Digging In	-2.84% (16)	-12.35% (29)	-5.18% (41)
Total	0.39% (251)	-4.73% (247)	-2.78% (90)

Table #12: Equal Weighted Returns by Letter Grade and Region From Start of Invasion Through April 19th

Equal Weighted Averages by Region, From February 23 to April 19 th			
Grade	North America	Europe	Asia
A – Withdrawal	2.47% (70)	-2.18% (64)	.24% (5)
F – Digging In	-.47% (16)	-11.93% (29)	-6.68% (41)
Total	2.03% (251)	-4.71% (247)	-3.25% (90)

Most significantly, we see from our regional breakdown that in every single region, and across every time interval and methodology tested, without exception, companies which withdrew from Russia dramatically outperformed companies which remained in Russia, with statistically significant outperformance and underperformance, respectively, established through regression p-values below the 0.05 threshold – though for Asia, statistical significance was impossible to establish given the small sample size of Asian companies that have withdrawn from Russia publicly.

We see that the performance by region across our list generally aligned with regional benchmarks, though, interestingly, in North America, the companies included on our list, in aggregate, somewhat underperformed the major indices, and likewise with North American companies that withdrew underperforming the major indices. Perhaps this can be explained by the number of significant components of the S&P 500 and Nasdaq 100 which did not have any exposure to Russia at all and thus were less directly adversely impacted by the outbreak of war – as Russia represents less than 2% of US trade in goods and services. It is conceivable that market sentiment has been relatively lower for companies that have any exposure to Russia relative to companies that have no direct exposure to Russia at all, but nevertheless, the dramatic differential performance between companies that stayed in Russia and those that left speaks for itself.

Another key consideration beyond regional divergences is the fact our dataset of 600 publicly traded companies contains companies of all sizes. Particularly when market-capitalization weight is used, larger-size companies can disproportionately dominate performance results – and given our list skews towards larger companies to begin with, with relatively fewer small companies (383 large cap companies vs. 59 small cap companies), this bias towards large companies disproportionately dominating results could hypothetically carry over into equal-weighted results as well. Thus, we ran detailed breakdowns of performance of A category companies relative to F category companies, cross-tabulated against size as measured by market cap segment, below across both equal-weight and market-cap weight

methodologies and across various time intervals. For the purposes of this analysis, we define small cap as any company with a market capitalization up to \$2 billion; mid cap as any company with a market capitalization between \$2 billion and \$10 billion; and large cap as any company with a market capitalization above \$10 billion. All market capitalizations are measured in USD and in the case of foreign companies, we used foreign currency conversion rates into USD as of the end date of the time interval measured in each trial.

Table #13: Market Capitalization Weighted Returns by Letter Grade and Market Capitalization Segment, From Start of Invasion Through April 8th

Market Cap Weighted Averages by Market Cap Segment, From February 23 to April 8 th			
Grade	Small Cap	Mid Cap	Large Cap
A – Withdrawal	6.48% (11)	-2.02% (43)	4.24% (85)
F – Digging In	-12.18% (14)	-7.84% (24)	-5.34% (49)
Total	-5.00% (59)	-4.99% (151)	1.81% (383)

Table #14: Market Capitalization Weighted Returns by Letter Grade and Market Capitalization Segment, From Start of Invasion Through April 19th

Market Cap Weighted Averages by Market Cap Segment, From February 23 to April 19 th			
Grade	Small Cap	Mid Cap	Large Cap
A – Withdrawal	8.71% (11)	-1.20% (43)	3.79% (85)
F – Digging In	-10.60% (14)	-5.70% (24)	-6.86% (49)
Total	-2.64% (59)	-2.87% (151)	.84% (383)

Table #15: Equal Weighted Returns by Letter Grade and Market Capitalization Segment, From Start of Invasion Through April 8th

Equal Weighted Averages by Market Cap Segment, From February 23 to April 8 th			
Grade	Small Cap	Mid Cap	Large Cap
A – Withdrawal	4.82% (11)	-3.22% (43)	0.17% (85)
F – Digging In	-13.11% (14)	-8.71% (24)	-4.37% (49)
Total	-5.89% (59)	-5.76% (151)	-.20% (383)

Table #16: Equal Weighted Returns by Letter Grade and Market Capitalization

Segment, From Start of Invasion Through April 19th

Equal Weighted Averages by Market Cap Segment, From February 23 to April 19 th			
Grade	Small Cap	Mid Cap	Large Cap
A – Withdrawal	6.07% (11)	-2.51% (43)	0.89% (85)
F – Digging In	-12.97% (14)	-6.34% (24)	-5.77% (49)
Total	-4.85% (59)	-3.71% (151)	-.12% (383)

Just as for the analysis by region, we see from this breakdown by market capitalization segment that in all three market cap segments, and across every time interval and methodology tested, without exception, companies which withdrew from Russia dramatically outperformed companies which remained in Russia, with statistically significant outperformance and underperformance, respectively, once again. In fact, the level of statistical significance is practically identical across all three segments, suggesting that these results were not just the product of a handful of large cap companies but rather reflects remarkable breadth and consistency across every corner of the market, ranging from household names and industry giants to more obscure companies. Smaller companies which might have hoped to continue operations in Russia while flying under the radar of investors, media, and consumers were evidently not immune to strong investor backlash, and were comparably punished as more well-known peers in terms of stock performance.

Another hypothetical argument we seek to proactively dispel is that some variation in the divergent return profiles could be hypothetically attributed to the different sectoral composition of the companies that are leaving Russia vs. the companies that are staying. Once more, we ran detailed breakdowns of performance of A category companies relative to F category companies, cross-tabulated against sector, below across both equal-weight and market-cap weight methodologies and across various time intervals. For all sector classifications, we deferred to the GICS standard, the industry taxonomy developed in 1999 by MSCI and S&P for use by the global financial community consisting of sectors, industry groups, industries and sub-industries into which all major public companies are categorized.

Table #17: Market Capitalization Weighted Returns by Letter Grade and Sector, From Start of Invasion Through April 8th

Market Cap Weighted Averages by Sector, From February 23 to April 8 th		
Sector	A – Withdrawal	F – Digging In
Communication Services	.15%	-11.90%
Consumer Discretionary	-4.05%	-5.55%
Energy	11.91%	6.70%
Financial Services	6.98%	-3.97%
Industrials	-3.01%	-5.69%
Information Technology	5.60%	-2.33%
Materials	.73%	-6.57%
Utilities	6.94%	-9.81%

Table #18: Market Capitalization Weighted Returns by Letter Grade and Sector, From Start of Invasion Through April 19th

Market Cap Weighted Averages by Sector, From February 23 to April 19 th		
Sector	A – Withdrawal	F – Digging In
Communication Services	.31%	-13.03%
Consumer Discretionary	-.19%	-11.52%
Energy	13.90%	8.88%
Financial Services	3.60%	-5.18%
Industrials	1.79%	-5.30%
Information Technology	.96%	-4.72%
Materials	2.42%	-8.30%
Utilities	3.48%	-2.69%

Table #19: Equal Weighted Returns by Letter Grade and Sector, From Start of Invasion Through April 8th

Equal Weighted Averages by Sector, From February 23 to April 8 th		
Sector	A – Withdrawal	F – Digging In
Communication Services	-.68%	-6.70%
Consumer Discretionary	-3.77%	-9.06%
Energy	8.40%	7.00%
Financial Services	2.27%	-11.99%
Industrials	-3.52%	-9.00%
Information Technology	1.88%	-2.55%
Materials	3.51%	-9.63%
Utilities	6.94%	-3.73%

Table #20: Equal Weighted Returns by Letter Grade and Sector, From Start of Invasion Through April 19th

Equal Weighted Averages by Sector, From February 23 to April 19 th		
Sector	A – Withdrawal	F – Digging In
Communication Services	.20%	-7.71%
Consumer Discretionary	-1.29%	-10.41%
Energy	9.83%	7.73%
Financial Services	-.41%	-12.56%
Industrials	-.03%	-8.89%
Information Technology	.60%	-5.55%
Materials	4.67%	-8.35%
Utilities	3.48%	10.71%

From this breakdown by sector, across communication services, consumer discretionary, energy, financial services, industrials, information technology, materials, and utilities, and across every time interval and methodology tested, companies which withdrew from Russia dramatically outperformed companies which remained in Russia. The only exception which emerged is in the case of utilities, largely arising from small sample size given most utilities in Russia are operated by domestic, not foreign companies. There is only a single utility which completely withdrew from Russia and only two utilities which remain in Russia, and one of these remaining companies, of very small size, underwent a significant liquidity event leading to outsized gains in mid-April and thus skewing the equal-weight returns when measured through April 19th.

From this analysis, it clearly emerges that shareholder returns generally correspond with their decision to withdraw or remain in Russia, and those with an A rating – companies which have made a clean break or permanent exit from Russia – have performed far better than those with a F rating – companies which are “digging in” and defying demand to reduce activities in Russia. This pattern holds true across multiple methodologies and time intervals tested, and cannot be explained by either regional variation, sector variation, or size variation. Remarkably, in another variation of the same test, we found that if companies that are undergoing special corporate actions such as M&A – and whose stocks are being driven by idiosyncratic factors rather than broad market movements or underlying company performance - are stripped from the dataset, the stock returns of companies that remain in Russia exhibit even greater underperformance.

III. Financial Performance – Wealth Creation Far Greater than Value of Asset Write-Downs for Companies That Leave Russia

For all the attention given to the firms that exited Russia completely and which have incurred billions in Russian asset write-downs in the process, our research reveals that the wealth creation driven by gains to shareholder equity far outweigh the actual write-downs themselves.

To compare the shareholder wealth created against the value of asset write-downs, we first retrieved the announcement dates for the write-downs in our sample of companies. We then retrieved the last closing stock prices prior to each announcement and compared it to the 2/23 price to determine the stock's "war return". We then compared the war returns to the respective returns since each asset write-down. Furthermore, we obtained the market capitalization of the stock on the date prior to each write-down announcement and multiplied it by the stock return since the announcement in order to obtain the gain/loss in the companies' equity value since the announcement.

Remarkably, at least six companies which incurred significant announced asset-write downs – Heineken, Shell, Exxon, Carlsberg, AB InBev, and Societe Generale - have actually seen more wealth created, far outweighing the value of the written-down assets, when taken in aggregate. Perhaps even more surprisingly, each of these companies had positive stock performance after the announcements of their exits from Russia and the values of their asset write-downs – after their stocks initially tanked in the period leading up to their announcement in most cases, as shown by the negative "war returns" below. On balance, these companies incurred asset write-downs of over \$14 billion but have generated nearly \$39 billion in subsequent equity gains. Even one high-profile idiosyncratic case not included here, BP, is in the green on the year after incurring an unprecedented, historic one-time impairment of \$25 billion for divesting its considerable Rosneft stake. This suggests that clearly investors are much more focused on rewarding companies for shedding reputational risk by exiting Russian than bemoaning the one-time impairment charges of leaving fixed assets behind.

Table #21: Value of Overall Equity Gains vs. Losses from Russian Asset Write-Downs

Name	Date_Announced	War Return	Return_Since_WriteDown	Write Down \$M	Equity Gains (loss)
Heineken	3/28/2022	-3%	7%	435	3,691
Shell	4/7/2022	7%	1%	5,000	1,848
Exxon	3/1/2022	11%	9%	4,000	28,407
Carlsberg	4/14/2022	-16%	6%	1,390	1,011
AB InBev	4/15/2022	-4%	1%	1,100	1,641
Societe Generale	4/11/2022	-26%	9%	2,160	1,782
Total				14,085	38,381

IV. Financial Performance – Credit and Derivative Markets

Equity markets are not the only asset class where financial markets have clearly been rewarding companies for leaving Russia while punishing those that remain. The same trend is evident across credit markets – specifically the pricing of corporate debt – and related derivative products. To evaluate the way the market was pricing the different gradings of corporate debt in the medium to long term as well as infer the market-implied expectation of business health, cross-tabulated against the business exodus from Russia, we had to study changes in longer maturity corporate debt as well as related derivative products that would enable us to isolate and analyze individual risk factors such as liquidity or credit risk.

We chose to study the changes in probability of default on bonds (utilizing the Bloomberg Database) issued by corporations on our list to check for whether the expected payoff on securities of those graded more poorly were shifting closer to the kink and making that particular credit more information sensitive. Our thesis was that across the majority of sectors, firms graded more poorly will suffer a sharper increase in probability of financial difficulty if not default which should then eventually price into credit spreads (especially as recovery rates vis a vis Russian assets may also fall) and the credit event insurances such as CDS or Credit Linked Notes – this is something we continue to monitor. The results of our analysis corroborated our initial hypothesis. Although we saw a general increase in probability of default of all corporates in our study of 500+ corporations, on a relative basis we found that across several sectors the increase in default probability was greater for those corporates who fell into the categories of ‘Digging In’ and ‘Buying Time’ versus those marked as ‘Withdrawal’ and ‘Suspension’. For example, within the Financial Services sector, the increase in bond default probability was 6.49% higher for the lower graded pool of companies, the same trend was seen for, inter alia, Consumer Staples, Information

Technology, Materials and Energy.

Table #22: Percentage Change in Bond Default Probability by Grade and Sector, From Start of Invasion Through April 8th

% Change in Bond Default Probability (2.23 - 4.08)		
Sector	Groupings	
	Withdrawal + Suspension	Digging In + Buying Time
Consumer Discretionary	25.50%	26.68%
Consumer Staples	32.55%	46.98%
Energy	-0.30%	5.75%
Financials	15.61%	23.10%
Industrials	15.54%	20.79%
Information Technology	19.78%	79.30%
Materials	13.62%	22.84%
Utilities	10.50%	42.40%
Average	16.60%	33.48%

Taking a geographic lens, we saw similarly that if bond default probabilities were averaged across corporates on our list domiciled in North America, Europe and Asia, those that took more stringent corporate actions such as ‘Withdrawal’ or ‘Suspension’ suffered from an increase in default probabilities that was almost 8.9% smaller than for their lower graded comparable peers.

Table #23: Percentage Change in Bond Default Probability by Grade and Region, From Start of Invasion Through April 8th

% Change in Bond Default Probability (2.23 - 4.08)		
Continent	Groupings	
	Withdrawal + Suspension	Digging In + Buying Time
North America	10.76%	9.51%
Asia	3.33%	15.98%
Europe	27.68%	43.21%
Average	13.92%	22.90%

What this data reveals is that although the present geopolitical risk has brought into slightly increased question the coverage capabilities of most corporations, as reflected by the overall

increase in default probabilities, those that have doubled down on Russia have been punished by investors taking a longer term view. It seems thus that the credit market has rewarded corporations who take a stand on this geopolitical issue today to continue to remain in favor from an international business perspective, as well as avoid the negative effect of international economic sanctions, reputational risk and consumer scrutiny that will likely weigh on those who stay quiet.

V. Conclusion

Despite the disproportionate attention given to the supposed losses incurred from exiting Russian operations or from divestiture of Russian, financial markets are clearly discounting outsized gains from exiting Russia, across asset classes, geography, and time periods. Indeed, using our proprietary dataset tracking now well over 1,200 companies, we demonstrate that total shareholder returns since the invasion have corresponded precisely with the level of curtailment of Russian operations, with linear regressions revealing that each increase in letter grade accounts for, on average, 1-2% of enhanced stock performance, dependent on methodology. This trend cannot be explained by variations in either regional, sector or market cap segment. Furthermore, we find that size and pre-existing exposure to Russia played no role in determining a company's response to the war.

Given the outperformance of stocks of companies that have withdrawn from Russia, the shareholder wealth created through equity gains have already far surpassed the cost of one-time impairments from asset write-downs across a representative sample of high-profile companies which have engaged in Russian divestitures and asset sales at highly discounted valuations.

We find the pattern of financial markets rewarding companies for exiting from Russia is not confined to only public equity markets. Our study of credit and derivative markets, in particular longer maturity corporate debt, credit spreads, and related credit default swap pricing, reveals a slight but statistically significant increase in market-implied default probability of the companies that remain in Russia relative to those that have withdrawn.

Clearly, global capital flows across financial markets demonstrate the importance investors attribute to the decision to withdraw from Russia. Capital allocators clearly

and unequivocally believe the risks associated with remaining in Russia at a time when nearly 1,000 major global corporations have exited far outweigh the costs of exiting Russia.