

# THE UKRAINIAN QUANDARY

## Hughes Economics (HE) – March 2022

How will the February 24<sup>th</sup> Ukrainian invasion end? Below **HE** sketches 4 possibilities with corresponding probabilities. In ascending order of likelihood these are as follows:

- RWC : Complete Russian withdrawal to pre-invasion borders.
- RWP : Partial Russian withdrawal but Russia controls some present Ukrainian territory.
- ROUA: Russian occupation of Ukraine with token Ukrainian acquiescence.
- OS : Ongoing struggle with Ukrainian resistance.

Probability determination follows the procedures in *A New Approach to Probability Assessment* at <https://doi.org/10.17265/1537-1506/2022.01.003> (or available on this website) with  $2^{(4-1)} = 8$  candidate distributions generated from the pairwise ranges as summarized in the table below.

Russia is tightening its grip on Ukraine but fighting goes on. This raises the probability of OS as shown in the following table.

**PROBABILITIES ON POSSIBLE OUTCOMES TO THE UKRAINIAN INVASION**

SCENARIO	Pairwise Values		Probabilities			Current More Likely Value
	Low	High	Average	Percent	Previous	
RWC	1.00	1.00	0.0913	9	9	Base = 1.00
RWP	2.00	3.00	0.2199	22	35	22/9 = 2.44
ROUA	1.20	1.50	0.2939	29	21	29/22 = 1.32
OS	1.20	1.50	0.3949	40	35	40/29 = 1.38
			<b>1.0000</b>	<b>100</b>	<b>100</b>	

RWP is seen as between 2 and 3 times more likely than RWC and ROUA is seen as a little more likely than RWP. Three weeks of fighting and a mediocre Russian military performance has OS now a little more likely than ROUA. Average probability has been calculated as an average of the mean, median and midpoint values for each event or scenario under the 8 distributions generated from the 6 pairwise values in the above table (the Base value 1.0 for the least likely RWC outcome is standard). The most likely scenario of OS is now seen as a 40% chance up from 35% previously.

Spreadsheets *ANAPA3.xlsx*, *ANAPA4* and *ANAPA5* for 3, 4 and 5 events respectively can be downloaded from this website to calculate probabilities as in the table above.

There does seem to be two irreconcilable fixed points. Putin cannot be seen to fail in his endeavour. But equally, the West through NATO cannot be seen to fail from punishing Russia. Perhaps reducing it to a North Korean-like status – nuclear, impoverished and isolated. China will be watching closely. The world economy is the loser and it remains to see how this will play out in the coming months, not least in oil and commodities markets.