

## THE UKRAINIAN QUANDARY II

### Hughes Economics (HE) – April 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.
- ROUA: Russian occupation of Ukraine with token Ukrainian acquiescence.
- OS : Ongoing struggle with Ukrainian resistance.
- RWP : Partial Russian withdrawal but Russia controls some present Ukrainian territory.

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 and further analyzed.

After 4 weeks of struggle, it appears Russia is not about to give up nor is Ukraine ready to agree to Russian control of the country. Pairwise values and resulting probabilities are summarized in the table below. Average in this table is the average of the mean, median and midpoint values calculated from the 8 candidate distributions generated from the pairwise ranges.

**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	0.0984	10	9	Base = 1.00
ROUA	1.00	1.00	0.0984	10	29	10/10 = 1.00
OS	3.00	4.00	0.3389	34	40	34/10 = 3.40
RWP	1.25	1.50	0.4642	46	22	46/34 = 1.35
			<b>0.9999</b>	<b>100</b>	<b>100</b>	

Some form of ceasefire followed by negotiations seems the most likely outcome presently. This relegates RWC and ROUA to low probabilities as above and elevates RWP to the most likely outcome now, although only slightly “more likely” than OS at 1.25 – 1.50 if no ceasefire eventuates. Ukraine has already conceded that it will not seek to join NATO. Possibly some Ukrainian territory (with majority Russian population) will revert to Russia, as per the RWP outcome.

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.

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