

WORLD ECONOMIC OUTLOOK

WORLD FINANCIAL MARKETS - WORLD FINANCIAL STATE - TAIWAN - WAR IN UKRAINE

HUGHES ECONOMICS (HE) – January 2023

The current review below calculates probabilities for Financial Markets outcomes, the situation over Taiwan, the possibility of another depression and the war in Ukraine. All papers as below are available on this website as are various spreadsheets in **xlsx** format. All calculations below employed the **WEOjan.xlsx** spreadsheet using **LoHiProbs.xlsx** methodology. Note that the Low and High Probabilities in the tables below reflect the Low and High Pairwise Values and not the probability values themselves.

Probability calculations below for the scenarios outlined are explained in **Structuring Probability Assessments** available at <https://doi.org/10.17265/1537-1506/2020.05.003>. Also **Thinking Probabilistically** available at <https://doi.org/10.17265/1537-1506/2021.05.002>, **Thinking Probabilistically Revisited** available at <https://doi.org/10.17265/1537-1506/2022.01.001>, **A New Approach to Probability Assessment** available at <https://doi.org/10.17265/1537-1506/2022.01.003> and **Probability Assessment** available at <https://doi.org/10.17265/2328-2185/2022.05.006>. This last article summarizes the methodology used here.

WORLD FINANCIAL MARKETS

As stated previously, three possible scenarios are proposed for the next 6 months as listed below in order of increasing likelihood:

- **TINA**: There is no alternative, and the Dow rises significantly to 40,000+.
- **SQ**: Status Quo, no major moves for the Dow in the range 30,000 – 35,000. Current Dow is around 33,000.
- **BB**: Bubble bursts and Dow corrects to below 30,000 or a 10%+ correction

There is little change from last month, but the probability of **BB** increases mainly at the expense of **SQ**.

PROBABILITIES ON WORLD FINANCIAL MARKETS FOR THE NEXT 6 MONTHS

Scenarios		Pairwise Range		Probabilities					More Likely Value
Events	Ratios	Low	High	Low	High	Average	%	Previous	
TINA	Base = 1	1.00	1.00	0.02778	0.01818	0.02298	2	3	Base = 1
SQ	SQ/TINA	10.00	12.00	0.27778	0.21818	0.24798	25	28	10.79
BB	BB/SQ	2.50	3.50	0.69444	0.69444	0.72904	73	69	2.94
				1.00000	1.00000	1.00000	100	100	

WORLD FINANCIAL STATE

Scenarios in order of increasing likelihood are as follows:

- **MB** or Mild Boom: Revamping of world infrastructure in light of Ukraine sees markets rise for 10%+ gains.
- **D** or Depression: High inflation and continued COVID pressures, policy mistakes and global financial collapse.
- **SQ** or Status Quo: All markets steady, significant but not rampant inflation, continued but containable COVID episodes.
- **MR** or Mild Recession: World activity falls, with problems from COVID, Ukraine, ESG factors & supply chain realignments.

PROBABILITIES ON THE WORLD FINANCIAL STATE FOR THE NEXT 6 MONTHS

Scenarios		Pairwise Range		Probabilities					More Likely Value
Events	Ratios	Low	High	Low	High	Average	%	Previous	
MB	Base = 1	1.00	1.00	0.01274	0.00690	0.00982	1	1	Base = 1
D	D/MB	10.00	12.00	0.12739	0.08276	0.10507	10	12	10.70
SQ	SQ/D	1.50	2.00	0.19108	0.16552	0.17830	18	20	1.70
MR	MR/SQ	3.50	4.50	0.66879	0.74483	0.70681	71	68	3.96
				1.00000	1.00001	1.00000	100	101	

The **MR** scenario increases slightly in probability this month and **D** is still a significant chance. **SQ** drops slightly.

TAIWAN

The scenarios for developments involving Taiwan from least to most likely are as follows:

- **TINO**: Taiwan invasion by mainland China with no aid from any country to help repel the invaders.
- **TIUS**: Taiwan invasion by mainland China and the US assists Taiwan in its defense, possibly with other allies.
- **NOTI**: No invasion of Taiwan but Chinese harassment of Taiwan continues.

The scenarios hold for the near future defined by the next 5 years.

PROBABILITIES ON TAIWAN DEVELOPMENTS OVER THE NEAR FUTURE

Scenarios		Pairwise Range		Probabilities					More Likely Value
Events	Ratios	Low	High	Low	High	Average	%	Previous	
TINO	Base = 1	1.00	1.00	0.03846	0.02000	0.02923	3	5	Base = 1
TIUS	TIUS/TINO	5.00	7.00	0.19231	0.14000	0.16615	17	21	5.68
NOTI	NOTI/TIUS	4.00	6.00	0.76923	0.84000	0.80462	80	74	4.84
				1.00000	1.00000	1.00000	100	100	

Probabilities are unchanged from last month.

THE WAR IN UKRAINE

This month we restate scenarios in line with the *Economist's* appraisals in a recent publication. In order of likelihood these are:

- **CRT**: A ceasefire is negotiated but on terms dictated by Russia.
- **CUT**: As for **CRT** but with Ukraine dictating the terms.
- **STM**: A stalemate cements itself with battlelines little changed from those currently operational.

PROBABILITIES ON POSSIBLE OUTCOMES TO THE WAR IN UKRAINE

Scenarios		Pairwise Range		Probabilities					More Likely Value
Events	Ratios	Low	High	Low	High	Average	%	Previous*	
CRT	Base = 1	1.00	1.00	0.16667	0.14286	0.15476	15	n/a	Base = 1
CUT	CUT/CRT	1.00	1.00	0.16667	0.14286	0.15476	15	n/a	1.00
STM	STM/CUT	4.00	5.00	0.66667	0.71429	0.69048	70	n/a	4.45
				1.00001	1.00001	1.00000	100		

*Scenarios have been changed this month.

In the words of the *Economist*: "Three broad scenarios now seem plausible for next year. The first, and worst, assumes that Russia stabilizes the front lines and rebuilds its battalions....Western countries might lobby Ukraine to accept a ceasefire. The second, and far more likely, is a stalemate. The third....Ukraine, maintaining its current momentum, could bring its forces to the cusp of Crimea." The "far more likely" judgment by the *Economist*, induces the 4 - 5 pairwise range above. The scenarios **CRT** and **CUT** are seen as equally likely by **HE**.

BOTTOM LINES

In the current test of COVID containment, China has come a long way second to Taiwan. Hong Kong has conceded top billing to Singapore as the Asian financial centre. A sea change in Chinese strategy is necessary for it to re-establish its challenge to US hegemony, but new leadership looks very unlikely. A good outcome in Ukraine would cement US hegemony for the foreseeable future. Of course, the reversals above may increase the chance of an attempted military takeover of Taiwan to compensate for Chinese failures. Although many factors mitigate against an invasion, attributing your rationality to the opponent invites a classic mistake with surprising outcomes. This is why "thinking probabilistically" is the preferred approach in this type of situation. Taiwan's current action in extending military service suggests they are preparing for all possibilities.

Word Count 978, 1st January 2023.