

WORLD ECONOMIC OUTLOOK

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

HUGHES ECONOMICS (HE) – October 2022

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 used the **WEO.xlsx** spreadsheet with **LoHiProbs.xlsx** methodology. Note that the Low and High Probabilities in the tables below correspond to 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> and **A New Approach to Probability Assessment** available at <https://doi.org/10.17265/1537-1506/2022.01.003>.

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+.
- **BB**: Bubble bursts and Dow corrects to below 30,000 or a 10%+ correction
- **SQ**: Status Quo, no major moves for the Dow in the range 30,000 – 35,000. At 29.9.22 the Dow was 29,226.

Currently the Dow is hovering between the **BB** and **SQ** scenarios. Commentators Ray Dalio and Nouriel Roubini are predicting up to a 20% fall in the US market from here. If they are correct, scenarios may need to be recast at some point. Clearly there seems little prospect for **TINA** at this time.

PROBABILITIES ON WORLD FINANCIAL MARKETS FOR THE NEXT 6 MONTHS

Scenarios		Pairwise Range		Probabilities						More
Events	Ratios	Low	High	Low	High	Average	Final	%	Previous	Likely Value
TINA	Base = 1	1.00	1.00	0.11111	0.09091	0.10101	0.101	10	15	1.00
BB	BB/TINA	4.00	5.00	0.44444	0.45455	0.44949	0.449	45	15	4.45
SQ	SQ/BB	1.00	1.00	0.44444	0.45455	0.44949	0.449	45	70	1.00
				0.99999	1.00001	0.99999	0.999	100	100	

The US Fed has clearly stated that inflation curtailment is its main goal. Whether the Dalio/Rubini thesis plays out remains a major question for financial markets.

WORLD FINANCIAL STATE

Scenarios in order of increasing likelihood are as follows:

- **D** or Depression: High inflation and continued COVID-19 pressures, policy mistakes and global financial collapse.
- **MB** or Mild Boom: Revamping of world infrastructure in light of Ukraine sees markets rise for 10%+ gains.
- **MR** or Mild Recession: Unemployment rises with hospitality etc. sectors subdued with a developing Omicron virus.
- **SQ** or Status Quo: All markets steady, significant but not rampant inflation, continued but containable COVID episodes.

There seems no prospect for the war in Ukraine to cease in the near term. This will continue to hamper worldwide growth. Chinese growth has fallen away, and the IMF has downgraded growth rates for some geographies. Outright depression still seems unlikely, but its likelihood rises slightly from last month as has that for **MR**.

PROBABILITIES ON THE WORLD FINANCIAL STATE FOR THE NEXT 6 MONTHS

Scenarios		Pairwise Range		Probabilities						More
Events	Ratios	Low	High	Low	High	Average	Final	%	Previous	Likely Value
D	Base = 1	1.00	1.00	0.12500	0.10000	0.11250	0.113	11	7	1.00
MB	MB/D	1.00	1.00	0.12500	0.10000	0.11250	0.113	11	22	1.00
MR	MR/MB	3.00	4.00	0.37500	0.40000	0.38750	0.388	39	17	3.44
SQ	SQ/MR	1.00	1.00	0.37500	0.40000	0.38750	0.388	39	54	1.00
				1.00000	1.00000	1.00000	1.002	100	100	

TAIWAN

This month **HE** restates the scenarios for developments involving Taiwan.

- **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
Events	Ratios	Low	High	Low	High	Average	Final	%	Previous	Likely Value
TINO	Base = 1	1.00	1.00	0.05882	0.03846	0.04864	0.049	5	n/a	1.00
TIUS	TIUS/TINO	4.00	5.00	0.23529	0.19231	0.21380	0.214	21	n/a	4.40
NOTI	NOTI/TIUS	3.00	4.00	0.70588	0.76923	0.73756	0.738	74	n/a	3.45
				0.99999	1.00000	1.00000	1.001	100	N/A	

As previously, future developments are awaited with some trepidation. **HE's** current evaluation speculates that if there is a military invasion, can Taiwan count on aid from allies? The most likely outcome at this point is YES which is 4.4 times more likely than NO.

THE WAR IN UKRAINE

The ordering of scenarios below reflects **HE's** assessment of the relative likelihoods as in least to most likely:

- **RV** : Russian Victory or Russia effectively controls Ukraine.
- **UV** : Ukraine drives Russia out of Ukraine but loses Crimea to Russia.
- **NC** : Negotiated ceasefire with Ukraine possibly yielding some territory to Russia including Crimea.
- **OS** : Ongoing struggle on Ukraine territory.

PROBABILITIES ON POSSIBLE OUTCOMES TO THE WAR IN UKRAINE

Scenarios		Pairwise Range		Probabilities						More
Events	Ratios	Low	High	Low	High	Average	Final	%	Previous	Likely Value
RV	Base = 1	1.00	1.00	0.02632	0.00885	0.01758	0.018	2	2	1.00
UV	UV/RV	1.00	2.00	0.02632	0.01770	0.02201	0.022	2	3	1.25
NC	NC/UV	4.00	5.00	0.10526	0.08850	0.09688	0.097	10	35	4.40
OS	OS/NC	8.00	10.00	0.84211	0.88496	0.86353	0.864	86	60	8.91
				1.00001	1.00001	1.00000	1.001	100	100	

Recent developments have favoured Ukraine, but Russia does not seem inclined to negotiate. Consequently, probabilities have realigned to favour an **OS** outcome and a significantly decreased probability for **NC**.

BOTTOM LINES

The Ukraine war and President Putin overhang the world economy. Until this war (together with associated NATO issues) is settled, the world economy will continue to struggle. Realignment of world trade and associated supply chains with increased transport, security, ESG etc. costs may lift commodity and other prices to higher equilibrium levels. And this needs to be accepted by everyone, even though our purchasing power is decreased as a result. Cheaper Russian energy, for example, is now off the table. Wage inflation with low unemployment may only be tamed with a recessionary climate. The US Fed appears to be aiming for this. Current policies by major countries mean a high value US dollar with looming debt problems for some countries. The world economy has to sort through these issues to regain a level of normalcy.

Word Count 1058, 1st October 2022.