

WORLD ECONOMIC OUTLOOK

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

HUGHES ECONOMICS (HE) – November 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>, **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>

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. At 1.11.22 the Dow was 32,653.
- **BB**: Bubble bursts and Dow corrects to below 30,000 or a 10%+ correction

Recently the Dow has been oscillating between the **BB** and **SQ** scenarios. Currently the Dow is in the middle of the **SQ** scenario. Several commentators continue to predict a major correction into **BB** territory, and **HE** believes this scenario to be the likeliest outcome with a very hawkish Fed in evidence. Of course, a good outcome in Ukraine could see a relief rally take the market back to a confirmed **SQ** scenario and a higher Dow and maybe even a **TINA** market. But the Ukraine conflict seems destined to drag on. Current probabilities are outlined below.

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	0.05376	0.03704	0.04540	0.045	5	3	1.00
SQ	SQ/TINA	8.00	10.00	0.43011	0.37037	0.40024	0.400	40	28	8.82
BB	BB/SQ	1.20	1.60	0.51613	0.59259	0.55436	0.554	55	69	1.39
				1.00000	1.00000	1.00000	0.999	100	100	

Probabilities now show an increased chance for **SQ** but with **BB** still most likely.

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-19 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: Unemployment rises with hospitality etc. sectors subdued with continuing Covid issues.

The IMF recently downgraded world growth from 3.2% this year to 2.7% in 2023. This puts the **MB** scenario to the least likely position as calculated below. Further, **MR** now becomes very likely in the **HE** view. Covid still pressures the Chinese economy as do geopolitical considerations on supply chain issues. International tourism is improving but is still subject to constraints.

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
MB	Base = 1	1.00	1.00	0.03704	0.01316	0.02510	0.025	2	11	1.00
D	D/MB	2.00	3.00	0.07407	0.03947	0.05677	0.057	6	11	2.26
SQ	SQ/D	4.00	6.00	0.29630	0.26657	0.26657	0.267	27	39	4.70
MR	MR/SQ	2.00	3.00	0.59259	0.65156	0.65156	0.652	65	39	2.44
				1.00000	1.00000	1.00000	1.001	100	100	

The recessionary scenarios show increased likelihood over last time at 71% now versus 50% previously.

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	5	1.00
TIUS	TIUS/TINO	4.00	5.00	0.23529	0.19231	0.21380	0.214	21	21	4.40
NOTI	NOTI/TIUS	3.00	4.00	0.70588	0.76923	0.73756	0.738	74	74	3.45
				0.99999	1.00000	1.00000	1.001	100	100	

Suppose a different approach to the above assessment is undertaken. Assume that if an invasion occurs, the odds are 4:1 on for US help (20% chance of no help). Now assume that the odds of invasion are 3:1 against. Compound likelihoods over the three ordered outcomes are then 1,4 and $3 \times (1 + 4) = 15$. These yield equivalent pairwise values 1,4 and $15/4$ (or 3.75) respectively. Resulting probabilities in order become 5%, 20% and 75%. Almost the same as in the above table. Different odds judgments would of course lead to different probabilities.

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	0.02564	0.01000	0.01782	0.018	2	2	1.00
UV	UV/RV	2.00	3.00	0.05128	0.03000	0.04064	0.041	4	2	2.28
NC	NC/UV	6.00	8.00	0.30769	0.24000	0.27385	0.274	27	10	6.74
OS	OS/NC	2.00	3.00	0.61538	0.72000	0.66769	0.668	67	86	2.44
				0.99999	1.00000	1.00000	1.001	100	100	

Ukraine continues to make gains, but Russia does not appear to be ready to negotiate although the **NC** outcome would be better for the world economy.

BOTTOM LINES

Some form of world recession now seems unavoidable, particularly if the Ukraine conflict continues as currently. The potential for shocks to the world economy exist with central bank actions, the Taiwan situation, the Ukraine war, and fallout from the US elections. This is now a case of wait and see. The continuing strong US dollar may reflect the fact that the EU and UK will lose competitiveness in the future with higher energy costs relative to the rest of the world but particularly the US, which is self-sufficient in energy.

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