


TEMPO

STRUCTURED PRODUCTS

AN ALPHA REAL CAPITAL GROUP COMPANY

- TICS -
TEMPO ISSUER & COUNTERPARTY SCORECARDS
- MAY 2019 -

FOR PROFESSIONAL ADVISER USE ONLY
- NOT FOR USE WITH CLIENTS -

KEY ALPHA STATISTICS:

(as at 31 Mar 2018)

£2.4bn+

AUM and capital commitments

100+

Professional team

10

Platforms

5

International offices

4

Core business areas

Alpha Real Capital LLP is an international co-investing fund management group.

Established in 2005, and headquartered in London, Alpha comprises an international network of offices in the UK, Europe and Asia. A 100+ strong professional team, combining experience and expertise with research, analysis and market knowledge, operates through 10 platforms, across diversified investment markets, offering listed and unlisted property vehicles, open and closed-ended property vehicles, and UK and international funds, products and wealth management services. Alpha engages with institutional investors, family offices, wealth managers and professional advisers / IFAs, as well as UHNW, HNW and private investors.

TIME Investments is the authorised wealth management and investment services arm of Alpha. TIME specialises in ground rent and other 'long income' property funds (having acquired the real estate asset management business of Close Brothers Group in 2011), Inheritance Tax Services, including Business Relief (BR), and investment services, including Enterprise Investment Schemes (EIS).

Tempo Structured Products is a new Alpha platform, with four areas of focus: i) Retail: focusing on straightforward, lower risk structured products, for distribution through TIME Investments to UK Professional Advisers (IFAs and wealth managers); ii) Institutions / Pension funds: working with institutions / pension fund consultants, to develop 'smart structured products' (fusing structured, passive and smart beta strategies together); iii) HNW / UHNW / Family Offices: working with Alpha contacts to design bespoke structured product solutions for Family Offices, UHNW and HNW Individuals; iv) Strategic Alliances: partnering with other institutions, offering our expertise and issuer relationships as a specialist structured products unit, for the benefit of their clients and customers.

- **As part of Alpha Real Capital, our philosophy, approach and USPs are founded upon a commitment to straightforward, lower risk products, underpinned by operational strength and robust governance, presented with transparency and integrity, with exemplary support and service for professional advisers / investors**
- **At the heart of our approach our aim is to be known for straightforward, lower risk products and ‘doing the right things - and doing simple well’:**
 - providing professional advisers and their clients with a high calibre structured product provider, a carefully considered approach to structured products and a level of support and service that they can be genuinely confident in
- **Our entire emphasis is on working closely with professional advisers to advance and enhance the value that can be gained from structured products, for the benefit of their clients**

- **Issuer / counterparty risk is the most fundamental risk of structured products:**
 - both the potential returns of a structured product and the repayment of capital usually depend upon the financial stability of the issuer / counterparty throughout the investment term

- **So, we think it's straightforward - and important - to state the obvious: *professional advisers and investors should seek to identify structured products backed by strong issuers / counterparties***

- **There are a number of metrics that are widely considered relevant in identifying and assessing the financial strength / credit risk of a prospective issuer / counterparty (our Academy 'Module 4: Issuer / Counterparty due diligence' explains credit ratings, CDS and fundamentals, etc.)**

- **Generally speaking, we think the UK retail structured products sector and professional advisers have 'upped their game' over recent years, since the global financial crisis:**
 - there is reasonable knowledge of and attention paid to credit ratings
 - there is some knowledge and awareness of credit default swap (CDS) spread levels
 - and there is some - albeit less - knowledge and consideration of 'fundamentals' (Tier 1 capital ratios, etc.)

- **But, we also think some complacency may have crept in, over the years: and that more could and should be done by the sector's providers to prompt professional advisers to carefully consider this critical aspect of structured products and to support them in their research and due diligence:**
 - the importance of this aspect of adviser due diligence should still be considered absolutely key

- Professional advisers are expected to undertake robust issuer / counterparty due diligence
- The regulatory expectations incumbent upon professional advisers are explicit - the following extracts are taken from the FCA Retail Product Development and Governance: Structured Product Review, 2012 Thematic Review:

“Firms should carry out sufficient due diligence into the counterparty and not rely solely on credit rating agencies ...”

“We expect firms to look more broadly than just the credit rating, such as the rating, outlook, credit default swap (CDS) spreads and other market information, as well as ‘fundamentals’ on the issuer’s balance sheet.”

- **Our approach as an independent Plan Manager, able to select and deal with issuers / counterparties without bias, is that we seek to identify and deal with strong issuers / counterparties**
- **The FT Banker Database identifies approximately 3,400 banks globally. As a first step, we have chosen to deal with banking groups that are regulatorily categorised as ‘Global Systemically Important Banks’ (G-SIBs) and / or, as a minimum, ‘Domestic Systemically Important Banks’ (D-SIBs):**
 - as the name details, G-SIBs / are fundamentally the more important (and usually the bigger, deeper and stronger) banking groups, globally, regionally
 - as a result, they are subject to *higher supervisory expectations*, including for risk management, risk governance and internal controls; and capital adequacy requirements, including higher Tier 1 capital ratios and further incoming rules regarding Total Loss Absorbency Capacity (TLAC)
 - it’s hard to argue with the rationale of recognising G-SIBs as bigger / stronger banking groups
 - however, simply having G-SIB, or D-SIB, status is not sufficient for us to engage with any / all of the G-SIBs or D-SIBs
- **As a second step, we have developed a suite of proprietary ‘Scorecards’ that help us analyse, assess, compare, consider and understand prospective issuer / counterparties within the banks universe:**
 - for full details of our Scorecards, please see our ‘Introduction and overview’ and ‘Methodology: scoring and weighting’ presentation packs

TICS Categories and Amalgamated: weightings summary ...

TICS CREDIT RATINGS: WEIGHTINGS						AMALGAMATED SCORECARD WEIGHTING
S&P (LT) Rating	S&P Outlook	Moody's (LT) Rating	Moody's Outlook	Fitch (LT) Rating	Fitch Outlook	
33.3%		33.3%		33.3%		40%
TICS CREDIT DEFAULT SWAP (CDS): WEIGHTINGS						AMALGAMATED SCORECARD WEIGHTING
5 Year CDS	1 Year CDS	Direction of 5 Year CDS	5 Year CDS Volatility			
60%	15%	15%	10%			15%
TICS FUNDAMENTALS (BALANCE SHEET): WEIGHTINGS						AMALGAMATED SCORECARD WEIGHTING
Tier 1 Capital Ratio	Leverage Ratio (Asset / Equity)	Loan-to-Deposit Ratio	Price-to-Book Ratio	Tier 1 Size (BLN \$)	Total Assets (BLN \$)	
40%	15%	15%	15%	10%	5%	30%
TICS FUNDAMENTALS (MARKET INDICATORS): WEIGHTINGS						AMALGAMATED SCORECARD WEIGHTING
Market Cap (BLN \$)	260 Day Share Price Volatility	5 YR Beta	Direction of 1 Year share price	Consensus Analyst Views		
50%	15%	15%	15%	5%		10%
TICS SYSTEMIC IMPORTANCE: WEIGHTINGS						AMALGAMATED SCORECARD WEIGHTING
G-SIB Status	Additional Tier 1 Capital Ratio	Total Deposits (BLN \$)	Sovereign S&P Rating	Sovereign S&P Outlook	Number of employees	
50%	15%	15%	10%	5%	5%	5%

We explain our methodology: but support other views / interests ...

- **The weightings we have applied to our Scorecards reflect our views of the relative importance of the categories factors in assessing and considering issuer / counterparty financial strength / credit risk:**
 - but we highlight that we can readily support professional advisers who may have different views and / or want to apply or explore different weightings

- **We developed our Scorecards for internal purposes: as part of our process of considering and selecting issuers and counterparties. We publish our Scorecards as part of our approach to providing transparency - and to support professional advisers in their research and due diligence responsibilities:**
 - but it is important that professional advisers using them understand what they are and what they are not
- **WHAT THEY ARE: the primary purpose of our scorecards is to compile multiple factors that potentially measure or indicate financial strength / credit risk, with a scoring system that provokes and supports more objective and detailed analysis, assessment, comparison, consideration and understanding of prospective issuers and counterparties**
- **WHAT THEY ARE NOT: the scoring system ranks the issuers and counterparties, but it is important that professional advisers understand that this is NOT their intended purpose:**
 - *the purpose of our scorecards, including the rankings, and multiple data points, at an amalgamated, category and factor level, is to provoke and support **analysis**, **assessment** and **comparison** of the data, to aid more objective **consideration** and **understanding** of relative issuer / counterparty financial strength / credit risk*
- **It is also important that professional advisers understand that our Scorecards are not independent research or an investment recommendation:**
 - we do not provide any warranty regarding the data, methodology, scores or rankings: and we expressly exclude any liability for any judgement or interpretation based upon or influenced by our Scorecards
 - professional advisers should reach their own judgement of issuer / counterparty financial strength / credit risk

A : ANALYSIS

A : ASSESSMENT

C : COMPARISON

C : CONSIDERATION

U : *AND UNDERSTANDING*

- Our Scorecards are NOT about the rankings per se. All of the issuers / counterparties (with one or two exceptions) are strong banks, in the top percentile (based on criteria we assess) of the banking universe:
 - our Scorecards are designed to provoke and support **analysis** and **assessment** of the data, including **comparison** and **consideration**, leading to better **understanding** of prospective issuers and counterparties

TICS

TEMPO ISSUER & COUNTERPARTY SCORECARDS

> May 2019

TICS Amalgamated: May 2019...

	Bank / Institution	Region	Sovereign	FSB G-SIB Status	Credit Rating Score	CDS Score	Fundamentals (Bal. Sheet) Score	Fundamentals (Mkt. Indicators) Score	Systemic Importance Score	Amalgamated Scorecard
WEIGHTINGS APPLIED TO AMALGAMATED SCORECARD:					40%	15%	30%	10%	5%	
1	HSBC	UK	UK	Y	4.00	2.85	3.25	2.95	2.29	341.2
2	UBS AG	Europe	Switzerland	Y	5.33	1.65	3.95	5.40	3.35	427.3
3	JP Morgan	North America	USA	Y	5.67	3.20	4.25	1.90	1.80	430.2
4	Bank of China	Asia	China	Y	5.67	3.25	4.05	2.45	2.50	433.9
5	ICBC	Asia	China	Y	5.67	N/A	3.95	1.45	2.50	438.2
6	BNP Paribas	Europe	France	Y	4.67	2.70	4.85	5.35	2.60	439.2
7	Credit Agricole	Europe	France	Y	4.92	2.55	4.50	5.70	3.25	443.2
8	Wells Fargo	North America	USA	Y	6.17	3.10	3.85	2.60	2.35	446.4
9	RBC	North America	Canada	Y	4.33	3.45	5.70	3.60	3.15	447.8
10	Bank of America	North America	USA	Y	6.00	3.20	4.20	2.20	2.40	448.0
11	BONYM	North America	USA	Y	5.00	2.35	4.60	5.60	3.80	448.3
12	CCB	Asia	China	Y	5.67	N/A	3.95	2.10	2.95	448.5
13	Mitsubishi	Asia	Japan	Y	5.92	1.90	3.80	5.65	2.76	449.5
14	Sumitomo	Asia	Japan	Y	5.92	2.10	3.90	5.05	3.41	452.7
15	Nordea	Europe	Sweden	N	4.00	3.90	5.00	5.90	8.25	468.8
16	Mizuho	Asia	Japan	Y	6.25	2.20	3.90	5.60	3.46	473.3
17	State Street	North America	USA	Y	5.00	N/A	4.10	6.00	4.00	474.1
18	Societe Generale	Europe	France	Y	5.58	2.85	4.70	6.20	3.40	486.1
19	Citi	North America	USA	Y	7.00	3.95	3.70	3.35	2.10	494.3
20	ABC	Asia	China	Y	5.67	6.40	4.45	2.45	2.95	495.4
21	Standard Chartered	UK	UK	Y	6.67	3.80	3.55	5.75	3.64	505.9
22	BPCE Natixis	Europe	France	Y	5.00	5.40	4.90	6.50	3.40	510.0
23	Morgan Stanley	North America	USA	Y	7.00	3.95	3.70	4.55	3.95	515.5
24	Santander	Europe	Spain	Y	6.33	2.85	5.15	4.70	3.71	516.1
25	MSIP	UK	UK	N	5.00	N/A	4.86	N/A	8.81	519.7
26	Prudential	UK	UK	N	6.00	2.85	N/A	4.90	7.54	527.8
27	Lloyds	UK	UK	N	6.67	3.50	4.20	4.30	8.04	528.4
28	Goldman Sachs	North America	USA	Y	7.00	5.00	3.85	4.75	3.55	535.8
29	ING Bank	Europe	Netherlands	Y	6.67	4.80	4.90	5.70	3.20	558.7
30	Commerzbank	Europe	Germany	N	6.75	4.20	3.95	6.70	8.05	558.8
31	Danske Bank	Europe	Denmark	N	6.25	4.05	4.85	6.20	8.45	560.5
32	Aviva	UK	UK	Y	5.92	4.20	N/A	5.90	7.49	565.8
33	Barclays	UK	UK	Y	8.33	3.80	3.65	5.25	3.04	567.5
34	Credit Suisse	Europe	Switzerland	N	7.92	3.35	4.60	6.15	3.55	584.2
35	Nomura	Asia	Japan	N	7.42	3.50	4.30	6.85	9.11	592.2
36	Investec Bank plc	UK	UK	Y	6.50	N/A	5.05	6.55	8.94	614.4
37	Deutsche Bank	Europe	Germany	N	7.83	7.50	3.70	6.85	2.40	617.3
38	RBS	UK	UK	N	8.17	5.60	3.80	5.25	8.19	618.1
39	Unicredit Group	Europe	Italy	Y	8.83	6.60	3.90	6.45	4.39	655.8
40	Bank of Ireland	Europe	Ireland	N	9.50	4.60	4.75	7.00	9.20	707.5

TICS Credit ratings: May 2019 ...

	Bank / Institution	Region	Sovereign	S&P Rating	S&P Outlook	Moody's Rating	Moody's Outlook	Fitch Rating	Fitch Outlook	Credit Rating Score
WEIGHTINGS APPLIED TO CREDIT RATING CATEGORY SCORECARD:				33.3%		33.3%		33.3%		
1	Nordea	Europe	Sweden	AA-	STABLE	Aa3	STABLE	AA-	STABLE	4.00
2	HSBC	UK	UK	AA-	STABLE	Aa3	STABLE	AA-	STABLE	4.00
3	RBC	North America	Canada	AA-	STABLE	A2	STABLE	AA	STABLE	4.33
4	BNP Paribas	Europe	France	A+	STABLE	Aa3	STABLE	A+	STABLE	4.67
5	Credit Agricole	Europe	France	A+	STABLE	A1	POSITIVE	A+	STABLE	4.92
6	BONYM	North America	USA	A	STABLE	A1	STABLE	AA-	STABLE	5.00
7	State Street	North America	USA	A	STABLE	A1	STABLE	AA-	STABLE	5.00
8	BPCE Natixis	Europe	France	A+	STABLE	A1	STABLE	A+	STABLE	5.00
9	MSIP	UK	UK	A+	STABLE	A1	STABLE	NULL	NULL	5.00
10	UBS AG	Europe	Switzerland	A-	STABLE	Aa3	STABLE	A+	STABLE	5.33
11	Societe Generale	Europe	France	A	POSITIVE	A1	STABLE	A	STABLE	5.58
12	ICBC	Asia	China	A	STABLE	A1	STABLE	A	STABLE	5.67
13	CCB	Asia	China	A	STABLE	A1	STABLE	A	STABLE	5.67
14	Bank of China	Asia	China	A	STABLE	A1	STABLE	A	STABLE	5.67
15	JP Morgan	North America	USA	A-	STABLE	A2	STABLE	AA-	STABLE	5.67
16	ABC	Asia	China	A	STABLE	A1	STABLE	A	STABLE	5.67
17	Mitsubishi	Asia	Japan	A-	POSITIVE	A1	STABLE	A	STABLE	5.92
18	Sumitomo	Asia	Japan	A-	POSITIVE	A1	STABLE	A	STABLE	5.92
19	Aviva	UK	UK	A-	POSITIVE	A2	STABLE	A+	STABLE	5.92
20	Prudential	UK	UK	A	STABLE	A2	STABLE	A	STABLE	6.00
21	Bank of America	North America	USA	A-	STABLE	A2	STABLE	A+	STABLE	6.00
22	Wells Fargo	North America	USA	A-	NEGATIVE	A2	NEGATIVE	A+	STABLE	6.17
23	Danske Bank	Europe	Denmark	A	NEGATIVE	A2	NEGATIVE	A	NEGATIVE	6.25
24	Mizuho	Asia	Japan	A-	POSITIVE	A1	STABLE	A-	STABLE	6.25
25	Santander	Europe	Spain	A	STABLE	A2	STABLE	A-	STABLE	6.33
26	Investec Bank plc	UK	UK	NULL	NULL	A1	STABLE	BBB+	STABLE	6.50
27	Standard Chartered	UK	UK	BBB+	STABLE	A2	STABLE	A	STABLE	6.67
28	Lloyds	UK	UK	BBB+	STABLE	A3	STABLE	A+	STABLE	6.67
29	ING Bank	Europe	Netherlands	A-	STABLE	Baa1	STABLE	A+	STABLE	6.67
30	Commerzbank	Europe	Germany	A-	NEGATIVE	A1	STABLE	BBB+	STABLE	6.75
31	Morgan Stanley	North America	USA	BBB+	STABLE	A3	STABLE	A	STABLE	7.00
32	Goldman Sachs	North America	USA	BBB+	STABLE	A3	STABLE	A	STABLE	7.00
33	Citi	North America	USA	BBB+	STABLE	A3	STABLE	A	STABLE	7.00
34	Nomura	Asia	Japan	A-	NEGATIVE	Baa1	STABLE	A-	STABLE	7.42
35	Deutsche Bank	Europe	Germany	BBB+	STABLE	A3	NEGATIVE	BBB+	NEGATIVE	7.83
36	Credit Suisse	Europe	Switzerland	BBB+	STABLE	Baa2	STABLE	A-	POSITIVE	7.92
37	RBS	UK	UK	BBB-	POSITIVE	Baa2	POSITIVE	A	STABLE	8.17
38	Barclays	UK	UK	BBB	STABLE	Baa3	STABLE	A	STABLE	8.33
39	Unicredit Group	Europe	Italy	BBB	NEGATIVE	Baa1	STABLE	BBB	NEGATIVE	8.83
40	Bank of Ireland	Europe	Ireland	BBB-	POSITIVE	Baa3	POSITIVE	BBB	STABLE	9.50

TICS CDS: May 2019...

	Bank / Institution	Region	Sovereign	5 Year CDS	1 Year CDS	5 Year CDS relative to 12 month low	5 Year CDS volatility	Overall CDS Score
WEIGHTINGS APPLIED TO CDS CATEGORY SCORECARD:				60%	15%	15%	10%	
1	UBS AG	Europe	Switzerland	22.97	5.32	0%	55%	1.65
2	Mitsubishi	Asia	Japan	29.14	11.98	2%	2%	1.90
3	Sumitomo	Asia	Japan	31.33	13.52	5%	27%	2.10
4	Mizuho	Asia	Japan	31.43	10.47	4%	35%	2.20
5	BONYM	North America	USA	40.35	8.62	0%	0%	2.35
6	Credit Agricole	Europe	France	28.82	7.16	23%	75%	2.55
7	BNP Paribas	Europe	France	32.83	7.93	34%	60%	2.70
8	Prudential	UK	UK	40.87	8.92	1%	60%	2.85
9	Santander	Europe	Spain	39.47	6.58	8%	71%	2.85
10	Societe Generale	Europe	France	35.32	9.10	8%	63%	2.85
11	HSBC	UK	UK	27.55	7.32	43%	58%	2.85
12	Wells Fargo	North America	USA	48.38	17.78	13%	37%	3.10
13	Bank of America	North America	USA	48.32	21.00	6%	44%	3.20
14	JP Morgan	North America	USA	44.86	18.03	17%	40%	3.20
15	Bank of China	Asia	China	52.89	9.33	1%	37%	3.25
16	Credit Suisse	Europe	Switzerland	56.02	8.32	3%	48%	3.35
17	RBC	North America	Canada	50.66	17.17	4%	20%	3.45
18	Lloyds	UK	UK	41.52	12.24	44%	49%	3.50
19	Nomura	Asia	Japan	50.78	17.73	17%	16%	3.50
20	Barclays	UK	UK	50.07	13.97	23%	44%	3.80
21	Standard Chartered	UK	UK	54.98	14.26	0%	100%	3.80
22	Nordea	Europe	Sweden	40.39	10.10	69%	51%	3.90
23	Citi	North America	USA	56.25	23.63	16%	40%	3.95
24	Morgan Stanley	North America	USA	63.82	23.65	19%	46%	3.95
25	Danske Bank	Europe	Denmark	47.57	13.73	79%	61%	4.05
26	Commerzbank	Europe	Germany	68.70	6.01	18%	58%	4.20
27	Aviva	UK	UK	64.72	17.90	35%	59%	4.20
28	Bank of Ireland	Europe	Ireland	57.15	25.37	58%	33%	4.60
29	ING Bank	Europe	Netherlands	66.46	16.95	32%	55%	4.80
30	Goldman Sachs	North America	USA	73.24	26.48	31%	49%	5.00
31	BPCE_Natixis	Europe	France	62.86	45.44	88%	61%	5.40
32	RBS	UK	UK	84.96	15.35	32%	100%	5.60
33	ABC	Asia	China	153.00	22.00	0%	0%	6.40
34	Unicredit Group	Europe	Italy	114.71	30.93	59%	75%	6.60
35	Deutsche Bank	Europe	Germany	146.23	79.18	46%	64%	7.50
36	CCB	Asia	China	N/A	N/A	N/A	N/A	N/A
N/A	ICBC	Asia	China	N/A	N/A	N/A	N/A	N/A
N/A	Investec Bank plc	UK	UK	N/A	N/A	N/A	N/A	N/A
N/A	MSIP	UK	UK	N/A	N/A	N/A	N/A	N/A
N/A	State Street	North America	USA	N/A	N/A	N/A	N/A	N/A

TICS Credit ratings (65%) | CDS (35%) combined: May 2019 ...

	Bank / Institution	Region	Sovereign	Credit rating Score	CDS Score	Combined Credit Rating (65%) and CDS (35%) Score
WEIGHTINGS APPLIED TO CREDIT RATING AND CDS SCORECARDS COMBINED:				65%	35%	
1	HSBC	UK	UK	4.00	2.85	3.60
2	Nordea	Europe	Sweden	4.00	3.90	3.97
3	BNP Paribas	Europe	France	4.67	2.70	3.98
4	RBC	North America	Canada	4.33	3.45	4.02
5	UBS AG	Europe	Switzerland	5.33	1.65	4.04
6	BONYM	North America	USA	5.00	2.35	4.07
7	Credit Agricole	Europe	France	4.92	2.55	4.09
8	Mitsubishi	Asia	Japan	5.92	1.90	4.51
9	Sumitomo	Asia	Japan	5.92	2.10	4.58
10	Societe Generale	Europe	France	5.58	2.85	4.63
11	JP Morgan	North America	USA	5.67	3.20	4.80
12	Bank of China	Asia	China	5.67	3.25	4.82
13	Mizuho	Asia	Japan	6.25	2.20	4.83
14	Prudential	UK	UK	6.00	2.85	4.90
15	State Street	North America	USA	5.00	N/A	5.00
16	MSIP	UK	UK	5.00	N/A	5.00
17	Bank of America	North America	USA	6.00	3.20	5.02
18	Wells Fargo	North America	USA	6.17	3.10	5.09
19	Santander	Europe	Spain	6.33	2.85	5.11
20	BPCE Natixis	Europe	France	5.00	5.40	5.14
21	Aviva	UK	UK	5.92	4.20	5.32
22	Danske Bank	Europe	Denmark	6.25	4.05	5.48
23	Lloyds	UK	UK	6.67	3.50	5.56
24	Standard Chartered	UK	UK	6.67	3.80	5.66
25	ICBC	Asia	China	5.67	N/A	5.67
26	CCB	Asia	China	5.67	N/A	5.67
27	Commerzbank	Europe	Germany	6.75	4.20	5.86
28	ABC	Asia	China	5.67	6.40	5.92
29	Citi	North America	USA	7.00	3.95	5.93
30	Morgan Stanley	North America	USA	7.00	3.95	5.93
31	ING Bank	Europe	Netherlands	6.67	4.80	6.01
32	Nomura	Asia	Japan	7.42	3.50	6.05
33	Goldman Sachs	North America	USA	7.00	5.00	6.30
34	Credit Suisse	Europe	Switzerland	7.92	3.35	6.32
35	Investec Bank plc	UK	UK	6.50	N/A	6.50
36	Barclays	UK	UK	8.33	3.80	6.75
37	RBS	UK	UK	8.17	5.60	7.27
38	Deutsche Bank	Europe	Germany	7.83	7.50	7.72
39	Bank of Ireland	Europe	Ireland	9.50	4.60	7.79
40	Unicredit Group	Europe	Italy	8.83	6.60	8.05

TICS Fundamentals (balance sheet): May 2019...

	Bank / Institution	Region	Sovereign	Tier 1 Capital Ratio	Leverage Ratio (Asset / Equity)	Loan to Deposit Ratio	Price-to-Book Ratio	Tier 1 Cap Size (BLN \$)	Total Assets (BLN \$)	Overall Bal. Sheet Score
WEIGHTINGS FOR FUNDAMENTALS (BALANCE SHEET) CATEGORY SCORECARD:				40%	15%	15%	15%	10%	5%	
1	HSBC	UK	UK	20%	15.6	74.9	0.93	147.1	2558.1	3.25
2	Standard Chartered	UK	UK	22%	13.8	73.9	0.61	43.4	688.8	3.55
3	Barclays	UK	UK	21%	18.1	88.3	0.43	67.1	1434.5	3.65
4	Deutsche Bank	Europe	Germany	19%	20.1	69.9	0.22	69.4	1776.8	3.70
5	Morgan Stanley	North America	USA	22%	11.9	80.2	1.02	70.6	853.5	3.70
6	Citi	North America	USA	17%	10.8	69.2	0.85	158.1	1917.4	3.70
7	RBS	UK	UK	23%	15.2	83.8	0.63	45.9	878.8	3.80
8	Mitsubishi	Asia	Japan	17%	19.2	61.0	0.45	153.0	2890.5	3.80
9	Wells Fargo	North America	USA	17%	11.0	75.0	1.10	167.9	1895.9	3.85
10	Goldman Sachs	North America	USA	18%	11.8	80.8	0.84	83.7	931.8	3.85
11	Mizuho	Asia	Japan	18%	22.6	63.5	0.50	86.6	1930.8	3.90
12	Sumitomo	Asia	Japan	19%	19.2	62.6	0.53	99.9	1874.5	3.90
13	Unicredit Group	Europe	Italy	18%	14.9	99.1	0.49	65.9	1008.2	3.90
14	CCB	Asia	China	16%	11.7	81.1	0.91	272.2	3398.5	3.95
15	Commerzbank	Europe	Germany	18%	16.4	76.6	0.36	31.3	545.2	3.95
16	ICBC	Asia	China	15%	12.3	71.4	0.86	324.1	4007.2	3.95
17	UBS AG	Europe	Switzerland	20%	18.1	78.5	0.93	46.3	958.5	3.95
18	Bank of China	Asia	China	15%	14.1	80.2	0.67	230.0	3104.7	4.05
19	State Street	North America	USA	16%	9.7	14.3	1.02	15.3	244.6	4.10
20	Bank of America	North America	USA	15%	11.6	71.0	1.10	186.0	2355.0	4.20
21	Lloyds	UK	UK	23%	16.0	106.6	0.91	47.5	1009.6	4.20
22	JP Morgan	North America	USA	16%	11.4	69.0	1.45	209.1	2622.5	4.25
23	Nomura	Asia	Japan	18%	15.6	86.0	0.53	25.1	403.5	4.30
24	ABC	Asia	China	14%	14.2	62.4	0.76	218.1	3234.0	4.45
25	Credit Agricole	Europe	France	19%	27.6	115.3	0.60	101.6	2124.3	4.50
26	BONYM	North America	USA	15%	9.8	23.6	1.15	21.0	363.0	4.60
27	Credit Suisse	Europe	Switzerland	18%	17.5	76.1	0.78	47.0	784.6	4.60
28	Societe Generale	Europe	France	17%	21.5	96.9	0.36	59.7	1536.3	4.70
29	Bank of Ireland	Europe	Ireland	19%	13.4	100.2	0.66	8.8	142.1	4.75
30	BNP Paribas	Europe	France	15%	20.1	95.1	0.58	101.7	2361.7	4.85
31	Danske Bank	Europe	Denmark	23%	21.9	187.3	0.64	24.3	570.0	4.85
32	MSIP	UK	UK	15%	4.6	N/A	N/A	19.1	446.2	4.86
33	BPCE Natixis	Europe	France	19%	24.9	125.7	0.83	71.7	1517.9	4.90
34	ING Bank	Europe	Netherlands	17%	17.4	101.6	0.87	52.5	1019.6	4.90
35	Nordea	Europe	Sweden	20%	16.8	163.8	0.86	31.0	633.8	5.00
36	Investec Bank plc	UK	UK	17%	12.1	79.8	1.04	2.6	28.3	5.05
37	Santander	Europe	Spain	15%	15.1	112.5	0.76	93.1	1740.1	5.15
38	RBC	North America	Canada	15%	18.1	72.5	1.90	48.3	1018.9	5.70
N/A	Aviva	UK	UK	n/a	26.0	n/a	1.00	n/a	647.0	N/A
N/A	Prudential	UK	UK	n/a	29.5	n/a	2.62	n/a	652.2	N/A

TICS Fundamentals (market indicators): May 2019 ...

	Bank/Institution	Region	Sovereign	Market Cap (BLN \$)	260 Day share price Volatility	5 Year Beta	Prevailing share price relative to 12 month high	Consensus Analyst Rec	Overall Mkt. Indicators Score
WEIGHTINGS APPLIED TO FUNDAMENTALS (MARKET INDICATORS) SCORECARD:				50%	15%	15%	15%	5%	
1	ICBC	Asia	China	297.59	23.04	0.63	94%	BUY	1.45
2	JP Morgan	North America	USA	376.91	20.02	1.15	97%	BUY	1.90
3	CCB	Asia	China	238.14	27.48	0.89	95%	BUY	2.10
4	Bank of America	North America	USA	290.76	23.61	1.51	95%	BUY	2.20
5	Bank of China	Asia	China	168.07	18.14	0.71	96%	BUY	2.45
6	ABC	Asia	China	192.31	21.00	0.61	95%	BUY	2.45
7	Wells Fargo	North America	USA	219.88	20.05	1.07	81%	HOLD	2.60
8	HSBC	UK	UK	175.59	17.84	1.00	89%	HOLD	2.95
9	Citi	North America	USA	165.47	23.79	1.71	93%	BUY	3.35
10	RBC	North America	Canada	114.60	11.72	0.95	99%	BUY	3.60
11	Lloyds	UK	UK	58.80	19.70	0.67	93%	BUY	4.30
12	Morgan Stanley	North America	USA	81.37	25.55	1.23	86%	BUY	4.55
13	Santander	Europe	Spain	82.01	23.11	1.46	82%	BUY	4.70
14	Goldman Sachs	North America	USA	75.52	25.20	1.23	83%	HOLD	4.75
15	Prudential	UK	UK	59.17	23.55	1.05	89%	BUY	4.90
16	Sumitomo	Asia	Japan	50.47	18.88	1.45	84%	BUY	5.05
17	RBS	UK	UK	37.74	25.52	0.71	83%	BUY	5.25
18	Barclays	UK	UK	36.80	23.17	0.69	75%	BUY	5.25
19	BNP Paribas	Europe	France	66.22	23.09	1.33	74%	BUY	5.35
20	UBS AG	Europe	Switzerland	59.04	22.63	1.34	81%	HOLD	5.40
21	BONYM	North America	USA	47.42	22.62	1.00	85%	HOLD	5.60
22	Mizuho	Asia	Japan	39.52	13.48	1.26	85%	HOLD	5.60
23	Mitsubishi	Asia	Japan	67.42	20.50	1.71	74%	BUY	5.65
24	Credit Agricole	Europe	France	39.14	23.43	1.46	89%	BUY	5.70
25	ING Bank	Europe	Netherlands	49.38	24.27	1.35	80%	BUY	5.70
26	Standard Chartered	UK	UK	30.72	23.95	1.44	90%	HOLD	5.75
27	Aviva	UK	UK	22.02	19.62	1.00	78%	BUY	5.90
28	Nordea	Europe	Sweden	31.66	22.93	1.22	75%	HOLD	5.90
29	State Street	North America	USA	25.51	27.13	1.39	64%	BUY	6.00
30	Credit Suisse	Europe	Switzerland	38.90	24.14	1.80	79%	BUY	6.15
31	Danske Bank	Europe	Denmark	15.44	32.94	0.69	54%	BUY	6.20
32	Societe Generale	Europe	France	25.46	25.02	1.42	61%	HOLD	6.20
33	Unicredit Group	Europe	Italy	30.75	34.27	1.79	68%	BUY	6.45
34	BPCE_Natixis	Europe	France	18.48	26.78	1.52	73%	BUY	6.50
35	Investec Bank plc	UK	UK	6.54	28.41	1.10	82%	BUY	6.55
36	Commerzbank	Europe	Germany	11.20	38.42	1.36	72%	HOLD	6.70
37	Nomura	Asia	Japan	13.09	25.07	1.66	65%	HOLD	6.85
38	Deutsche Bank	Europe	Germany	17.05	34.53	1.40	63%	HOLD	6.85
39	Bank of Ireland	Europe	Ireland	6.98	32.38	1.35	75%	BUY	7.00
N/A	MSIP	UK	UK	N/A	N/A	N/A	N/A	N/A	N/A

TICS Systemic importance: May 2019 ...

	Bank/Institution	Region	Sovereign	FSB G-SIB Status	GSIB Additional Tier 1 Capital Ratio (%)	Total Deposits (BLN \$)	Sovereign S&P Rating	Sovereign S&P Outlook	Number of employees	Systemic Importance score
WEIGHTINGS APPLIED TO SYSTEMIC IMPORTANCE SCOREACRD:				50%	15%	15%	10%	5%	5%	
1	JP Morgan	North America	USA	Y	2.5%	1470.67	AA+	STABLE	249,632	1.80
2	Citi	North America	USA	Y	2.0%	1013.23	AA+	STABLE	217,058	2.10
3	HSBC	UK	UK	Y	2.0%	1418.97	AA	NEGATIVE	235,217	2.29
4	Wells Fargo	North America	USA	Y	1.5%	1286.48	AA+	STABLE	258,686	2.35
5	Bank of America	North America	USA	Y	1.5%	1381.59	AA+	STABLE	201,834	2.40
6	Deutsche Bank	Europe	Germany	Y	2.0%	699.77	AAA	STABLE	97,535	2.40
7	ICBC	Asia	China	Y	1.5%	3171.17	A+	STABLE	453,048	2.50
8	Bank of China	Asia	China	Y	1.5%	2401.12	A+	STABLE	310,119	2.50
9	BNP Paribas	Europe	France	Y	1.5%	1008.69	AA	STABLE	189,509	2.60
10	Mitsubishi	Asia	Japan	Y	1.5%	1669.76	A+	POSITIVE	143,400	2.76
11	CCB	Asia	China	Y	1.0%	2513.63	A+	STABLE	352,621	2.95
12	ABC	Asia	China	Y	1.0%	2637.33	A+	STABLE	487,307	2.95
13	Barclays	UK	UK	Y	1.5%	585.27	AA	NEGATIVE	83,500	3.04
14	RBC	North America	Canada	Y	1.0%	610.54	AAA	STABLE	81,870	3.15
15	ING Bank	Europe	Netherlands	Y	1.0%	709.91	AAA	STABLE	52,233	3.20
16	Credit Agricole	Europe	France	Y	1.0%	959.35	AA	STABLE	140,596	3.25
17	UBS AG	Europe	Switzerland	Y	1.0%	430.80	AAA	STABLE	66,888	3.35
18	BPCE_Natixis	Europe	France	Y	1.0%	702.45	AA	STABLE	106,463	3.40
19	Societe Generale	Europe	France	Y	1.0%	573.10	AA	STABLE	147,125	3.40
20	Sumitomo	Asia	Japan	Y	1.0%	1096.88	A+	POSITIVE	77,205	3.41
21	Mizuho	Asia	Japan	Y	1.0%	1177.90	A+	POSITIVE	59,179	3.46
22	Goldman Sachs	North America	USA	Y	1.5%	157.92	AA+	STABLE	36,600	3.55
23	Credit Suisse	Europe	Switzerland	Y	1.0%	386.88	AAA	STABLE	45,680	3.55
24	Standard Chartered	UK	UK	Y	1.0%	420.73	AA	NEGATIVE	85,402	3.64
25	Santander	Europe	Spain	Y	1.0%	946.17	A-	POSITIVE	202,251	3.71
26	BONYM	North America	USA	Y	1.0%	238.97	AA+	STABLE	51,300	3.80
27	Morgan Stanley	North America	USA	Y	1.0%	187.82	AA+	STABLE	60,348	3.95
28	State Street	North America	USA	Y	1.0%	180.36	AA+	STABLE	40,142	4.00
29	Unicredit Group	Europe	Italy	Y	1.0%	635.38	BBB	NEGATIVE	91,952	4.39
30	Aviva	UK	UK	N	N/A	n/a	AA	NEGATIVE	30,021	7.49
31	Prudential	UK	UK	N	N/A	n/a	AA	NEGATIVE	27,151	7.54
32	Lloyds	UK	UK	N	N/A	538.48	AA	NEGATIVE	66,613	8.04
33	Commerzbank	Europe	Germany	N	N/A	353.57	AAA	STABLE	49,417	8.05
34	RBS	UK	UK	N	N/A	482.91	AA	NEGATIVE	65,400	8.19
35	Nordea	Europe	Sweden	N	n/a	214.01	AAA	STABLE	28,990	8.25
36	Danske Bank	Europe	Denmark	N	N/A	172.20	AAA	STABLE	19,768	8.45
37	MSIP	UK	UK	N	N/A	N/A	AA	NEGATIVE	344	8.81
38	Investec Bank plc	UK	UK	N	N/A	18.68	AA	NEGATIVE	10,146	8.94
39	Nomura	Asia	Japan	N	N/A	34.92	A+	POSITIVE	28,186	9.11
40	Bank of Ireland	Europe	Ireland	N	N/A	91.20	A+	STABLE	10,595	9.20

- **In addition to the Category and Amalgamated Scorecards, our Scorecards can also be used to identify:**
 - regional scores for the US, Europe, UK and Asia
 - scores for multi-bank / institution products baskets (offered by some providers)

Regional score analysis: May 2019 ...

UK	
Bank / Institution	Overall Scorecard
HSBC	341.2
Standard Chartered	505.9
MSIP	519.7
Prudential	527.8
Lloyds	528.4
Aviva	565.8
Barclays	567.5
Investec Bank plc	614.4
RBS	618.1
AVERAGE	532.08

NORTH AMERICA	
Bank / Institution	Overall Scorecard
JP Morgan	430.2
Wells Fargo	446.4
RBC	447.8
Bank of America	448.0
BONYM	448.3
State Street	474.1
Citi	494.3
Morgan Stanley	515.5
Goldman Sachs	535.8
AVERAGE	471.14

EUROPE	
Bank / Institution	Overall Scorecard
UBS AG	427.3
BNP Paribas	439.2
Credit Agricole	443.2
Nordea	468.8
Societe Generale	486.1
BPCE_Natixis	510.0
Santander	516.1
ING Bank	558.7
Commerzbank	558.8
Danske Bank	560.5
Credit Suisse	584.2
Deutsche Bank	617.3
Unicredit Group	655.8
Bank of Ireland	707.5
AVERAGE	538.10

ASIA	
Bank / Institution	Overall Scorecard
Bank of China	433.9
ICBC	438.2
CCB	448.5
Mitsubishi	449.5
Sumitomo	452.7
Mizuho	473.3
ABC	495.4
Nomura	592.2
AVERAGE	478.55

- **Professional advisers are expected to undertake robust issuer / counterparty due diligence**
 - “Firms should carry out sufficient due diligence into the counterparty and not rely solely on credit rating agencies ...”*
 - “We expect firms to look more broadly than just the credit rating, such as the rating, outlook, credit default swap (CDS) spreads and other market information, as well as ‘fundamentals’ on the issuer’s balance sheet.”*
- **Our Scorecards provide easy access to multiple, widely recognised measures and indicators of financial strength / credit risk:**
 - that can help provoke and support detailed and more objective analysis, assessment, comparison, consideration and understanding of prospective issuers and counterparties, as part of product research and due diligence
- **Importantly, however, professional advisers should note our explanation of what our Scorecards are and what they are not - including understand that our Scorecards were developed for internal purposes, with a scoring system and weightings that we feel are appropriate:**
 - and we highlight that we can readily support professional advisers who may have different views and / or want to apply or explore different weightings

- **Issuer / counterparty risk is the most fundamental risk of structured products**
- **Our Tempo Issuer & Counterparty Scorecards have been developed for internal purposes, to aid more objective due diligence consideration and selection (or rejection) of prospective issuers / counterparties:**
 - based on the criteria that we assess, the banks that we monitor are (with one or two exceptions) in the top percentile of the global banking universe (of circa 3,400 banks)
 - our Scorecards are designed to help provoke and support detailed **analysis, assessment, comparison, consideration** and **understanding** of issuers / counterparties, based upon multiple factors that are widely recognised measures / indicators of financial strength / credit risk
- **We publish our Scorecards as part of our approach to proactively providing transparency with regard to the processes behind our products:**
 - and to support professional advisers in their product research and issuer / counterparty due diligence
- **We explain our methodology and the weightings we use for internal purposes - having given considerable thought to how to combine, balance and reflect our views of the relative importance of the factors:**
 - importantly, we highlight what our Scorecards are: and what they are not
- **We feel strongly that prompting professional advisers to carefully consider this essential aspect of structured products, supporting their research due diligence, is the right thing to be doing and a significant positive**

- **It should always be understood that:**
 - structured products are not suitable for everyone
 - past performance is not a reliable indicator of or guide to future performance and should not be relied upon, particularly in isolation
 - the value of investments and the income from them can go down as well as up
 - the value of structured products may be affected by the price of their underlying investments
 - capital is at risk and investors could lose some or all of their capital

- **The ‘Important risks’ section of our website highlights the key and other risks of structured products, in addition to explaining important information for Professional Advisers who wish to access the current products area of our website and who may use our structured product plans with their clients:**
 - www.tempo-sp.com/home/important-risks

- **Professional Advisers should access and read the relevant plan documents relating to any structured product plan of interest, in particular: the plan brochure; plan application pack, including, the terms and conditions of the plan; and the issuer’s securities prospectus, final terms sheet and key information document (KID), before making a recommendation to their clients**

- **Professional advisers should not invest in, or advise their clients to invest in, any investment product unless they and their clients understand them, in particular the relevant risks**

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