

METHODOLOGICAL NOTES

Transition indicators: six qualities of a sustainable market economy

The transition indicators reflect the judgement of the EBRD's Office of the Chief Economist and the Economics, Policy and Governance department on the transition progress in the economies where the EBRD invests. According to this approach a sustainable market economy is characterised by six qualities: Competitive, Well-governed, Green, Inclusive, Resilient and Integrated.

This approach measures the state of each quality and its components in a given economy, as compared with the other economies in the EBRD regions and a few select developed economies,¹ against a frontier. The frontier is set either by the best performance in this group of economies or by an unobserved theoretical value and provides a common benchmark against which all economies are assessed consistently and comparably. The same frontier values are also applied across the years to ensure that computed scores are comparable and capture changes in underlying indicators through time.

Assessments of Transition Qualities (ATQs) are composite indices combining information from a large number of indicators and assessments in a consistent manner. The underlying indicators within each ATQ are constructed using a wide range of sources, including national and industry statistics, data from other international organisations and affiliated databases (World Bank, IMF, UN); surveys (The Business Environment and Enterprise Performance Survey (BEEPS); Life in Transition Survey (LiTS) and assessments prepared internally by EBRD experts (see Table M.1 below for the list of indicators).

The computation of ATQ indices involves multiple steps, namely: data preparation, normalisation and aggregation. Details of each of these steps are provided below.

Data preparation and treatment of missing observations

The underlying data for the majority of indicators either enter the composite index directly or are scaled using a meaningful related measure. A number of indicators may themselves be composite indices (for example, EBRD SME index or EBRD Knowledge Economy index) and they enter the ATQ composites in index form. No further transformation is applied to the underlying indicators before normalisation. For some indicators no data is available for the current year and simple imputation methods are used.² One method of imputation uses the latest available observation from past years, thus assuming that no change from the latest available observation has been observed. When there are no past or present observations available for a particular indicator, then, based on the judgement of EBRD experts, either the regional mean (using the EBRD classification of regions for the economies where it invests) or the observed regional minima are used to impute the missing observations.

For the regional disparity component of the Inclusive ATQ, imputations for the southern and eastern Mediterranean (SEMED) economies and Turkmenistan are necessary due to the LiTS (source of the data for this indicator) not being administered in these economies. In particular, a new series is generated for a full set of economies including SEMED and

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¹ The group of comparator developed economies currently includes Canada, the Czech Republic, France, Germany, Japan, Sweden, United Kingdom and the United States of America.

² Due to lags in the availability of data, ATQ scores for a given year may not correspond fully to that calendar year. In particular, ATQ scores for 2019 reflect progress in transition based primarily on data available for the years 2017-18.

Turkmenistan based on available indicators on rural-urban disparities from other sources. Using the statistical relationship between the scores produced by this series and LITS-based regional inclusions scores, missing SEMED and Turkmenistan values were imputed. Further details of this imputation are available on request.

To mitigate the effect that extreme values may have on scores, observations that lie above the 98th percentile are considered outliers and replaced by the next value within the acceptable range. Outlier detection and replacement is only applied to select continuous variables.

Normalisation

The raw data for each indicator are normalised to the same scale using the min-max normalisation method as follows:

$$x' = \frac{x - x_{worst}}{x_{best/frontier} - x_{worst}}.$$

The resulting scores are then rescaled from 1 to 10, where 10 represents the frontier for each quality. The frontier is taken to be the best performance, observed either in an economy where we invest, a comparator country or a theoretical value determined based on expert judgement.

If an observation for a country exceeds the selected frontier, then the normalised value of the indicator is capped at the frontier value. For indicators where any deviation from the frontier is undesirable, values either below or above the frontier are treated similarly (the same score is computed and assigned to two observations that are equally distant from the frontier).

Aggregation

Normalised indicators are aggregated to a single composite index (by quality) using weights determined by expert judgement (see Table M.1 for details of weights). A simple weighted averaging method is used for aggregation.

Changes to methodology from 2018

During the past year, further work on strengthening the methodology for computing ATQ indices was carried out. This work did not involve changes to the process of computation of ATQ indices and it focused largely on modifications to the set of underlying indicators. The primary purpose of this work has been ensuring that ATQs better capture the relevant phenomena and allow adequate monitoring of the pace of reforms and transformation in the region. This work resulted in the addition of new indicators, discontinuation of the use of others and use of equivalent data series from alternative sources. Details of these changes are provided below.

Competitive

- The indicator measuring the issuance of ISO certifications (scaled by population) was removed.

Inclusive

- The gender equality component of the composite was revised and it now includes the “Women, Business and the Law” index and the measure for inequality of opportunity attributable to gender. The previous financial inclusion measure (number of bank accounts) has been replaced by two indicators measuring the overall level of borrowing and savings at financial institutions and the respective percentage difference of this measure between the female and male populations.

- The opportunities for youth component of the composite was also revised. The PISA test scores were replaced by the Human Development Index harmonised test scores. Unemployment and financial inclusion dimensions of the composite (per cent of individuals with a bank account) are captured both at their level and the percentage difference between young people and adults.
- The regional disparities component was revised to include the quality of transport and trade-related infrastructure and the measure for access to heating was removed.

Resilient

- The methodology used to assess the regulatory, governance and safety nets sub-component of the financial sector resilience sub-index has changed to a new scale (indicators now have 10 categories rather than three).

Integrated

- New indicators were added to the composite: road connectivity, air transport connectivity, losses in electrical power transmission and distribution, mobile broadband basket price, international bandwidth per internet user and 3G coverage of the population.
- An indicator measuring the losses due to electrical outages was removed.

The following tables show, for each quality, the components used in each quality index along the indicators and data sources that were fed into the final assessments.

TABLE M.1 List of indicators used to compute Assessment of Transition Qualities (ATQs) indices

COMPETITIVE						
Components	Sub-components	Indicators	Source	Frontier economy	Frontier value	Worst performance
Market structures [50%]		Applied tariff rates ^a (weighted average) [14%]	World Bank Development Indicators (WDI), International Trade Centre, Market Access Map, 2017	Georgia	0.67	9.35
		Subsidies expense ^a (share of GDP) [14%]	International Monetary Fund, 2017	Uzbekistan	0.13	7.05
		Ease of Doing Business (Distance to frontier (DTF) Score) [14%]	World Bank <i>Doing Business</i> , 2019	United States of America	83.99	53.97
		Doing Business - resolving insolvency score [14%]	World Bank <i>Doing Business</i> , 2019	Japan	93.16	20.88
		Number of new business entries ^d (scaled by population) [7%]	WDI, 2016	Estonia	20.76	0.15
		Doing Business - starting a business ^d [7%]	World Bank <i>Doing Business</i> , 2019	Canada*	98.23	58.43
		SME index adjusted (1 = worst, 10 = best) [14%]	EBRD assessment, 2018	United Kingdom	7.73	3.85
		Share of advanced business services in service exports [14%]	WDI, 2017	United Kingdom	74.90	8.17
Capacity to generate value added [50%]		Economic Complexity Index [14%]	Harvard Centre for International Development, 2016	Japan	2.26	-1.39
		Knowledge Economy Index (KEI) adjusted (1 = worst, 10 = best) [14%]	EBRD assessment, 2018	Sweden	8.09	1.97
		WB Logistics Performance Index (1 = worst, 5 = best) [14%]	WDI, 2018	Germany	4.37	1.96
		Quality of education system (1 = worst, 7 = best) [14%]	World Economic Forum (WEF), Global Competitiveness Index, 2017	United States of America	5.70	2.91
		Labour productivity (output per worker, GDP (constant 2011 int.US\$ PPP) [14%]	ILOSTAT, WDI, 2019	United States of America	112,677	8,898
		Credit to private sector ^b (per cent of GDP) [14%]	WDI, 2017	Cyprus*	100	13.72
		Global value chain participation [14%]	UNCTAD, EBRD, 2018	Slovak Republic	0.81	0.33

WELL-GOVERNED						
Components	Sub-components	Indicators	Source	Frontier economy	Frontier value	Worst performance
National level governance [60%]	Quality of public governance [33%]	Regulatory quality (-2.5 = worst, 2.5 = best) [14%]	World Bank Governance Indicators, 2017	Canada	1.85	-2.09
		Government effectiveness (-2.5 = worst, 2.5 = best) [14%]	World Bank Governance Indicators, 2017	Sweden*	1.84	-1.21
		Transparency of government policy making (1 = worst, 7 = best) [14%]	WEF Global Competitiveness Index, 2017	Canada	5.67	2.71
		Private property protection ^g (1 = worst, 7 = best) [14%]	WEF Global Competitiveness Index, 2018	No economy was at the frontier in 2019	6.28	2.87
		Intellectual property protection ^g (1 = worst, 7 = best) [14%]	WEF Global Competitiveness Index, 2018	No economy was at the frontier in 2019	6.09	2.93
		Burden of government regulation (1 = worst, 7 = best) [14%]	WEF Global Competitiveness Index, 2018	Germany*	4.83	1.85
		Political instability [14%]	World Bank/EBRD BEEPS, 2014	Azerbaijan	0	0.96
		Freedom of the press ^{a,f} (100 = least free, 0 = most free) [7%]	Freedom House, 2016	Sweden	11	98
		World press freedom index ^{a,f} (100 = least free, 0 = most free) [7%]	Reporters Without Borders, 2018	Sweden	12.33	84.20
	Integrity and control of corruption [33%]	Control of corruption ^g (-2.5 = worst, 2.5 = best) [19%]	World Bank Governance Indicators, 2017	Sweden	2.14	-1.52
		Corruption perception index ^{g,e} (0 = highly corrupt, 100 = not corrupt) [19%]	Transparency International, 2018	Sweden	84	19
		Perception of corruption ^g [19%]	World Bank/EBRD BEEPS, 2014	Estonia	0.01	0.71
		Informality ^a [22%]	World Bank/EBRD BEEPS, 2014	Jordan	0.04	0.62
		Implementation of anti-money laundering (AML)/combating the financing of terrorism (CFT)/tax exchange standards ^a (0 = low risk, 10 = high risk) [22%]	International Centre for Asset Recovery, 2018	Estonia*	3.33	8.30
	Rule of law [33%]	Judicial independence (1 = worst, 7 = best) [20%]	WEF Global Competitiveness Index, 2018	No economy was at the frontier in 2019	6.30	1.99
		Efficiency of legal framework in settling disputes ^h (1 = worst, 7 = best) [10%]	WEF Global Competitiveness Index, 2018	United States of America	5.69	1.86
		Efficiency of legal framework in challenging regulations (1 = worst, 7 = best) [20%]	WEF Global Competitiveness Index, 2018	United States of America	5.21	1.83
		Enforcement of contracts ^h [10%]	World Bank <i>Doing Business</i> , 2018	No economy was at the frontier in 2019	91.23	42.75
		Rule of law (-2.5 = worst, 2.5 = best) [20%]	World Bank Governance Indicators, 2017	Sweden	1.94	-1.49
		Effectiveness of courts ^a [20%]	World Bank/EBRD BEEPS, 2014	Jordan	0.00	-0.28
	Corporate level governance [40%]	Corporate governance frameworks and practices [80%]	Structure and functioning of the board [20%]	EBRD Legal Transition Team (LTT) Corporate Governance Assessment, 2017	Czech Republic*	3.68
Transparency and disclosure ⁱ [10%]			EBRD LTT Corporate Governance Assessment, 2017	Czech Republic*	4.66	1.96
Internal control [20%]			EBRD LTT Corporate Governance Assessment, 2017	Czech Republic*	4.00	0.60
Rights of shareholders ^j [10%]			EBRD LTT Corporate Governance Assessment, 2017	Czech Republic*	4.20	2.75
Stakeholders and institutions [20%]			EBRD LTT Corporate Governance Assessment, 2017	Czech Republic*	4.16	0.18
Strength of auditing and reporting standards ⁱ (1 = worst, 7 = best) [10%]			WEF Global Competitiveness Index, 2018	Canada	6.22	3.33
Protection of minority shareholders' interest ^j [10%]			World Bank <i>Doing Business</i> , 2018	Georgia*	80.00	38.33
Integrity and other governance-related business standards and practices [20%]		Ethical behaviour of firms (1 = worst, 7 = best) [100%]	WEF Global Competitiveness Index, 2017	Sweden	5.98	2.65

GREEN							
Components	Sub-components	Indicators	Source	Frontier economy	Frontier value	Worst performance	
Mitigation [35%]	Physical indicators [37%]	Electricity production from renewable sources, including hydroelectric (per cent of total) [17%]	World Bank, 2015	Albania	100	0.82	
		Value added from industry (construction, manufacturing, mining, electricity, water and gas) per unit of CO ₂ emissions from industry (GVA (US \$) / total CO ₂) [17%]	World Bank, International Energy Agency (IEA), 2016	Sweden	17,255	575	
		MWh consumed per tonne of CO ₂ emitted from electricity and heat generation (MWh/ total CO ₂) [17%]	World Bank, IEA, 2015	Albania*	42.88	0.12	
		GDP per tonne of CO ₂ emitted from residential buildings (from fuel combustion) (GDP(US\$) / total CO ₂) [17%]	World Bank, IEA, 2016	Sweden	4,870,654	9,312	
		Number of registered vehicles per tonne of CO ₂ emitted from transport [17%]	World Health Organization (WHO), IEA, 2012	Lebanon	7.38	0.79	
		Agricultural sector GVA per tonne of GHG emissions from agriculture (GVA (US \$) / total CO ₂ eq) [17%]	World Bank, Food and Agriculture Organization of the United Nations (FAO), 2016	Japan	2,625	66	
	Structural indicators [63%]	Market support mechanism (0=no support, 0.5 regulatory support, 1 = revenue support) [25%]	IEA, 2018	Canada*	1	0.50	
		INDC rating (0 for no INDC, 0.5 for INDC but not ratified, 1 for ratified INDC) [25%]	World Resources Institute (WRI), CAIT, 2018	Canada*	1	0	
		Carbon price (0 = worst, 1 = best) [25%]	World Bank, 2018	France*	1	0	
		Fossil fuel subsidies (per cent of GDP) ^a [25%]	IMF, 2015	Sweden*	0	11.91	
	Adaptation [30%]	Physical indicators [45%]	NDGAIN human habitat score ^a [25%]	Notre Dame Global Adaptation Initiative, 2017	Germany	0.25	0.63
			Aqueduct water stress index ^a [25%]	World Resource Institute (WRI), 2013	Slovenia	0.83	3.14
NDGAIN projected change in cereal yield ^a [25%]			Notre Dame Global Adaptation Initiative, 2017	Canada*	0	0.85	
WDI Occurrence of droughts, floods, extreme temperatures ^a (per cent of population affected 1990-2009) [25%]			World Bank, WDI, 2009	Sweden*	0	5.38	
Structural indicators [55%]		NDGAIN agricultural capacity ^a [20%]	Notre Dame Global Adaptation Initiative, 2017	Turkmenistan	0	0.99	
		World Governance Indicators: Institutional Quality (- 2.5 = worst, 2.5 = best) [40%]	World Bank, World Governance Indicators, 2017	Canada*	1.82	-1.61	
Other environmental areas [30%]	Physical indicators [37%]	Population weighted mean annual exposure to PM2.5 ^a [22%]	World Bank, WDI, 2017	Kosovo	0	88.15	
		Waste intensive consumption (kg municipal solid waste/US\$ household expenditure) ^a [22%]	Waste Atlas, 2015	Japan	0.01	0.33	
		Waste generation per capita (kg/cap) ^a [22%]	Waste Atlas, 2015	Armenia	119	777	
		Number of animal (terrestrial and marine) species threatened as proportion of total number assessed ^a [17%]	IUNC Red list, 2018	Estonia	0.04	0.18	
		Number of plant (terrestrial and marine) species threatened normalised by total number assessed ^a [17%]	IUNC Red list, 2018	Canada*	0	0.27	
	Structural indicators [63%]	Vehicle emission standards (0 = worst, 6 = best) [34%]	UN Environment Programme, 2018	Germany*	6	0	
		Municipal solid waste collected (per cent of total generated) [34%]	Waste Atlas, 2015	France*	100	39	
		Proportion of terrestrial protected area (per cent of total area) [16%]	World Bank, 2017	Slovenia	53.62	0	
		Proportion of marine protected areas (per cent of total area) [16%]	World Bank, 2017	Slovenia	100	0	
		Cross-cutting [5%]		Number of environmental technology patents (per cent of GDP (billion US\$)) [100%]	OECD, 2014	Japan	0.61

INCLUSIVE						
Components	Sub-components	Indicators	Source	Frontier economy	Frontier value	Worst performance
Gender equality [33%]		Women Business and the Law Index (0 = worst, 100 = best) [13%]	World Bank, 2018	Sweden*	100	35.00
		Social Institutions and Gender Index ^{a,b} (0 = best) [13%]	OECD, 2018	No economy was at the frontier in 2019	0	0.57
		Inequality of opportunity attributable to gender ^{a,b} [13%]	EBRD, LITS, 2016	No economy was at the frontier in 2019	0	0.08
		Women employers (per cent of employers) ^c [13%]	ILOSTAT, 2017	No economy was at the frontier in 2019	50.00	0
		Women in managerial roles (per cent of all in managerial roles) ^c [13%]	ILOSTAT, 2017	No economy was at the frontier in 2019	50.00	6.40
		Per cent of individuals that borrow from a financial institution ^k [6%]	World Bank Financial Inclusion Database, 2017	No economy was at the frontier in 2019	35.66	0.84
		Per cent of individuals that save at a financial institution ^l [6%]	World Bank Financial Inclusion Database, 2017	Sweden	75.43	0.12
		Percentage difference between female and male who have borrowed from a financial institution ^{a,c,k} [6%]	World Bank Financial Inclusion Database, 2017	No economy was at the frontier in 2019	0	0.68
		Percentage difference between female and male who have saved at a financial institution ^{a,c,l} [6%]	World Bank Financial Inclusion Database, 2017	No economy was at the frontier in 2019	0	0.74
		Labour force participation rate ^m [6%]	ILOSTAT, 2018	Sweden	73.20	34.10
	Percentage difference in labour force participation rate of men and women ^{a,c,m} [6%]	ILOSTAT, 2018	No economy was at the frontier in 2019	0	0.79	
Opportunities for youth [33%]		Median age [17%]	UN-DESA, World Population Prospects, 2015	Japan	46.35	19.45
		Harmonised test scores [17%]	Human Development Index, 2017	Japan	563.36	355.99
		Perception of quality of education system (1 = worst, 7 = best) [17%]	WEF Global Competitiveness Index, 2017	United States of America	5.62	2.14
		Hiring and firing flexibility [17%]	WEF Global Competitiveness Index, 2017	United States of America	5.44	2.37
		Unemployment rate ^{a,n} (15+) [8%]	ILOSTAT, 2018	Czech Republic	2.20	30.80
		Percentage difference between youth (15-24) and adult (25+) unemployment rates ^{a,c,n} [8%]	ILOSTAT, 2018	No economy was at the frontier in 2019	0	0.80
		Per cent of individuals with a bank account ^o [8%]	World Bank Financial Inclusion Database, 2017	Sweden	99.74	0.40
		Percentage difference between number of youth (15-24) and adults (15+) with a bank account ^{a,c,o} [8%]	World Bank Financial Inclusion Database, 2017	No economy was at the frontier in 2019	0	0.78
Regional disparities [33%]		Quality of transport and trade related infrastructure (1 = worst, 5 = best) [13%]	World Bank LPI, 2018	Germany	4.44	1.96
		Access to computer ^a [13%]	EBRD, LITS, 2016	Germany	0.25	0.79
		Access to internet ^a [13%]	EBRD, LITS, 2016	No economy was at the frontier in 2019	0.26	0.86
		Access to water ^a [13%]	EBRD, LITS, 2016	Germany*	0	0.97
		Percentage of establishments with checking or savings account ^a [13%]	EBRD, BEEPS V and MENA, 2015	Russia	0	0.45
		Quality of administrative, health and education systems ^a [13%]	EBRD, LITS, 2016	Uzbekistan	1.25	3.05
		Household head labour market status (worked in the last 12 months) ^a [13%]	EBRD, LITS, 2016	Czech Republic	0.39	0.71
		Completed education of the household head in working age (25-65) ^a [13%]	EBRD, LITS, 2016	Estonia	0.07	0.87

RESILIENT							
Components	Sub-components	Indicators	Source	Frontier economy	Frontier value	Worst performance	
Energy sector resilience [30%]	Liberalisation and market liquidity [50%]	Sector restructuring, corporatisation and unbundling (0 = worst, 0.67 = best) [33%]	EBRD assessment, 2018	Germany*	0.67	0	
		Fostering private sector participation (0 = worst, 0.67 = best) [33%]	EBRD assessment, 2018	United States of America*	0.67	0	
		Tariff reform (0 = worst, 0.67 = best) [33%]	EBRD assessment, 2018	Czech Republic*	0.67	0	
	System connectivity [20%]	Domestic connectivity (0 = worst, 0.67 = best) [35%]	EBRD assessment, 2018	Czech Republic*	0.67	0.09	
		Inter-country connectivity (0 = worst, 0.67 = best) [65%]	EBRD assessment, 2018	Germany*	0.67	0	
	Regulation and legal framework [30%]	Development of an adequate legal framework (0 = worst, 0.67 = best) [50%]	EBRD assessment, 2018	Czech Republic*	0.67	0	
Establishment of an empowered independent energy regulator (0 = worst, 0.67 = best) [50%]		EBRD assessment, 2018	Czech Republic*	0.67	0		
Financial stability [70%]	Banking sector health and intermediation [65%]	Capital adequacy ratio [9%]	IMF Financial Soundness Indicators (FSI), IMF Article IV, IHS Markit, National Authorities, Fitch - Sovereign Data Comparator, EBRD FI Risk Reports, 2018	No economy was at the frontier in 2019	0.30	0.06	
		Return on assets [9%]	IMF FSI, IMF Article IV, IHS Markit, National Authorities, Fitch - Sovereign Data Comparator, EBRD FI Risk Reports, 2018	Azerbaijan*	3.16	-12.47	
		Loan to deposits ratio ^c [9%]	IMF FSI, IMF Article IV, IHS Markit, National Authorities, Fitch - Sovereign Data Comparator, EBRD FI Risk Reports, 2018	No economy was at the frontier in 2019	1	0.36	
		NPLs to total gross loans (per cent) ^a [9%]	IMF FSI, IMF Article IV, IHS Markit, National Authorities, Fitch - Sovereign Data Comparator, S&P BICRA, EBRD FI Risk Reports, 2018	Canada	0.59	54.54	
		Loan loss reserves to NPLs (Provisions to NPLs) ^b [9%]	IMF FSI, IHS Markit, National Authorities, EBRD FI Risk Reports, 2018	Azerbaijan*	100	15.14	
		Asset share of five largest banks ^a [9%]	World Bank Global Financial Development Database (GFDD), IMF FSSA, EBRD FI Risk Reports, 2017	United States of America	46.53	99.89	
		Asset share of private banks [9%]	World Bank GFDD, EBRD FI Risk Reports, IMF Article IV, IMF FSSA, Bank Focus, 2018	Canada*	100	0	
		Financial sector assets ^c (per cent of GDP) [9%]	IMF FSI, EBRD, Internal Sovereign Risk Report, Bank Focus, National Authorities, IHS Markit, 2018	No economy was at the frontier in 2019	100	30.80	
		Credit to private sector ^c (per cent of GDP) [9%]	World Bank GFDD, S&P BICRA, IMF Article IV, WDI, 2017	No economy was at the frontier in 2019	80	4.02	
		Foreign currency denominated loans ^a (per cent of total loans) [9%]	IMF FSI, IMF Article IV, IHS Markit, National Authorities, 2018	United States of America*	0	100	
	Alternative sources of funding [12%]	Other Financial Corporation's assets ^b (per cent of GDP) [50%]	IMF FSI, World Bank GFDD, IMF Article IV, National Authorities, EBRD FI Risk Overview, IMF FSSA, AFDB, 2018	Canada*	100	0.32	
			Stock market capitalisation ^b (per cent of GDP) [50%]	World Bank WDI, IMF FSSA, IMF FSI, 2017	United States of America*	79.24	0
		Regulation, governance and safety nets [24%]	Is there a well-functioning deposit insurance scheme? (1 = worst, 10 = best) [25%]	EBRD assessment, 2018	Czech Republic*	10	1
			Do the banks have good risk management and corporate governance practices? (1 = worst, 10 = best) [25%]	EBRD assessment, 2018	Czech Republic*	10	1
			Is there an adequate legal and regulatory framework in place? (1 = worst, 10 = best) [25%]	EBRD assessment, 2018	Czech Republic*	10	1
Is the supervisory body independent and competent? (1 = worst, 10 = best) [25%]	EBRD assessment, 2018	Czech Republic*	10	1			

INTEGRATED						
Components	Sub-components	Indicators	Source	Frontier economy	Frontier value	Worst performance
External integration [50%]	Trade openness [33%]	Total trade volume (per cent of GDP, five year moving average) [50%]	World Bank, WDI, 2017	Slovak Republic	184.59	29.11
		Number of Regional Trade Agreements [17%]	World Trade Organization, 2018	Germany*	41	1
		Binding overhang ratio ^{a,b} (%) [17%]	World Trade Organization, 2017	Germany*	0	46.30
		Number of non-tariff measures ^a [17%]	World Trade Organization, 2018	No economy was at the frontier in 2019	0	4,673
	Investment openness [33%]	FDI inflows (per cent of GDP, 5 year moving average) [50%]	IMF, International Investment Position Statistics, 2018	Cyprus	9.51	0.78
		Number of bilateral investment agreements [25%]	UNCTAD, 2018	Germany	183	8
		FDI Restrictiveness indicator ^a [25%]	OECD, 2018	Kosovo	0	0.24
	Portfolio openness [33%]	Non-FDI inflows (per cent of GDP, 5 year moving average) [50%]	IMF, International Investment Position Statistics, 2018	Cyprus	9.61	-5.46
		Financial openness index (Chinn-Ito) [50%]	Chinn-Ito webpage, 2016	Germany*	2.36	-1.91
Internal integration [50%]	Domestic transport [25%]	Quality of road infrastructure (1 = worst, 7 = best) [6%]	WEF Global Competitiveness Index, 2018	No economy was at the frontier in 2019	6.12	2.41
		Road connectivity [6%]	WEF Global Competitiveness Index, 2018	United States of America	99.96	27.72
		Quality of railroad infrastructure (1 = worst, 7 = best) [13%]	WEF Global Competitiveness Index, 2018	Japan	6.66	1.03
		Quality of port infrastructure (1 = worst, 7 = best) [13%]	WEF Global Competitiveness Index, 2018	Japan*	5.84	1.03
		Efficiency of air transport (1 = worst, 7 = best) [6%]	WEF Global Competitiveness Index, 2018	Japan	6.10	2.60
		Air transport connectivity [6%]	WEF Global Competitiveness Index, 2018	United States of America	100	23.77
		Competence and quality of logistics services (1 = worst, 5 = best) [13%]	World Bank, LPI database, 2018	Germany	4.31	1.96
		Tracking and tracing of consignments (1 = worst, 5 = best) [13%]	World Bank, LPI database, 2018	Germany	4.38	1.84
		Timeliness of shipments (1 = worst, 5 = best) [13%]	World Bank, LPI database, 2018	Germany	4.45	2.04
		Proportion of products lost to breakage or spoilage during shipping ^a [13%]	World Bank, Enterprise Surveys, 2013	Latvia*	0	2.90
	Cross-border transport [33%]	Quality of customs and border management, trade and transport infrastructure and ease of arranging shipments (1 = worst, 5 = best) [50%]	World Bank, LPI database, 2018	Germany	4.14	1.95
		Cost of trading across borders [50%]	World Bank, <i>Doing Business</i> , 2018	France*	100	51.01
	Energy and ICT [33%]	Quality of electricity supply (1 = worst, 7 = best) [25%]	WEF Global Competitiveness Index, 2017	France	6.78	1.65
		Electric power transmission and distribution losses as percentage of domestic supply ^a [13%]	IEA, 2018	No economy was at the frontier in 2019	2.34	23.39
		Time required to get electricity ^a (days) [13%]	World Bank, WDI, 2018	Germany	28	281
		Broadband subscription (per 100 inhabitants) [13%]	ITU, 2017	France	43.72	0.07
		Number of internet users (per cent of population) [13%]	ITU, 2016	Sweden	96.41	17.99
		Level of competition for internet services (50 = monopoly, 75 = partially competitive, 100 = competitive) [6%]	World Bank, <i>The Little Data Book</i> , 2017	United States of America*	100	50
		Mobile broadband basket price ^a [6%]	ITU, 2017	Russia	0.22	5.95
		International internet bandwidth per internet user [6%]	ITU, 2016	Sweden	253,090	0
		3G coverage (per cent of population) [6%]	ITU, 2017	Sweden*	100	94.00

* Additional economies are at the frontier. Further information is available on request.

^a Inverted before normalisation.

^b Capped at frontier.

^c Mirrored from frontier.

^d Mean of "New business entries" and "Starting a business" indicators enters the final index.

^e Mean of "Private property protection" and "Intellectual property protection" indicators enters the final index.

^f Mean of "Freedom of the press" and "World press freedom index" indicators enters the final index.

^g Mean of "Control of corruption", "Perception of corruption" and "Corruption perception index" indicators enters the final index.

^h Mean of "Enforcement of contracts" and "Efficiency of legal framework in settling disputes" indicators enters the final index.

ⁱ Mean of "Transparency and disclosure" and "Strength of auditing and reporting standards" indicators enters the final index.

^j Mean of "Rights of shareholders" and "Protection of minority shareholders' interest" indicators enters the final index.

^k Mean of "Per cent of individuals who borrow from a financial institution" and "Percentage difference between female and male who have borrowed from a financial institution" enters the final index.

^l Mean of "Per cent of individuals that save at a financial institution" and "Percentage difference between female and male that have saved at a financial institution" enters the final index.

^m Mean of "Labour force participation rate" and "Percentage change between female and male labour force participation rate" enters the final index.

ⁿ Mean of "Unemployment rate" and "Percentage difference between youth and adult unemployment rate" enters the final index.

^o Mean of "Per cent of individuals that hold a bank account" and "Percentage difference between youths and adults that hold a bank account" enters the final index.