Economic Evaluation of International Commercial Law Reform

Framework and Guide

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CTCAP | Cape Town Convention Academic Project

Economic Evaluation of International Commercial Law Reform

Framework and Guide

CTCAP | Cape Town Convention Academic Project
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The Framework and Guide on the Economic Evaluation of International Commercial Law Reform have been prepared within the ambit of the more general Project on Economic Evaluation of International Commercial Law Reform ("EE ICLR project"), which started in 2015 as a partnership between the UNIDROIT Foundation and Harris Manchester College's Commercial Law Centre at Oxford University. The Global Business Law Institute at the University of Washington later joined as a partner from 2017-2019.

Subsequently, the Project was brought within the auspices of the Cape Town Convention Academic Project (**CTCAP**), a joint initiative between the University of Cambridge and the International Institute for the Unification of Private Law (UNIDROIT), with the Aviation Working Group (AWG) as the Founding Sponsor. The UNIDROIT Foundation provided organisational and secretarial support throughout the Project.

This Framework and Guide are the result of twelve workshops, a public consultation, and several intersessional meetings bringing together leading experts – both lawyers and economists – from universities, intergovernmental organisations, international development banks, national central banks and industry. Through the workshops, the Framework was developed step-by-step as a tool to evaluate the economic impact of international commercial law reforms, alongside the preparation of the Guide to support its practical application, as well as a User Template and Case Studies designed to facilitate and test its use.

Special acknowledgment is due to the expert consultants who – also part of the Experts' Group – worked closely with the UNIDROIT Secretariat in the last stage of the project: *Jordi Paniagua* (University of Valencia), whose input played a key role in shaping the Framework and Guide, and contributed to the development of Case Studies, as well as *Oren Sussman* (University of Oxford) for his contributions that helped inform the direction of the work.

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MESSAGE FROM THE DIRECTORS

The development of high-quality, impactful, and evidence-based legal frameworks is essential to fostering legal certainty, facilitating international commerce, and promoting sustainable economic growth. In this context, CTCAP has long been committed to supporting the harmonisation and modernisation of commercial law across jurisdictions.

This Framework and Guide on the Economic Evaluation of International Commercial Law Reform mark an important step in strengthening the analytical foundations of such law reforms and in supporting more informed decision-making by international, regional, and domestic actors. Developed under the EE ICLR Project, the methodology introduces a Framework based on a formula of five Factors, each designed to capture a distinct aspect of the expected economic impact of international commercial law reforms. The practical application of the Framework is supported by the Guide, which provides clear and actionable guidance on how to apply the methodology consistently, largely based on benchmark-based comparison.

The Framework and the Guide will serve as a valuable tool to support decision-makers in carrying out ex-ante economic evaluations in a systematic, transparent, and comparable manner, enabling the ranking, scaling, and, where possible, quantification of reforms. The approach allows users to measure the potential costs and gains of proposed reforms, to consider whether harmonisation efforts are likely to deliver meaningful economic impact, and to prioritise those initiatives with the greatest potential gains.

We believe that embedding this type of structured, ex-ante economic analysis into law reform processes can contribute to better-designed and more effective legal instruments, grounded in sound economic reasoning and informed by the broader economic and legal context in which they operate.

As Directors of the CTCAP, we are delighted to support the publication of this Framework and Guide as the culmination of a project in which we had direct involvement. We believe that, together with the accompanying User Template and Case Studies, they will serve as a useful and accessible resource for those engaged

in the design, evaluation, and implementation of international commercial law reforms, and that it will contribute to the continued development and wider adoption of harmonised legal frameworks worldwide.

Professor Louise Gullifer
Chair, Law Faculty Board, University of Cambridge

Professor Ignacio Tirado
Secretary-General, UNIDROIT

Professor Jeffrey Wool
Secretary-General, Aviation Working Group

FOREWORDS

A stable, predictable, and modern legal framework is one of the foundations of sustainable economic growth. This is especially true for international economic law, which provides the essential architecture for cross-border trade and private-sector engagement. However, reforming these legal structures is a formidable task. To succeed, policymakers must navigate a dense landscape of competing factors, accurately diagnose systemic weaknesses, and anticipate the real-world impact of any legislative shift.

Projecting the economic consequences of new regulations cannot happen in isolation; it demands a rigorous, adaptable methodology tailored to local realities. For too long, the field has lacked a unified approach to measuring the tangible gains of international commercial law reform. The *Framework and Guide on the Economic Evaluation of International Commercial Law Reform*, developed under the auspices of UNIDROIT, directly address this void.

By translating intricate legal principles into practical, data-driven tools, the Framework and Guide represent a significant milestone in bridging the gap between legal theory and measurable economic outcomes. They offer policymakers worldwide a sophisticated instrument to test the viability of proposed changes, refine existing frameworks, and anticipate future reform requirements. Ultimately, by championing an evidence-based approach, this Guide is poised to become a vital resource for integrating legal and economic analysis into the reform process.

Norman Loayza (Director), Varun Eknath (Private Sector Development Specialist), and Raman Maroz (Private Sector Development Specialist)
Policy Indicators
World Bank Group

Strong commercial laws underpin private sector-led growth, cross-border trade, and investment. For developing economies, the key challenge is not only identifying necessary reforms but also prioritising and sequencing them in a way that delivers tangible economic results. In this context, the *Framework and Guide on the Economic Evaluation of International Commercial Law Reform* provides a timely and practical contribution.

The Asian Development Bank (ADB) welcomes and endorses this publication as a valuable resource for governments and development partners working to strengthen commercial legal frameworks. In an environment of limited fiscal space and competing reform demands, the ability to assess – *ex ante* – the likely economic impact of proposed legal reforms is critical. This Framework offers a

structured, evidence-based methodology to evaluate expected gains and costs, compare reform options and focus efforts where impact is likely to be greatest.

Drawing on ADB's experience across Asia and the Pacific, the Framework responds directly to governments' need for greater clarity on whether and how legal reforms will improve the investment climate and justify the use of scarce institutional resources. By embedding economic analysis into commercial law reform processes, it supports more coherent decision-making, better sequencing of reforms, and stronger alignment with broader development priorities, including private sector development, financial inclusion and regional integration. ADB encourages its use to help ensure that commercial law reforms translate into measurable development impact.

Christina Pak
Assistant General Counsel (Law and Policy Reform)
Asian Development Bank

The EBRD welcomes the Framework and Guide on the *Economic Evaluation of International Commercial Law Reform* as a valuable resource for international organisations and public authorities seeking to design, prioritise and evaluate commercial law reforms in an evidence-based and results-oriented manner. Since the establishment of the EBRD's Legal Transition Programme in 1995, the Bank has supported the development of transparent, predictable, and investor-friendly legal frameworks across its countries of operation, linking legal reform to investment needs and market outcomes. Experience has increasingly demonstrated, however, that the value of legal frameworks depends not only on their design, but also on their effective implementation, and on the ability to evidence their impact in practice.

Against this background, the Guide responds to the growing need for forward-looking economic analysis to inform decisions on whether, how and in what order commercial law reforms should be pursued, particularly where institutional capacity and resources are constrained. By providing a structured methodology to identify reform objectives, and channels of economic impact, as well as to distinguish between direct, network and systemic effects, the Guide strengthens the analytical foundations for prioritising reforms most likely to deliver significant economic outcomes. Well-targeted commercial law reforms have, for example, been associated with improved debt recovery, lower borrowing costs, more efficient insolvency and secured transactions frameworks, greater availability of modern commercial instruments, including in areas such as digital trade, and increased private investment and longer-term economic prosperity. The Guide's emphasis on evidence, data and transparency clearly makes the case for embedding economic evaluation within the law reform process from an early stage, while recognising uncertainty and the limits of data availability and quality that frequently affect emerging economies.

The Guide also aligns closely with the EBRD's institutional practice, which brings together the Legal Transition Programme in the Office of the General Counsel, the Office of the Chief Economist, and the Vice Presidency for Policy and Partnerships.

This collaboration ensures that legal reforms are well designed, informed by data where available, and focused on interventions most likely to deliver meaningful transition impact.

Michel Nussbaumer
Director, **Legal Transition Programme**
European Bank for Reconstruction and Development

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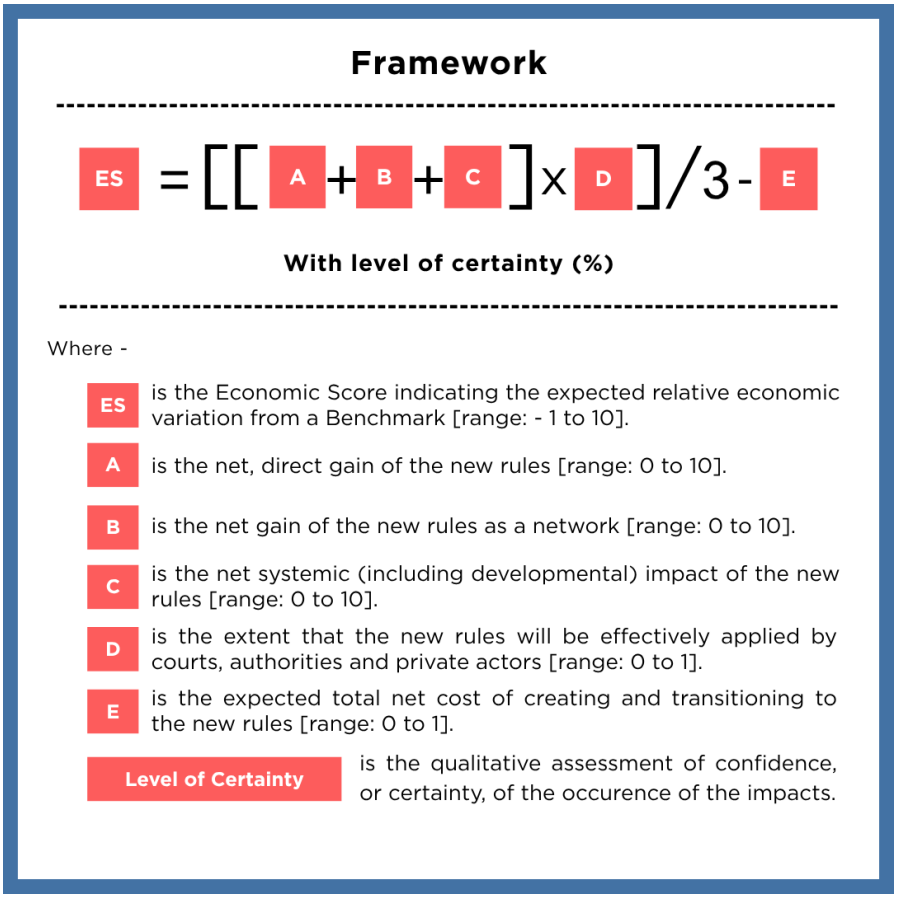

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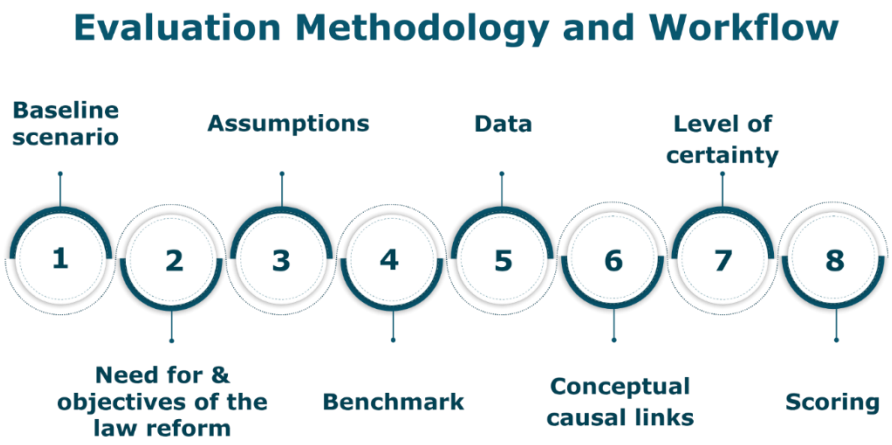

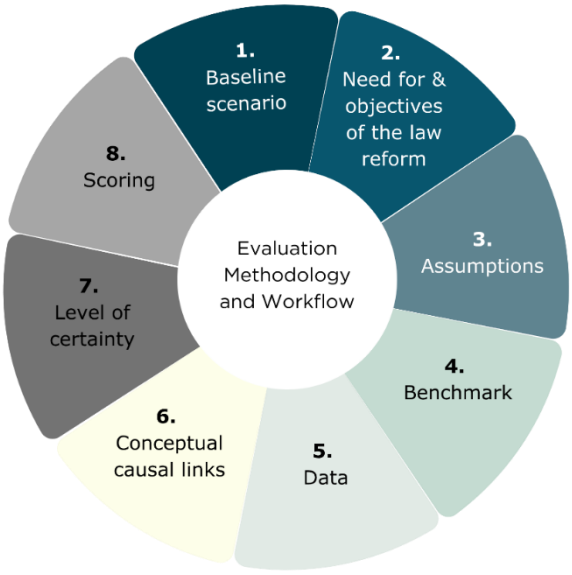

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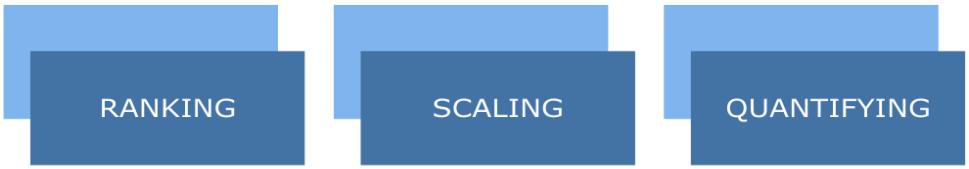

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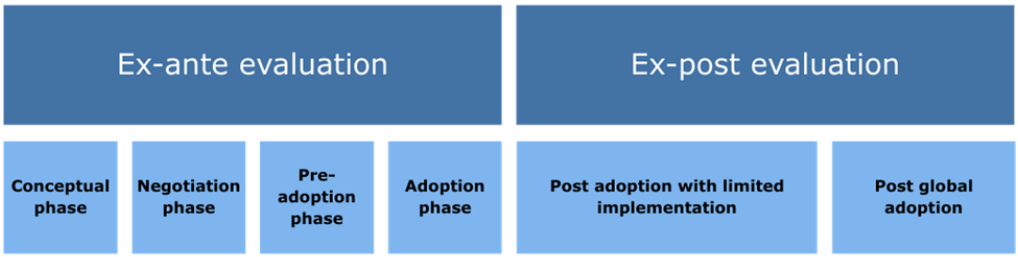


Table 1. Interpretation and rating of ES band

ES Bands	Rating	Interpretation
10-9	AAA	Highest economic impact
9-8	AA	Very high economic impact
8-7	A	High economic impact
7-6	BBB	Good economic impact
6-5	BB	Conjectural economic impact
5-4	B	Highly conjectural economic impact
4-3	CCC	Low economic impact
3-2	CC	Very low economic impact
2-1	C	Lowest economic impact
1-0	D	No economic impact
<0	F	Negative impact

Table 2. Interpretation of the ES rating

ES	Interpretation
As	High economic impact, which suggests that, from an economic perspective, there is substantial merit in pursuing the law reform. This means that the law reform is in line with the Benchmark and could have positive economic gains.
Bs	Good economic impact evaluation, which suggests that, from an economic perspective, there is merit in pursuing the law reform.
Cs	Low economic impact, which suggests that, from an economic perspective, the law reform is inadequate and there is little justification to pursue it.
Ds-F	Low or negative impact evaluation, which suggest that, from an economic perspective, the law reform should not be pursued. This may mean that the reform deviates largely from the Benchmark or may have unintended consequences

Table 3. Interpretation of the level of certainty

Level of Certainty	Interpretation
Highest 90-100%	The Benchmark is nearly identical to the proposed law reform, with extensive empirical evidence and a proven track record of success.
Very High 80-90%	The Benchmark closely aligns with the proposed law reform, and there is strong empirical evidence from multiple sources.
High 70-80%	The Benchmark is a relevant comparison, but some adjustments are needed. Empirical evidence is reliable, though minor uncertainties exist.
Conjectural 60-70%	The Benchmark partially aligns with the reform, but significant adjustments are required. Limited empirical data exists, while assumptions play a key role.
Low 50-60%	There is minimal empirical evidence, and the Benchmark has limited applicability, requiring substantial modifications and estimations.
Very Low 40-50%	The Benchmark is weakly related to the proposed reform, with substantial reliance on assumptions, leading to high uncertainty.
Lowest 0-40%	No suitable Benchmark exists. The evaluation is entirely based on theoretical modelling and expert judgment, with extreme uncertainty.

ACRONYMS AND ABBREVIATIONS

AI	Artificial Intelligence
CTC	Cape Town Convention
CTCAP	Cape Town Convention Academic Project
DiD	Difference-in-Difference
EBRD	European Bank for Reconstruction and Development
EE	Economic Evaluation
EE ICLR	Economic Evaluation of International Commercial Law Reform
ELI	European Law Institute
ES	Economic Score
EU	European Union
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
HCCH	The Hague Conference on Private International Law
ICLR	International Commercial Law Reform
ICT	Information and Communications Technology
IFC	International Finance Corporation (World Bank Group)
IFI(s)	International Financial Institution(s)
IMF	International Monetary Fund
IV	Instrumental Variables
Large-N	Large-Number statistical (econometric) analysis

MAC	Mining, Agriculture and Construction
MIGA	Multilateral Investment Guarantee Agency (World Bank Group)
MSME	Micro, Small and Medium Enterprise
OECD	Organisation for Economic Co-operation and Development
PSM	Propensity Score Matching
RCTs	Randomised Controlled Trials
RDD	Regression Discontinuity Design
ROAMEF	Rationale, Objectives, Appraisal, Evaluation, Monitoring, Evaluation, Feedback
UK	United Kingdom
UN	United Nations
UNCITRAL	United Nations Commission on International Trade Law
UNIDROIT	International Institute for the Unification of Private Law
USITC	United States International Trade Commission

GLOSSARY OF KEY TERMS

The definitions set out in this glossary are provided solely for the purposes of this document and are intended to clarify the meaning of specific terms as used herein. They are not intended to serve as general legal or economic definitions outside the context of this document.

Baseline scenario	The situation in the absence of the proposed international commercial law reform, reflecting the status quo ("business as usual"). It describes what would be expected to occur if the reform were not adopted.
Benchmark	An existing or constructed international, regional, or domestic law reform that serves as a reference point for comparison in the economic evaluation. The Benchmark reflects a best-in-class scenario in economic terms against which the expected economic impact of the proposed reform is assessed.
Conceptual causal links	Theoretical or logical cause-and-effect relationships that explain the interrelation between different Factors.
Constructed Benchmark	A hypothetical best-in-class reference scenario representing an economically optimal law reform. It integrates the most relevant and effective elements drawn from existing Benchmarks, combining their strengths into a coherent reference point for evaluation.
Economic externalities	Side effects or consequences of an economic activity that affect third parties who are not directly involved in the transaction and may be positive or negative.
Economic gains	Measurable positive changes in economic value relative to the Benchmark.
Economic Score (ES)	Expected relative economic variation from a Benchmark.
Ex-ante evaluation	Expected economic impacts of a legal instrument in advance of its adoption.
Ex-post evaluation	Realised economic impacts after adoption of the legal instrument.

Factors	Variables to be considered for the economic evaluation.
Factor A	The net, direct gain of the new rules.
Factor B	The net gain of the new rules as a network.
Factor C	The net, systemic (including developmental) impact of the new rules.
Factor D	The extent that the new rules will be effectively applied.
Factor E	Expected total net cost of creating and transitioning to the new rules.
Framework	A formula based on five Factors capturing different dimensions of economic impact to score the economic gains of commercial law reforms.
Hard law	Legally binding law instruments.
Level of certainty	Percentage of confidence in the final score, or certainty of the occurrence of the impacts.
Net economic gains	The difference between total economic gains and the associated costs.
Net impact	Net sum of gains (positive impact) and costs (negative impact).
Net score	Factor score assigned by subject matter experts through relative comparison with economic evaluation of ICLR Benchmarks.
Network	The relevant set of legal frameworks, including the new law and the existing international and/or domestic laws with which the new law can interact.
Soft law	Non-binding law instruments.
Transaction costs	Expenses incurred in conducting a transaction that are not part of the price of the good or service but arise from engaging in trade or exchange.

EXECUTIVE SUMMARY

Purpose: Economic evaluation (**EE**) is a valuable tool for assessing the economic impact of international commercial law reforms (**ICLR**), supporting evidence-based decision-making in their design. The primary objective of this document is to establish a Framework for the ex-ante economic evaluation of international commercial law reforms (**EE ICLR**) and to provide accompanying guidance on how to apply it in practice. Together, the Framework and Guide provide a standardised approach to EE, grounded in both legal and economic perspectives. They are not intended to necessarily replace existing practices, but rather to complement them where such practices are already in place and used effectively.

Objectives: The Framework and Guide aim to:

- Provide a structured approach for measuring and quantifying the potential economic gains and costs resulting from ICLRs;
- Assist international and regional organisations, as well as states, in ranking, scaling, or quantifying ICLRs;
- Facilitate the establishment of the economic evaluation process as a central component of decision-making in such reforms; and
- Support informed decision-making for such reforms at international, regional and domestic levels.

Target users: Professionals in international, regional and domestic organisations or governments who are (i) responsible for designing and monitoring legal instruments in the area of commercial law, or (ii) tasked with the management or conduct of economic evaluations of such legal instruments.

Scope: The Framework and Guide focus on economic, quantifiable impacts and are used to summarise net economic gains (gains minus costs), both in quantitative and qualitative terms.

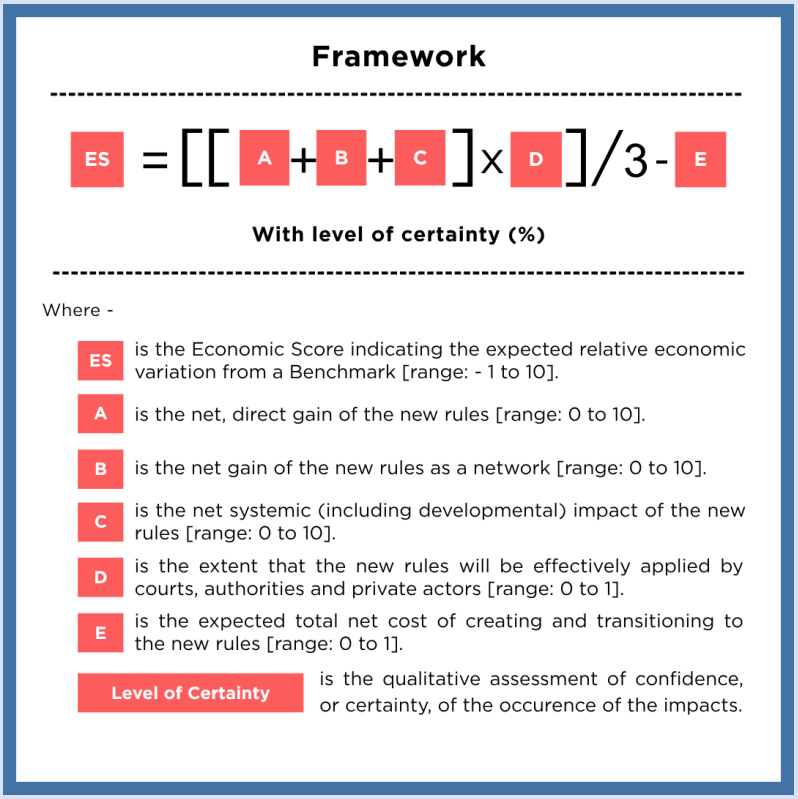
They are intended to primarily apply:

- To private commercial law reforms;
- To both reform of existing laws requiring amendment, and new rules being introduced in the absence of existing rules;
- To hard- and soft-law reforms;
- At all ex-ante stages of development of the law reform, meaning prior to the introduction, adoption or implementation of the legal instrument;
- At the international level, but also at the regional or domestic level.

Terminology: "International commercial law reform" (**ICLR**) is also referred to as "law reform" or "reform" in this document.

Timing: Economic evaluations of commercial law reforms may be conducted at various stages. The Framework is designed for ex-ante use, where economic evaluation examines the expected economic impacts of a law reform in advance of its adoption. During the ex-ante stage, the economic evaluation may be conducted at different phases of the development of the legislative initiative, including during its conceptual phase, negotiation phase, pre-adoption phase, and adoption phase.

The Framework: The Framework consists of a formula with five main Factors that capture different aspects of the economic impact of ICLRs.



Factor A pertains to the direct (primary) effects, including market size, transaction volume, costs and risk reduction in the affected market or sector.

Factor B focuses on the international applicability of the instrument and its potential for creating network effects.

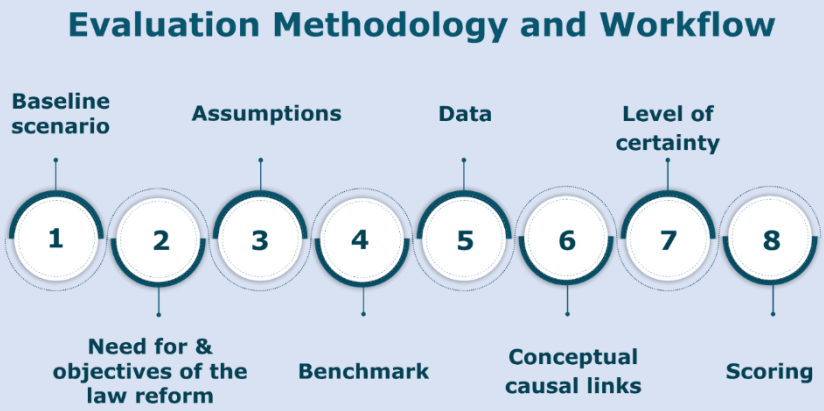
Factor C addresses indirect (secondary) effects related to broader development objectives, such as gains through employment or increased tourism.

Factor D reflects the extent to which the new rules will be effectively applied by courts, authorities and private actors.

Factor E covers the transition costs of a law reform.

The **level of certainty** reflects the qualitative measure of confidence in the findings and represents the extent to which the estimated economic impact of a proposed law reform is reliable and robust.

Evaluation methodology and workflow: The EE should follow a structured and transparent methodology, with each of the following steps clearly documented in the EE Report:



CHAPTER I

Introduction

I. INTRODUCTION

1. Purpose

1. A central and driving objective of, and justification for, an international commercial law reform (**ICLR**) is the expectation that it will generate economic gains, whether microeconomic, macroeconomic, or developmental. Yet, the evidence of expected gains, the specific characteristics of law reforms that are most likely to produce them, and the data and methodology to establish and demonstrate such potential gains prior to the introduction of a reform have not yet been subject to systematic academic analysis.[1] This is due, in part, to the inherent challenges of engaging with uncertainty and a range of unknown factors where full effects will only materialise over time. As a result, there is limited, if any, international guidance, standards, or parameters for evaluating economic gains in this specific context.[2]

2. This Framework and Guide aim to address this gap and facilitate the process of conducting economic evaluation (**EE**) of the expected impact of ICLRs by providing a structured approach grounded in both legal and economic analysis. It introduces a quantitative scoring formula (**Framework**) accompanied by practical guidance, examples, and case studies illustrating how the methodology can be applied in practice. The Framework is intended to support a consistent and methodical assessment of the potential economic impact of proposed reforms and to encourage the systematic incorporation of economic evaluation into decision-making processes related to ICLRs.

3. The EE Framework set out in this Guide is intended to help legal and economic experts focus on clearly-defined, relevant factors and benefit from a structured methodology when assessing the economic impact of ICLRs. It provides a comparable scoring method that enables the economic impact of different reforms to be assessed using a common structure. Under this system, an overall score is calculated for a given ICLR, based on the combined scores of several underlying factors. This approach allows stakeholders to obtain both a high-level assessment of the overall economic impact and a more detailed understanding of the specific factors that contribute to the expected economic outcomes of the reform.

4. In this context, the Framework is intended primarily for professionals in international and domestic organisations or governments who are responsible for managing or conducting economic evaluations of legal instruments in the area of

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[1] Further information on economic gains and their impact on law reforms can be found in Annex 2, Section 1.

[2] For an overview of the existing guidance, see Annex 2, Section 2.

commercial law. It may also be useful to staff involved in the design, development, or monitoring of such instruments.

5. Applying this Framework to systematically quantify the economic impact of commercial law reforms prior to their introduction and adoption (*ex ante*) can help ensure that reforms are more closely aligned with their intended objectives and contribute to improving the overall quality of legislation. Economic evaluation can help states assess the potential costs and expected gains associated with adopting a legal reform, enabling them to make more informed decisions about whether and how to pursue legislative change. In particular, it can help determine whether an international law reform aimed at achieving greater legal harmonisation is likely to generate economic gains and should therefore be pursued.[3] Beyond supporting decision-making, ex-ante economic evaluations can also encourage the wider adoption of legal instruments by demonstrating their potential value in clear and measurable terms. This, in turn, can strengthen confidence in the work of law-making organisations and in the processes used to develop legislative initiatives. For these reasons, the results of the economic evaluation should be made public and presented in a way that is accessible to non-specialists, such as decision-makers, policymakers, and government officials involved in the development, adoption, and implementation of law reforms.

6. Ex-ante evaluations may have various objectives and purposes, including:

a) To clarify the objective(s) of an envisaged law reform;

b) To decide whether a law reform should be pursued;

c) To justify a legislative initiative;

d) To enhance accountability and transparency in the law-making process;

e) To examine the impact of various legislative options in order to inform decision-making on the most efficient and effective approach to achieve policy goals;

f) To identify potential negative economic impacts in advance in order to mitigate such impacts;

g) To encourage the adoption and implementation of the instrument, including possible optional provisions (e.g., showing how opting-in would enhance the economic value of the law reform);

h) To function as an advocacy mechanism.

7. Regardless of the specific objectives pursued in each case, the Framework is designed to facilitate the conduct of economic evaluations in the context of ICLRs. At the same time, an economic evaluation should not be regarded as the sole or ultimate criterion for determining whether a legislative project should proceed. Law reforms may pursue a range of policy objectives, and other

[3] For details on harmonisation, see Annex 1, Section 2.

considerations, such as social or environmental impacts, may also play an important role in the overall assessment.

2. Background

International commercial law reforms and economic gains

8. ICLRs can act as a catalyst for economic growth by creating a more technical and predictable environment for cross-border economic activities and commercial operations. Economic gains refer to measurable positive changes in economic value, typically expressed in relative terms, such as a percentage of gross domestic product (GDP). These gains encompass a wide range of economic outcomes, including increases in net producer and consumer surplus, productivity or employment. Economic gains are integral components of broader economic outcomes (such as GDP, labour, unemployment, and prices), as they reflect beneficial changes in these outcomes, such as increases in GDP or decreases in unemployment. Gains may arise in different dimensions, from macroeconomic (e.g., GDP growth, increased trade volumes, foreign direct investment (FDI) attraction), to microeconomic (e.g., reduced transaction costs, improved market efficiency, dispute resolution efficiency) and developmental (e.g., enhanced access to credit, job creation, resource allocation, or infrastructure development). Such gains may arise from international or transnational law reforms. For the purposes of this Guide, economic gains are assessed relative to the Benchmark and should be understood as any positive outlook identified on the basis of the Benchmark analysis and underlying ex-post studies.[4]

9. Maximising the broader economic gains typically requires reducing transaction costs. Transaction costs are the expenses incurred during the transaction process, i.e., the process of engaging in trade or exchange for buying or selling goods and services. These costs are not directly related to the price of the good or service itself but arise from the process of negotiating, concluding, and enforcing agreements. They typically encompass brokerage fees, legal fees, transportation costs, and search costs. Transaction costs directly influence the feasibility and cost-effectiveness of transactions.

10. Consequently, transaction costs may generally lead to inefficiencies in the market. High transaction costs can delay or prevent mutually beneficial trade, lowering market efficiency and limiting trade volumes and economic activity. This may result in reduced trade volumes, resource misallocation and deviations from optimal economic equilibrium. Additionally, elevated transaction costs can create barriers to market entry, hindering competition and restricting access for new entrants.

11. Reducing transaction costs is therefore crucial for unlocking economic gains, facilitating commercial transactions and ensuring effective market functioning. Lower transaction costs can yield economic gains through increased trade volume and competition and lower transaction risk. Specifically, reduced costs can

[4] For more details on the Benchmark, see Chapter VI, Section 4.

increase the volume of transactions by making them more accessible and cost-efficient. Increased activity may lead to market expansion and increased competition. In fact, lower transaction costs may reduce barriers to entry, enabling more players to enter the market and resulting in more efficient resource allocation. The resulting dynamic markets offer consumers greater choice and lower prices, fostering innovation and driving broader economic growth.

12. ICLRs can contribute to the reduction of transaction costs by addressing the underlying factors and inefficiencies or uncertainties and creating a more conducive and predictable environment. A well-designed legal system can facilitate economic transactions and improve the overall market performance, thus fostering a more dynamic economy. Transaction costs should therefore be included in the economic score system when evaluating the economic impact of a law reform.

13. The EE Framework and Guide assume that ICLRs primarily target transaction costs, defined as all costs incurred during an economic activity, beyond the actual price of the product or service. These include legal expenses and costs incurred in managing obligations, negotiating, gathering information, enforcing contracts, resolving disputes, dealing with unrealised transactions, and navigating legal complexities and diverse (unharmonised) legal systems. Thus, the Framework and Guide seek to provide transparent and uniform tools to measure the economic gains arising from reduced transaction costs and to evaluate the potential impact of proposed reforms on trade volumes, market efficiency, competition and economic growth.

14. Nevertheless, the Guide acknowledges that, while ICLRs primarily seek to address transaction costs, certain ICLRs may address or affect broader barriers, referred to as "economic frictions" (see Annex 2, Section 3). Where relevant and quantifiable, such frictions should be acknowledged under the respective Factors. For example, if these frictions are not the direct target of the reform but arise as indirect effects, they should be addressed under Factor C in order to ensure analytical clarity.

3. Scope

15. The Framework has been developed as a tool to provide an economic scoring system to evaluate the economic impact of ICLRs. It focuses on initiatives undertaken at the international level to introduce substantive **rules of commercial law within the realm of private law**. In particular, it applies to law reforms affecting international commercial transactions between private parties, covering areas such as contracts, secured transactions, sales of goods, warehouse receipts, digital assets, dispute resolution mechanisms, and enforcement.[5] Accordingly, the Framework applies to reforms that address the private law dimensions of commercial activity. In this context, references to

[5] An indicative list of ICLRs that fall within the scope of the Framework and Guide is provided in Annex 1, Section 1.

"ICLR" are intended to capture international commercial law reforms within the domain of private law.

16. The Framework is not intended to apply to commercial law reforms that address regulatory matters, such as taxation or consumer protection. [6] Nevertheless, even where the reform falls within the field of commercially oriented private law, the economic evaluation should acknowledge possible effects on regulatory matters, where relevant and directly connected to the reform. Where relevant, such effects should be addressed under the corresponding Factors. For example, where a law reform indirectly incentivises tax compliance or fosters competition in a market, these effects should be captured under Factor C.

17. A key benefit of the Framework lies in its adaptability and flexibility. It is designed to measure and demonstrate net economic gains (gains minus costs), both in quantitative and qualitative terms. In addition, the Framework can be applied to legislative initiatives that introduce entirely new legal rules and to reforms that amend existing legislation. It is also intended to be used in relation to both binding legal instruments **(hard law)** and non-binding instruments **(soft law)**.

18. The Framework applies at all **ex-ante stages** of the law reform, that is, during the development of a reform and before the adoption or implementation of the instrument. Although the Framework focuses on ex-ante evaluations, ex-post evaluations can be useful in drawing comparisons. For this purpose, the Framework contains limited guidance on ex-post evaluations and their utility when carrying out ex-ante evaluations (see Annex 3, Section 5).

19. While the Framework is designed for **international commercial law reforms**, the methodology is not limited to that context. It is not intended to replace country-specific or sector-specific economic analyses, but it may also be applied to commercial law reforms at a **regional or domestic level** as well. For instance, the guidance may be used when international or regional legal instruments (including model laws and other types of soft law) are implemented domestically, as well as in the context of purely domestic law reforms. Moreover, the use of the Framework may be extended to initiatives in a wide range of different fields of commercial law (e.g., corporate law, insolvency law, and intellectual property law).

20. The Framework focuses on **economic impacts that can be assessed in quantifiable terms**, adopting a relatively narrow economic perspective. In other words, it does not deal with the evaluation of non-economic impacts. However, law reforms may also produce broader impacts, such as social and environmental effects, which may affect decision-making for domestic legislators or international or regional organisations. Such impacts should be recognised where relevant but may need to be assessed using other analytical tools or methodologies. In many cases, a more detailed evaluation of social and environmental effects should be carried out separately from the economic evaluation.

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[6] For more details on the scope of this Guide and its focus on commercial law reforms in the area of private law, see Annex 1, Section 1.

CHAPTER II

The Framework

II. THE FRAMEWORK

1. Presentation of the Framework

21. The Framework aims to score the economic gains of commercial law reforms.[7] To this end, the Framework employs a formula which consists of five Factors capturing different aspects of the economic impact of legal reforms. Together, these Factors are designed to provide a structured and transparent basis for estimating how reforms in the commercial legal framework can translate into measurable economic gains, as depicted in the box below.

Framework

$$ES = [[A + B + C] \times D]/3 - E$$

With level of certainty (%)

Where -

- **ES** is the Economic Score indicating the expected relative economic variation from a Benchmark [range: - 1 to 10].
- **A** is the net, direct gain of the new rules [range: 0 to 10].
- **B** is the net gain of the new rules as a network [range: 0 to 10].
- **C** is the net systemic (including developmental) impact of the new rules [range: 0 to 10].
- **D** is the extent that the new rules will be effectively applied by courts, authorities and private actors [range: 0 to 1].
- **E** is the expected total net cost of creating and transitioning to the new rules [range: 0 to 1].
- **Level of Certainty** is the qualitative assessment of confidence, or certainty, of the occurence of the impacts.

[7] The Framework is informed by a view of how legal reform has an economic impact, and it is not derived from an economic model.

22. To calculate the economic impact score using this formula, four steps must be undertaken. These steps involve assigning values to each of the five Factors and then combining them in accordance with the formula to generate a final score that reflects the expected economic impact of the reform.

Step 1

23. Factors A, B and C are equally weighted and are **assigned an individual score** from 0 (no net gains) to 10 (maximum net gains). Legal and economic expert assessment should guide the individual Factor scoring based on a Benchmark. There are two possibilities:

a) When an ICLR Benchmark exists, the experts conducting the evaluation ("Evaluation team") should use the Benchmark with the maximum gains (i.e., 10).[8] The Evaluation team should compare the content of the ICLR and its associated economic impact to the Benchmark to score individual Factors. For example, if a specific Factor of an ICLR includes similar legal and associated economic content as the Benchmark, it should receive a value of 10 (assuming the chosen Benchmark has maximum gains). Conversely, if a specific Factor of an ICLR deviates by 50% from the Benchmark, it should receive a value of 5.

b) When an ICLR Benchmark does not exist, legal and economic experts should first detail the legal content and associated economic impact of a best-in-class Benchmark ICLR with the highest gains for each Factor. Then, the scoring Factors of a specific ICLR relative to the best-in-class Benchmark should be analysed, ideally by an independent analysis group.

24. The potential impact of the ICLR is calculated by **adding up**:

a) the **direct impact** of the law in and of itself (Factor A);

b) the **network impact** of the law, i.e., its impact taking into account the existing legal framework (Factor B); and

c) the **systemic impact** or "knock-on" effects of the law (Factor C).

Step 2

25. The figure obtained from the combined effect of Factors A through C in Step 1 is multiplied by a score between 0 and 1, to take into account the extent to which the new rules are expected to be **effectively applied and enforced** (Factor D).

[8] For more details on the Benchmark, see Chapter VI, Section 4.

26. Unlike Factors A-C which are assessed against the Benchmark, Factor D should be assessed in absolute terms.

Step 3

27. The combined effect of Factors A through D is **divided by three** to obtain a score between 0 (no gains) and 10 (maximum gains).

28. The divider in the Framework reflects the number of Factors A, B and C present in a given case. In other words, "division by three" only applies when all three Factors are present. Although it is rare for any of these Factors to be absent, the denominator should represent the number of Factors associated with the evaluation at stake. For example, if one Factor is missing, the divider should be set to "two". If two Factors are missing and only one is present, the divider should be set to "one".

Step 4

29. The figure obtained in Step 3 is reduced by the expected **transition costs** of the law reform (Factor E). These transition costs do not include costs already netted out in the previous Factors.

30. Factor E is assigned a score from 0 (no cost) to 1 (highest cost), where the highest cost negates the maximum net combined gains.

31. Factor E does not increase over time.

Outcome

32. The outcome indicates the expected economic impact of the law reform, in an Economic Score (**ES**) based on a scoring system which is Benchmark-relative; in other words, it reflects the deviation from the Benchmark used.

33. The evaluation should be assigned a level of certainty expressed as a percentage of confidence in the evaluation. The level of certainty reflects a qualitative assessment of the overall confidence in the evaluation based on the quality of the available data.

34. The following tables offer a qualitative interpretation of the ES:

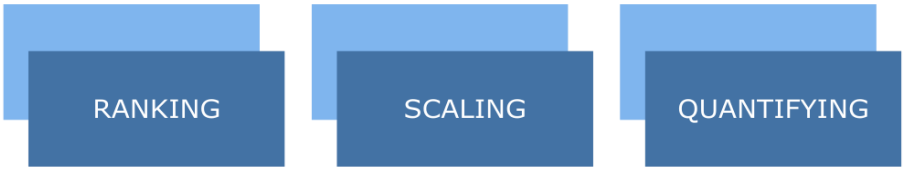
Table 1: Interpretation and rating of ES band

ES Bands	Rating	Interpretation
10-9	AAA	Highest economic impact
9-8	AA	Very high economic impact
8-7	A	High economic impact
7-6	BBB	Good economic impact
6-5	BB	Conjectural economic impact
5-4	B	Highly conjectural economic impact
4-3	CCC	Low economic impact
3-2	CC	Very low economic impact
2-1	C	Lowest economic impact
1-0	D	No economic impact
<0	F	Negative impact

Table 2: Interpretation of the ES rating

ES	Interpretation
As	High economic impact, which suggests that, from an economic perspective, there is substantial merit in pursuing the law reform. This means that the law reform is in line with the Benchmark and could have positive economic gains.
Bs	Good economic impact evaluation, which suggests that, from an economic perspective, there is merit in pursuing the law reform.
Cs	Low economic impact, which suggests that, from an economic perspective, the law reform is inadequate and there is little justification to pursue it.
Ds-F	Low or negative impact evaluation, which suggest that, from an economic perspective, the law reform should not be pursued. This may mean that the reform deviates largely from the Benchmark or may have unintended consequences

2. Uses



35. The purpose of the Framework is to help prioritise law reforms or allocate funds for legal and technical assistance in law reform projects, facilitating the decision-making process. The Framework is intended to assist international and regional organisations or states in ranking, scaling or quantifying the impact of a law reform.

a) **Ranking:** The Framework serves to indicate how a law reform may differ from a Benchmark or another reform. By weighing different Factors and producing numerical results, different types of reforms can be ranked. The ranking exercise can be used in establishing a hierarchy or ranking for legal reform. Policy-makers can benefit from comparing proposed reforms with past experiences using the Framework, which positions reforms within a hierarchy of past successes and failures, offering valuable insights into potential impacts.

b) **Scaling:** The Framework allows project scaling by employing numerical scoring. This can help determine whether an envisaged law reform meets a certain threshold. The scaling exercise could be useful in cases where identifying comparable projects for ranking is challenging, for example in innovative areas.

Quantifying: The Framework allows stakeholders to infer expected economic gains through an ex-post economic scoring of the Benchmark. When rigorous and/or multiple ex-post analyses of the ICLR Benchmark exist, the estimates of the economic impact of the Benchmark can be used to infer the economic impact using the score of the ICLR under scrutiny (see Annex 3, Section 1). The Framework allows quantification of the impact of an ICLR and produces actual monetary values if two conditions are fulfilled: first, there must be a Benchmark in place, and second, there must be an ex-post evaluation of this Benchmark.[9] Quantification can facilitate comparisons and demonstrate the gains of an ICLR. Quantification of economic outcomes relies on the *ceteris paribus* assumption that all other relevant conditions remain unchanged to distinguish the projected impact of a law reform. This does not mean that externalities or broader systemic effects are disregarded; it merely ensures that the evaluation measures the economic outcomes and the causal links of the proposed law reform in a controlled environment, making it comparable to the Benchmarks. The ES of the proposed law reform can be used to quantify an extrapolated evaluation of the economic impact of the proposed law reform. The formula to use (under a static scenario where all remains equal) would be:

$$\text{Economic impact} = \text{Benchmark's economic impact} \times \frac{ES}{10}$$

[9] "Benchmark" refers to either an existing or constructed Benchmark. See Chapter VI, Section 4 for more details.

Example 1: According to the estimates of Bian (2020), the Cape Town Convention (**CTC**) increased fleet productivity by 12%. Using CTC as the Benchmark for a proposed law reform with an ES=8, the industry productivity should increase by: $$12\% \times ES/10 = 12\% \times 0.8 = 9.6\%$$
Example 2: According to estimates, the Cape Town Convention saved the United Kingdom (UK) 60 million pounds annually in funding costs.[10] Considering the Cape Town Convention as the Benchmark for a proposed law reform with an ES=5, the industry savings should be: $$60 \times ES/10 = 60 \times 0.5 = 50\ million\ pounds$$

36. The Framework aims to offer clarity on the economic impact, even if the relevant organisation or state opts to undertake a lower scoring law reform for other, non-economic, reasons.

37. The Framework reflects specific types of impacts, i.e., Factors, to be taken into account, but is flexible enough to accommodate both positive and negative economic impacts.

3. Limitations

38. While the Framework is designed to be as comprehensive as possible, it has some limitations. In particular, it focuses exclusively on the economic dimension of law reform. The resulting ES should therefore not be interpreted as a definitive measure to assess the overall value of law reform initiatives, especially from a legal, social or environmental perspective. A low score on a particular Factor, or even a relatively low overall economic impact score, does not imply that a reform lacks merit. Other considerations, including social and environmental impacts, may significantly influence the overall assessment of a law reform.

39. To capture these additional dimensions, other analytical tools or evaluation approaches may be used alongside the Framework or at a subsequent stage in the reform process. Although the Framework operates as a stand-alone methodology, it is designed to be compatible with other tools, which can complement and reinforce its findings.

40. Furthermore, the analytical Framework:

a) does not address the question of how the relevant impacts will be distributed;

[10] Vadim Linetsky, *Accession to the Cape Town Convention by the UK: An Economic Impact Assessment Study* (Northwestern University, Independent Technical Advisor to the Aviation Working Group, December 2010).

b) does not address the non-quantifiable impacts of retaining or changing existing rules; and

c) should be applied and compared with other law reform options which seek the same objective.

41. Finally, the Framework adopts an aggregated approach, assuming that each of the three effects – direct, network, and systemic under Factors A to C – contributes equally to the overall economic impact. Accordingly, the calculation is adjusted based on the number of Factors applicable in a given case. Where all three Factors are present, the total is divided by three; if one Factor is not applicable, the total is divided by two (as explained under Step 3 of the Framework, above).

42. The guidance on applying the Framework is intended to provide practical direction and advice to support its use. However, it is not meant to impose rigid rules or constraints on how the Framework should be applied. Rather, it aims to assist users in navigating and using the Framework while maintaining flexibility in its implementation.

CHAPTER III

The Factors

III. THE FACTORS

43. The Framework is comprised of five Factors that capture different aspects of the economic impact of legal reforms and provide greater depth for the EE. These Factors are combined to obtain an overall score, but can also provide additional analytical value. Examining the individual Factor scores can help distinguish between ICLRs that achieve similar overall results but differ in the nature, scope, or underlying drivers of their expected economic impact.

44. Factors A, B, C and E are evaluated relative to the Benchmark, meaning that they measure the expected change or relative improvement resulting from the legal reform compared with the Benchmark. In other words, these Factors assess the extent to which the reform is expected to improve the existing legal framework and the economic outcomes associated with it. By contrast, Factor D is assessed in absolute terms. This Factor relates to the likelihood that the reform will be effectively applied in practice. Because it concerns the expected effectiveness of implementation and compliance rather than the degree of improvement relative to the Benchmark, it can be evaluated independently of the Benchmark.

45. Factors A, B and C represent distinct sources of economic gains, each reflecting "net" values that produce economic gains. Each of these Factors addresses different elements and time horizons and represents a different impact on market dynamics, reflecting both immediate and long-term effects on the economy. Factors A through C should initially be evaluated individually to avoid double-counting and to recognise their potential as distinct tools to promote law reforms. Subsequently, their effects and net values should be combined.

46. The **net impact** requires identifying and calculating the positive and negative components, i.e., the net sum of gains (positive impact) and costs (negative impact). The concept of "net" is also useful to account for negative externalities. In a competitive market, even where the law reform generates substantial overall economic gains, some parties may experience losses. In those cases, while the scoring system permits scores ranging from 0 to 10, a score below 0 may be assigned if the proposed law reform is expected to have a net negative impact under a specific Factor. However, assigning a score below the minimum should be reserved for exceptional cases and must be thoroughly justified.

The economic impact of law reforms may be unevenly distributed among different economic agents. As a result of the reform, productive parties within the affected industry may borrow more and expand, while unproductive parties may experience significant downsizing or even exit the market, leading to resource reallocation.

Example: Reforms in relation to creditor rights may induce firm-wide resource reallocation. For example, in a credit market there may be two types of borrowers: borrowers with access to alternative funding sources, and borrowers who heavily rely on bank credit. A banking reform that enables a significant expansion of bank credit may lead to increased production and decreased commodity prices, negatively affecting the profits of the better-funded class of borrowers.

47. The **net score** of each Factor should be evaluated by subject-matter experts through relative comparison with the economic evaluation of ICLR Benchmarks. Ideally, the Benchmark should be chosen from a previous and similar ICLR with the highest impact (best-case scenario). When the Benchmark does not exist (or is only a suboptimal ICLR with low or negative impact, or unintended consequences), the Evaluation team may create a best-in-class Benchmark scenario. The team should use all available information, including suboptimal reforms to identify their weakness. To introduce comparability between Economic Scores, the Benchmark (chosen or created) should refer to the best-case scenario (see Chapter VI. Section 4).

48. Double counting within the Framework should be avoided. This means that Factors are mutually exclusive and exhaustive. For instance, those categories of groups that would be affected by the law reform *indirectly* should not be considered under Factor A, since these are captured under Factor C (systemic effects). In addition, to avoid double counting, care should be taken where costs may overlap across Factors. The Evaluation team should ensure that each Factor addresses only those transaction costs that are relevant to that specific Factor. For instance, transition costs for direct (private) stakeholders would be taken into account under Factor A. This refers to transition costs incurred by those stakeholders in adjusting their behaviour, operations, or compliance practices to the new rules. By contrast, Factor E should cover the public or private costs of developing, negotiating, and adopting the reform, as well as implementation expenses such as legislative changes, institutional adjustments, and the establishment or maintenance of any necessary infrastructure. Similarly, enforcement costs incurred by public authorities (captured under Factor D) may be passed on to private actors through fees or charges (captured under Factor A). In such cases, the evaluation should ensure that these costs are not counted in full under both Factors but are allocated appropriately to avoid duplication.

49. The analysis of each Factor in the Guide is accompanied by "indicative questions" which aim at guiding the economic evaluation. These questions should be answered in relation to the Benchmark to help detect deviations of the law

reform from the Benchmark. Such a comparison can help capture whether a reform would have a similar or different effect on the various sectors.

1. Factor A (Direct impact)

The net, direct impact of the new rules
[range: 0 to 10]

50. **Factor A (direct impact)** measures the direct impact of the international commercial law reform, rather than the rules applicable in the absence of reform. In other words, this Factor reflects the primary effects of the reform and concerns the economic gains that parties who are directly affected by the rules will likely experience from the reform initiative. Under this Factor, the initiative is scored in and of itself – its intrinsic quality – rather than as an element of a legal order or a broader legal environment (which is separately evaluated under Factor B instead).

51. The measurement of this Factor requires stakeholder mapping to identify who would be directly affected by the initiative. Having a good understanding of the need for, and objective(s) of, the law reform (see Chapter VI, Section 2), the way in which those objectives are sought to be achieved, and the functioning of the relevant market are all key for the identification of the (intended) final beneficiaries and other directly affected parties.

52. Generally, several categories of groups will be directly affected by the initiative (e.g., enterprises in a specific sector, investors, consumers, etc.). The direct impact should ideally be determined separately for each of those categories.

53. If the ICLR initiative is not able to identify all key stakeholders, or some of those who would not gain from the reform, the score of Factor A should be lower than the Benchmark.

Example: For the Aircraft Protocol to the Cape Town Convention, key stakeholders include (i) airlines; (ii) end-users of the affected aircraft equipment; (iii) governments; (iv) manufacturers and their shareholders, employees and suppliers.

Similarly, in the economic impact evaluation of the UK's accession to the Cape Town Convention and its Aircraft Protocol, identified stakeholders included: (i) UK-based airlines; (ii) UK lenders and lessors financing aircraft; (iii) UK-based aircraft and engine manufacturers; (iv) UK aircraft passengers.

54. A positive impact for one affected party can be negative for another. Factor A is a net figure, meaning that positive impacts (i.e., the gains) and negative

impacts (e.g., compliance costs of beneficiaries, such as the need to adapt existing ICT solutions) need to be weighed against each other.

Factor A and transaction costs

Factor A may directly impact several transaction costs in the sector, country or market affected. For example, in the specific context of transaction costs, Factor A should be interpreted as the increase in transaction volume due to the reduction of transaction costs in the affected market. Transactions that, due to the high costs, are too costly to execute, can become profitable post-reform, resulting in an increase in transaction volume and an expansion in the size of the market. Transactions can increase both for the existing players and for new international players that can enter the market by virtue of the law reform.

Market structure may change as a result of the law reform. For example, new operators may enter the expanded market making it more competitive. Analysing competition involves identifying the relevant market and its structure and examining whether the law reform might result in an increase in industry concentration, affecting prices and efficiency. Additionally, the analysis should explore potential barriers to entry and exit, i.e., factors hindering the entry and exit of players in the relevant market.

It is recommended to take into account the impact of the degree of competition. For example, the difference between the borrower's rate and the lender's rate should not be solely attributed to transaction costs but also to imperfect competition.

55. The magnitude of the direct impact is to be measured in terms of changes compared to the baseline scenario (see Chapter VI, Section 1 below) and expressed in a score from 0 to 10 relative to the Benchmark.

Rating

A score from 0 to 10.

Indicative questions

56. The following list of indicative questions may be helpful for measuring Factor A relative to the Benchmark:

- Under the baseline scenario, who is disadvantaged by market failures or other inefficiencies?
- Which actors would be directly affected by the law reform?
- Who is targeted to gain from the law reform?
- Are the stakeholders for whom the envisaged rules are intended easily identified?

- What is the size of the market(s) affected by the law reform (e.g., in terms of investment, trade flows, expenditure) relative to the Benchmark?
- What is the expected change in the affected markets brought about by the legal reform?
    - Depending on the subject matter of the law reform, aspects subject to change may include, for instance, the number and volume of trade flows; the interest rate at which banks provide loans; loan terms; the market capitalisation of entities affected by the reform; the number of entities active in the relevant sector, etc.

Example: In case of a secured transactions law reform, Factor A could refer, for example, to a reduction in risk of lenders/investors; an increase in secured transactions operations; and/or a reduction in interest rates.

- What is the expected improvement of transactions at the individual level relative to the Benchmark?
    - This includes, for instance, the (expected) increase or decrease in transaction costs, such as the costs of negotiating and writing contracts.
- Is the law reform expected to lead to compliance costs (e.g., costs to comply with reporting requirements, etc.)?
- Is the law reform expected to lead to increased legal predictability relative to the Benchmark? If so, is this expected to affect the number of disputes and related costs?
- What type of statistical information, indicators and information should be generated in order to facilitate an evaluation of the direct impacts of the law reform?

57. Especially for ex-ante evaluation, it may be difficult to provide a quantification of the various factors to consider under Factor A. In such a case, the (expected) impacts could first be ranked "high" or "low" individually compared to the Benchmark, and subsequently be evaluated in combination for the determination of the final rating of this Factor.

Sources of data

58. The data required for evaluating Factor A depends on the content of the law reform. For an evaluation of market failures, it may be helpful to assess market data and/or interact with key actors in the sector. To determine the size of the relevant market(s), relevant categories of data may include, for instance, trade data and data on FDI. To measure the expected change, it could be useful, for instance, to undertake interviews or consultations with law firms and consultancy firms, companies and financiers active in the relevant market.

2. Factor B (Network impact)

The net impact of the new rules as a network
[range: 0 to 10]

59. **Factor B (network impact)** reflects the net impact of the new rules as a "network", that is, the existence of international rules altogether. Factor B should be understood as determining whether the law reform would create synergies, blocks, or substitution effects with existing laws and the gains of legal harmonisation across countries. First, this requires identifying the relevant international and/or domestic legal frameworks that the new law will interact with. Then, an analysis of the interactions between the ICLR and the previously-identified legal frameworks should be conducted.

Network refers to the relevant set of legal frameworks, including the new law and the existing international and/or domestic laws that the new law can interact with.[11]

Furthermore, the gains that will arise as more countries adopt the law reform could be taken into account under Factor B. For instance, if a certain international instrument becomes a standard for contracts in a specific sector, this provides an incentive for companies in that sector to rely on that instrument instead of choosing a different governing law. The gain obtained by users of the instrument then grows with the total number of users. The standardisation this creates can lead to increased predictability, which in turn may lead to an increase in transactions.

Factor B captures the *direct* network effects. Any other network effects, such as *indirect* network effects including externalities, should be considered under the level of certainty.[12]

Direct network effects pertain to the individual user of a network good, whose payoff from adoption of that good increases as additional users adopt it in a complementary fashion, which in turn makes that network more attractive to current non-users. This dynamic is observable in telecommunications networks, for example.

[11] For the purposes of this Guide, the term "network" is used in a narrow sense, referring solely to the impact of one law on other laws. Any second-order effects of a legal change on networks of economic actors should be addressed under Factor C, as part of the broader systemic impact of the law reform.

[12] See Annex 2, Section 4, for more details on the network effects.

60. Under Factor B, in addition to analysing the network effects in the jurisdiction(s) where the law reform is introduced, evaluating the impacts in third countries (that is, states that are not directly affected by the reform) may also be considered. For example, regional initiatives[13] may have inspired legislators in other jurisdictions, and international treaties may have effects beyond their signatories.

Factor B and transaction costs

Factor B represents the impact of the changes in law across different jurisdictions in reducing transaction costs and enabling cheaper, more efficient transactions. With harmonisation and changes to the law in more countries, transaction costs can drop as a consequence of a reduction of the legal costs (including investigation costs) associated with the operative rule across different jurisdictions. For example, transactions could be facilitated as transnational issues between parties are resolved.

To avoid double counting within the Framework, the expansion in the size of the market, even by virtue of legal harmonisation, should be examined under Factor A. This means that the entry of new international players into the market should not be considered as an economic gain produced through harmonisation and should not be covered by Factor B.

61. Factor B is highly important for decision-makers, as it shows the benefit of a harmonised rule on an international basis. This is particularly relevant for industries with significant cross-border activities, such as those involving non-localised assets. For example, mobile equipment falling under the Cape Town Convention and transactions involving intangible assets require consideration on an international scale.

62. Quantifying Factor B could offer a better understanding of how the law reform would interact with other laws and what the value of uniform law would be for cross-border trade. However, quantification might be challenging due to the difficulties in tracking the benefits of harmonisation or in cases where its value is negative (for example, due to regulatory competition).

63. In applying Factor B, the evaluation should distinguish between first-order effects, arising directly from the interaction between the new rules and existing legal frameworks, and second-order effects, which emerge over time through behavioural responses, market adjustments, and feedback effects within the legal and economic system.

64. In addition, the evaluation should explicitly differentiate between private costs and benefits borne by individual actors and broader social costs and benefits, including network effects, coordination gains, and systemic externalities. These dynamic and distributional considerations are integral to determining whether the

[13] For example, the ELI/UNIDROIT Model European Rules of Civil Procedure (2020).

law reform generates net positive network effects or, conversely, creates fragmentation or substitution at the system level.

Rating

A score from 0 to 10.

Indicative questions

65. The following list of indicative questions may be helpful for scoring Factor B relative to the Benchmark:

- Which existing laws would the law reform interact with?
- How are the new rules expected to fit into the existing legal framework?
- How do the objectives of the law reform compare to the objectives of the existing legal framework (e.g., do they support or oppose each other) and to those of the Benchmark?
- What are the expected synergies or conflicts with existing legislation?
- How many states are expected to join the initiative (i.e., expected number of ratifications or adoptions)?
- What gains would arise as more states adopt the law reform (e.g., implement a model law or become party to a treaty)?
- How does the law reform affect states that are not direct addressees of the reform?
- What type of statistical information, indicators and information should be generated in order to facilitate an evaluation of the network impacts of the law reform?

66. Depending on the type of instrument and the constitutional arrangements of states, the following considerations may also be relevant:

- How a country allocates law-making functions and jurisdictional powers across its constituent parts: Network costs and gains may vary, for example, to the extent that a country distributes legislative and judicial jurisdiction through a federal or other constitutional structure.
- The type of legal instrument and its implementation in the domestic legal order, e.g., whether the global law reform at hand requires domestic implementing legislation or will have a direct effect.
- The level at which the law reform is expected to apply. For instance, an international convention will likely have to be ratified at the domestic level, making it part of the domestic legal framework. The network effects of commercial law reform in the form of a model law, guidance or handbooks will also depend on whether the guidance is to be implemented at the national or sub-national level.

Sources of data

67. For an evaluation of Factor B, a good understanding of the existing legal context is key. If such expertise is not available in-house, it may be useful to consult external experts, such as law firms potentially affected by the reform.

68. Where appropriate, cross-national legal indicators may inform the evaluation of network effects and legal harmonisation. In the absence of such indicators, the Evaluation team may consider developing a tailored measure using established methods of construct validity.

3. Factor C (Systemic impact)

The net, systemic (including developmental) impact of the new rules
[range: 0 to 10]

69. **Factor C (systemic impact)** is a measure of the systemic, indirect impact of the envisaged law reform in relation to the relevant sectors. Factor C reflects the secondary effects ("knock-on" or "spill-over" effects) related to the law reform, as opposed to the primary (direct) effects under Factor A.

70. Factor C focuses on broader market dynamics and price shifts in areas beyond those directly affected by the law reform. The Benchmark used for comparison helps gauge whether a reform would have a similar or different broader effect.

71. Economic frictions beyond transaction costs should be considered under this Factor if they are not the primary target of the reform but rather emerge as indirect effects. Such frictions should be recognised if they are both relevant to the law reform and quantifiable. Annex 2, Section 3 provides a list of potential economic frictions relevant to the commercial law context.

72. Multiplier effects should also be considered where relevant, as they capture indirect economic impacts that extend beyond the immediate effects of a law reform. These may include, for example, increased consumption as a result of the employment growth achieved through the law reform. However, to avoid double counting, increased consumption or similar effects should only be considered under Factor C where they represent an additional, non-overlapping systemic effect, rather than a mere transfer or restatement of gains already captured elsewhere. Such cascading effects may also include effects on regulatory domains which are not directly targeted by the law reform. For example, a law reform may indirectly result in generating taxes, boosting government revenues, or creating macroeconomic benefits. Similarly, competition may increase, not because of the reform itself, but through its facilitation of market entry by new participants.

73. Precisely because multiplier effects can extend across multiple layers of the economy, it is important to set practical limits on their scope. To ensure real

quantification and avoid overly abstract or less relevant comparisons, such effects should be included only where they represent distinct and reasonably measurable systemic impacts. This requires a focus on Benchmarks aligned with the specific policy goals of the reform and reflecting the specific market problems or economic deficiencies the reform seeks to address, rather than the overall economic outlook. This is particularly important where indirect effects are not well documented and data is lacking, in which case the analysis may rely more on mere comparison with the Benchmark, rather than on precise quantification. Benchmarks tied to well-documented multiplier effects can therefore be adjusted to reflect the specific context of the reform. If a reform does not have the same broad application as the Benchmark, then the expected effects, and consequently the corresponding economic scoring, should be scaled accordingly.

74. Systemic effects may differ not only because of the precise content of the reform, but also because of their general subject matter. For example, contract law reforms may tend to have less systemic effects than credit law reforms. Thus, results may not have the same outcome or interpretation depending on the subject matter of the reform.

75. The scope of the underlying components to be scored should be limited to those that may be measured, at the time of the economic evaluation, with a discrete level of certainty. A detailed, quantified evaluation of uncertain long-term effects should be postponed to a later moment in time. However, the evaluation could already describe the relevant underlying components and the time horizon for such future evaluation. A reasonable timeframe should be established to delineate the relevance of Factor C.

76. Factor C is a net Factor, like Factors A and B. This means that if there are any systemic disadvantages and losses owing to the law reform, the final score for Factor C is reduced. For instance, an expansion of activities in the informal sector may be seen as a "negative" systemic consequence of a law reform.

Factor C and transaction costs

As Factor C is connected to broader economic consequences and addresses transaction costs that affect systemic impact, it should be interpreted as covering the increase in transactions more broadly (i.e., beyond the affected area). For instance, lower transaction costs could lead to more transactions, through the acquisition of more equipment, such as aircraft, which could produce an effect in another industry, such as tourism or employment.

Enhanced competition through the entry of new market participants in areas beyond the directly affected one represents a developmental impact, resulting in structural effects and changes in market dynamics.

Rating

A score from 0 to 10.

Indicative questions

77. The following list of indicative questions may be helpful for scoring Factor C relative to the Benchmark:

- Which actors are expected to be indirectly affected by the law reform?
- Which sectors are expected to be indirectly affected?
    - For instance, what are the expected spill-over effects on other sectors through supply chains?
- How many different regions or countries are expected to be affected?
- How is the law reform expected to affect the labour market?
- How is the law reform expected to impact the financial markets?
- What is the expected impact of the law reform on prices?
- What are the expected effects on economic growth or development?
- What types of statistical information, indicators and data should be generated in order to facilitate an evaluation of the systemic impact?

Sources of data

78. For a scoring of Factor C, helpful sources of data may include:

- Economic data sets that evaluate multiplier effects;
- Existing models and standard economic methodologies that identify systemic effects of rule changes, such as the OECD input/output tables (IOTs) and the UN Comtrade Database;
- Data of the United States International Trade Commission (USITC);
- Data from the World Bank's World Development Indicators database;
- Data by companies active in the relevant market.

79. These sources may generate absolute estimates of broader systemic effects, such as spill-overs across sectors, multiplier effects, or changes in market-wide performance. However, for the purposes of the Framework, such estimates are not used in isolation. They should inform a comparative assessment of the likely systemic impact of the reform relative to the Benchmark. Accordingly, even where the underlying methodology relies on absolute economic measurement, the final score for Factor C should reflect the extent to which the proposed reform is expected to approximate, match, or fall short of the systemic effects associated with the Benchmark.

80. This approach preserves consistency across the Framework. Factor A and Factor C may draw from different types of evidence and data sources, but both ultimately rely on a Benchmark-oriented scoring exercise. The distinction lies in the nature of what is being assessed. Specifically, Factor A focuses more directly on the reform's expected effects on immediate stakeholders and transaction costs,

whereas Factor C captures wider systemic or economy-wide effects, which often require model-based or macro-level evidence. As such effects are less directly observable at the ex-ante stage, their assessment may call for the use of a broader range of datasets, methodologies, and analytical techniques.

4. Factor D (Effective application)

The extent that the new rules will be effectively applied [range: 0 to 1]

81. **Factor D (effective application)** seeks to determine whether the law reform will be effectively applied and become operative or not. "Effective" application under this Factor refers to implementation of the law by states and to the extent to which states and private actors comply with it. It therefore captures not only formal adoption, but also whether the rules are actually followed and relied upon in practice. In certain cases, and over time, a rigid application of the law may not necessarily be the most effective approach. Instead, a certain amount of flexibility may allow the law to take relevant new developments into account.

82. Whether or not the law reform will be applied is a crucial factor and could nullify the gains of the law reform through multiplication from 0 to 1. The score attributed reflects the ex-ante expectation of the actual implementation of, and compliance with, the relevant commercial law instrument. The expectation of effective application of an instrument is modelled on the basis of reliable data relating to the Factors outlined below. This modelling would typically rely on "absolute" measurements, in the sense that Factor D is not relative to the Benchmark, but instead reflects the specific legal, institutional, and practical environment affecting the effectiveness of a particular instrument in a given country.

83. Effective application should therefore be understood as encompassing both public and private actors. On the public side, it includes the capacity and willingness of state institutions, such as courts, regulators, and administrative bodies, to implement, interpret, and enforce the law. In the first place, any state that undertakes a commercial law reform - for instance, by becoming a party to a convention - does so with the intention to comply with it. However, the degree of implementation and compliance may vary significantly across jurisdictions, depending on differences in institutional capacity, legal systems, administrative structures, and market conditions.

84. Beyond formal state enforcement mechanisms, Factor D should encompass the practical use of the law by private actors. In this sense, effective application includes the extent to which the relevant legal instrument is relied upon, interpreted, and enforced by courts, arbitral tribunals, and other dispute resolution bodies, as well as the degree to which it is understood, accepted, and utilised by private parties in commercial practice. This encompasses, *inter alia*, the ability of stakeholders to contract and use private means of enforcement, and

the availability of professional expertise necessary to apply the instrument in practice. Assessing effective application therefore requires consideration not only of state capacity and enforcement, but also of the broader legal and market environment in which private actors operate and through which the economic effects of the law reform are ultimately realised.

85. When scoring Factor D, it is recommended to consider any underlying components, both global and country-specific, that could hinder the application of the new rules. The analysis should consider political risk arising from rules being adopted but not effectively implemented or complied with, by including factors intrinsically linked to political circumstances found within a particular jurisdiction, as well as factors that may affect courts' and authorities' ability within that jurisdiction to implement the adopted law reform correctly. However, the analysis should extend beyond a country's compliance and also include structural or market factors. For example, economic evaluations should take into account the development of contrasting markets within different countries or situations where the infrastructure or the people involved in the transactions will not apply the instrument.

86. Political and institutional settings will vary depending on the level of economic development of a specific jurisdiction. Since all these components may be particularly subject to change over time, it is recommended to rely on the latest available data and ensure that the date is refreshed for each new scoring. As a best practice, it is recommended to rely on indices that are updated regularly.

Resistance to the full implementation of the reform from certain interest groups may impact the overall reduction in transaction costs anticipated by the reform. For example, while two countries may adopt identical legal texts, variations in implementation, often stemming from political resistance in one country, can result in lower economic gains.

Even with an equivalent level of implementation, outcomes may vary. For example, two countries may adopt identical banking laws and implement them with similar effectiveness. However, if the first country has a developed bond market, while the second relies heavily on banking finance, the impact on the first country may be less pronounced.

87. To the extent feasible, Factor D should also take into account practical impediments, such as institutional and resource constraints, including judicial backlogs. In this context, unusually high transition costs, such as costs related to judicial training, administrative capacity-building, or adaptation by courts and authorities, may affect the practical effectiveness of the law reform's application. Where such transition costs undermine implementation or enforcement, they may be reflected under Factor D by scaling down the expected gains of the reform to account for reduced operability. This approach ensures internal consistency of the evaluation framework, allowing significant transition frictions to be reflected through the assessment of effective application, rather than treated as a separate adjustment, particularly where those costs exceed the benefits identified under other Factors.

88. Law-making organisations can, to some extent, strengthen the effective application of their legal instruments themselves. For instance, engaging potentially affected stakeholders as well as other experts at various stages of the law-making process can furnish important information regarding the extent to which affected parties are likely to comply with the proposed reform, and advocacy and assistance mechanisms may help to increase understanding of the new rules. Furthermore, including specific dispute resolution or enforcement mechanisms in the instrument may increase its effectiveness. Especially in the case of lengthy or complex laws, additional documentation such as official commentaries or guidance may also contribute to the effective application of the rules.

89. It is likely that there will be an inverse relationship between (i) the magnitude of the change brought about by the law reform and the time required to implement it, and (ii) the likelihood it will be complied with. The greater the magnitude of change, the more time may be required for effective implementation. Similarly, as the scale of change increases, the likelihood of immediate or consistent compliance may decrease. The period of time the evaluation covers (e.g., one, two or five years after the hypothetical introduction of the law reform) should therefore be determined and explained. The time required to implement a new law in order to apply it effectively (under Factor D) is also related to capacity-building (under Factor E). The more complex a law is, the greater the link between Factors D and E.

90. The Guide allows for methodological flexibility in assessing effective application. Where, having regard to the institutional context and commitments expressed by the relevant authorities, the Evaluation team proceeds on the assumption that the law reform will be applied with reasonable effectiveness, this assumption should be expressly stated in the evaluation as a disclaimer and waiver of responsibility (for example, "this assessment is conducted on the basis that the reform will be duly implemented and applied by the competent authorities"). In such circumstances, assigning a value of 1 to Factor D may be appropriate, as it reflects reliance on the stated intention and capacity of the authorities, while preserving transparency as to the assumptions underpinning the evaluation.

Rating

91. A score from 0 to 1. Assigning numerical ratings to each state is suggested on the basis of a five-tier structure: 0.2; 0.4; 0.6; 0.8 and 1.

Relevant underlying components

92. Factor D is relevant for evaluations both at domestic level, that is, for national law reforms, and for international reforms that would be implemented at domestic level, such as model laws.

93. The underlying components that may be relevant to consider and prioritise for measuring Factor D depend on the type of evaluation (domestic or

regional/international). The table below summarises the suggested approach for each of the possible types of evaluations.

Economic Evaluations of a Domestic Nature	Economic Evaluations of a Regional or International Nature
Components a-j below, as derived from specific indices, could be taken into account to determine Factor D for a specific country. These components should also be taken into account for country-specific considerations of international or regional law reforms, when tailored.	(i) Economic scoring for global or regional legal reforms should assume implementation by a "representative" country scenario. "Representative country" refers to the country that typifies average conditions. It should be viewed as a standard point of reference in the analysis. Specific adaptations can later be developed for individual countries or groups of countries sharing similar and specific features. However, the initial analysis should reflect a generalised "average" implementation context. (ii) Deducting a specific percentage from the overall economic gain to account for non-compliance, based on an amalgamation of the general proxy data available country by country.

94. Components to consider include (relative to the Benchmark):

a) Geopolitical risk impacting the rule of law, especially in emerging markets.

b) Imperfect functioning of the rule of law - impacted, for instance, by the level of corruption and the level of transparency in a country.

c) Informational limitations. This refers to the impact of the level of comprehension of the new law or instrument upon its effective application. This is a dynamic factor; users of the new law provisions and enforcement institutions may need time to understand the content. Generally, as a result of a learning curve, informational limitations would be expected to decrease over time. If the content of the rules is sufficiently explained and promoted prior to their formal adoption, this delay may not be relevant.

d) Institutional, capacity, or resource-related limitations. This refers to the inability to apply the rules as intended and could take into account,

for instance the existence or absence of specialised courts or possible rotation requirements among different courts and administrative expertise.

e) Implementation-related limitations - for instance, to the strength of enforcement mechanisms, and the primacy of new rules over previously existing rules.

f) Lack of stability of the rule-maker or rule-applying entities - including, for instance, fundamental changes in government composition or policies.

g) Rapid and unpredictable changes in legal and economic structures and policy.

h) Intentional resistance - for instance, based on notions of sovereignty or protectionism.

i) The effects of signalling.

j) An analysis of the system as a whole - for instance, by looking at regulatory competition put forth by a treaty system.

95. Assessing the complexity of the law should be considered under any type of law reform. Law reforms usually generate beneficial effects only up to a certain level of complexity. Overly complex and difficult-to-implement rules become inefficient.

Indicative questions

96. The following indicative list of questions may be helpful for scoring Factor D relative to the Benchmark:

- Do the new rules provide for specific dispute resolution or other enforcement mechanisms?
- Do the new rules have a direct effect at domestic level, or are implementing actions needed?
- How will stakeholders be involved in the law reform?
- What advocacy and assistance activities are anticipated?
- To what extent are direct stakeholders expected to effectively apply the new rules?
- To what extent are courts in the relevant jurisdictions expected to effectively apply the new rules?
- What data exists regarding compliance with comparable legal instruments?

Sources of data

97. For the scoring of Factor D, helpful sources of data may include:

- Indices used by major international organisations on political and regulatory risks associated with a specific country, including:
  - The World Justice Project Rule of Law Index;
  - Country risk ratings of the major international credit rating agencies;
  - Private political risk insurance evaluations;
  - Data of the World Bank and Business Ready (B-READY);[14]
  - Bertelsmann Transformation Index (BTI);[15]
  - European Quality of Government Index (EQI);[16]
  - The World Bank Governance Indicators, such as the Rule of Law measure, V-Dem (Varieties of Democracy) Indices, Bank Polity 5, and Freedom House indicators;
- Data on compliance with comparable legal instruments (for instance, the pricing or risk assessment by the World Bank's Multilateral Investment Guarantee Agency (MIGA));
- Data on corruption and anti-corruption measures affecting the political risk associated with a country (for instance, the Transparency International Corruption Perceptions Index (CPI), which measures perceived levels of public sector corruption);
- Data on judicial performance affecting state enforcement capabilities – for instance:
  - The Council of Europe - European Commission for the Efficiency of Justice indicators (CEPEJ);[17]

[14] Data of the World Bank on contract enforcement was used in the economic evaluation of the Cape Town Convention and its Aircraft Protocol. This initiative has been discontinued and replaced by Business Ready (B-READY) which provides an overview of business environments in participating countries. It includes 10 topics: Business Entry, Business Location, Utility Services, Labour, Financial Services, International Trade, Taxation, Dispute Resolution, Market Competition, and Business Insolvency.

[15] BTI measures political transformation and economic transformation in 137 developing/transition countries on the basis of expert reports.

[16] EQI measures perceptions and experiences with public sector corruption, as well as the extent to which citizens believe various public sector services are impartially allocated and of good quality in the EU.

[17] Only applicable to Council of Europe Contracting States. It analyses the functioning of judicial systems by measuring whether courts keep up with the incoming workload and calculating the length of court proceedings and the number of judges per 100,000 inhabitants.

- The EU Justice Scoreboard, which measures the efficiency, quality and independence of EU Member States' judicial bodies;
- The World Bank: Business Ready (B-READY) – Dispute Resolution Topic;[18]
- The World Social Values survey;[19]

- Data on the prevalence of arbitration (for instance, the ICC's Dispute Resolution Statistics);
- Input from the general counsels of affected companies;
- Input from multinational accounting/consulting/law firms;
- Input from judges, court officials, and police officers.

98. Care should be exercised when relying on governance indicators, as they often adopt different definitions and conceptual approaches to terms such as the "rule of law". Caution is also warranted when using indices developed by private or government actors, as their methodologies and underlying assumptions may reflect particular policy perspectives. The Evaluation team should therefore consider such sources critically, use them in conjunction with other datasets, and ensure transparency in their selection and use.[20]

5. Factor E (Transition costs)

The expected net cost of creating and transitioning to the new rule
[range: 0 to 1]

99. **Factor E (transition costs)** covers the transition costs of a law reform, namely the costs associated with moving from the existing legal framework to the new regime introduced by a law reform. These costs include the costs required for negotiating, drafting and adopting the new rules, as well as those associated with their implementation. They may also encompass expenditures linked to institutional adjustments, capacity-building, and training of relevant stakeholders, such as judges, regulators, legal practitioners, and market participants.

100. Factor E may also include the costs of establishing the institutional, technical, or administrative infrastructure required under the new legal framework. This may involve creating new bodies, systems, or tools that are essential for the functioning of the reform. For instance, in the case of the Cape Town Convention, this included the establishment of an international registry for

[18] The B-Ready reports measure the quality of laws for dispute resolution (including alternative dispute resolution-ADR), the quality of key public services pertaining to dispute resolution, and the reliability and efficiency of courts and ADR.

[19] The World Social Values survey may contain useful information on trust in courts.

[20] More guidance on the data selection is provided in Chapter VI, Section 5.

the registration of international security interests in mobile equipment. Similar requirements may arise in other reforms, depending on their scope and design, and should be taken into account where they are necessary for the implementation and operation of the new rules.

101. For the sake of simplicity, Factor E is treated as static, meaning that transition costs are assessed as a one-off or fixed component and are not assumed to evolve (i.e., increase or decrease) over time. This simplifying assumption allows for greater comparability across different reforms, even though, in practice, some costs may be incurred over different stages.

Legal and administrative resource expenditures represent the net cost associated with creating and transitioning to the new rules and need to be subtracted from the overall economic impact. Their measurement is relative to the Benchmark.

102. The nature of the law reform may have an impact on the costs associated with Factor E. Hard-law reforms tend to be more resource-intensive in comparison to soft-law reforms. They often involve more complex and lengthy negotiation and legislative processes, higher coordination costs among stakeholders, and more demanding implementation and compliance requirements. In addition, hard-law instruments typically require the establishment of enforcement mechanisms and monitoring systems, such as registries or supervisory bodies, or the employment of administrative tools such as registries, which further increase transition costs. By contrast, soft-law instruments, being non-binding and more flexible, tend to involve lower adoption and implementation costs.

103. The magnitude of the problem targeted by the law reform can also affect the outcome of Factor E. Reforms targeting more complex, systemic, or deeply entrenched issues are likely to require more extensive legal, institutional, and administrative adjustments, thereby increasing transition costs. Conversely, reforms addressing more narrowly-defined issues may involve more limited changes and therefore lower associated costs. Accordingly, the assessment of Factor E should take into account not only the type of instrument but also the scale and difficulty of the underlying problem the reform seeks to address.

104. Factor E does not encompass all cost elements associated with a law reform. Costs that are already captured under Factors A, B, and C (i.e., direct, indirect, or systemic economic effects) should not be duplicated under Factor E. Instead, Factor E is limited to transition-related costs that arise specifically during the shift to the new legal framework and that are not otherwise accounted for.

105. To preserve balance within the overall scoring methodology, transition costs are capped at 10% of the total weight. This ensures that Factor E can influence the final score, but only to a limited extent. The cap reflects the general expectation, informed by expert practice, that transaction costs associated with ICLRs rarely exceed this percentage when compared to the Benchmark. It is intended to guide the Evaluation team and prevent unusually high transition costs

from disproportionately influencing the overall score. Where estimated costs exceed this threshold in particular cases, this may indicate the need to net out certain costs under Factors A, B, or C rather than under transition costs.

106. In addition to initial transition costs, Factor E should also capture ongoing maintenance costs necessary to sustain the continued functioning and effective application of the law reform once implemented. These may include recurring administrative expenses, the operation and upkeep of registries or information systems, periodic training of judicial or administrative staff, compliance monitoring, and the updating of supporting infrastructure. While such maintenance costs arise on a recurring basis and accrue over time, they should be incorporated under Factor E in an aggregated and simplified manner to preserve the static nature of the cost assessment and ensure comparability across reforms. In practice, this may involve estimating these costs over a defined period or expressing them as an equivalent static value. Where relevant, such costs should be clearly identified and disclosed to the extent that they materially affect the net economic assessment of the law reform.

Rating

A score from 0 to 1.

Indicative questions

107. The following list of indicative questions may be helpful for scoring Factor E, relative to the Benchmark:

- What are the expected costs for negotiating and adopting the law reform?
- What are the expected educational costs for the instrument?
- What are the expected costs for implementing and complying with the instrument?
    - This includes legislative implementation, technical assistance (the various types of support which will be provided to assist jurisdictions in their implementation of the legislation) and capacity-building.
- What are the expected future costs of inaction?
    - This component is applicable only to limited types of law reforms (for example, reforms related to the entire financial system), aiming to deal with low-probability, long-term risks that could have a significant impact.

Sources of data

108. For the scoring of Factor E, data drawn from past experiences, whether at the international or domestic level, depending on the type of law reform, may serve as a useful Benchmark, particularly with regard to costs incurred in developing ICLRs. Such data may include information on expenditures related to

drafting, negotiation, coordination, and adoption processes, as well as information on the costs required at the domestic level to implement the law reform, such as legislative adjustments, institutional adaptation, administrative changes, and capacity-building. They capture the resources, time, and adjustments required for both legal systems and institutions to adapt to the change.

109. Relevant data sources identified under Factor D may also be consulted when evaluating legal and institutional switching costs for Factor E, as they can provide insights into observed practices and cost patterns, and distributional considerations to the extent that they affect transition costs.

CHAPTER IV

Contexts of Use

IV. CONTEXTS OF USE

1. Timing aspects

110. The timing of the evaluation can significantly affect the resulting ES and its interpretation. Three distinct aspects should therefore be considered when conducting an economic evaluation of an ICLR: **the timeframe, the time horizon, and the stage of the law reform under evaluation**.

111. The timeframe refers to the duration of the EE. Any evaluation should be designed so that the results are available in time to meaningfully inform policy development and decision-making. The time and resources required to carry out an economic evaluation will vary depending on the scope of the reform, the availability, quality, and complexity of the data, and the need to construct an appropriate Benchmark. As a general guideline, a timeframe of approximately three months is often sufficient to carry out a structured and thorough evaluation.

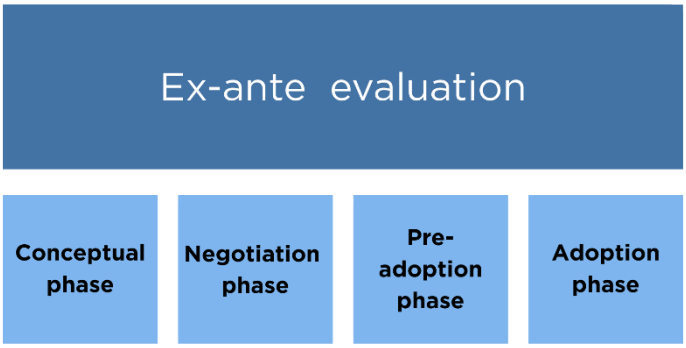
112. The Evaluation team should also define the time horizon, that is, the period over which the expected economic impacts of the reform are assessed. The specific span of time should be carefully determined, taking into account the nature and scope of the reform, as well as the available data and the Benchmark. In determining the appropriate time horizon for estimating costs and benefits, the evaluation should consider how long the reform is likely to produce economic effects. The time horizon of the evaluation should be sufficiently long to capture the anticipated economic effects while remaining realistic, given constraints related to data availability and quality to make reliable projections.

113. The economic evaluation should also consider the stage of the reform process at which the evaluation is carried out, that is, its position within the broader lifecycle of the legal reform. Economic evaluations of ICLRs may be conducted at various stages of the lifecycle of a legal reform. A general distinction can be made between **ex-ante** and **ex-post** stages. Ex-ante economic evaluations examine the expected economic impacts of a legal instrument in advance of its adoption, while ex-post evaluations examine the realised economic impacts after the reform has been adopted and implemented. Different impacts may materialise at different points in time. For example, costs are often incurred early in the process, while gains tend to be more visible in the medium to long term.

114. The Framework is designed for **ex-ante use**, though its application during ex-post phases is possible, provided that sufficient data exists. However, the Framework will be applied differently depending on when the evaluation is conducted. For instance, in the ex-post phase, more reliable and developed empirical data is likely to be available, reducing the need for reliance on extensive assumptions and qualitative data. In such cases, the availability of realised

indicators may also validate and refine the assumptions used in the ex-ante assessment. Ex-post evaluations may therefore help assess whether the impacts anticipated in the ex-ante evaluation have materialised in practice and may provide evidence that can help validate and refine the assumptions used in the ex-ante assessment (see Annex 3, which offers limited guidance on how the Framework can be used *ex post* and how ex-post evaluations can be used when carrying out ex-ante evaluations).

115. Within the ex-ante stage, the economic evaluation may be conducted at several phases of the reform process, reflecting the progressive development of the law reform. These stages — outlined in the table below and discussed in detail in subsequent sections — include the **(1) conceptual phase, (2) negotiation phase, (3) pre-adoption phase, and (4) adoption phase.**



116. At an ex-ante stage, the Framework will probably not be used to conduct a full quantitative economic evaluation, but it may help to determine whether the commercial law reform efforts are viable. Early evaluations of viability can help shape the direction of a reform project and increase the chances of a project being successful. It is therefore recommended to include an ex-ante evaluation as the natural first step of any commercial law reform project. As the reform process develops, the EE under this Framework may be complemented by additional analytical tools. For instance, a legislative impact assessment can be used to compare alternative policy approaches and assess their broader social and environmental impacts, while a gap analysis can examine the extent to which existing domestic legal and institutional frameworks may align with the proposed reform and identify country-specific implementation needs.

117. One of the main challenges at the ex-ante stage is often the limited availability of quantitative information. In such cases, the evaluation takes place from a theoretical point of view, with greater reliance on qualitative data. Nevertheless, the objective should always be to collect, to the greatest extent possible, the data necessary to enable an empirical evaluation.

1.1 Conceptual phase

118. This phase corresponds to a very early stage in the development process, where the evaluation Framework is applied to a preliminary idea, such as a proposal put forward by an international organisation. During the conceptual phase, the EE supports the decision on whether to pursue a law reform by providing initial insights into its potential impacts. Specifically, it can help identify the underlying problem, justify the necessity of the reform, and inform decision-making, before substantial resources are invested into the project.

119. At this phase, the economic evaluation should be kept relatively simple, enabling a comparison between different approaches to solving the identified legal problem. For example, it may be useful to compare soft-law and hard-law approaches, or different legislative options in terms of scope and content. The aim is to assess which alternative solution is expected to yield the greatest economic gain and provide the most efficient legislative model.

120. Given the early nature of this phase, the economic evaluation may be limited to identifying the different elements to be considered under each of the Framework's Factors. Since specific legal provisions are unlikely to have been drafted yet, the specifics will be vague. Often, only an outline of the proposal will be available, without accompanying data. As such, in most cases, it will be impossible to make a precise quantitative evaluation of the potential economic impact of the proposed law reform in terms of monetary value. Economic evaluations attempting to forecast material economic gains too early can risk being discredited and undermined, thereby potentially damaging the project. Therefore, at this phase the evaluation may be limited to a simple scoring relative to the Benchmark. As the law-making process advances, more detailed and data-driven actual values can be incorporated as they tend to become more readily available in the later stages.

121. A key principle at this stage is to avoid overloading the analysis with unnecessary detail, which can lead to analysis paralysis. Rather than aiming for precision too early, it may be more appropriate to rely on qualitative assessments or rough quantitative estimates where quantitative information is not available. Drawing on economic theory and findings from ex-post studies related to the Benchmark can help in hypothesising the potential benefits and costs. Evidence from ex-post evaluations may also be useful in informing the assumptions used in the ex-ante evaluation, particularly where such evaluations provide empirical information on the realised impacts of comparable reforms and can therefore help refine the assumptions used in the economic evaluation.

Example: Under UNIDROIT'S working methodology, the conceptual phase corresponds either to a project being proposed for the UNIDROIT Work Programme or to the Secretariat undertaking a feasibility study for a proposed project.

1.2 Negotiation phase

122. The negotiation phase refers to the stage in which the text of the law reform is actively developed. It typically involves iterative drafting and discussion among experts, policy-makers, and stakeholders, with the aim of shaping provisions that are technically sound and, for ICLRs, broadly applicable across jurisdictions. This phase often includes a consultation before the drafting begins, during the drafting process, or after a first draft has been completed. The consultation aims to raise awareness of the instrument, ensure its suitability for application across diverse contexts, and gather feedback on whether it adequately addresses the commercial law issues associated with the subject-matter.

123. During the negotiation phase, an economic evaluation can play a central role in informing and refining the design and scope of the legal instrument, guiding the drafting process and enabling the identification and comparison of alternative legislative options and their respective impacts.

Example: In the context of UNIDROIT, the negotiation phase refers to the phase in which work is conducted by a group of international experts (Working Group) responsible for developing the legal instrument. This process may include the launch of a public or targeted consultation.

124. At this stage, as the instrument's provisions become more concrete, the ex-ante economic evaluation can also become progressively more detailed, examining specific elements to be considered under each Factor in the Framework. Where there is sufficient certainty and available data, the economic evaluation may also provide quantitative estimates of the possible economic impacts of the draft instrument relative to the Benchmark.

125. Depending on the exact stage and the shape of the rules of the proposed reform, economic evaluation can help identify specific provisions within the draft instrument that are likely to have significant effects on the overall economic impact of the reform.

1.3 Pre-adoption phase

126. The pre-adoption phase refers to the period between the finalisation of a draft instrument and its formal approval. Once negotiations are complete, there is often a period of time before the instrument is officially adopted, either by a diplomatic conference (in the case of a treaty) or by a legislative body or the governing body of the sponsoring organisation (for both hard-law and soft-law instruments).

Example: Under UNIDROIT'S working methodology, the pre-adoption phase refers to the stage in which a diplomatic conference is being organised (for treaties) or in which the draft instrument has been approved by the Governing Council (for soft-law instruments).

127. At this stage, economic evaluation plays a consolidating and decision-support function. Since the rules in the draft instrument are usually well defined by this point, the economic evaluation can be more robust and precise and include quantitative estimates of the likely economic impacts. The evaluation serves to validate the coherence of the draft, identify any remaining risks or unintended consequences, and strengthen the evidentiary basis for approval and adoption. Where the draft offers multiple implementation options or design choices, their economic implications can also be compared, providing valuable information to negotiating states as they make final decisions.

1.4 Adoption phase

128. At the adoption phase, the legal instrument has been formally approved and adopted by the international organisation or legislative body but has not yet been widely adopted by states. During this period, states typically seek to adopt or implement the instrument and assess how to incorporate it into their legal systems, considering any necessary legislative, institutional, and administrative adjustments.

Example: In the UNIDROIT process, the adoption phase may refer to the stage following the approval of the instrument by the Governing Council.

129. During this phase, economic evaluation can support the promotion of the legal instrument by demonstrating its expected economic gains and assist states in preparing for the adoption and implementation process in light of potential costs, institutional requirements, and anticipated economic effects under different implementation approaches.

130. Since the instrument has not yet been widely applied and implemented, empirical evidence remains limited. Quantitative data may still be scarce or not yet available. If the instrument remained largely unchanged throughout the adoption process, the analysis may rely substantially on estimates developed during the pre-adoption phase. As adoption progresses, depending on the number of states which have adopted the law reform, additional and more accurate information, such as on the costs of negotiating and adopting the instrument, can now be factored in, allowing for progressively more accurate assessments.

2. Geographical context

131. While the Framework's primary focus is on international commercial law reforms, it can in principle be applied to law reforms at any geographical level, including at the domestic and regional level, particularly in the context of country-specific or sector-specific analyses.

132. Regardless of the level of application, the economic evaluation should clearly set out its geographical scope. This scope should align as closely as possible with the expected geographical reach of the proposed law reform,

ensuring that the analysis captures the relevant jurisdictions, markets, and actors likely to be affected.

> **Example**: In the case of UNIDROIT instruments, the focus of the economic evaluation may be limited to the economic impacts in its 65 Member States or extended to jurisdictions that intend to implement a commercial law reform based on a Model Law.

133. When the evaluation is conducted at the domestic level, it may benefit from the availability of proxy data from another, similar jurisdiction. In such cases, it is recommended to fact-check the underlying conditions, such as legal structures, market characteristics, and institutional capacity. Although this may be time-consuming, it ensures that the situations are truly comparable and thus that conclusions drawn from proxy data are reliable and meaningful.

134. In the case of international reforms, depending on the approach taken, the evaluation can begin with country-level assessments and then aggregate results to reflect global impacts. This may require using weighted averages to account for differences in economic size, market structure or the significance of each jurisdiction in the relevant sector.

3. Nature of law reform

3.1 Hard law and soft law

135. The Framework can be applied to all types of commercial law reforms, whether they involve hard-law or soft-law instruments. Hard law refers to legally binding instruments, which typically take the form of treaties and create enforceable obligations for the parties involved, including states and international actors.[21] These instruments usually provide more predictable outcomes. As they typically require formal adoption and implementation, certain aspects of their economic impact, such as their effective application under Factor D, may be more readily observable and measurable. In contrast, soft law comprises non-binding rules, standards, or statements of practice intended to guide behaviour or serve as a reference for identifying the best legal solutions in specific contexts. Non-binding instruments may take the form of principles, model laws, guidelines, legal and legislative guides, and recommendations.[22] These instruments generally offer greater flexibility and adaptability, and, coupled with lower negotiation costs, are particularly suitable for areas where stakeholders' interests diverge significantly or where consensus on binding rules may be difficult to achieve. Although not legally binding, soft-law instruments can play a significant role in shaping domestic legal reforms and in achieving the convergence of legal standards at the

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[21] For instance, the Convention on International Interests in Mobile Equipment (Cape Town Convention) and its Protocols.

[22] For example, the UNIDROIT Principles of International Commercial Contracts, the UNCITRAL-UNIDROIT Model Law on Warehouse Receipts, the UNCITRAL Legislative Guide on Secured Transactions.

international level.[23] At the same time, the connection between soft-law instruments and legislative changes may be less direct and more difficult to trace, particularly when multiple reforms are taking place simultaneously.

136. At the ex-ante stage, in particular during the conceptual phase, the Framework may be used to support the comparison of different legislative options, including the choice between hard-law and soft-law options, by assessing and comparing their respective expected impacts.

137. As such, conducting an economic evaluation for soft-law instruments may be more challenging given their non-binding nature, which relies on voluntary compliance. The lack of enforceable obligations can make it difficult to assess specific Factors, especially Factor D, which deals with adoption and implementation. Predicting how consistently a soft-law instrument will be adopted and implemented across jurisdictions is complex, creating obstacles in determining its scope of application and its potential direct, indirect, and systemic impacts.

To enable a more structured evaluation of soft-law initiatives, two assumptions may be applied:

Assumption 1

For the sake of the economic evaluation, the soft-law instrument can be analysed as if it were binding and enforceable, akin to a hard-law instrument. This allows for a more structured analysis of its potential impact across jurisdictions, assuming consistent implementation.

Assumption 2

The instrument's core characteristics, such as bindingness, adaptability, flexibility, credibility, enforceability, and the presence or absence of sanctions in case of breach, should be evaluated to determine its "hard-law" effect, i.e., the extent to which the instrument may function like hard law in practice. The degree of expected implementation and application may vary depending on the type of soft-law instrument (e.g., "principles" versus a "model law").

138. With regard to soft-law instruments, the economic evaluation should clearly identify the intended addressees, such as legislators, judges, lawyers, and other parties involved in dispute resolution mechanisms, as well as the core elements of the reform, including key provisions likely to influence domestic legal systems. By clarifying these components, the economic evaluation can better account for potential pathways of adoption and implementation, even in a non-binding context. This approach ensures a more accurate economic evaluation by reflecting

[23] For example, the UNIDROIT Principles of International Commercial Contracts have influenced legislative processes and serve as an interpretative tool for contracts as well as in arbitration.

the soft-law instrument's potential effectiveness and its ability to achieve harmonisation and influence across diverse jurisdictions.

139. Ultimately, the choice between hard-law and soft-law instruments often reflects the desired level and method of legal harmonisation. While some legislative initiatives aim for full harmonisation (or unification) through hard law, others may be more suitably pursued via soft-law approaches. Economic evaluations play a crucial role in shaping these decisions by weighing not only costs and benefits, but also the most appropriate solutions for the specific context.

3.2 Broad-scale law reforms

140. In the case of extensive reforms affecting multiple legal domains, it is recommended to subdivide the reform into different components based on the subject matter and to apply the Framework separately to each of the components.

> **Example**: A large-scale commercial law reform may simultaneously introduce changes in secured transactions laws, insolvency frameworks, company law provisions, and cross-border enforcement mechanisms.

141. This can help identify distinct economic impacts associated with each area of reform, while also accounting for varying degrees of implementation across the different components. This can improve data collection, as relevant indicators and proxy measures may vary depending on the subject matter. This can provide clearer communication of the reform's value, especially when presenting the outcomes of an ex-ante economic evaluation to policy-makers, legislators, donors, or the public, enabling prioritisation and allowing policy-makers to assess which parts of the reform generate the greatest economic value and merit earlier or more intensive implementation efforts.

142. As each of these components may have different structures, requirements, expected economic outcomes, and stakeholders, a single aggregated economic evaluation might fail to capture these variations or might lead to misleading conclusions.

143. Once individual economic evaluations are completed, their findings can be synthesised into an overarching analysis that reflects the cumulative impact of the broader reform while preserving the depth and specificity of each component evaluation.

CHAPTER V

Evaluation Actors

V. EVALUATION ACTORS

144. The economic evaluation of an ICLR should involve two teams: an "**Evaluation team**" and a "**Benchmark team**". Engaging two distinct teams should ensure clear role distinctions and prevent conflicts of interest or unintended biases, thus leading to more rigorous and objective results, and an overall transparent process. Additionally, it is recommended that both teams be multidisciplinary, comprising both legal and economic experts, to ensure a well-rounded methodological approach and strengthen the analytical depth of the evaluation.[24]

145. Nevertheless, the composition, structure, and functions of these teams ultimately depend on the organisation conducting the economic evaluation, as well as the available resources and budgetary constraints. While some organisations may fully implement this separation with independent teams, others may face practical limitations requiring overlapping roles or a less diverse disciplinary composition within the teams. Despite maintaining distinct roles, collaboration between the Evaluation team and the Benchmark team is essential for a comprehensive, rigorous, and transparent outcome. Constructive feedback and review between teams can enhance the robustness of the evaluation. Additionally, fostering discussions among legal and economic experts across teams is encouraged to promote a more holistic evaluation by integrating diverse perspectives.

146. Furthermore, as a quality control measure, a peer review process or external validation mechanism can enhance the credibility and objectivity of the evaluation. While not strictly necessary, involving independent reviewers at various stages of the evaluation can provide diverse perspectives, help identify potential biases, and strengthen the evaluation's rigour and transparency. These mechanisms can contribute to a more consensus-based and methodologically sound assessment.

1. Evaluation team

147. The Evaluation team is responsible for evaluating the economic impact of the commercial law reform. This includes selecting an appropriate real-case Benchmark or adopting the Benchmark designed by the Benchmark team, applying and documenting the scoring methodology, determining the overall economic outcome of the law reform, and producing the Economic Evaluation Report, based on the Workflow presented below (see Chapter VI).

[24] In carrying out their tasks, the Evaluation and Benchmark teams may be supported by technological tools. Further guidance on the responsible use of technology in applying this Guide is set out in Annex 2, Section 7.

148. The legal experts of the team should contribute by providing insights into the content, objectives and text of the proposed law reform, determine the baseline scenario, and identify the relevant legal assumptions. While the text of the proposal for a law reform may not always be comprehensive, especially at the conceptual phase, it nevertheless specifies the legal issue that is sought to be addressed by the ICLR and provides a necessary foundation for the evaluation. On the other hand, economic experts should be responsible for analysing data, market trends, and economic performance indicators to evaluate the expected economic impact of the reform. They should also take care of economics-related assumptions, collect the relevant data, and establish the conceptual causal links.

149. Close collaboration between legal and economic experts is necessary to ensure that the evaluation reflects both legal accuracy and economic relevance. The team should assess and score each of the Factors sequentially to reach a final ES. This process requires the consistent application of the scoring methodology, supported by clear reasoning and appropriate evidence. In determining the final score, the Evaluation team should also consider the potential relevance of externalities (see Chapter VI, Section 7), ensuring that indirect or unintended effects are appropriately taken into account in the overall assessment under the level of certainty.

2. Benchmark team

150. Where a constructed Benchmark is required in the absence of an existing Benchmark,[25] an independent team comprising legal and economic experts should design the Benchmark by detailing all components of a best-case scenario based on economic terms. The Benchmark team's responsibilities include:

- Conducting a thorough review of existing legal and economic literature to identify best practices and successful reform examples;
- Defining specific methodologies and criteria that represent the highest standards and best-case scenarios for commercial law reforms; and
- Documenting the Benchmark in a detailed report that outlines its components, rationale, and expected impacts.

151. It is recommended that the expert team developing the best-in-class Benchmark be distinct from the Evaluation team, in order to minimise the risk of unintended biases and ensure that the Benchmark remains a neutral and objective point of reference. The Benchmark team should focus solely on creating an ideal standard based on economic terms, without being influenced by the specific features or expected outcomes of the reform under evaluation. This division of roles supports objectivity and impartiality throughout the evaluation process and maintains its integrity.

[25] Situations that require a constructed Benchmark are listed in Chapter VI, Section 4.

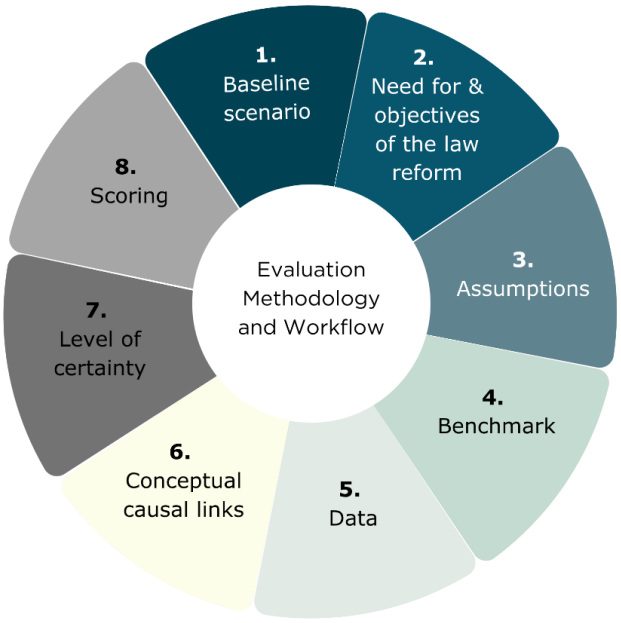
152. Once the Benchmark is created, the Evaluation team will use it as a reference point for conducting the evaluation of the commercial law reform at hand. In doing so, the team uses the Benchmark to guide its analysis and ensure that comparisons are consistently based on the best possible standards. The Evaluation team should engage with the Benchmark in a structured and methodical manner, ensuring a careful interpretation of its components and conducting a transparent, well-reasoned assessment of how the proposed reform is expected to perform against it.

CHAPTER VI

Evaluation Methodology and Workflow

VI. EVALUATION METHODOLOGY AND WORKFLOW

153. To ensure transparent and informed decision-making, the Evaluation team should employ a structured and transparent methodology, systematically documenting the following steps[26] in the specified order: **(1) identifying the baseline scenario; (2) defining the need for the proposed law reform and its objectives; (3) setting out the key assumptions; (4) determining or constructing the Benchmark; (5) mapping and collecting data; (6) assessing causality; (7) determining the level of certainty; and (8) assigning scores**.



154. These steps are intended to guide the different stages of the EE process. At each stage, the guidance provided below sets out the relevant tasks and appropriate tools to assist the teams. All of these steps are highly interrelated and

[26] The evaluation methodology set out in this Chapter does not preclude the use of other established approaches and tools. For further details on its interplay with other tools that help measure the economic impact of commercial law reforms, see Annex 2, Section 2.

should not be treated in isolation. Each step both informs and depends on the others, contributing to a comprehensive and coherent EE. For instance, the assumptions made in step (3) influence the data to be collected in step (5), and the causality assessed in step (6) relies on the baseline scenario identified in step (1). Similarly, the level of certainty determined in step (7) depends on the accuracy and reliability of data, and generally on the previous steps.

1. Baseline scenario

155. The first step in conducting an ex-ante evaluation of an ICLR is to identify the baseline scenario. The baseline scenario reflects the situation in the absence of the legal reform and represents the status quo, i.e., the "business as usual" case. It reflects what would happen if the law reform were not adopted and, thus, no legal changes were implemented.

156. Identifying the baseline scenario requires that the current situation be properly described, the market and legal context be provided, and the problem with the existing situation be explained (i.e., the situation without the law reform) along with its underlying causes, as specifically as possible. The actors affected by the situation should be identified (stakeholder mapping) and the size and scale of the problem should be estimated. The problem of the existing situation may be caused by several factors, such as market failures or legislative inefficiencies, and may already have led to negative consequences or present a risk of such consequences.

157. The baseline scenario should be clearly described. It should have regard to existing legislation and reflect possible developments of these laws in the absence of reform. For instance, the baseline scenario may be the lack of international standards on the applicable subject matter or the existence of international legislation that no longer seems fit for purpose.

158. The Evaluation team should identify and analyse the baseline scenario carefully, as its specification may have a profound influence on the outcome of the economic evaluation. The baseline scenario helps determine the relevant elements and potential changes as a result of the law reform under scrutiny, and serves as a starting point and basis for any comparisons to the Benchmark.

2. Objectives of the law reform

159. It is recommended to specify the rationale for action at the international level and to outline its objectives. This may involve assessing whether the problem to be addressed has transnational aspects which cannot be adequately addressed by domestic legislation alone and/or whether an international legal response would produce greater gains or achieve better outcomes compared to purely domestic actions. Clearly setting out the objective(s) of the law reform helps to identify the relevant questions to be examined and the relevant assumptions to be drawn during the economic evaluation process.

160. There may be different ways to achieve the identified objectives of the law reform, including by identifying alternative legislative options to be evaluated. Such analysis may be particularly relevant in the early stages of law reforms (especially in the conceptual phase, see Chapter IV, Section 1). These alternatives may relate to the nature of the law reform (i.e., hard law or soft law), the type of instrument (e.g., model law), and variations in terms of scope and policy approaches (e.g., different levels of stringency). The EE should serve to genuinely consider the potential impacts of different options rather than to justify a predetermined position. To this end, it is recommended to begin with a screening of the widest array of options and subsequently narrow the focus to a limited number of the most relevant and feasible options (e.g., two or three different options), which can then be examined in greater depth in the course of the economic evaluation process.

3. Assumptions

161. For transparency's sake, any EE of commercial law reform should clearly present the key assumptions on which the evaluation is based. Assumptions should cover both the current legal framework (i.e., current state of the law) and the impact of the law reform (i.e., anticipated changes in the law).

162. As a methodological premise, the economic evaluation typically begins with the assumption that the proposed law reform is capable of generating an economic effect. Without this assumption, neither economic evaluation nor scoring would be meaningful, as there would be no effect to assess in comparison with a Benchmark. This premise does not predetermine the magnitude or direction of the expected economic effect. Rather, it establishes the analytical starting point necessary for the evaluation to proceed. Any uncertainty regarding the strength or robustness of the underlying evidence is subsequently addressed through the assessment of the level of certainty.

163. Reasonable assumptions should be made for all Factors, as well as in comparison to the Benchmark. Assumptions should be identified on a case-by-case basis since they vary depending on the content of the law reform, its type (i.e., whether soft law or hard law), the level of (potential) adoption, and other circumstances.

Example: In the economic evaluation of the Mining, Agriculture and Construction (MAC) Protocol to the Cape Town Convention, a key assumption was that economies in need of reform of their secured transactions laws are unable to acquire a desired or efficient stock of mobile MAC sector equipment due to financial constraints.

In an economic evaluation of the Aircraft Protocol to the Cape Town Convention, assumptions were made, for instance, regarding the fixed costs for lenders in the repossession of aircraft collateral. The evaluation assumed fixed costs of 6% if the aircraft was less than six years old, and 10% if the aircraft was six years or older.

In another study concerning the Aircraft Protocol, a key assumption was that productivity can be inferred from the intensity of aircraft use.

164. The quantity and types of assumptions may vary depending on the evaluation stage and data availability, and may change over time. Especially in the early stages of a law reform, several legal assumptions may need to be made. During the conceptual phase, assumptions would primarily focus on the scope and content of the law reform, whereas at the pre-adoption phase, they could be expanded to encompass the expected number of states to adopt the reform. The assumptions concerning legal rules should be identified and articulated by legal experts to guide the economists. The assumptions may also concern different options provided in a law reform. For example, it may be assumed that states would adopt the most favourable option.

165. Given the dynamic nature of data availability and the varying stages of evaluation, assumptions must be both adaptable and precise to maintain the relevance and accuracy of the scoring. As the evaluation progresses, assumptions may need to evolve in response to newly available data or emerging policy contexts. The following considerations illustrate how assumptions should be developed and managed across different stages of a law reform evaluation, and for different purposes:

A) Variability of assumptions by phase

166. At different stages of evaluation, assumptions will likely vary in scope and complexity, and generally become more structured and refined as the law reform progresses through its lifecycle. During the conceptual and negotiation phases, assumptions are often general, focusing on the broad aims, scope, and potential content of the reform. For example, assumptions may involve general predictions about the impact of the reform on certain sectors or general compliance with legal principles. At the pre-adoption phase, when the reform is closer to approval, assumptions typically become more specific, addressing practical considerations such as the projected number of states likely to adopt the reform and how various jurisdictions may apply it. At this stage, assumptions are informed by more detailed information and allow for scenario modelling based on anticipated adoption rates and policy preferences. Finally, at the adoption phase, assumptions are more detailed and, where possible, can be partially validated against initial evidence. They may focus on actual adoption patterns, early behaviour regarding effective application, and initial market responses.

B) Assumptions for legal guidance

167. Legal assumptions need to be carefully articulated by legal experts. Particularly, in the case of ICLRs, this may include assumptions about how jurisdictions will interpret or enforce new legal standards, the anticipated behaviour in terms of effective application by affected parties, and potential legal challenges or adaptations. Legal assumptions might also address variances in how states interpret certain legal provisions or adopt legislative mechanisms. Such

expert-guided assumptions are essential for economists, who rely on them to frame economic impacts accurately. Without clear legal assumptions, the economic analysis may overlook critical legal nuances that significantly impact outcomes.

C) Options within law reforms

168. ICLRs often present multiple pathways or legislative/implementation options, each with its own potential impacts. For instance, a reform might allow states to choose between two or more policy models, each with different degrees of economic impact. In such cases, assumptions may need to address which options are most likely to be adopted based on factors such as cost-effectiveness, political feasibility, or anticipated stakeholder support. For example, an assumption might be made that states will adopt the most economically favourable option available under the law, influencing projections of cost savings or economic benefits. This approach allows the evaluation to account for different pathways, making it more flexible.

D) Impact of insufficient data on assumptions

169. When data is lacking, assumptions based on limited information can introduce greater uncertainty. Early-stage evaluations often require assumptions made with limited empirical support, increasing the risk that projections will need adjustment as more data becomes available. For instance, if there is little data on a new legal rule's economic impact, initial assumptions may be based on analogous cases or theoretical predictions. Recognising these limitations upfront is critical, as it helps the Evaluation team assess the level of certainty associated with each assumption and prepares them for potential adjustments as new data is collected.

E) Assumptions over time

170. Assumptions are not static; they must be revisited and potentially revised as conditions evolve and more data becomes available. For instance, initial assumptions about the rate of adoption across states might change as specific states express their support or opposition to the reform. This iterative approach to assumptions ensures that the economic evaluation remains relevant and reflective of the latest developments. Additionally, documenting any changes in assumptions helps maintain transparency, allowing stakeholders to track how the evaluation has adapted to new information. Moreover, stakeholder perspectives should be actively integrated into the process of revising assumptions. Feedback from businesses, legal practitioners, policy-makers, and other affected parties can provide valuable insights into the practical feasibility of assumptions, ensuring they align with real-world conditions. For example, stakeholders may highlight barriers to compliance or adoption that require adjustments to initial projections. Incorporating these perspectives not only enhances the accuracy of assumptions but also builds trust and credibility in the evaluation process.

F) Sensitivity and risk management

171. Assumptions in economic evaluations are inherently sensitive, as small changes in their underlying inputs can have disproportionate impacts on projected legal and economic outcomes. This sensitivity necessitates careful management of the risks associated with incorrect or overly simplistic, optimistic or pessimistic assumptions. For instance, assumptions about high adoption rates or uniform compliance may prove inaccurate if they fail to account for jurisdictional differences, stakeholder resistance, or unforeseen economic conditions. Therefore, scenario modelling at different levels such as best-case, moderate, and worst-case should be used to account for variability. These diverse models provide insights into potential deviations and ensure that outcomes remain robust across different contexts. Additionally, regular reviews and iterative adjustments based on emerging data or stakeholder feedback are critical to refining assumptions as conditions evolve. Documenting these adjustments, along with the rationale behind them, promotes transparency and helps stakeholders understand the evaluation's adaptive approach. Such measures ensure that the evaluation remains credible and reflective of the complexities inherent in law reform processes.

4. Benchmark

172. After identifying the baseline scenario, the next step involves determining the appropriate Benchmark law reform ("the **Benchmark**")[27] against which the law reform will be evaluated as a deviation. The Benchmark is a similar law reform introduced or adopted at domestic, regional or international level and represents the scenario against which to compare the law reform under scrutiny. The Benchmark refers to the law that is most economically beneficial ("best-in-class") based on ex-post studies, rather than the ideal law in legal terms. The quality of the Benchmark is therefore assessed based on economic terms.

173. The Benchmark serves as a reference point for measuring the impact of legal changes or economic effects. This process requires a comparison of potential changes or impacts resulting from other law reforms with the expected effects of the law reform under scrutiny. Comparisons can demonstrate the expected gains of an ICLR. As such, the Benchmark acts as a tool to identify "best-in-class" performers, providing policy-makers with evidence-based comparisons to evaluate the potential impact of the law reform globally, as well as a country's or region's standing. Benchmarks help set achievable goals, inspire reforms, and also create opportunities to learn from less successful cases of legislative reforms, thus reducing the risks of policy and legislative failure.

174. While Benchmarks provide a reference point for the best-available comparison, they do not necessarily represent the optimal legal framework. In some cases, the proposed law reform may be superior to that selected by introducing solutions that are economically more advantageous. The selection of

[27] Benchmarks are widely used in economic evaluation of law reforms. See Annex 2, Section 5.

a Benchmark should not imply that the reform under evaluation is inherently inferior. Relying on the selected Benchmark should not be interpreted as a limitation of the economic efficiency of the proposed law reform. Rather, the selected Benchmark should serve as a tool for assessing relative economic impact.

Example: An international legal framework on security interests in digital assets is currently under development to facilitate cross-border access to credit and address the growing use of digital assets as collateral in technology-driven lending models. In this context, the Evaluation team should select a best-in-class Benchmark, such as an internationally recognised legal instrument on secured transactions more broadly, or a framework addressing security interests in other types of assets. Such a Benchmark, ideally adopted in multiple jurisdictions, should not only support international financing but also align with the reform's objectives to modernise secured transactions law for international trade. It should be supported by empirical research that confirms its positive impact on expanding access to credit. Using a well-established and widely accepted Benchmark would allow the Evaluation team to estimate potential economic gains more accurately.

175. Multiple and diverse Benchmarks might exist. As legislative instruments may address multiple legal problems, Benchmarks could cover some or all of the specific aspects addressed by the law reform under evaluation. Depending on the nature of the law reform, it is recommended to use more than one Benchmark to examine critical aspects of the law reform from different perspectives and achieve greater accuracy in the results. A single Benchmark may not fully capture all dimensions of the proposed law reform; therefore, using multiple Benchmarks that are partially aligned with the scope of the law reform is encouraged. Comparing different scenarios can also help identify suitable Benchmarks.

Example: A law reform related to digital asset transactions is currently being developed to enhance legal certainty in cross-border digital markets. Given the absence of a single comprehensive international legal framework addressing the private law aspects of digital assets, the Evaluation team would need to identify multiple Benchmarks, each reflecting a different dimension, such as the legal classification of digital assets, the validity of digital market transactions, security rights and insolvency-related private law issues. Since digital assets are relevant for different legal domains, including contracts, property law, and insolvency law, a multi-Benchmark approach would employ Benchmarks covering all or some of these legal areas.

4.1 Criteria for selecting a Benchmark

176. The Evaluation team should select the Benchmark carefully, as it has a profound influence on the outcome of the economic evaluation. Three main features of the Benchmark should be considered: its similarity to the law reform under evaluation, its methodological alignment with the Framework, and the quality of the supporting evidence. In reviewing options for Benchmarks, the

starting point should be identifying the general problems they address and seeking either subject-specific or functional analogies. Benchmarks shall be selected based on the specifics of the proposed law reform, even if they are not directly linked to industry legislation. A balanced approach should be adopted in looking at both subject-specific and broader economic Benchmarks, on a case-by-case basis. To identify the most appropriate one(s), the Evaluation team should then rank them based on the extent they employ a methodology similar to that of the Framework, and the quality of the supporting evidence, primarily in economic terms.

177. The Evaluation team may determine the suitability of the Benchmark, using relevant questions such as:

a) "Is this the appropriate context?"

b) "Does the Benchmark align with the reform's objectives?"

c) "Does the Benchmark correspond to one or more aspects of the law reform?"

d) "Does it reflect the ideally economically beneficial law in the reform's area of law?"

178. Ideally, the Benchmark should have a similar nature (binding versus non-binding, degree of enforceability) to the proposed law reform. Where the law reform is soft law, the Benchmark should also be soft law. Conversely, where the ICLR is hard law, the Benchmark should be a hard-law reform. The Evaluation team should identify and decide which legal content is similar and relevant for accurate comparison, based on:

a) Similar sectoral law reforms in other countries or regions;

b) Similar law reforms in other sectors in the same country or in comparable jurisdictions;

c) Similar policy goals;

d) Recommendations from international organisations or standard-setting bodies;

e) Best practices and model laws developed by organisations;

f) Comparative analysis of legal frameworks in comparable jurisdictions;

g) Feedback from stakeholders, including industry experts, legal practitioners, and economic experts; and

h) The existence of ex-post studies.

179. Benchmarks shall be selected based on the specifics of the proposed law reform, even if they are not directly linked to industry legislation. In some cases, functionally comparable or cross-sectoral Benchmarks may provide more relevant insights, particularly where they address similar economic challenges or policy goals. The key consideration is their analytical relevance and the extent to which they can meaningfully inform the evaluation, rather than their formal connection to a particular legislative domain.

For instance, in the case of ICLRs related to Artificial Intelligence (AI), Benchmarks could be drawn from related technology regulations.

Similarly, in the UNIDROIT Digital Assets project, a suitable Benchmark could have been a law reform addressing a completely new form of asset, where economic activity was present but no legal framework yet existed.

180. The selection of an appropriate Benchmark should be grounded in a careful, evidence-based assessment of available studies and data. Selecting the appropriate indicators can be subjective and may often be the result of biases of those selecting the Benchmark. To address this, the Evaluation team should compare data, potential differences in measurement methodologies or approaches, and the use of diverse definitions, and carefully avoid the distortion of outcomes. As Benchmarks are not universally applicable or relevant in every context, applying lessons drawn from them may require certain adaptation or acknowledgement of the contextual differences, especially for cross-country comparisons, if relevant. For instance, Benchmarks related to domestic law reforms may be different in a global context or in another jurisdiction. To ensure accuracy, the Evaluation team should provide evidence-based justifications for its Benchmark selection.

181. The Evaluation team should identify and review relevant studies on the ex-post evaluation of the Benchmark. Several different studies may be considered for the same law reform, including both ex-post studies and academic literature. Using a range of sources for the analysis of the Benchmark can reduce biases associated with relying on a single study, while also enabling more precise quantification of different aspects of the law reform under evaluation. The Benchmark should be selected by (i) reviewing economic literature that analyses law reforms *ex post,* and (ii) identifying the one with the highest economic gains. If rigorous ex-post analyses of the Benchmark exist, the estimates of the economic impact of the Benchmark can be used to infer the economic impact using the score of the law reform under scrutiny (see Annex 3, Section 1).

182. The selection of the Benchmark should be based on highly reliable, peer-reviewed academic sources. A clear distinction must be made between quantitative ex-post and theoretical evaluations, as well as between observed and demonstrated impacts versus hypothetical or predicted effects.

183. The selection of studies and literature should prioritise the following hierarchy:

a) Quantitative empirical studies using causal inference;

b) Case-based quantitative studies;

c) Qualitative studies.

184. Empirical validation should take precedence over conceptual argumentation. [28] Benchmarks supported by rigorous studies with reliable datasets should be prioritised, since these provide a stronger foundation for quantification during the economic evaluation. Specifically, ex-post studies that allow for quantification and demonstrate economic gains should be preferred.

185. Qualitative studies that rely on, for example, qualitative evidence and reasoning, such as expert opinions, should also be considered, where relevant. Qualitative data can be relevant and provide valuable insights either in the absence of dedicated quantitative studies or to complement them by explaining specific aspects and outcomes, such as the reasons a reform might have been less successful or might have influenced national laws indirectly. The use of qualitative studies should be appropriately justified. Justifications may include, for example, that the Benchmark represents a fully drafted and implemented law reform. However, non-quantitative benefits fall outside the focus of the Framework and Guide and should be assessed separately by relevant stakeholders.

186. Where available, meta-analyses synthesising multiple ex-post studies should be given particular weight and may serve as a primary basis for Benchmark comparison, as they can provide a more robust and less biased estimate than reliance on individual studies or narrative literature reviews alone.

187. The quality of the Benchmark is highly dependent on the available studies and literature, which should be well documented in the evaluation report. It is therefore recommended to prioritise Benchmarks supported by strong economic studies and robust economic data or datasets, even if they are not a perfect match for the reform. The more detailed and robust the Benchmark, the better it would serve in evaluating the impact of the reform.

188. The best-in-class Benchmark is highly quantified. A best-in-class Benchmark, rated at 10, would be preferable, although it is not always attainable. While best-in-class Benchmarks should be prioritised, a suboptimal Benchmark could still serve as a practical reference. The scoring system allows for imperfect Benchmarks by rating them at a lower level (e.g., at 5). Even suboptimal Benchmarks could provide valuable insights, as long as alternatives face similar biases or include similar individual components, allowing for meaningful comparisons.

189. At the conceptual phase, where no predefined text or draft of the law reform exists, it is recommended to develop different alternatives that could then be fed into the Framework. The alternative scenarios should consider the "no action" option, which constitutes the baseline scenario. The Framework is flexible enough to accommodate inputs from various proposals and legislation. Once the alternative scenarios are drafted by the legal team, they could be assessed using economic scores against existing Benchmarks for each alternative option. A clear workflow should be established: (i) receiving the text proposal; (ii) creating

[28] For further guidance on the statistical methods to be used when selecting the Benchmark and ex-post studies, see Annex 3, Section 5.

alternative scenarios; (iii) identifying existing Benchmarks by examining ex-post studies and their comparability relative to the scenarios; and (iv) delivering an economic score for each alternative scenario by comparing their economic impacts with those of the Benchmark.

4.2 Constructed Benchmark

190. In certain cases, it may be necessary to design a Benchmark ("**constructed Benchmark**") specifically tailored for evaluation purposes. This approach is particularly relevant in the following scenarios:

a) When no Benchmark exists, and a legal reform is needed, *or*

b) When multiple Benchmarks are available but

- a law reform is necessary to simplify and harmonise them with a global solution; *or*
- the existing Benchmarks are inadequate, either due to their quality or because none fully aligns with the reform objectives. For example, it may not be possible to identify a sufficiently comparable case to serve as a Benchmark. This may include cases where analogies to existing Benchmarks are too distant or uncertain to be reliable, or cases where the existing Benchmarks cover only certain aspects of the reform.

191. The Benchmark team should construct a unique, best-in-class Benchmark by integrating elements from various sources to better align with the reform under evaluation. This constructed Benchmark does not reflect the ideal law, but the economically-ideal law. The constructed Benchmark should not be designed from scratch but rather developed as a combination of existing Benchmarks, which should be selected according to the methodology described earlier for the Benchmark. In practice, the Benchmark team should construct the best economic reference for the proposed law reform. For this purpose, the team should prioritise Benchmarks supported by rigorous ex-post studies and demonstrate economic gains, as these provide a solid foundation for quantification.

192. A constructed Benchmark will need to, at least in part, draw on approximation and analogy. It should integrate the most relevant elements from the existing Benchmarks, combining their strengths into a cohesive and practical and reference point, while reflecting components from different Benchmarks.

Example: A new law reform on dispute resolution for cross-border transactions involving Micro, Small and Medium Enterprises (MSMEs) has been proposed. However, current legal instruments do not fully align with the proposed reform, and they fail to capture all of its dimensions. As such, none of them can serve as a best-in-class Benchmark on its own.

To assess the potential impacts of the reform, the Benchmark team could construct a new Benchmark by synthesising elements from multiple international legal frameworks, for example, one focused on arbitration and

another on online dispute resolution. Each legal instrument offers different strengths: one may emphasise affordable resolution mechanisms, such as online proceedings for small-value claims or the use of technology to overcome language barriers and reduce documentation costs; another may prioritise expedited procedures to minimise the time and cost associated with prolonged dispute resolution processes.

Based on the most relevant elements from these different international instruments, the Benchmark team could create a constructed Benchmark that would allow for a structured evaluation of the law reform and would ensure that the evaluation does not rely on an isolated legal precedent but instead synthesises the most relevant aspects of various international approaches, as a more comprehensive and adaptable basis for economic evaluation.

193. A Benchmark should be constructed based on the following guidance:

a) Comparative analysis: Analyse similar laws at the international level or in specific jurisdictions to identify successful components and potential pitfalls. Select the most relevant legal rules and construct a Benchmark by combining them.

b) Economic impact: Outline the economic impact of the selected existing Benchmarks based on related ex-post studies. Ideally, the studies should be rigorous and rely on quantitative data.

c) Stakeholder input: To the extent possible, incorporate feedback and input from relevant stakeholders such as businesses, legal practitioners, and other affected parties.

d) Interoperability with existing legal instruments: Analyse the interaction between the proposed law reform and existing legal instruments to ensure alignment, avoid conflicts, and promote coherence within the legal systems of the affected jurisdictions.

e) Legal framework: Define the fundamental principles, legal definitions, and scope of the constructed Benchmark law.

f) Economic outcomes: Assess potential economic outcomes of the constructed Benchmark through cost-benefit analysis and economic feasibility.

g) International standards: The constructed Benchmark should consider international standards and best practices, where applicable.

h) Enforcement mechanisms: Outline clear enforcement and compliance mechanisms, where applicable.

i) Flexibility and adaptability: Ensure the constructed Benchmark law can adapt to future changes and emerging issues.

j) Market situation: Assess the preparedness of the affected markets' participants and institutions by evaluating their current capacity, resources, and ability to implement and comply with the law reform.

4.3 Guidance on the use of Benchmark

194. Overall, two key aspects should be considered with regard to Benchmarks: (i) whether a Benchmark exists or needs to be constructed, and (ii) the assumptions to be made in comparison to the Benchmark. A comprehensive approach should be adopted in considering multiple factors and various areas of law when establishing a Benchmark.

195. Once the Benchmark is selected, the team should compare the legal content of the law reform at stake with that of the law reform generating the highest economic gains. If different results from the different Benchmarks would be likely to reveal different Economic Scores, this should be reflected in the evaluation and, specifically, in the economic scoring. The discrepancies between different Benchmarks should be analysed and justified.

196. The selection of a Benchmark and, in particular, its relevance, should be reflected in the level of certainty, which should be adjusted to account for Benchmarks selected from different legal contexts or not supported by sufficient ex-post evidence. A best-in-class Benchmark, highly quantified and closely aligned with the subject matter of the law reform, should yield a higher level of certainty. Conversely, a suboptimal Benchmark from less-related legal areas or based on less robust economic studies, should be reflected in a lower level of certainty. The level of certainty should also address the possible lack of a Benchmark and the consequent limitations of available comparisons. The evaluation should explicitly state how closely the Benchmark aligns with the reform's objectives. If no single Benchmark fully captures the issue, complementary Benchmarks and qualitative adjustments should be incorporated to enhance the robustness of the evaluation. The level of certainty should reflect both the reliability of the Benchmark and the extent to which necessary adjustments have been made to bridge conceptual gaps.

197. Benchmarks can support quantification.[29] The Framework does not require the Benchmark to be rigid or static in legal terms to enable quantification; rather, it requires a sufficiently defined economic reference point, grounded in ex-post evidence, against which the proposed reform can be assessed. Where Benchmarks are flexible or context-dependent, quantification remains possible but should be treated with caution, reflected through a lower level of certainty and, where necessary, a more qualified use of Benchmark-based extrapolation.

In practical terms, Benchmark-based quantification also requires the Evaluation team to identify, and where possible substantiate, the transaction costs or other economic frictions that the reform is expected to address. The following considerations indicate the type of descriptive and preliminary evidence that may support this exercise.

In particular, ***descriptive statistics*** should be provided to demonstrate that the level of lost transactions is indeed significant. For example, if it is argued

[29] See also Chapter II, Section 2.

that a certain factor impedes the growth of bank credit, standard statistics should be provided as supporting evidence: high credit spreads, low loan-to-value figures, low leverage, etc. Back-of-the-envelope calculations can offer rough estimates of the expected impact of the law reform.

5. Data

198. For any economic evaluation, data is key to understand the causality, evaluate the impact, and justify law reforms. The Evaluation team should "map" the available data, i.e., create a comprehensive overview of existing data and identify what additional evidence needs to be collected (**data mapping**). The team should then identify the sources, approaches and methods for further data gathering (**data collection**). The economic evaluation should document the methods used for mapping and collecting data and should demonstrate the robustness of data. Sufficient time should be allocated to ensure that all relevant data can be properly collected and analysed. The Evaluation team should consider and document the time available for data collection, indicating whether it is sufficient or limited.

199. The choice of data sources and analytical methods should be guided by the specific characteristics of the law reform under evaluation, including its scope, stage of development, and the availability of data. Methods should be chosen based on their suitability and their respective strengths and limitations, with due consideration given to practical time constraints.

200. The economic evaluation should clearly distinguish between different types of data and provide the relevant sources.

Examples of data sources that may be used for the economic evaluation:

- Databases and indices
- Statistics from domestic or international statistical institutes
- Interviews with experts and stakeholders
- Reports, opinions or advice from relevant international, transnational and domestic organisations
- Public or targeted consultations
- Expert opinions
- Conclusions of evaluations or impact evaluations
- Studies requested specifically for the purpose of the law reform
- Surveys among experts and potentially affected stakeholders
- Workshops held with stakeholders
- Stakeholder consultations
- (Peer-reviewed) academic literature

201. High-quality data is necessary to establish causal relationships, accurately assess impacts, and provide robust justification for the EE. The data used in these evaluations, including the empirical studies evaluating the Benchmark, serves as

the backbone for the entire analysis and the individual scoring of each Factor. The following considerations further elaborate on the role and selection of data and data sources in an economic evaluation:

A) Completeness, currency, and reliability of data

202. The Evaluation team should seek to rely on data that is as complete, up-to-date, and reliable as possible and derived from reliable sources, in order to apply the scoring methodology consistently across each Factor. Completeness ensures that the dataset captures the full range of factors and dynamics relevant to the evaluation, reducing the risk of partial or distorted analysis. Currency helps maintain the relevance of findings amid evolving economic and legal conditions. The Evaluation team should aim to collect data that is as complete as possible, using the latest available sources. Reliability refers to the credibility and methodological soundness of the data sources, which should, where possible, be drawn from established databases, official government reports, industry studies, or reputable academic research. These data qualities can ensure that the evaluation is grounded in robust evidence and that any conclusions drawn are both credible and suitable for informing decision-making.

B) Complementary role of qualitative and quantitative data

203. All Factors should be assessed both qualitatively and quantitatively, where possible. Quantitative and qualitative data play a complementary role in economic evaluation. Quantitative data provides objective measurements, offering insights through measurable and comparable numbers, trends and indicators that enable the Evaluation team to compare and assess impacts across time periods or groups. These metrics offer an objective foundation for analysing the economic effects of a law reform. For instance, in evaluating the economic impact of a trade law reform, quantitative data might include metrics such as trade volumes, GDP contributions, or employment figures, which may be extracted from databases to show the evolution of trade flows over time.

204. Qualitative data, on the other hand, may be used to help understand and strengthen results derived from quantitative data. It adds explanatory depth and context, serving as a validating and interpreting layer for quantitative findings. Drawing on sources like expert interviews, stakeholder consultations or surveys, and case studies, qualitative evidence can help interpret or clarify observed trends, shed light on underlying drivers, and capture dimensions that may not be fully reflected in numerical data alone. This adds perspective on the potential social, political, or cultural implications of the reform. For instance, when examining a convention's effect on international trade flows, quantitative analysis relying on databases may reveal changes in trade volumes and patterns following a reform, while qualitative insights based on interviews with industry experts or

legislative authorities can help explain the drivers behind these patterns – such as compliance challenges or market perceptions.[30]

205. Used together, qualitative and quantitative data reinforce one another. Quantitative analysis identifies and measures outcomes, while qualitative analysis helps explain and validate them. Case studies and interviews can often provide clearer insights into causal mechanisms and sequences than Large-N econometric analyses.

C) Explanation of data scarcity or limitations

206. When data, especially quantitative data, is unavailable or limited, the Evaluation team should transparently document this limitation and its implications for the overall analysis. This explanation provides clarity for stakeholders, allowing them to understand any uncertainties or gaps in the findings, and the assigned level of certainty. For example, if a trade impact analysis lacks data on specific commodity flows, the evaluation should note this gap and discuss how it may influence the results, potentially using qualitative insights to fill some of the gaps left by missing quantitative data.

207. For ex-post evaluations, it is generally feasible to rely on empirical data to reach quantitative measures of economic impact. However, at the ex-ante stage, the required data may not exist or may not be sufficiently representative and/or collectable at proportionate cost. Data availability and type (quantitative or qualitative) may differ depending on the phase of the ex-ante stage. Empirical data is likely to be scarce in the earlier phases of development of a law reform. Data can be limited concerning history, fact and interpretations, leading to a selection of decision premises influenced by organisational structures and actors' roles. Limitations in data availability necessitate greater reliance on assumptions and qualitative evaluations (e.g., based on theoretical approaches), drawing from experience and professional judgment. The combination of facts and well-founded assumptions are usually the most important tool for economic evaluations at an early phase. As more data becomes available, more rigorous quantitative methods can be incorporated.

208. Even if the lack of data is challenging, conducting an ex-ante evaluation tends to provide better results than developing an instrument without any such systematic analysis. Economic evaluations are expected to gradually gain empirical precision by virtue of additional data inputs as the content of the law reform is developed, adopted and implemented. Where empirical data is likely to be scarce, a greater reliance on assumptions and qualitative data is necessary.

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[30] E.g., for assessing the economic gains of the Cape Town Convention and its Aircraft Protocol, a quantitative analysis was carried out to evaluate the change in risk spreads (margins) on aircraft financing. The results of the quantitative analysis – i.e., that below investment grade borrowers enjoyed a risk spread reduction commensurate to between one and two notches credit rating upgrade – were corroborated by the qualitative opinion of credit rating agencies.

D) Diverse data sources for comprehensive insights

209. Economic evaluations should draw data from a wide variety of sources to ensure a well-rounded perspective. Using multiple, independent sources allows the Evaluation team to cross-check and validate data and reduce reliance on any single dataset, and to identify inconsistencies. It also helps mitigate potential biases that may arise where certain data sources reflect specific institutional perspectives or policy orientations. For example, data produced by particular organisations or stakeholders may reflect specific policy priorities, economic interests, or regional contexts. To mitigate such risks, the Evaluation team should clearly document and justify the choice of datasets and data sources. Any limitations, uncertainties, or potential biases in the data should be explicitly acknowledged and, where relevant, reflected in the analysis.

210. Key sources may include domestic statistics agencies, international organisations (such as the World Bank or IMF), industry reports, academic research, and expert opinions. Each source type can offer unique advantages. For example, government data tends to be highly credible and specific to domestic contexts, international organisations provide global comparability, and industry reports or expert interviews add nuanced perspectives.

6. Conceptual causal links

211. During the economic evaluation, understanding conceptual causal links is essential for mapping how different Factors influence each other and contribute to the outcomes of a law reform. Conceptual causal links provide a theoretical or logical framework for analysing how specific changes brought about by the reform might cascade through the economic and social systems it affects. In this sense, they help explain not only *what* effects may arise, but also *how* and *why* those effects are expected to occur.

212. Conceptual causal links are theoretical or logical cause-and-effect connections. They represent the Evaluation team's hypothesis or understanding of how different Factors within an economic evaluation are interrelated and how a law reform might create ripple effects across these Factors.

Example: In an economic evaluation of an ICLR, one might identify conceptual causal links showing how introducing simplified and technology-enabled dispute resolution mechanisms for MSMEs (the law reform) reduces the cost and time required to resolve cross-border commercial disputes (Factor A), which, by promoting a more predictable and harmonised cross-border dispute resolution framework, lowers legal risk and procedural costs across jurisdictions (Factor B). The law reform can further stimulate the development of digital service providers and increase tax revenues through higher economic activity (Factor C). These links are based on logical reasoning about relationships rather than on direct empirical evidence.

213. Conceptual causal links can be further broken down into types based on their nature and intensity:

i. Types of conceptual causal links

- **Direct causal links**: These are clear, straightforward connections where one Factor directly influences another without intermediaries. For instance, a law reform mandating renewable energy usage directly reduces carbon emissions.
- **Indirect causal links**: These involve intermediary steps where the impact of one Factor on another is mediated by additional Factors. For example, a renewable energy mandate might indirectly reduce healthcare costs by first reducing emissions and then improving air quality, which in turn reduces respiratory illness rates.

ii. Intensity of conceptual causal links

- **Weak causal links**: These connections exist but are less influential or have a less certain impact. For example, a tax incentive for electric vehicles might weakly reduce overall carbon emissions if electric vehicle adoption rates are low.
- **Strong causal links**: These connections are well-established and have a significant impact. For instance, prohibiting certain pollutants in manufacturing has a strong causal link to reducing local air pollution if compliance is high.

214. Conceptual causal links are essential for building a coherent evaluation narrative, helping to illustrate how a law reform could logically lead to various outcomes. However, conceptual causal links, on their own, are not sufficient to establish causation with certainty because they are based on logical reasoning rather than empirical evidence. The mere observation of a correlation between a law reform and subsequent outcomes does not necessarily imply a causal relationship. For the purposes of the Guide, it is therefore important to distinguish clearly between different ways of assessing relationships between law reform and outcomes, including conceptual causality (theoretical, logic-based links), statistical causality (empirically tested relationships), and correlation analysis (observed associations without proven causation).

215. Establishing conceptual causal links, especially at the impact level, can often be challenging. This is more pertinent for Factor C (systemic impact). While a direct link between a legal instrument and macroeconomic changes may exist, other social, economic, and legal factors may also influence the outcome, making it difficult to separate them. These limitations should be explicitly acknowledged and described transparently in the evaluation report.

216. Under a theory of change, the starting point for an ex-ante evaluation is a description of how and why a desired change is expected to happen. Evidence is then needed to assess whether assumed causal links are correct or whether there are other causes outside the theory of change. Under the Framework, the causal links should be established to evaluate each Factor in relation to the Benchmark.

Causal links are necessary to draw accurate and reliable conclusions regarding the impact of different Factors on economic outcomes.

217. Different approaches may be employed to establish causal links in ex-ante evaluations:

- Comparing the law reform with (a) no measures and (b) alternative measures: This approach involves comparing the expected outcomes of the law reform with both the extant situation and hypothetical scenarios where a different law reform would be introduced instead. By analysing the differences, the Evaluation team can infer the specific impacts of the law reform. This may require looking at a Benchmark to compare the results.
- Assuming causation at a specific date: Evaluation teams may assume that causation occurs at a specific date. They can then observe whether changes in the assumed date led to significant variations in results.
- Using another factor as a predictor: This method involves identifying another factor that is related to the law reform but not to other economic factors. By using this factor as a predictor, the Evaluation team can isolate the effect of the law reform on the outcomes. This helps in distinguishing the reform's impact from other influencing factors.

218. Conceptual causal links should be distinguished from causal inference, as they serve different purposes and involve distinct processes. Conceptual causal links offer a theoretical framework that maps out potential relationships within an evaluation. In contrast, causal inference is a statistical approach used to empirically verify these relationships by determining whether a change in one factor (e.g., the implementation of a law reform) causes a change in another. Unlike conceptual reasoning, causal inference relies on data and rigorous methodologies to quantify the strength of relationships and control for confounding variables, providing stronger evidence of causality.[31]

219. The Framework relies on a combination of empirical evidence, conceptual causal links, and reasoned comparison with Benchmarks. Limitations in causal inference should be reflected in the level of certainty rather than treated as a reason to preclude evaluation altogether.

7. Level of certainty

220. The precise impacts of law reforms, especially at the ex-ante stage, are rarely certain. For instance, according to the Rumsfeld Knowledge Matrix, knowledge can be categorised as "known knowns", "known unknowns", and "unknown unknowns", which helps analyse decision-making under uncertainty. In this sense, sources of ex-ante uncertainty can range from imperfect information

[31] For the differences between "conceptual causal links" and "causal inference", see Annex 3, Section 4.

to the "unknown unknowns", which cannot be meaningfully expressed in probabilistic terms.

221. To account for this, the Framework requires defining and communicating the level of certainty associated with the findings. This is expressed as a qualitative measure of confidence representing the extent to which the estimated economic impact of a proposed law reform is reliable and robust. Establishing the level of certainty helps in understanding the reliability of the conclusions drawn from the evaluation process supporting a more informed interpretation of the evaluation's conclusions. The level of certainty should indicate the level of the confidence in the final score, based on the type, quantity, and quality of evidence or input data, and the degree of agreement and consistency across sources. It should account for deviations from the Benchmark, namely the extent to which the Benchmark used in the analysis aligns with the reform under evaluation, including potential differences in scope (legal areas), geography (e.g., different target countries), and sectoral application. In other words, the level of certainty reflects how confidently the effects documented in the Benchmark could be expected to apply to the proposed reform. Where such differences are significant, the level of certainty should be lowered to reflect the uncertainty in applying the Benchmark data to a potentially different context. Any limitations to the evaluation should be signalled clearly.

222. The level of certainty is expressed as a percentage, where 100% indicates that the Evaluation team is fully certain of the score obtained. Decreasing the level of certainty reveals less confidence and a greater possibility that the true score may differ, either higher or lower. The level of certainty should be higher with a solid Benchmark supported by robust ex-post studies and extensive peer-reviewed academic work evaluating its impact.

223. The level of certainty should not be treated as static over time. As a law reform is implemented and its effects evolve, new information, empirical evidence, behavioural responses, institutional adjustments, or changes in market conditions may emerge. The evaluation should therefore allow for periodic reassessment and adjustment of the level of certainty to reflect learning over time, including increases in certainty as evidence accumulates, or decreases in certainty where unanticipated dynamics, feedback effects, or structural changes affect the relevance or robustness of prior assessments.

7.1 Externalities and third-party effects

224. The level of certainty should also reflect the presence of externalities, including social and environmental effects, as well as indirect network effects and other third-party effects, where these cannot be reasonably identified and incorporated into Factors A–C.

225. Although the Framework focuses on economic impacts in a narrow sense, the EE should also acknowledge the relevance of economic impacts on third parties, where necessary as they capture broader economic impacts beyond the immediate parties affected by a law reform, influencing third parties, related

markets, or the broader economic and institutional environment. Such effects, whether positive or negative, may impact the overall economic evaluation of the law reform, but they are often more difficult to identify, quantify, and attribute with precision.

226. Externalities constitute side effects or consequences of an economic activity that affect third parties who are not directly involved in the transaction. These effects are not reflected in the market prices of the goods or services involved. Externalities are typically categorised as positive or negative based on their quantitative effects on production or utility.

a) **Negative externalities:** These occur when the activity imposes costs on third parties who are not directly affected by the reform. Common examples include environmental costs and congestion. Assessing negative externalities requires identifying potential negative effects of a proposed law reform and determining whether they would outweigh the economic gains. Negative externalities may carry different interpretations depending on the context. While economists focus on efficiency losses or reduced output, legal scholars often use the term to describe socially undesirable outcomes or harms, regardless of their measurable economic impact. In this Guide, references to negative externalities are intended to reflect their impact on economic performance, specifically, increases or decreases in production or efficiency, where applicable.

b) **Positive externalities:** These arise when the activity generates economic gains for parties beyond the immediate scope of the reform. Examples include the broader societal benefits of education, and the increased investor confidence resulting from a law reform that strengthens enforcement of cross-border contracts and creates spill-over benefits for other market participants.

227. Social impact can be considered either a positive or a negative externality and encompasses a wide range of factors, including but not limited to changes in social welfare and the distribution of gains and burdens among different societal groups. Externalities can lead to market failure, as the full social costs or benefits are not reflected in the market price, leading to overproduction in the case of negative externalities and underproduction in the case of positive externalities.

228. Externalities may create distributional effects. Distributional effects refer to the impact that the reform has on the distribution of income, wealth, or resources among different groups in society. These effects indicate how the gains, costs and other positive or negative effects of a particular economic action are spread across various segments of the population, such as different income groups, regions, or demographic categories.

229. Understanding externalities is crucial for evaluating ICLRs because individual incentives might be misaligned with broader societal outcomes. A deep understanding of the relevant sector and the specific matters related to externalities (e.g., social or environmental effects) would be required to assess their impact. Especially in areas with high uncertainty, such as technological

innovation, externalities may be highly relevant for a law reform. For instance, job losses due to AI legislation could be an externality affecting sectors beyond technology. If studies show the presence of externalities, this could be reflected in the evaluation process. If these externalities are not considered under Factor C, they should be reflected in the Framework by influencing the level of certainty.

230. ICLRs do not directly address externalities which are handled by other parties or through separate reforms. However, in such reforms, it is common to recognise broader issues (e.g., capital requirements or disclosure obligations) and suggest addressing them through legislative measures beyond the scope of the law itself. Such legislative interventions falling outside the scope of the reform itself could be considered externalities from a private law perspective.

Example 1 (hypothetical Maritime Protocol)

While a possible Maritime Protocol to the CTC may lead to an increase in the total number of ships due to improved access to finance and asset mobility, this increase should not, by itself, be expected to raise emissions per ship or the per-ship costs of complying with applicable emission regulations. The relevant uncertainty therefore relates primarily to fleet size and aggregate emissions, rather than to the emissions intensity of individual vessels or to compliance costs at the unit level.

Example 2 (MAC Protocol)

In relation to the Protocol to the CTC on matters specific to Mining, Agricultural and Construction equipment (MAC Protocol), empirical evidence suggests that the Protocol could reduce the environmental impacts of mining by enabling market participants to acquire newer, more efficient, and less polluting equipment. In this case, the adjustment in the level of certainty concerns the extent and speed of equipment upgrading and adoption across jurisdictions and sectors, rather than the direction of the environmental effect, which is supported by the underlying study.

Indirect network effects

231. Indirect network effects – as opposed to direct network effects, which are addressed under Factor B – are externalities which arise in a complementary market. For example, users of a certain hardware may gain when others join them because it encourages the provision of better software. Such externalities should be reflected in the level of certainty if they have not been factored into Factor C.

Third party effects

232. For the purposes of the Guide, it is important to distinguish between externalities in the strict economic sense and third-party effects more broadly. Externalities refer to non-priced spill-over effects of a law reform, such as social, environmental, or systemic network effects, that are not internalised by the

parties subject to the reform and may affect overall welfare. By contrast, third-party effects refer to economic impacts on identifiable actors who are not signatories to the instrument or direct addressees of the law reform, but whose behaviour, costs, or benefits may nonetheless be affected through market or institutional linkages.

233. Within the Framework, third-party effects may be incorporated directly into the assessment under Factors A, B, or C where they can be reasonably identified and attributed, for example where non-signatory jurisdictions, downstream users, or adjacent markets experience measurable gains or losses. Instead, externalities in the narrower sense, particularly diffuse social, environmental, or indirect network effects that are difficult to quantify or attribute with precision, should be reflected primarily through adjustments to the level of certainty, rather than through direct scoring, unless robust empirical evidence allows their effects to be reliably estimated.

234. By addressing externalities as integral components of the externality analysis in an economic evaluation, a more comprehensive understanding of the broader implications of the law reform can be achieved. This approach ensures that decision-makers are well-informed – to the extent possible – about the potential impacts on third parties, including social and environmental consequences and the related costs, thus fostering a more sustainable and responsible decision-making process.

235. Where externalities or third-party effects can be reasonably identified and incorporated into Factors A–C, the analysis is conducted in relation to the Benchmark. Instead, where such effects are diffuse, non-priced, or insufficiently measurable, they should not be directly scored against the Benchmark but instead be acknowledged separately and reflected through the level of certainty, using different methods or instruments. A separate evaluation is necessary because quantifying such impacts may be challenging and time-consuming, potentially hindering the economic evaluation. Practical difficulties are often encountered when translating evaluation results into figures or determining time horizons. The separate evaluation report should include a description of the social and environmental impacts and an explicit statement if any of these is not considered significant.

236. Multiplier effects under Factor C should refer only to identifiable and reasonably measurable systemic economic spillovers that can be scored relative to the Benchmark, whereas third-party effects should affect the level of certainty where they are diffuse, non-priced, or insufficiently attributable for direct scoring.

7.2 Guidance on the level of certainty

237. The qualitative measurement of the likelihood of impacts should be based on a transparent analysis of uncertainty, by describing how uncertainty in input data affects the resulting outputs and findings. This analysis may encompass statistical variation, lack of data and incomplete knowledge (e.g., the impact of climate change or developments in technology). A sensitivity analysis can be a

useful tool in this context, as it may help to show how the results of the economic evaluation vary with changes in, for instance, input data and assumptions, thus contributing to uncertainty.

238. A practical way to determine the level of certainty is to consider the availability of previous economic research that has tackled specifically similar reforms. Where the ES scoring relies on assumptions derived indirectly from existing studies, the level of certainty should be decreased. For example, if past research has focused on large corporations but the reform targets small enterprises and no specific evidence is available on MSMEs, the level of certainty should be reduced accordingly.

239. The level of certainty ultimately depends on the accuracy of assumptions and the quality of data and data sources. For example, uncertainty may differ depending on the time horizon (i.e., whether short-term or long-term impacts are being analysed), the nature of the law reform and the entity proposing it. It may also vary based on the type and reliability of the data used (e.g., hard data tends to be more reliable than interview-based evidence), as well as the timing of the data collection. Standard statistical techniques may be used to estimate the degree of certainty. The uncertainty analysis and its outcomes should be clearly described in the final economic evaluation document.

240. To address the inherent uncertainties in economic projections, a comprehensive and transparent analysis of uncertainty should be conducted, incorporating several key aspects:

a) **Benchmarks:** Since the level of certainty is closely related to the selection of the Benchmark used, its accuracy is significantly influenced by the relevance of the Benchmark in relation to the law reform under evaluation. A well-matched and empirically corresponding Benchmark that is closely aligned with the legal, economic, and institutional context of the proposed law reform increases the level of certainty by providing a reliable point of comparison for expected economic impacts. Conversely, a weakly aligned or outdated Benchmark, or the absence of a direct Benchmark, introduces greater uncertainty, which requires the Evaluation team to rely on theoretical assumptions, qualitative assessments, or alternative indirect references. In such cases, the level of certainty should be assigned accordingly to reflect the robustness of available comparisons, ensuring transparency in the evaluation process. When a direct Benchmark is unavailable, the process of constructing Benchmarks by the Benchmark team becomes crucial. The quality of this constructed Benchmark directly impacts the level of certainty and makes the methodology and expertise of the Benchmark team essential in minimising uncertainty to ensure a well-founded evaluation.

b) **Random factors:** Random factors refer to the inherent, unpredictable fluctuations in input data that may arise from chance events or variations in data collection methods. By analysing these random factors, the Evaluation team can provide insights into how much natural variability exists in the data, offering a clearer understanding

of the reliability of the findings. Addressing these random factors allows for a more transparent assessment of how consistent or variable the inputs are, helping the Evaluation team determine the level of certainty and improve the robustness of the overall results.

c) **Data gaps and incompleteness:** Economic evaluations often rely on data that may be incomplete or unavailable. When data is missing or insufficient, it becomes more challenging to provide accurate predictions. In these cases, the Evaluation team should document any gaps and explain how they might affect the overall certainty of the evaluation. For instance, in assessing environmental impacts, incomplete data on future climate conditions or population growth trends could lead to a wider range of possible outcomes.

d) **Incomplete knowledge or emerging factors:** There are areas where uncertainty stems from the evolving nature of the subject matter itself, such as future developments in technology, legislative changes, or unforeseen environmental events. These unknowns, while difficult to quantify, should be acknowledged as part of the uncertainty analysis. To address these issues, the Evaluation team should identify areas where knowledge is evolving or where future conditions may substantially deviate from current expectations.

241. The level of certainty is expressed as a percentage (%), which may also be converted into a decimal for calculation purposes. It reflects the degree to which the selected Benchmark is considered comparable to the law reform being evaluated. Where appropriate in contexts of high uncetainty, this assessment may be represented as a range of percentages. This approach acknowledges the inherent uncertainty in estimations and allows for a more nuanced interpretation of confidence levels. Using a range can better reflect the variability and potential fluctuations in the data, providing a more realistic assessment of certainty. The level of certainty also accounts for external factors that may influence the ES, ensuring that the ES remains adaptable and comprehensive rather than unrealistically precise.

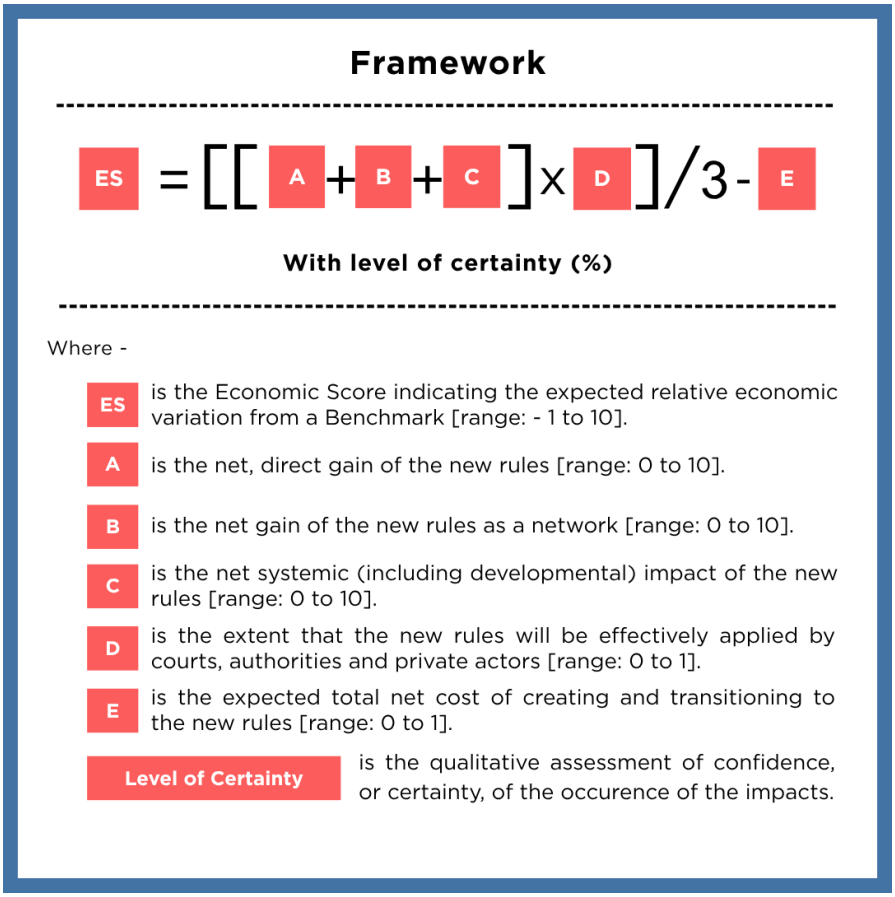
242. The level of certainty reflects not only the degree of comparability between the proposed reform and the Benchmark, and the strength of the supporting evidence, but also uncertainty arising from externalities, indirect network effects, and other third-party effects that cannot be directly incorporated into the scoring.

243. The level of certainty should be interpreted as per below:

Table 3: Interpretation of the level of certainty

Level of Certainty	Interpretation
Highest 90-100%	The Benchmark is nearly identical to the proposed law reform, with extensive empirical evidence and a proven track record of success.
Very High 80-90%	The Benchmark closely aligns with the proposed law reform, and there is strong empirical evidence from multiple sources.
High 70-80%	The Benchmark is a relevant comparison, but some adjustments are needed. Empirical evidence is reliable, though minor uncertainties exist.
Conjectural 60-70%	The Benchmark partially aligns with the reform, but significant adjustments are required. Limited empirical data exists, while assumptions play a key role.
Low 50-60%	There is minimal empirical evidence, and the Benchmark has limited applicability, requiring substantial modifications and estimations.
Very Low 40-50%	The Benchmark is weakly related to the proposed reform, with substantial reliance on assumptions, leading to high uncertainty.
Lowest 0-40%	No suitable Benchmark exists. The evaluation is entirely based on theoretical modelling and expert judgment, with extreme uncertainty.

8. Scoring methodology



244. The scoring process is a central component of the economic evaluation, as it provides a structured way to assess how each Factor aligns with an established Benchmark. Economic Scores are derived using the Framework and should always be interpreted in comparison to the Benchmark. By assigning a score to each Factor, the Evaluation team can quantify how closely each Factor aligns with the economic characteristics reflected in the Benchmark, thereby creating a comparable metric. The detailed methodology for applying the formula, including the four required steps, is set out in Chapter II, Section 1.

245. Scores are assigned based on expert discretion, allowing the Evaluation team to use their professional judgment to interpret how each Factor corresponds to, or deviates from, the Benchmark. This method provides flexibility and is particularly important where precise measurements are impractical due to data

limitations or the inherently qualitative nature of certain impacts, yet the expert analysis can still provide a reliable assessment.

246. A practical approach to scoring involves interpreting each Factor as a percentage reflecting its "economic correspondence" to the Benchmark. Under this system, each Factor is rated according to how closely it aligns with or diverges from the Benchmark criteria that serve as an economic reference. For example, a Factor that is assessed as corresponding to 75% of the Benchmark requirements would receive a score of 7.5. This percentage-based scoring system facilitates direct comparisons among the Factors and provides a clear indication of their alignment with the Benchmark. Moreover, using an economic correspondence percentage enhances transparency in the evaluation process, enabling stakeholders to clearly understand the project's position relative to its goals. This scoring methodology also helps identify specific Factors that require improvement, allowing decision-makers to prioritise necessary adjustments or allocate resources differently.

247. While the methodology allows for a scoring system ranging from 0 to 10, this scale is applied in a Benchmark-relative manner rather than as an absolute measurement of net economic gain. In exceptional circumstances, scores above 10 may be assigned where the proposed law reform is credibly expected to improve upon existing best-in-class practices reflected in the Benchmark. Such departures beyond the standard scale, however, should remain limited and be applied cautiously, so as to preserve the Benchmark-relative logic of the Framework, and avoid distorting the comparative nature of the evaluation or suggesting an implicit weighting of effects. Any score exceeding the Benchmark must therefore be clearly and rigorously justified, particularly where existing empirical studies identify concrete limitations in the Benchmark that the proposed reform is designed to overcome.

CHAPTER VII

Economic Evaluation Report

VII. ECONOMIC EVALUATION REPORT

248. The various steps and findings of the economic evaluation process should be reflected in a final document, referred to as the "Economic Evaluation Report" ("**EE Report**"). The Report should present the key information used and synthesise the results of the analysis in a manner accessible to a broad stakeholders. All relevant elements should be transparently and systematically documented and their influence on the evaluation clearly explained. The EE Report should also adopt a forward-looking perspective by considering future trends and potential challenges to ensure, to the extent possible, the continued relevance of the analysis. In addition, all supporting evidence, including studies, reports, and scientific findings, should be consistently referenced.

249. The structure and presentation of the EE Report may vary depending on the methodologies and institutional practices of the organisation conducting the evaluation, whether at the international, regional, or national level. With a view to promoting readability and comparability, a consistent reporting structure is recommended. The length of the EE Report will vary depending on the complexity of the law reform, the scope of the evaluation, and the stage at which it is conducted. As a general indication, a detailed and comprehensive assessment would typically not exceed 50 pages.

250. Specifically, the EE Report should: (a) include an executive summary presenting the key findings and conclusions in a clear and accessible manner; (b) set out the background and context of the evaluation; (c) describe the proposed law reform, the baseline scenario, and underlying assumptions; (d) identify or construct the relevant Benchmark; (e) outline the data and sources used; and (f) present the scoring methodology and resulting ES. The recommended structure is the following:[32]

A. An executive summary of 1-3 pages	Subdivided into different sections in line with the content of the EE Report, summarising the main elements of the economic evaluation.

[32] A sample template of the EE Report, accompanied by explanatory guidance, is provided in the User's Template. The Template sets out the recommended workflow and key stages of an ex-ante evaluation, and provides the main questions to be addressed throughout the economic evaluation process. Additionally, UNIDROIT has developed Case Studies based on hypothetical or real law reforms to illustrate the application of the Framework and the methodology set out in this Guide, and to support their consistent use.

B. Background to the EE	Setting out the background of the economic evaluation, including who has commissioned and carried out the economic evaluation, when it was conducted, and with which goal(s). More specifically: • Evaluation actors. • Timing aspects (including time horizon of the evaluation). • Geographical context. • Objectives of the evaluation. The general objective will likely be to identify the ways in which the law reform will have an impact on countries' economies and to assess how the expected economic impacts might vary across countries and over time. Depending on the timing, more specific objectives may include: • Informing an organisation's evaluation of whether to pursue a law reform (in the conceptual phase). • Guiding the design of the text by identifying legislative options and comparing their potential impacts (in the negotiation phase). • Testing and validating the coherence and expected economic impacts of the near-final draft (in the pre-adoption phase). • Assisting jurisdictions in preparing for the adoption and implementation process (in the pre-adoption phase).
C. Introduction to the law reform	Providing key information on the proposed law reform initiative, such as: • The baseline scenario against which the likely economic impact is measured. • The need for – and objectives of – the law reform (e.g., improving access to finance). • The geographical scope.

	• The expected implementation (e.g., number of ratifications, degree of adoption, etc.). • The possible alternative legislative options considered and the foreseen nature of the instrument (soft law or hard law). • Assumptions and limitations.
D. Benchmark	Determining the appropriate Benchmark(s) against which the economic impact of the law reform is evaluated, and constructing a Benchmark, if necessary. This requires providing information on the: • Benchmark(s). • Main features for a constructed Benchmark *(if needed)*. • Ex-post economic studies related to the Benchmark.
E. Data and Conceptual causal links	Outlining other data and data sources to be collected, specifying which were ultimately used, and establishing the conceptual causal links.
F. Economic scoring	Following the scoring methodology by: • Evaluating and scoring the Factors, • Assigning the level of certainty, and Calculating the final ES based on quantification.
Annex. Consulted sources	Listing the sources used during the EE, including academic literature, legislation and ex-post studies related to the Benchmark.

251. The EE Report should contain a comprehensive commentary, which would include explanations regarding the relative importance of the Factors.

252. The final report containing the economic evaluation should aim to present the results of the evaluation in a way that is accessible to non-specialists. Therefore, it is recommended to use plain language and to limit the use of technical jargon, providing explanations on key terms and concepts where appropriate.

253. It is recommended to make the final evaluation publicly available, for instance by publishing it on the relevant organisation's website. Publishing the results of the economic evaluation is important to build trust and demonstrate that the organisation has a sound culture of transparency and accountability for its instruments.

CHAPTER VIII

Conclusions

VIII. CONCLUSIONS

254. This Framework and Guide represent an important step toward establishing a structured and systematic approach to the ex-ante evaluation of the economic impact of international commercial law reforms. They are designed to measure the economic gains of such reforms and provide a basis for demonstrating the economic relevance of legal reforms in a clear and comparable manner. The text provides detailed legal and economic guidance to support the consistent application of the Framework across different jurisdictions and contexts.

255. The scoring methodology is built upon a quantitative formula comprised of five key Factors, each capturing a distinct aspect of the economic impact of law reforms: **direct impact (Factor A), network impact (Factor B), systemic impact (Factor C), effective application (Factor D), and transition costs (Factor E)**. This approach allows comprehensive and comparable assessments, enabling an overall score to be assigned to a particular law reform through the combined evaluation of its individual Factors. In turn, this facilitates a better understanding of how different elements of a reform contribute to its overall economic effect, helping to identify the main drivers of economic gains as well as potential areas for improvement prior to adoption.

256. The Framework is designed to support international and regional organisations, as well as states, in evaluating the potential costs and gains of proposed legal reforms, determining whether harmonisation efforts are likely to yield meaningful economic gains, and making informed, evidence-based decisions on whether to pursue them. It particularly helps prioritise high-impact law reforms through numerical results in three ways. First, it facilitates the **ranking** of reforms by comparing their expected impact against other reforms, helping to establish a hierarchy of initiatives. Second, it allows for **scaling**, through numerical scoring, to determine whether a reform meets defined thresholds, including in areas where direct comparisons may be challenging. Third, it facilitates the **quantification** of expected economic gains where relevant data is available by linking scores to benchmark-based ex-post evaluations. Taken together, these functions provide a practical basis for comparing reforms, assessing their relative significance, and identifying those most likely to generate significant economic gains.

257. More broadly, the Framework and Guide have the potential to play a transformative role in international commercial law reform processes by embedding a more systematic and economically grounded approach to evaluation. It is expected that they will serve as a practical and reliable tool, helping shift decision-making toward more rigorous, data-informed practices. In doing so, they may contribute to fostering trust in law-making processes and institutions, as well as supporting the broader adoption of international commercial law instruments. Over time, their application may improve the design of legal reforms by better

aligning them with expected economic gains and increasing the likelihood of their adoption. Facilitating the prioritisation of high-impact legislative initiatives can ultimately contribute to reducing transaction costs and promoting stronger economic growth.

ANNEX 1

Legal Background

ANNEX 1. LEGAL BACKGROUND

1. Private commercial law reforms

258. The Framework and Guide focus specifically on commercial law reforms within the realm of private law. At the international level, such law reforms are typically introduced by international standard-setting bodies or transnational law-making institutions through instruments such as conventions, model laws, legislative or legal guides, principles, or contractual standards.

259. Such legislative texts include all instruments developed by UNIDROIT, in light of its mandate in the field of private law, as well as many instruments developed by other international and regional organisations, such as the The Hague Conference on Private International Law (HCCH), United Nations Commission on International Trade Law (UNCITRAL), and the European Law Institute (ELI).[33]

260. Private law reforms address private legal relationships and focus on the rights and obligations between parties who do not exercise or enforce public power or authority. In the commercial context, these reforms concern voluntary transactions between parties and the protection of their private interests, covering areas such as contracts, sales of goods, secured transactions, enforcement or dispute resolution mechanisms. In contrast, commercial law reforms that address regulatory or public law, including criminal law, fall outside the scope of the Framework. Regulatory or public law reforms serve public policy goals and rely on the exercise of public authority by involving state enforcement and regulatory oversight. Examples may include taxation, licensing requirements for business operations or engaging in certain activities, transparency obligations for market participants, or other areas requiring compliance to be enforced by public authorities. Therefore, such reforms are excluded from the Framework and Guide.

[33] Examples of such legislative texts may include, the UN Convention on Contracts for the International Sale of Goods (CISG) and the UNIDROIT Principles of International Commercial Contracts (UPICC); the UNIDROIT Convention on International Interests in Mobile Equipment (Cape Town Convention) and the Protocols thereto; the UNCITRAL Model Law on Secured Transactions and the UNCITRAL Legislative Guide on Secured Transactions; the UNCITRAL Model Law on Cross-Border Insolvency; the UNCITRAL Model Law on International Commercial Arbitration and the Convention on the Recognition and Enforcement of Foreign Arbitral Awards (New York Convention); the UNCITRAL Model Law on Electronic Transferable Records (MLETR); and the Hague Convention on Choice of Court Agreements and the Hague Convention on the Recognition and Enforcement of Foreign Judgments in Civil or Commercial Matters; the UNIDROIT Principles on Digital Assets and Private Law (DAPL Principles) and the ELI Principles on the Use of Digital Assets as Security.

261. To ensure that the Framework and Guide are applied in a consistent, coherent, and methodologically sound manner, it is important to clearly define the scope of private law reforms and distinguish them from areas that fall outside the Guide's intended application. Even though the primary focus is on private law, the economic evaluation of an ICLR should acknowledge possible effects on regulatory matters that are directly linked to the reform. Such effects should be addressed under the relevant Factors. For example, if a reform indirectly affects taxation or promotes competition, it should be considered under Factor C.

262. In practice, many law reforms do not fall strictly into private or public law categories. Some, referred to as hybrid law reforms, include elements of both private and public law. The Framework and Guide can still be applied, provided the private law elements form a substantial part of the reform. In such cases, the economic evaluation should primarily focus on the private law components, while also recognising the interaction with any accompanying public law aspects, where relevant.

263. The presence of public law elements does not automatically exclude a reform from the scope of the Framework. However, the Evaluation team should:

a) clearly identify and separate the private and public law components;

b) apply the Framework specifically to the private law aspects, assessing their economic impact independently or in conjunction with the broader reform; and

c) indicate how public law elements may influence the functioning, adoption, or effectiveness of the private law provisions, for example, through incentives, enforcement mechanisms, or compliance costs.

Example: A reform introducing a new set of contractual rules governing digital trade between businesses (private law) may also include obligations requiring firms to report specified data to public authorities (public law). In such a case, the economic evaluation should focus primarily on the expected effects of the private law rules, such as changes in contracting practices, transaction costs, risk allocation, and market participation, while explicitly identifying, but not fully scoring, the potential economic impacts of the accompanying public law requirements, including compliance costs, administrative burdens, and possible effects on enforcement or monitoring.

2. Harmonisation

264. The Framework and Guide focus on legislative initiatives taken at the international level to introduce substantive rules in the area of commercial law. These initiatives aim to harmonise (in the sense of aligning) legal rules, principles, and standards across jurisdictions to promote greater consistency and coherence in cross-border commercial transactions.

265. In particular, legal harmonisation aims to reduce legal uncertainty, facilitate cross-border transactions, and enhance economic cooperation by aligning

different national legal frameworks through international law instruments, broadly interpreted to include transnational and regional legal instruments.[34] The overarching objective is usually to mitigate legal fragmentation and complexity associated with navigating diverse legal systems.[35]

266. Harmonisation can be pursued through different types of legal instruments: (a) hard law, such as treaties and conventions, which establish binding obligations and fosters a higher degree of uniformity;[36] and (b) soft law, such as model laws, principles, guidelines, and recommendations, which offer non-binding yet flexible frameworks that states can adapt to their domestic legal systems.[37]

267. The level and mode of harmonisation chosen, i.e., whether binding or non-binding, depend on various factors, including the subject matter, the diversity of legal traditions, and the degree of political consensus among participating jurisdictions. These factors influence both the effectiveness of the reform and the degree of harmonisation achieved. Typically, the chosen legal instrument reflects the desired level of harmonisation. While hard-law instruments provide enforceability and promote greater uniformity, soft-law instruments allow greater flexibility and encourage gradual convergence by accommodating differing approaches in diverse legal systems.

268. It is important to distinguish *legal harmonisation* from *economic integration*. While the two are often complementary, legal harmonisation refers specifically to aligning legal frameworks governing private commercial relationships, whereas economic integration primarily focuses on eliminating market and trade barriers

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[34] Roy Goode, 'Reflections on the Harmonisation of Commercial Law' (1991) *Uniform Law Review* 54; Anthony Saunders et al, 'The Economic Implications of International Secured Transactions Law Reform: A Case Study' (1999) 20 *University of Pennsylvania Journal of International Law* 309; Harold J Berman and Colin Kaufman, 'The Law of International Commercial Transactions (Lex Mercatoria)' (1978) 19 *Harvard International Law Journal* 221. On the terminology and concepts of "transnational" vs "international" law, see Roy Goode, Herbert Kronke y Ewan McKendrick (eds), *Transnational Commercial Law: Texts, Cases and Materials Transnational Commercial* (2nd edn, OUP, 2015) 149, 165; Peer Zumbansen (ed), *The Oxford Handbook of Transnational Law* (OUP, 2021) 36, 58; Craig Scott, '"Transnational Law' as Proto-Concept: Three Conceptions' (2009) 10(7) *German Law Journal*, 859-876; Syed Mujtaba, 'Notes on the relationship between globalisation and transnational law' (2022) 19(2) *Jura Gentium 90;* Harold Hongju Koh, 'Transnational Legal Process' (1996) 75 *Nebraska Law Review*, 183-184.

[35] See John Goldring, '"Unification and Harmonisation" of the Rules of Law' (1978) 9(3) *Federal Law Review* 284.

[36] Roy Goode, Herbert Kronke y Ewan McKendrick (eds), *Transnational Commercial Law: Texts, Cases and Materials* (2nd edn, Oxford University Press 2015); Katarina Zajc, 'Hard Law' in Alain Marciano and Giovanni Battista Ramello (eds), *Encyclopedia of Law and Economics* (1st edn, Springer 2019).

[37] See Dinah Shelton (ed), *Commitment and Compliance: The Role of Non-Binding Norms in the International Legal System* (1st ed. Oxford University Press 2000). For more recent discussions and academic debates on the concept and nature of soft law, see Mariolina Eliantonio, Emilia Korkea-aho, Ulrika Mörth (eds), *Research Handbook on Soft Law* (Edward Elgar Publishing 2023).

to facilitate broader economic unification.[38] Within the context of this Guide, "harmonisation" refers strictly to legal harmonisation, or the alignment of substantive legal rules and principles. It does not encompass economic integration in the broader sense.

[38] Bela Balassa, *The Theory of Economic Integration* (Routledge Revivals 1961).

ANNEX 2

Economic Background

ANNEX 2. ECONOMIC BACKGROUND

1. Economic gains and law reforms

269. Economic gains are widely regarded as the primary objective and key justification for international commercial law reforms.[39] Existing literature and academic discourse in the field of *law and economics* are to a certain extent related to this subject matter and provide valuable context, though comprehensive analytical frameworks remain limited. This field explores how legal systems and institutions influence economic and social development, and views law not only as a regulatory tool but also as a driver of economic change, particularly in developing and transition economies. The Framework proposed in this Guide draws on established strands of economic theory, especially those rooted in *New Institutional Economics (NIE)*.[40] This school of thought focuses on the role of institutional frameworks, including legal rules, in shaping economic outcomes by influencing transaction and enforcement costs.[41] Integrating transaction costs, i.e., the positive costs in economic transactions, into economic analysis is one of the central features of the NIE.[42]

270. Despite the significance of understanding how legal rules affect market dynamics and efficiency, there remains a lack of empirical evidence and systematic academic research on the economic gains from ICLRs. In particular, questions remain about the characteristics of such reforms that produce economic gains, as well as the data and methodologies needed to accurately assess their impact.

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[39] See Harold S Burman, 'Building on the CISG: International Commercial Law Developments and Trends for the 2000's' (1998) 17 *Journal of Law and Commerce* 355.

[40] See Oliver E Williamson, *Markets and Hierarchies: Analysis and Antitrust Implications* (Free Press 1975); Ronald H Coase, 'The Nature of the Firm' (1937) 4(16) *Economica* 386; Ronald H Coase, 'The Problem of Social Cost' (1960) 3 *Journal of Law and Economics* 1; Ronald H Coase, 'The New Institutional Economics' in Eric Brousseau and Jean-Michel Glachant (eds), *The Economics of Contracts: Theories and Applications* (Cambridge University Press 2002).

[41] As defined by economist and Nobel laureate Douglass C. North, institutions in the above sense are *"the humanly devised constraints that structure political, economic and social interaction. They consist of both informal constraints (sanctions, taboos, customs, traditions, and codes of conduct), and formal rules (constitutions, laws, property rights)."* See Douglass C North, 'Institutions' (1991) 5 *Journal of Economic Perspectives* 97.

[42] See Ronald H Coase (n 40); Eirik G Furubotn and Rudolf Richter, *Institutions and Economic Theory: An Introduction to and Assessment of the New Institutional Economics* (University of Michigan Press 2005) ch 2.

2. The interplay of the Guide with other tools and methodologies for economic evaluation

271. Economic evaluation of law reforms is already conducted across jurisdictions, national legislatures, and international organisations, and across different areas of law, for varied purposes. The methodologies and decision-making processes adopted by different policy-makers or legislators may therefore vary significantly. In practice, several analytical or evaluation tools are used to support such evaluations, including legislative or regulatory impact assessments, gap analyses and other diagnostic tools. These tools often employ different methodologies, such as cost-benefit analysis, benchmarking, scoring techniques, or qualitative assessment. The diversity in evaluation approaches often depends on factors such as institutional capacity, economic priorities, legal traditions, and the degree of stakeholder involvement.

272. The Framework provides a stand-alone evaluation methodology. It neither requires nor excludes the use of any external analytical tools or evaluation approaches developed by other international organisations or applied by governments in the preparation and submission of draft legislation to parliaments. Instead, the relationship between the Framework and such tools is complementary and mutually reinforcing. Where appropriate and compatible with the objectives of the evaluation, the Framework can support and be used alongside legislative impact assessments, gap analyses, and other tools. The Framework is not intended to replace these tools, but rather to complement them by providing a structured methodology for the ex-ante economic evaluation of international commercial law reforms. In practice, multiple tools may be used in parallel to help identify and structure the expected economic gains of the proposed reform in the early stages. For instance, an EE under this Framework can then be complemented by a legislative impact assessment, which examines alternative policy options and their broader social and environmental impacts, as well as by a gap analysis to assess the extent to which existing national laws and institutional frameworks align with the proposed reform and to identify areas requiring adjustment in a country-specific context.

273. The qualitative anchors provided in this Guide for scoring[43] may, where relevant, support cross-country comparisons. However, the scoring methodology is Benchmark-relative rather than strictly comparable across countries or reforms. Any such comparisons should therefore be undertaken with caution, taking into account contextual differences.

274. The use of other analytical tools when conducting an ex-ante economic evaluation of ICLRs remains optional and subject to the discretion of the Evaluation team. Where employed, such tools may inform specific components and steps of the evaluation process without altering the overall scope or methodology of the Framework.

[43] See Chapter II, Section 1.

275. Nonetheless, the differences between these tools and the EE Framework in terms of objectives and methodologies should be clearly recognised. Legislative or regulatory impact assessments are typically designed to inform ex-ante policy choices among alternative interventions.[44] By contrast, diagnostic or gap-analysis tools are generally used to identify deficiencies and gaps within existing systems; assess the adequacy, performance, or implementation of legal or institutional frameworks against defined Benchmarks; highlight institutional, legal, and enforcement weaknesses; and suggest areas for improvement.[45]

276. The following sub-sections examine in greater detail how the Framework interacts with other analytical tools.

2.1 Legislative or regulatory impact assessments

277. In general terms, legislative or regulatory impact assessments adopt a forward-looking approach. They seek to support the achievement of policy objectives by evaluating the expected costs, benefits, and risks of alternative policy options. In doing so, they promote evidence-based decision-making and help determine whether regulatory or non-regulatory interventions are necessary and justified.

278. In practice, this analysis is most commonly carried out through *Regulatory Impact Assessments (RIAs)* or *Impact Assessments (IAs)*, which focus on regulatory reforms and are not specifically tailored to commercial reforms within the realm of private law. RIAs help evaluate the anticipated economic, social, and environmental impacts, often requiring the description of a baseline scenario.

279. In line with established guidance and practices, RIAs typically include (i) a clear definition of the policy problem, (ii) the identification of objectives, (iii) a description of the regulatory proposal, (iv) the identification of alternative options, (v) an analysis of costs and benefits, (vi) the selection of a preferred option, and (vii) the applicable monitoring and evaluation framework. The core goals of an impact analysis are to establish whether specific legislation is necessary and justified, clarify how to design a law in the most efficient, cost-effective manner, and promote accountability and transparency.[46]

280. Many RIAs are guided bythe principle of proportionality, whereby the depth and complexity of analysis are calibrated to the anticipated significance and impact of the proposed intervention to ensure that analytical resources are directed toward the most consequential policy decisions. RIAs commonly assess policy options against a baseline scenario (such as a "no policy change" or "do

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[44] OECD, *Regulatory Impact Assessment* (OECD Best Practice Principles for Regulatory Policy, OECD Publishing 2020) 8–12; European Commission, *Better Regulation Guidelines* (SWD(2021) 305 final, 2021) 30–31; European Commission, *Better Regulation Toolbox* (2023) 41–48.

[45] World Bank, *Crisis Preparedness Gap Analysis (CPGA)* (2023) 2–4.

[46] See similarly, Office of Information and Regulatory Affairs (OIRA), *Circular A-4 Regulatory Impact Analysis: A Primer* (2011).

nothing" scenario) and frequently rely on cost-benefit analysis, including, where feasible, the monetary quantification of impacts. The approach adopted in this Framework differs, specifically as it employs a benchmark-relative approach and scoring methodology that can be used in the context of RIAs to capture expected economic gains in a structured, comparable and quantifiable manner. RIAs, on the other hand, may provide useful analytical input for certain elements of the evaluation process under this Framework, where available. Insofar as they are relevant and compatible with the Framework's objectives and methodology, they may support the identification and articulation of the policy problem, inform the definition of the baseline scenario, and contribute to a broader assessment of the potential economic, social, and environmental implications of reform options.

281. International and regional organisations, as well as national legislative bodies, may adopt their own distinct approaches to legislative impact and associated evaluation processes in specific areas of law.[47]

Examples at the international, regional, or national level:

The Organisation for Economic Co-operation and Development (OECD) has developed methodologies and tools for regulations,[48] primarily aimed at domestic and sectoral regulatory authorities. The OECD approach requires the consideration of multiple types of impacts, including economic, social, and environmental effects, often combining quantitative and qualitative analysis. Monetary impacts are often determined based on calculations of costs to business or the net present value of costs to business and society in general, capturing both direct and broader impacts.

The European Commission has adopted a comprehensive Impact Assessment (IA) system to support policy development and contribute to "better regulation". The IA process is designed to identify and describe the underlying policy problem, define objectives, examine alternative policy options, and assess their likely economic, environmental, and social impacts.[49] An IA is expected to address a core set of questions, including: What is the problem and why does it require intervention? Why should action be taken at the EU level? What objectives should be pursued? What policy options are available to achieve those objectives? What are the economic, social, and environmental impacts of each option, and which stakeholders are affected? How do the options compare in terms of effectiveness, efficiency, and coherence? How will implementation, monitoring, and subsequent evaluation be organised? A central feature of the methodology is the assessment of impacts relative to a dynamic baseline scenario, which reflects how conditions would evolve over

[47] For example, the OECD recommends consultations and stakeholder management as a basic step in the regulatory impact evaluation process. See OECD (n 44).

[48] OECD, *Regulatory Impact Assessment, OECD Best Practice Principles for Regulatory Policy* (OECD Publishing, Paris 2020a); OECD, *Applying regulatory impact assessment at regulatory authorities: A methodology for assessing the economic, social and environmental impacts of regulation* (OECD 2025).

[49] See European Commission (n 44).

time in the absence of the proposed intervention, taking other policies in place into account.

A broadly comparable approach exists in the United States of America, where regulatory agencies are generally required to include four basic elements in their regulatory analysis (such as in RIAs): (i) a clear statement of the need for the proposed regulatory action; (ii) definition of the baseline scenario; (iii) an examination of reasonable alternative approaches and their consequences; and (iv) an evaluation of the expected benefits and costs (both quantitative and qualitative) of the proposed action.[50]

In the UK, under the Better Regulation Framework, RIAs are required for regulatory reforms related to business activity. These assessments are undertaken both at the initial stage of policy proposals (prior to formal or informal consultation), and/or before implementation. They follow the ROAMEF policy cycle (Rationale, Objectives, Appraisal, Monitoring, Evaluation, Feedback), and involve options analysis, including an assessment of costs and benefits. This process focuses on quantifying and, where possible, monetising the expected costs and benefits, as well as identifying the rationale for regulatory intervention and considering different policy options.[51] In addition, the assessments take into account broader impacts beyond the direct costs to business, as well as distributional effects and environmental impacts.

In Australia, all decisions by the Government and national or sub-national policy forums are subject to the Regulation Impact Assessment (RIA) process. Proposals with "more than minor" regulatory impact must be accompanied by a Regulation Impact Statement (RIS).[52] Specifically in Victoria (Australia), there are two different types of impact assessments: (i) Legislative Impact Assessment (LIA) for proposals that may result in, or change, primary legislation that should be prepared at the Approval in Principle stage of proposed legislation; and (ii) Regulatory Impact Statement (RIS) for proposals that may result in, or change, subordinate legislation, or replace sunsetting regulations.[53]

Beyond legislative assessment, some international organisations have developed specialised mechanisms to assess the economic effects of legal

[50] See Office of Management and Budget (OMB), *Circular A-4, Regulatory Analysis* (2003); Office of the Assistant Secretary for Planning and Evaluation (2016) Office of Information and Regulatory Affairs (OIRA), *Circular A-4, Regulatory Impact Analysis: A Primer* (2011); Maeve P Carey, *Cost-Benefit Analysis in Federal Agency Rulemaking* (Congressional Research Service, IF12058, 2024); U.S. Department of Health and Human Services, *Guidelines for regulatory impact analysis* (Office of the Assistant Secretary for Planning and Evaluation 2016).

[51] UK Department for Business and Trade, *Better Regulation Framework Guidance* (2023).

[52] Australian Government, Department of the Prime Minister and Cabinet, *Australian Government Guide to Policy Impact Analysis* (2023). Australian Government Department of the Prime Minister and Cabinet, *Cabinet Handbook* (15th edn Commonwealth of Australia 2023).

[53] Victorian Government, *Victorian Guide to Regulation: A Handbook for Policy-Makers in Victoria* (2024).

measures in specific contexts. For example, in the WTO dispute settlement system, panels may be required to estimate the trade effects of a WTO-inconsistent measure when determining the level of permissible countermeasures under Article 22.6 of the WTO Understanding on Rules and Procedures Governing the Settlement of Disputes (DSU).

2.2 Diagnostic or gap analysis

282. Other analytical tools include diagnostic or gap-analysis tools, which are commonly developed and used by international organisations, including international financial institutions (IFIs).[54] Where such tools are available, their use remains optional and is left to the discretion of the Evaluation team. They may be used to inform specific aspects of the evaluation steps without altering the scope or methodology of the Framework.

283. For instance, in identifying the baseline scenario, where available, diagnostic or gap-analysis tools may be used as supporting inputs to inform the description of the baseline scenario. Such tools may assist the Evaluation team in identifying structural weaknesses, implementation gaps, or institutional constraints in the existing legal and market context. However, these analyses do not substitute the Evaluation team's own determination of the baseline scenario, which must remain specific to the international commercial law reform under evaluation and consistent with the Benchmark applied in this Guide.

284. In certain contexts, sector-specific legal gap analyses prepared by IFIs may be particularly relevant for describing the baseline scenario. For example, the EBRD has developed a comparative legal assessment in specific areas of private and commercial law, which examines the degree of alignment of domestic legal frameworks with internationally-recognised standards and assesses the effectiveness of their implementation.[55] Such assessments may provide useful descriptive input regarding the current legal and institutional environment. Similarly, country-level diagnostic tools developed by IFIs may assist in describing broader legal and institutional foundations relevant to the baseline scenario. For instance, the World Bank has developed diagnostic frameworks[56] that assess

[54] IFIs include the World Bank, International Monetary Fund (IMF), Bank for International Settlements (BIS), European Bank for Reconstruction and Development (EBRD), European Investment Bank (EIB), Asian Development Bank (ADB), Inter-American Development Bank Group (IDB, IADB), African Development Bank (AfDB), Islamic Development Bank (IsDB), New Development Bank (NDB), Asian Infrastructure Investment Bank (AIIB), North American Development Bank (Nadbank), European Stability Mechanism (ESF), European Investment Fund (EIF), International Finance Facility for Immunisation (IFFIm), International Fund for Agricultural Development (IFAD), Arab Petroleum Investments Corporation (APICORP), OPEC Fund for International Development. See e.g. World Bank, *The Crisis Preparedness Gap Analysis* (2023) 2.

[55] European Bank for Reconstruction and Development (EBRD), 'Corporate Governance Sector Assessment' https://www.ebrd.com/home/what-we-do/policy-and-business-advice/legal-reform/corporate-governance/sector-assessment.html.

[56] World Bank, *The Crisis Preparedness Gap Analysis* (CPGA, 2023).

legal, institutional, financial, and social preparedness across countries, including the capacity of legal systems and public institutions to support market functioning. Where relevant, such gap analyses may inform the understanding of the broader context within which the international commercial law reform would operate.

285. Where diagnostic or gap-analysis tools are used as supporting inputs, they generally aim to identify the distance between an existing situation and a desired or reference state. By contrast, the economic evaluation under this Guide focuses on assessing the expected economic impact of a specific international commercial law reform as a deviation from the Benchmark. The use of such diagnostic or gap analysis tools therefore serves an informational function and does not alter the scope or methodology of the economic evaluation.

286. In substantiating the need for an international-level law reform and describing its objectives, the Evaluation team may also take into account relevant findings from existing country-level diagnostic or gap-analysis tools prepared by IFIs,[57] where such findings identify systemic weaknesses, coordination failures, or institutional constraints that extend beyond the capacity of domestic legal frameworks to address them effectively. Such tools may assist in explaining why action at the international level is warranted, without predetermining the objectives or content of the international commercial law reform under evaluation.

287. Regarding the Benchmark, conducting a thorough review of relevant legal and economic sources to identify best practices and reference standards may include the use of structured comparative assessments and gap-analysis tools developed by IFIs that compare existing legal frameworks against internationally recognised standards. Such IFI gap-analysis tools may inform individual components of the Benchmark by identifying best-practice elements and reference points but should not be treated as defining the Benchmark itself, which must reflect a best-in-class scenario rather than an aggregation or assessment of existing practice.

288. Where diagnostic or gap-analysis tools developed by IFIs are used as supporting inputs, the Evaluation team should ensure that any underlying assumptions reflected in those tools are identified and assessed explicitly for the purposes of the evaluation.

289. In addition to data collected from the relevant sources for the purposes of the evaluation, the Evaluation team may draw on data contained in diagnostic or gap-analysis tools developed by IFIs. Such data may provide structured information on institutional arrangements, enforcement capacity, systemic constraints and structural limitations that may affect the application and

[57] Examples of such country-level diagnostic or gap-analysis tools include the World Bank's "The Crisis Preparedness Gap Analysis" (CPGA), and the Global Environment Facility, *Gap Analysis of GEF-Funded Activity and Engagement in Fragility, Conflict, and Violence-Affected States* (2024).

effectiveness of the proposed reform in the baseline scenario and its implementation context.

290. Furthermore, tools developed by IFIs may be relevant for the scoring methodology. Such tools typically apply internal scoring or assessment frameworks as part of their ex-ante decision-making processes by using gap analysis.[58] Such analyses, which may involve structured, standardised scoring of expected impacts relative to defined reference points, can be conceptually aligned with the approach adopted in this Guide insofar as both seek to support informed decision-making on a consistent and comparable basis. However, the scoring methodology under the EE ICLR Framework remains distinct in purpose and design and should not be regarded as interchangeable with, or derived from, internal assessment tools used by IFIs. While conceptually comparable in form, such frameworks often differ in their objectives and methodologies from the scoring approach set out in this Guide.

3. Economic frictions and transaction costs

291. ICLRs are typically designed to reduce transaction costs, though some also address broader economic frictions. Transaction costs constitute a subset of economic frictions and directly relate to commercial law reforms and transactional processes. Economic frictions, more broadly, encompass any impediment or barrier that hinders the functioning of markets and economic systems, usually with broader macroeconomic implications.[59] They may arise from both human and natural causes and can affect economic activity beyond individual transactions.[60] Economic frictions can disrupt the smooth operation of markets by slowing down the flow of transactions or complicating economic activities, increasing uncertainty, limiting market access, and raising costs beyond transaction costs.[61] Their effects may include reduced trade volumes, resource misallocation, and deviations from optimal equilibrium.[62] In this way, they can significantly influence

[58] For example, the EBRD applies an Expected Transition Impact (ETI) assessment as part of Transition Impact (TI) Analysis during its internal project appraisal process, combining benchmark-based analysis with standardised ex-ante scoring.

[59] Oliver E Williamson, *The Mechanisms of Governance* (Oxford University Press 1996a).

[60] Regarding the transaction costs arises from the economic activities in the market, see: Ronald H Coase, 'The Nature of the Firm' (1937) 4(16) *Economica* 386; Oliver E Williamson, *The Economic Institutions of Capitalism* (1st ed. Free Press 1985)

[61] For further explanation on how transaction costs affect the efficiency in the market, see: Ronald H Coase, 'The Problem of Social Cost' (1960) 3 *Journal of Law and Economics* 1. Oliver E Williamson considers transaction cost as the economic counterpart of friction. For the further transaction cost economics explanations, see: Oliver E Williamson, 'Transaction cost economics and the Carnegie connection' (1996b) 31(2) *Journal of Economic Behavior and Organization* 149.

[62] John R Commons, *Notes on Analytic and Functional Economics* (1926); Antoine Berthou et al, 'Trade, Productivity and (Mis)allocation' (2020) 163 *IMF Working Papers*.

both the functioning of markets and the overall economic impact of international commercial law reforms.

292. ICLRs often target the root causes of economic frictions – such as ambiguous, fragmented or inefficient legal frameworks[63] – and can contribute to improving legal certainty, reducing barriers to economic activity, and facilitating smoother transactions. In doing so, these reforms may enhance overall economic efficiency, support increased market participation, and contribute to a more dynamic economic environment.

293. The following sources of economic frictions can be identified:

3.1 Human-generated economic frictions

A) Legal barriers: Legal barriers include outdated or inadequate legal systems, as well as divergent national laws and standards that businesses must navigate when engaging in commerce. Harmonisation of standards and legal frameworks through ICLRs can reduce these barriers by facilitating smoother cross-border transactions, reducing legal costs, and enhancing legal certainty.

B) Bureaucracy: Bureaucratic inefficiencies involve excessive administrative procedures that may delay business operations and commercial transactions. Simplifying and streamlining bureaucratic processes through ICLRs can enhance business efficiency. ICLRs often aim to reduce red tape and promote faster, more transparent procedures for international transactions, thus lowering economic frictions.

C) Information asymmetry: Information asymmetry occurs when one party has more or better information than the other in a commercial transaction. Enhancing transparency and disclosure requirements through law reform can reduce information asymmetry. [64] ICLRs can promote standardised reporting and information-sharing practices, leading to more informed decision-making and reducing the risks associated with international transactions.

3.2 Natural economic frictions

A) Geographic barriers: Geographic barriers can hinder transportation and communication in commerce. By facilitating better connectivity and transportation

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[63] Oliver E Williamson, *The Economic Institutions of Capitalism* (1st ed. Free Press 1985); Douglass C North, 'Institutions' (1991) 5 *Journal of Economic Perspectives* 97; Simeon Djankov, et. al., 'The Regulation of Entry' (2002) 117(1) *Quarterly Journal of Economics* 1.; Avinash K Dixit, *Lawlessness and Economics: Alternative Modes of Governance* (Princeton University Press 2004); Dani Rodrik, *One Economics, Many Recipes: Globalization, Institutions, and Economic Growth* (Princeton University Press 2007).

[64] Friedrich A Hayek*, Individualism and Economic Order* (University of Chicago Press 1948); George A Akerlof, 'The Market for "Lemons": Quality Uncertainty and the Market Mechanism' (1970) 84(3) *Quarterly Journal of Economics* 488; Joseph E Stiglitz and Andrew Weiss, 'Credit Rationing in Markets with Imperfect Information' (1981) 71(3) *American Economic Review* 393.

networks, ICLRs can reduce the costs and complexities associated with geographic barriers. For example, they can promote infrastructure development and logistical improvements to overcome geographic challenges.

B) Climate and environmental challenges: Severe climate variations and environmental challenges can have long-term economic consequences and disrupt economic activities. ICLRs can integrate environmental protection and sustainability standards. By promoting eco-friendly practices and reducing environmental degradation, such reforms can help stabilise global trade in the face of environmental challenges, increase investment in clean and resilient infrastructure and accelerate climate-friendly innovation, thereby ensuring the long-term viability of global economic activities.

C) Resource availability: Uneven distribution of natural resources can create economic disparities and trade imbalances. ICLRs can facilitate economic integration by encouraging fair trade practices and equitable resource distribution via trade. Such reforms can address resource-related frictions by promoting sustainable resource management, ensuring fair access to essential resources and securing better terms in international or bilateral trade agreements for all nations.

4. Network effects

294. In economic theory, network effects describe a phenomenon where the value of a product or system increases as more users adopt it.[65] These effects may be important when conducting an economic evaluation of a law reform that is adopted by different jurisdictions and widely used in specific sectors. Network effects are typically categorised into "direct network effects" and "indirect network effects".[66]

295. Direct network effects occur when an increasing number of adopters directly enhances the value of the system for all users. In other words, direct network effects pertain to the individual user of a network good, whose payoff from adoption of that good increases as additional users adopt it in a complementary fashion, which in turn makes that network more attractive to current non-users. This dynamic is observable, for example, in a telecommunications network or in a social media network.[67] In the legal context, direct network effects are particularly

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[65] For detailed information on network industries, network effects and sources of network externalities in different market structures, see Nicholas Economides, 'The Economics of Networks' (1996) 14 *International Journal of Industrial Organization* 673.

[66] For differences in the implication of direct and indirect network effects, see Matthew T Clements, 'Direct and Indirect Network Effects: Are They Equivalent?' (2004) 22 *International Journal of Industrial Organization* 633.

[67] For the very first studies on the network externalities generated in telecommunication market, see Lyn Squire, 'Some Aspects of Optimal Pricing for Telecommunications' (1973) 1(2) *Bell Journal of Economics and Management Science* 515; Stephen C Littlechild, 'Two-Part Tariffs and Consumption Externalities' (1975) 6(2) *Bell Journal of Economics* 661; Shmuel S Oren and Stephen A Smith,

relevant for legal harmonisation in the area of commercial law. As more jurisdictions adopt a common legal framework, the consistency and predictability of cross-border transactions improve, thereby making the framework more attractive for additional jurisdictions to adopt. This can create a virtuous cycle of increased adoption and greater legal harmonisation.

296. By contrast, indirect network effects arise as externalities when the value of the system increases due to the growth in complementary goods, services, or infrastructure that support its use. For instance, in technology markets, a mobile application platform becomes more attractive and valuable as developers extend the product range on that platform.[68] In the context of international commercial law reforms, indirect network effects may emerge when the adoption of a legal instrument encourages the development of supporting ecosystems, such as specialised arbitration centres, legal education programmes, or compliance and advisory services. As these complementary institutions and services expand, the legal framework becomes even more valuable and accessible, reinforcing its attractiveness to additional jurisdictions.

5. Benchmarks in economics

297. "Benchmarks" are extensively used in economics and by international organisations such as the World Bank, OECD, and the International Finance Corporation (IFC) in similar contexts. They serve as a tool for comparing national law reforms with international standards or best practices, helping to assess and monitor the implementation of legislative initiatives. [69] In this context, benchmarks involve the identification of a reference framework, such as internationally recognised standards, laws, or established good practices, against which existing or proposed legal frameworks may be assessed. These evaluations typically rely on indicators, scoring systems, or qualitative criteria, enabling systematic comparison across jurisdictions and highlighting the strengths and weaknesses of specific reforms.

Examples and analogous practices:

The World Bank assesses regulatory frameworks by examining a series of defined legal, procedural, and institutional features against recognised good practices. These are translated into indicators and aggregated into scores,

'Critical Mass and Tariff Structure in Electronic Communications Markets' (1981) 12(2) *Bell Journal of Economics* 467.

[68] These externalities are also called "platform effects", see David P McIntyre and Arati Srinivasan, 'Networks, Platforms, and Strategy: Emerging Views and Next Steps' (2017) 38(1) *Strategic Management Journal* 141.

[69] See, for example, World Bank, *Benchmarking Infrastructure Development* (2023); IFC, *Assessment of the Sustainable Rice Platform* (2024); OECD, *Compendium of International Organisations' Practices: Working Towards More Effective International Instruments* (OECD Publishing 2021); Regulatory Impact Assessment, OECD Best Practice Principles for Regulatory Policy (OECD Publishing, 2020a); OECD, *Reviewing the Stock of Regulation* (OECD Best Practice Principles for Regulatory Policy, OECD Publishing 2020b).

enabling cross-country comparison, identification of reform priorities and gaps, and tracking of progress over time.[70]

Similarly, the IFC carries out benchmark analysis through criterion-based comparisons of legal frameworks against multiple reference standards which are incorporated into a benchmark framework. The degree of alignment is then evaluated through a scoring methodology, supported by qualitative justifications.[71]

In OECD practice, benchmarking relies on common evaluation criteria or reference points in a broader sense, such as relevance, effectiveness, efficiency, impact, and sustainability, which function as normative reference points for assessing policies and reforms. These guide the formulation of evaluation questions, the structuring of analysis, and the interpretation of findings across different policy contexts.[72]

6. Alternative theories

298. While the Framework is primarily grounded in institutional and transaction-cost-based analysis, this Section provides a broader explanation of complementary economic theories that help elucidate the mechanisms through which international commercial law reforms generate economic effects. Selected theories such as Incomplete Contract Theory and Agency Theory can clarify why legal rules matter in practice, how economic frictions arise in complex contractual and institutional settings, and how law reforms translate into observable economic impacts. These theories do not introduce additional evaluative criteria or scoring dimensions, but rather strengthen the conceptual foundation of the Framework and support a consistent, benchmark-relative interpretation of the economic effects captured under Factors A–E.

299. The Incomplete Contract Theory provides an additional rationale for evaluating international commercial law reforms where contractual relationships cannot specify all future contingencies. In many commercial settings, particularly cross-border, long-term, or technologically-complex transactions, uncertainty limits contractual completeness. Contracts, in this scenario, are necessarily incomplete because future states of the world are difficult or impossible to foresee and verify. As a result, legal rules governing default terms, residual control rights, and enforcement outcomes play a central role in shaping incentives and economic outcomes.[73]

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[70] See World Bank, *Benchmarking Infrastructure Development* (2023); World Bank, *Business Ready* (2025).

[71] For example, IFC, *Assessment of the Sustainable Rice Platform* (2024).

[72] OECD (2025); OECD (2021); OECD (2020a); OECD (2020b).

[73] Sanford J Grossman and Oliver D Hart, 'The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration' (1986) 94(4) *Journal of Political Economy* 691; Oliver Hart, *Firms, Contracts and Financial Structure* (Oxford 1995); Oliver Hart

300. From this perspective, ICLRs generate economic benefits by reducing the costs associated with contractual incompleteness. Harmonised or well-designed rules can limit opportunistic behaviour, reduce renegotiation and dispute resolution costs, and improve investment incentives by clarifying how unforeseen contingencies will be handled. These effects are particularly relevant in areas such as secured transactions, insolvency, international sales, and emerging sectors such as digital assets, where bespoke contracting would otherwise be costly or impractical.

301. Within the Framework, these insights support the assessment of expected economic gains under Factors A and B, by explaining why improved legal predictability and allocation of residual rights can translate into measurable reductions in transaction costs and coordination failures. The theory does not require separate scoring but rather strengthens the causal narrative linking legal design choices to economic impacts reflected in the benchmark-relative analysis.

302. Agency Theory addresses economic frictions arising from delegation relationships in which one party (the principal) relies on another (the agent) to act on its behalf, under conditions of imperfect information and potentially misaligned incentives.[74] Such relationships are ubiquitous in commercial law, including between shareholders and managers, creditors and debtors, investors and intermediaries, and principals and commercial agents operating across borders.

303. Legal rules affect agency costs by shaping disclosure obligations, monitoring mechanisms, enforcement rights, and liability regimes. ICLRs may reduce agency costs by improving transparency, strengthening creditor or investor protections, or clarifying accountability and governance structures. These changes can lead to lower risk premia, increased access to finance, and more efficient allocation of capital, even where the formal contractual structure remains unchanged.

304. In the Framework, Agency Theory reinforces the evaluation of economic impacts under Factors A, B, and C, by explaining how legal harmonisation and institutional design influence incentives and behaviour beyond the immediate contracting parties. As with Incomplete Contract Theory, agency considerations

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and John Moore, 'Property rights and the nature of the firm' (1990) 98(6) *Journal of Political Economy* 1119; Bengt Holmstrom, 'Moral Hazard in Teams' (1982) 13(2) *Bell Journal of Economics* 324.

[74] Stephen A Ross, 'The Economic Theory of Agency: The Principal's Problem' (1973) 63(2) *American Economic Review* 134; Michael C Jensen and William H Meckling, 'Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure' (1976) 3 *Journal of Financial Economics* 305; Michael Harris and Alvin Raviv, 'Some Results on Incentive Contracts with Applications to Education and Employment, Health Insurance, and Law Enforcement' (1978) 68(1) *American Economic Review* 20; Eugene F Fama, 'Agency Problems and the Theory of the Firm' (1980) 88(2) *Journal of Political Economy* 288; Eugene F Fama and Michael C Jensen, 'Separation of Ownership and Control' (1983) 26 *Journal of Law and Economics* 301; Charles Perrow, *Complex Organizations: A Critical Essay* (McGraw-Hill 1986); Kathleen M Eisenhardt, 'Agency Theory: An Assessment and Review' (1989) 14(1) *Academy of Management Review* 57.

inform the interpretation of observed or expected gains but do not constitute an independent evaluative factor.

305. The inclusion of Incomplete Contract Theory and Agency Theory alongside Transaction Cost Economics broadens the theoretical foundation of the Guide while remaining consistent with its Benchmark-relative approach and the non-weighted structure of the formula. These theories explain why economic frictions persist in international commercial activity and how legal reforms can mitigate them, thereby strengthening the plausibility of the causal links underlying the scoring of economic impacts.

306. Importantly, these theories are complementary rather than cumulative: they illuminate different mechanisms through which law affects economic outcomes, while the Framework evaluates only the resulting effects as captured under the relevant Factors. This approach avoids double counting while also aligning the methodology adopted in this Guide with analytical frameworks commonly used by other international organisations and policy institutions.

7. The use of technology in applying the Framework

307. In applying the Framework and following the methodology provided in the Guide to conduct an ex-ante economic evaluation of an ICLR, the use of specific technologies is neither encouraged nor precluded. The Framework is intended to be methodologically neutral with respect to the technological means that may be used to support the evaluation process and does not prescribe any specific tool or system. Instead, it recognises that a range of technological solutions may assist the Evaluation team in carrying out evaluations under the Framework.

308. In particular, Artificial Intelligence (AI) and other forms of advanced data analysis and economic modelling tools may support the work of the evaluation and benchmark teams at different stages of the evaluation process. They may facilitate the implementation of the evaluation methodology and enhance efficiency in the evaluation process. For instance, such tools may assist with literature reviews, the identification of relevant references, and the collection, organisation and processing of data, including handling large datasets of complex information. They may also help identify potential Benchmark candidates, facilitate the comparative analysis with the Benchmark(s), and support the development or assessment of economic models.

309. The choice of whether, and to what extent, technological tools should be used depends on the nature of the evaluation, the availability and reliability of the relevant data, the context and sensitivity of information involved, and the resources and expertise available to the Evaluation and Benchmark teams. In making this determination, the teams should carefully assess both the opportunities and the potential risks associated with the use of such tools. In light of the rapid evolution of digital technologies, the potential role and suitability of such tools may be periodically reviewed and reassessed in the course of applying the Framework, taking into account emerging practices, technological developments and experience gained from its use.

310. The use of technology should not, however, replace human judgment, expertise, or accountability, and it must be employed responsibly and with due care. Although technological tools may enhance efficiency and assist the Evaluation team in managing complex information, their use should not render the assessment process overly mechanical or reduce it to formulaic exercises that could compromise analytical rigour and the quality of the evaluation. Their use should preserve the methodological integrity underpinning the application of the Framework and ensure that the results of the evaluation remain reliable. Authorship, analytical decisions, and responsibility for the content of the evaluation, including conclusions on the ES and related recommendations, remain entirely with the Evaluation and Benchmark teams. Where technological tools are used, the Evaluation team should ensure that the analytical reasoning and methodological steps underlying the evaluation remain transparent and traceable, so that the results of the evaluation can be properly understood and verified. Any outputs generated by such tools should be carefully reviewed, validated, and supported by appropriate sources and references forming the basis of the analysis.

311. The use of technological tools should also comply with the internal rules and policies of the relevant international, regional, or national organisation, or of the authority responsible for conducting the ex-ante evaluation, as well as with applicable legislation. In particular, the Evaluation team should ensure that the deployment of such tools is consistent with relevant legal and regulatory requirements, including those relating to data protection, confidentiality, intellectual property, and the responsible use of digital technologies.

ANNEX 3

Ex-post Evaluation of International Commercial Law Reform

ANNEX 3. EX-POST EVALUATION OF INTERNATIONAL COMMERCIAL LAW REFORM

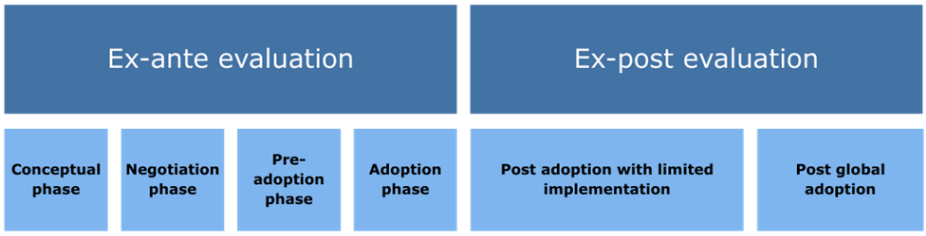
312. Depending on the purpose and methodology of the evaluation, different approaches for evaluating the impact of law reforms exist. Certain evaluation methods focus on reforms that are still being proposed by estimating their potential effects through modelling and comparisons. Others examine reforms that have already been implemented by using real-world data to measure their impact. The two main types of evaluation are known as "ex-ante" and "ex-post" evaluations.

313. "*Ex ante*" corresponds to the more traditional expression in law of "*a priori*", and refers to a situation before the contemplated event occurs. On the other hand, "*ex post*" corresponds in law to "*a posteriori*", referring to a reaction to the contemplated event.

314. While this Guide focuses on ex-ante evaluations, it acknowledges the utility of ex-post evaluations in drawing comparisons. Ex-post evaluations can be employed to provide insights into the success and gains of past reforms. Such evaluations could inform future decisions (*ex ante*) and be be used for comparison with them. In addition, ex-post evaluation may be particularly beneficial at the country level in promoting ratifications or in cases where an ex-ante evaluation needs to transition into an ex-post evaluation as the reform progresses and is implemented.

315. With this in mind, this Annex provides (limited) guidance on ex-post economic evaluations and their utility in conducting ex-ante evaluations.

316. The economic evaluation may be conducted at predefined phases of the development of an initiative, which are set out in the table below and described in more detail in the next sections.



1. Ex-post evaluations

317. The primary objective of an ex-post evaluation is to determine the economic effects that the reform has caused. Ex-post evaluations provide useful learning information about the effectiveness of the instrument, encourage greater adoption, and may inform decision-making on the extent to which revisions to the law may be warranted. It is therefore recommended to conduct an ex-post evaluation for every adopted instrument.

318. At an ex-post stage, the Framework may be used to conduct a more detailed quantitative economic evaluation, since empirical data are generally available. In general, the more time has passed since adoption, the greater the amount of empirical data.

1.1 Post-adoption with limited implementation

319. When conducting a post-adoption economic analysis at the stage where the instrument has not been widely implemented by states, the data may not be significantly different from those available during pre-adoption and adoption phases, especially where the instrument did not change radically through the adoption process. The available data may affect certain parameters, for example, by providing more accurate information on the costs of implementing the instrument.

320. During this phase, an economic evaluation can help to determine at a relatively small scale whether the law reform has had the anticipated economic impacts determined in the ex-ante evaluation, which in turn may further promote the instrument.

321. At this phase, the instrument has likely been implemented by only a limited number of states. Therefore, the Framework would be used by conducting domestic or regional evaluations, focusing on the particular jurisdictions that have implemented the reform.

Example: Under UNIDROIT's working methodology, the post-entry-into-force phase refers to the stage following the moment at which a treaty, or domestic legislation implementing a model law, has entered into legal force and begun to apply within the relevant jurisdiction(s), at which point its practical operation and effects can be observed and assessed.

1.2 Post-global adoption and implementation

322. During the post-global adoption and implementation phase, that is, once the new rules have been adopted and implemented by a large number of jurisdictions across the world, the Framework can be used to conduct an economic evaluation that provides detailed information about the global economic impacts of the legal instrument (including, perhaps, differences among states). Given the

long time lapse between the adoption of an instrument and its widespread implementation or use, this final phase might need to be undertaken one decade or more after entry-into-force.

2. Relationship between ex-ante and ex-post evaluation

323. Ex-ante and ex-post evaluation are interconnected, since the ex-post evaluation aims to evaluate whether the expected economic impacts, identified *ex ante*, have actually materialised. Evaluation *ex post* should in principle consider the objective(s) of the law reform and the approach followed when assessing the commercial law reform *ex ante*. Ex-post evaluations can validate or invalidate the accuracy of ex-ante projections, test and improve the underlying assumptions, identify deviations between expected and observed effects, and highlight gaps in the initial analysis. They can also provide critical insights for refining future ex-ante evaluation methodologies, particularly through the identification of patterns, deviations, and gaps.

324. Ex-post evaluation might serve as a foundation for developing these models by offering real-world data and insights into systemic dynamics, thereby enabling a more informed, accurate and nuanced approach to quantitative and qualitative assessments.

325. The ex-post evaluations can also play a significant role in the selection of Benchmarks for the ex-ante evaluations by offering an analysis of the successes and challenges of past reforms and helping to identify best practices and risks of international standards and existing laws. Ex-post evaluations facilitate comparative analysis by highlighting the similarities and differences in the implementation of the law reform among diverse jurisdictions.

326. Ex-post evaluation can be useful in the following situations when conducting an ex-ante evaluation:

a) Leveraging historical (performance) data on past law reforms to project the likely impacts of proposed reforms by identifying patterns, trends, and causal relationships. For example, if a previous law reform led to significant economic growth, similar law reforms can be expected to yield comparable outcomes, adjusted for current economic conditions.

b) Examining other law reform studies, thus potentially providing insights into long-term impacts or unintended consequences.

c) Analysing the successes and failures of past initiatives to inform the design of future policies. Understanding what worked and what did not can help refine assumptions and improve the accuracy of ex-ante evaluations.

d) Allowing for counterfactual analysis, by analysing the impact of past law reforms to estimate the impact of the proposed law reform.

e) Examining the level of implementation for the previous law reforms can help assess the feasibility and success of the proposed reforms by identifying factors such as market readiness and adaptability,

stakeholder resistance and engagement with a new rule in the specific area of law reform.

3. Guidance on using ex-post evaluations for ex-ante evaluations

327. An assessment of the systemic effects of law reforms may involve, e.g., general equilibrium analysis, which typically requires modelling abilities. Where it is not feasible to perform such types of sophisticated quantitative analysis, the (expected) systemic effects could be identified on a mixed or qualitative basis. In this regard, organisations conducting economic evaluations should initiate baseline data collection as early as possible, before or at the early stages of adoption and implementation. Since historical data becomes harder to retrieve over time, early collection ensures accurate comparisons with post-implementation outcomes. This is especially important when gathering data from private companies, as relevant information may only be available for a limited period.

328. The ex-ante evaluation should aim to clarify which statistical information, indicators, and information should be generated in order to facilitate and complement the ex-post evaluation. In order to effectively carry out the ex-post evaluation, it is recommended to include a non-exhaustive list of indicators for assessing economic impacts in the ex-ante evaluation. Furthermore, while the data needed for the ex-post evaluation can likely, to a large extent, be collected via public sources and licenced databases, certain indicators may require input from stakeholders affected by the reform. It is therefore beneficial to identify such information needs at the stage of the ex-ante evaluation and include relevant publication/reporting/cooperation requirements in the proposed reform.

329. Both for ex-ante and for ex-post evaluation, a suitable timeframe should be chosen for assessing the impact of the law reform. The timing should be chosen with care, taking into account the nature of the law reform since it will likely have an impact on the outcome of the evaluation. For example, the actual impact of a new insolvency law focused on private law matters may not be properly assessed until several years after its implementation. An early-stage evaluation might primarily capture short-term costs and effects, rather than long-term benefits. Therefore, such an evaluation would not typically be able to demonstrate the full outcomes of the law reform.

330. Furthermore, the evaluation should reflect that the effects of the law reform may occur at different times. For instance, compliance costs may arise early on, while expected gains may follow later. Costs and gains may also increase or decrease over time.

4. Causal inference

331. In economics, various methods are used to infer causality, helping to determine whether and how one variable (factor) influences another. Causal inference is a statistical approach used to empirically establish whether a change in one factor, such as the application of a law reform, causes a change in another

factor. It goes beyond conceptual reasoning by relying on data and rigorous methods, such as randomised controlled trials (RCTs), regression analysis, or difference-in-differences (DiDs) techniques, to demonstrate that a specific outcome is attributable to the reform and not to other unrelated factors. Causal inference seeks to quantify the strength of a relationship and control for confounding variables to support conclusions about causality.

332. Unlike conceptual causal links, which are based on logical expectations, causal inference provides evidence that can validate or challenge those expectations through measurable data.

333. Key differences between conceptual causal links and causal inference include the following:

a) **Basis of analysis:** Conceptual causal links rely on logical reasoning or theoretical expectations, forming a foundation for understanding potential relationships without direct evidence. In contrast, causal inference depends on empirical data and statistical methods to establish a credible cause-and-effect relationship, providing evidence of actual impacts.

b) **Purpose:** Conceptual causal links help map out possible pathways of influence, enabling the Evaluation team to hypothesise about the effects of a law reform and outline a framework for further investigation. Causal inference aims to test and confirm those hypotheses, proving or disproving the existence of causation through rigorous analysis.

c) **Evidence requirement:** Conceptual causal links are generally speculative and may be based on historical knowledge, assumptions, or indirect observations. Causal inference typically requires robust data, controls for confounding factors, and uses statistical tests to produce results that support causality with confidence.

d) **Applicability in economic evaluation:** Conceptual causal links are useful in the early stages of evaluation for building an initial model and exploring potential outcomes, especially when data may be limited or unavailable. Causal inference is critical in later stages when evaluating whether the observed changes are indeed attributable to the reform, providing conclusive support for policy recommendations.

334. Causal inference can help identify whether a specific legal reform has a measurable effect (e.g., economic improvement). Causal inference focuses on determining statistical relationships and outcomes, rather than the logical or legal causality referred to under "Conceptual causal links" (Chapter VI, Section 6). It relates to economic outcomes demonstrated through rigorous statistical methods.

5. Ex-post studies

335. When selecting the appropriate Benchmark and ex-post studies, priority should be given to those conducted using the following statistical methods rather than relying on "softer" methods such as surveys:

a) **Randomised Controlled Trials (RCTs):** Participants are randomly assigned to treatment and control groups, ensuring that the treatment is the only systematic difference between the groups. **RCTs** are often used in development economics, labour economics, and health economics.

b) **Instrumental Variables (IV):** An instrument is used to isolate the variation in the independent variable that is unrelated to the error term, helping to address endogeneity. This method is typically used in addressing issues like reverse causality or omitted variable bias, especially when randomisation is not feasible.

c) **Difference-in-Differences (DiD):** Compares changes in outcomes over time between a group exposed to a treatment and a control group that is not. This method is frequently applied in policy analysis, where a policy change affects only certain regions or groups. A crucial aspect of this method often involves identifying a control group that has not yet experienced the impact of the reform but shares similar characteristics with the groups already affected by the reform. Some proponents argue that these results can be causally interpreted, suggesting that the reform caused the observed changes in performance rather than merely being correlated with them.

d) **Regression Discontinuity Design (RDD):** Exploits a cutoff or threshold in the assignment of treatment, comparing those just above and below the cutoff to estimate the treatment effect. This method is often used in contexts where eligibility for a programme or treatment is determined by a specific cutoff.

e) **Propensity Score Matching (PSM):** Matches treated units with non-treated units that have similar characteristics to estimate the causal effect of treatment. This method is useful when randomisation is not possible, especially in observational studies.

f) **Synthetic Control Method:** Constructs a synthetic control group by weighting a combination of untreated units to compare against the treated unit. This method is particularly useful for case studies where only one unit is treated, such as in evaluating the impact of state-level policies.

g) **Natural experiments:** Exploit exogenous shocks or events that affect only some individuals or regions, mimicking a randomised experiment. This method is often used when randomisation is not feasible, taking advantage of real-world situations where the treatment assignment is quasi-random.

h) **Structural model estimations:** Involves structural estimation of the industry to generate counterfactual estimates, providing an evaluation

of performance under conditions different from the current reality. However, this method is often used in macroeconomics, though it tends to be a lengthy process, and the accuracy of the outcome depends on the quality of the specification.

ANNEX 4

Consulted Sources

ANNEX 4. CONSULTED SOURCES

Annex 4 provides an indicative (non-exhaustive) list of sources consulted in the development of the Guide.

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